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DEPARTMENT OF THE ARMY

Procurement Programs



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Committee Staff Procurement Backup Book
FY 1998 / FY 1999 Budget Estimate

WEAPONS AND TRACKED COMBAT VEHICLES

APPROPRIATION

February 1997

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ARMY Budget Documents

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Index for WEAPONS AND TRACKED COMBAT VEHICLES

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5	BRADLEY FVS TRAINING DEVICES (MOD)	GZ2500	33450141.98P	50
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17	IMPROVED RECOVERY VEHICLE (M88 MOD)	GA0570	33700141.98P	168
18	BREACHER SYSTEM (MOD)	GZ3200	34500141.98P	175
19	HEAVY ASSAULT BRIDGE (HAB) SYS (MOD)	GZ3250	34520141.98P	179
20	M1 ABRAMS TANK (MOD)	GA0700	36406141.98P	187
21	ABRAMS UPGRADE PROGRAM	GA0750	36500141.98P	242
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23	MODIFICATIONS LESS THAN $2.0M (TCV-WTCV)	GA0925	38376101.98P	258
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25	PRODUCTION BASE SUPPORT (TCV-WTCV)	GA0050	35960144.98P	266
28	ARMOR MACHINE GUN, 7.62MM	G13000	32472100.98P	269
29	MACHINE GUN, 5.56MM (SAW)	G12900	35632100.98P	275
30	GRENADE LAUNCHER, AUTO, 40MM, MK19-3	G13400	36106100.98P	281
32	M16 RIFLE	G14900	37528100.98P	287
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Index for WEAPONS AND TRACKED COMBAT VEHICLES

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35	MEDIUM MACHINE GUNS (MODS)	GZ1300	33030117.98P	314
36	M119 MODIFICATIONS	GC0401	33640100.98P	321
37	M16 RIFLE MODS	GZ2800	36456117.98P	330
38	MODIFICATIONS LESS THAN $2.0M (WOCV-WTCV)	GC0925	39280117.98P	342
39	ITEMS LESS THAN $2.0M (WOCV-WTCV)	GL3200	31862100.98P	351
40	PRODUCTION BASE SUPPORT (WOCV-WTCV)	GC0050	33270144.98P	353
41	INDUSTRIAL PREPAREDNESS	GC0075	33400144.98P	356
42	SMALL ARMS (SOLDIER ENH PROG)	GC0076	34010117.98P	358
43	SPARES AND REPAIR PARTS (WTCV)	GE0150	34540107.98P	362

Appropriation: **WEAPONS & TRACKED COMBAT VEHICLES**

Activity: 1. **TRACKED COMBAT VEHICLES**

LINE NO.	ITEM NOMENCLATURE	ID	(DOLS) FY 98 UNIT COST	(THOUSANDS OF DOLLARS) 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)
	****TRACKED COMBAT VEHICLES****										
1	ABRAMS TRNG DEV MOD (GA5208)				3,017		3,181		2,222		6,440
2	BRADLEY BASE SUSTAINMENT (G80718)	B			133,869		234,774		125,591		342,423
3	BRADLEY FVS TRAINING DEVICES (G20900)	A					572		1,417		9,544
4	HAB TRAINING DEVICES (G84600)										398
5	BRADLEY FVS TRAINING DEVICES (MOD) (GZ2500)	A			1,813		851				2,143
6	FIELD ARTILLERY AMMUNITION SUPPORT VEH (G80100)	A		48	49,988	48	64,140				
7	ARMORED COMBAT EARTHMOVER (G82303)	A				54	50,952				
8	ABRAMS TANK TRAINING DEVICES (GB1300)	A			6,133		12,590		13,351		13,850
9	M1 ABRAMS TANK SERIES (MYP) (G82917)	A			2,904						
10	COMMAND & CONTROL VEHICLE (G84200)	B	6,179,400			5	48,939	5	30,897	14	62,681
	SUB-ACTIVITY TOTAL				**197,724**		**415,999**		**173,478**		**437,479**
	****MODIFICATION OF TRACKED COMBAT VEHICLES****										
11	CARRIER, MOD (GB1930)	A			47,958		42,988		20,244		34,021
12	FIST VEHICLE (MOD) (GZ2300)	B							14,656		16,169
13	BFVS SERIES (MOD) (GZ2400)	A			93,101		119,037		61,232		46,640

Appropriation: **WEAPONS & TRACKED COMBAT VEHICLES**

Activity: 1. **TRACKED COMBAT VEHICLES**

LINE NO.	ITEM NOMENCLATURE	ID	(DOLS) FY 98 UNIT COST	(THOUSANDS OF DOLLARS) 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)
14	HOWITZER, MED SP FT 155MM M109A6 (MOD) (GA0400)	A			281,986		105,890		18,706		11,538
15	HOWITZER, MED SP FT 155MM M109A5 (MOD) (GA0401)	A			126		130				
16	FAASV PIP TO FLEET (GA8010)	A			6,434		13,814		1,922		438
17	IMPROVED RECOVERY VEHICLE (M88 MOD) (GA0570)	B			54,363		55,687		28,601		40,229
18	BREACHER SYSTEM (MOD) (GZ3200)	B									10,444
19	HEAVY ASSAULT BRIDGE (HAB) SYS (MOD) (GZ3250)	B			14,611		51,322		42,205		51,950
20	M1 ABRAMS TANK (MOD) (GA0700)	A			50,094		63,157		29,843		30,070
21	ABRAMS UPGRADE PROGRAM (GA0750)	A			320,515		502,004		587,714		686,521
	LESS: ADVANCE PROCURMENT (PY)				-52,601		-297,218		-259,086		-266,228
					267,914		204,786		328,628		420,293
22	ABRAMS UPGRADE PROGRAM (GA0750) ADVANCE PROCUREMENT (CY)				297,218		259,086		266,228		270,691
23	MODIFICATIONS LESS THAN $2.0M (TCV-WTCV) (GA0925)				562		1,049		1,030		
	SUB-ACTIVITY TOTAL				**1,114,367**		**916,946**		**813,295**		**932,483**
	****SUPPORT EQUIPMENT AND FACILITIES****										
24	ITEMS LESS THAN $2.0M (TCV-WTCV) (GL3100)				147		141		139		137

Appropriation: **WEAPONS & TRACKED COMBAT VEHICLES**

Activity: 1. **TRACKED COMBAT VEHICLES**

LINE NO.	ITEM NOMENCLATURE	ID	(DOLS) FY 98 UNIT COST	(THOUSANDS OF DOLLARS) 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)
25	PRODUCTION BASE SUPPORT (TCV-WTCV) (GA0050)				5,323		9,319		8,942		9,150
26	REGIONAL MAINTENANCE TRAINING SITES-EQUIP (GA2449)				1,405		1,367				
					---		---		---		---
	SUB-ACTIVITY TOTAL				**6,875**		**10,827**		**9,081**		**9,287**
	ACTIVITY TOTAL				**1,318,966**		**1,343,772**		**995,854**		**1,379,249**

Appropriation: **WEAPONS & TRACKED COMBAT VEHICLES**

Activity: 2. **WEAPONS AND OTHER COMBAT VEHICLES

LINE NO.	ITEM NOMENCLATURE	ID	(DOLS) FY 98 UNIT COST	(THOUSANDS OF DOLLARS) 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)
	****WEAPONS AND OTHER COMBAT VEHICLES****										
27	PERSONAL DEFENSE WEAPON (ROLL) (GN0003)	A		4,100	1,936						
28	ARMOR MACHINE GUN, 7.62MM M240 SERIES (G13000)	A				2,034	19,981			673	6,967
29	MACHINE GUN, 5.56MM (SAW) (G12900)	A	13,716	9,430	27,585	3,802	12,092	406	5,569	1,570	4,887
30	GRENADE LAUNCHER, AUTO, 40MM, MK19-3 (G13400)	A		1,500	32,812	2,150	33,168			720	13,075
31	MORTAR, 120MM (G02100)	A			2,911						
32	M16 RIFLE (G14900)	A	450	31,056	13,067	15,583	6,546	11,297	5,089	21,077	9,152
33	5.56 CARBINE M4 (G14904)	A	679	9,785	6,292	10,603	6,546	7,484	5,089	15,352	9,568
	SUB-ACTIVITY TOTAL				**84,603**		**78,333**		**15,747**		**43,649**
	****MODIFICATION OF WEAPONS AND OTHER COMBAT VEHICLES****										
34	M4 CARBINE MODS (GB3007)	A			900		2,114		2,152		5,318
35	MEDIUM MACHINE GUNS (MODS) (GZ1300)	A			6,292						
36	M119 MODIFICATIONS (GC0401)	A							4,977		4,969
37	M16 RIFLE MODS (GZ2800)	A			2,751		5,526		7,603		7,060

Appropriation: **WEAPONS & TRACKED COMBAT VEHICLES**

Activity: 2. **WEAPONS AND OTHER COMBAT VEHICLES

LINE NO.	ITEM NOMENCLATURE	ID	(DOLS) FY 98 UNIT COST	(THOUSANDS OF DOLLARS) 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)
38	MODIFICATIONS LESS THAN $2.0M (WOCV-WTCV) (GC0925)				1,339		1,427		1,406		1,395
	SUB-ACTIVITY TOTAL				**11,282**		**9,067**		**16,138**		**18,742**
	****SUPPORT EQUIPMENT AND FACILITIES****										
39	ITEMS LESS THAN $2.0M (WOCV-WTCV) (GL3200)				1,113		1,767		1,215		1,202
40	PRODUCTION BASE SUPPORT (WOCV-WTCV) (GC0050)				5,855		4,311		6,195		6,540
41	INDUSTRIAL PREPAREDNESS (GC0075)				5,283		5,086		5,758		5,713
42	SMALL ARMS (SOLDIER ENH PROG) (GC0076)				2,350		5,839		4,178		5,598
	SUB-ACTIVITY TOTAL				**14,601**		**17,003**		**17,346**		**19,053**
	ACTIVITY TOTAL				**110,486**		**104,403**		**49,231**		**81,444**

Appropriation: **WEAPONS & TRACKED COMBAT VEHICLES**

Activity: 3. **SPARES AND REPAIR PARTS**

LINE NO.	ITEM NOMENCLATURE	ID	(DOLS) FY 98 UNIT COST	(THOUSANDS OF DOLLARS) FY 96 QTY	FY 96 COST	FY 97 QTY	FY 97 COST	FY 98 QTY	FY 98 COST	FY 99 QTY	FY 99 COST
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	****SPARES AND REPAIR PARTS****										
43	SPARES AND REPAIR PARTS (WTCV) (GE0150)				25,279		20,280		20,622		14,413
	SUB-ACTIVITY TOTAL				**25,279**		**20,280**		**20,622**		**14,413**
	ACTIVITY TOTAL				**25,279**		**20,280**		**20,622**		**14,413**
	APPROPRIATION TOTAL				**1,454,731**		**1,468,455**		**1,065,707**		**1,475,106**

BUDGET ITEM JUSTIFICATION SHEET						DATE: February 1997		
APPROPRIATION / BUDGET ACTIVITY: PROCUREMENT OF WPNS & TRKD CMBT VEHS /Tracked Combat Vehicles				P-1 ITEM NOMENCLATURE: ABRAMS TRNG DEV MOD (GA5208)				
	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)	3.0	3.2	2.2	6.4	2.8	5.7	5.9	6.0

DESCRIPTION: Funding provided will accomplish modifications to Abrams Training Devices required as a result of changes to the Abrams tanks or tank training requirements. These changes are hardware and software modifications to existing equipment to keep simulators abreast of developments in the Abrams Tank System.

JUSTIFICATION: The program reflected here-in is structured to meet needs validated by the Abrams user community. Degradation of tank training will occur if these modifications are delayed or deleted. The intended sites for the Conduct of Fire Trainer (COFT) M60A3 to M1 Conversions are for the National Guard units. The average expected gunner and commander thoughput per year for the modified COFT is 3,016. The Conduct of Fire Trainer (COFT) M1 to M1A1, Optical Improvement (OIP) and Armament Enhancement Initiative (AEI) modifications are for units at FORSCOM, USAREUR, TRADOC, and National Guard.

BUDGET ITEM JUSTIFICATION SHEET		DATE: February 1997
APPROPRIATION / BUDGET ACTIVITY: PROCUREMENT OF WPNS & TRKD CMBT VEHS /Tracked Combat Vehicles	P-1 ITEM NOMENCLATURE: ABRAMS TRNG DEV MOD (GA5208)	

OSIP No.	Description							
Classification	All PYs	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003
1-03-05-4430	M60A3 to M1 Conversion Kits							
Operational	5.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1-90-05-7877	OIP Modification to M1A1 COFTS							
Operational	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1-93-05-4452	AEI							
Operational	1.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1-92-06-4419	M1 to M1A1 Modification Kits							
Operational	2.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TBD1	Conduct of Fire Trainer (COFT) Image Generator (IG) and Computer Upgrade							
Operational	0.0	3.2	2.2	2.4	0.8	0.8	0.8	0.0
TBD2	AGTS/SEP MOD							
OPERATIONAL	0.0	0.0	0.0	0.0	0.0	1.3	2.4	2.9
TBD3	Tank Driver Trainer Mod (M1A2 SEP Upgrade)							
Operational	0.0	0.0	0.0	4.0	1.5	0.0	0.0	0.6
TBD4	Close Combat Tactical Trainer (CCTT)/SEP Mod							
OPERATIONAL	0.0	0.0	0.0	0.0	0.2	1.8	2.7	2.5
TBD5	Maintenance Training System (MTS) SEP Mod							
Operational	0.0	0.0	0.0	0.0	0.3	1.8	0.0	0.0
Totals	11.4	3.2	2.2	6.4	2.8	5.7	5.9	6.0

MODIFICATION INSTALLATION SUMMAR

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
No P3a Set for modification									
ABRAMS TRNG DEV MOD									
GA5208									
M60A3 to M1 Conversion Kits	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OIP Modification to M1A1 COFTS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AEI	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
M1 to M1A1 Modification Kits	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Conduct of Fire Trainer (COFT) Image Generator (IG) and Compute	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AGTS/SEP MOD	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Tank Driver Trainer Mod (M1A2 SEP Upgrade)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Close Combat Tactical Trainer (CCTT)/SEP Mod	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maintenance Training System (MTS) SEP Mod	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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: M60A3 to M1 Conversion Kits 1-03-05-4430

MODELS OF SYSTEMS AFFECTED: M60A3 COFTs.

DESCRIPTION / JUSTIFICATION:

The Conduct of Fire Trainer (COFT) provides the ready capability for precision tank gunnery training while reducing the O&S costs associated with ammunition consumption. The COFT is configured to the tank system it supports.

In support of the Abrams fielding schedule, the conversion of M60A3 COFTs to M1 COFTs is required to meet the Army's new force structure. The structure has changed to make the M60 tank and training devices obsolete. This situation establishes an urgent requirement to convert the M60A3 COFTs to M1 configuration.

Without this modification, one of the following most likely will occur: 1) Negative training results from using outdated COFTs; 2) In lieu of using

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

	PLANNED	ACCOMPLISHED
Preliminary Design Review:	N/A	
Critical Design Review:	N/A	
Contractor Test and Evaluation:	4Q95	1Q96
Development Test and Evaluation:	N/A	
Initial Operational Test and Evaluation:	4Q95	1Q96
IPR Production Decision	N/A	
TDP Available:	N/A	

INDIVIDUAL MODIFICATION																Date		February 1997	
MODIFICATION TITLE (Cont):	M60A3 to M1 Conversion Kits 1-03-05-4430																		
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	20	3.8																	20	3.8
Installation Kits		1.6																		1.6
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																				
Total Procurement Cost		5.4																		5.4

METHOD OF IMPLEMENTATION: Contractor ADMINISTRATIVE LEADTIME: 1 Months PRODUCTION LEADTIME: 12 Months

Contract Dates: FY 1997: FY 1998: FY 1999:

Delivery Date: FY 1997: FY 1998: FY 1999:

Installation Schedule: M60A3 to M1 Conversion Kits 1-03-05-4430 Date February 1997

	FY 1996 & Prior	FY 1997 1	2	3	4	FY 1998 1	2	3	4	FY 1999 1	2	3	4	FY 2000 1	2	3	4	FY 2001 1	2	3	4	Total
Inputs																						
FY 1996 & Prior	16	4																				20
FY 1997																						
FY 1998																						
FY 1999																						
Outputs																						
FY 1996 & Prior	13		2	4	1																	20
FY 1997																						
FY 1998																						
FY 1999																						

	FY 2000 1	2	3	4	FY 2001 1	2	3	4	FY 2002 1	2	3	4	FY 2003 1	2	3	4	FY 2004 1	2	3	4	FY 2005 1	2	3	4	Total
Inputs																									
FY 2000																									
FY 2001																									
FY 2002																									
FY 2003																									
Outputs																									
FY 2000																									
FY 2001																									
FY 2002																									
FY 2003																									

Remarks:

Installation costs are included within the hardware contract and cannot be broken out.

INDIVIDUAL MODIFICATION	Date	February 1997

MODIFICATION TITLE: OIP Modification to M1A1 COFTS 1-90-05-7877

MODELS OF SYSTEMS AFFECTED: M1A1 UCOFTs.

DESCRIPTION / JUSTIFICATION:

This modification is required because the tank's optics now include filters to protect the crew from eye damage resulting from exposure to lasers. To accomodate the improved optics, a new switch, which induces the eye safe laser filters, has been added and the switch used to change the gunner's sight from high to low power has been redesigned and relocated. Training with the Conduct of Fire Trainers (COFTs) will enable the gunners and commanders to quickly find and use the correct switches by touch.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

	PLANNED	ACCOMPLISHED
Preliminary Design Review:	N/A	
Critical Design Review:	N/A	
Contractor Test and Evaluation:	1Q96	1Q96
Development Test and Evaluation:	N/A	
Initial Operational Test and Evaluation:	2Q96	3Q96
IPR Production Decision	N/A	
TDP Available:	N/A	

INDIVIDUAL MODIFICATION — Date: February 1997

MODIFICATION TITLE (Cont): OIP Modification to M1A1 COFTS 1-90-05-7877

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	95	1.5																	95	1.5
Installation Kits Nonrecurring		0.6																		0.6
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																				
Total Procurement Cost		2.1																		2.1

METHOD OF IMPLEMENTATION: Contractor — ADMINISTRATIVE LEADTIME: 9 Months — PRODUCTION LEADTIME: 18 Months

Contract Dates: FY 1997: — FY 1998: — FY 1999:

Delivery Date: FY 1997: — FY 1998: — FY 1999:

Installation Schedule: OIP Modification to M1A1 COFTS 1-90-05-7877 Date February 1997

	FY 1996 & Prior	FY 1997 1	FY 1997 2	FY 1997 3	FY 1997 4	FY 1998 1	FY 1998 2	FY 1998 3	FY 1998 4	FY 1999 1	FY 1999 2	FY 1999 3	FY 1999 4	FY 2000 1	FY 2000 2	FY 2000 3	FY 2000 4	FY 2001 1	FY 2001 2	FY 2001 3	FY 2001 4	Total
Inputs																						
FY 1996 & Prior	20			20		20	20	15														95
FY 1997																						
FY 1998																						
FY 1999																						
Outputs																						
FY 1996 & Prior				20	20	10	10	20	15													95
FY 1997																						
FY 1998																						
FY 1999																						

	FY 2000 1	FY 2000 2	FY 2000 3	FY 2000 4	FY 2001 1	FY 2001 2	FY 2001 3	FY 2001 4	FY 2002 1	FY 2002 2	FY 2002 3	FY 2002 4	FY 2003 1	FY 2003 2	FY 2003 3	FY 2003 4	FY 2004 1	FY 2004 2	FY 2004 3	FY 2004 4	FY 2005 1	FY 2005 2	FY 2005 3	FY 2005 4	Total
Inputs																									
FY 2000																									
FY 2001																									
FY 2002																									
FY 2003																									
Outputs																									
FY 2000																									
FY 2001																									
FY 2002																									
FY 2003																									

Remarks:

Installation costs are included within the hardware contract and cannot be broken out.

INDIVIDUAL MODIFICATION	Date	February 1997

MODIFICATION TITLE: AEI 1-93-05-4452

MODELS OF SYSTEMS AFFECTED: M1A1 UCOFTs.

DESCRIPTION / JUSTIFICATION:

The Armament Enhancement Initiative (AEI), 120mm tank round modification is required to change the configuration of the M1A1 COFT to the latest configuration of the tank. Addition of new rounds causes switch changes and additional sight reticles in the tank. These changes affect training and can only be provided in the COFT. The COFT will require both hardware and software changes to provide this capability. A key benefit of training with the COFT is in training gunners and commanders on the capability of new rounds with special features without having to fire the actual rounds. Using the existing COFTs without this capability results in severe negative training. The COFT must maintain the same configuration as the tank system it supports.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

	PLANNED	ACCOMPLISHED
Preliminary Design Review:	N/A	
Critical Design Review:	N/A	
Contractor Test and Evaluation:	1Q96	1Q96
Development Test and Evaluation:	N/A	
Initial Operational Test and Evaluation:	2Q96	3Q96
IPR Production Decision	N/A	
TDP Available:	N/A	

INDIVIDUAL MODIFICATION																	Date	February 1997		
MODIFICATION TITLE (Cont):	AEI 1-93-05-4452																			
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	100	1.2																	100	1.2
Installation Kits Nonrecurring		0.5																		0.5
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																				
Total Procurement Cost		1.7																		1.7

METHOD OF IMPLEMENTATION: Contractor ADMINISTRATIVE LEADTIME: 9 Months PRODUCTION LEADTIME: 18 Months

Contract Dates: FY 1997: FY 1998: FY 1999:

Delivery Date: FY 1997: FY 1998: FY 1999:

Installation Schedule: AEI 1-93-05-4452 Date February 1997

	FY 1996 & Prior	FY 1997 1	2	3	4	FY 1998 1	2	3	4	FY 1999 1	2	3	4	FY 2000 1	2	3	4	FY 2001 1	2	3	4	Total
Inputs																						
FY 1996 & Prior	20			20		20	20	20														100
FY 1997																						
FY 1998																						
FY 1999																						
Outputs																						
FY 1996 & Prior				20	20	10	10	20	20													100
FY 1997																						
FY 1998																						
FY 1999																						

	FY 2000 1	2	3	4	FY 2001 1	2	3	4	FY 2002 1	2	3	4	FY 2003 1	2	3	4	FY 2004 1	2	3	4	FY 2005 1	2	3	4	Total
Inputs																									
FY 2000																									
FY 2001																									
FY 2002																									
FY 2003																									
Outputs																									
FY 2000																									
FY 2001																									
FY 2002																									
FY 2003																									

Remarks:

Installation costs are included within the hardware contract and cannot be broken out.

INDIVIDUAL MODIFICATION	Date	February 1997

MODIFICATION TITLE: M1 to M1A1 Modification Kits 1-92-06-4419

MODELS OF SYSTEMS AFFECTED: M1 COFTs

DESCRIPTION / JUSTIFICATION:

The Conduct of Fire Trainer (COFT) provides the ready capability for precision tank gunnery training while reducing the O&S costs associated with ammunition consumption. The COFT is configured to the tank system it supports.

In support of the Abrams fielding schedule, the M1 to M1A1 COFT modification is required to meet the Army's new force structure. All active army divisions, as well as selected National Guard units receiving the M1A1 tank have or will receive the modification. Additionally, the Armor School requires all M1A1 ICOFTs (four COFT crew stations), except for one standard M1 ICOFT and one linked M1 ICOFT used to provide Reserve Component training, be modified (hardware and software) to support basic and advance training of gunners and commanders. This situation establishes a requirement to upgrade the Armor School's M1 ICOFTs to the M1A1 capability.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

	PLANNED	ACCOMPLISHED
Preliminary Design Review:	N/A	
Critical Design Review:	N/A	
Contractor Test and Evaluation:	4Q97	
Development Test and Evaluation:	N/A	
Inital Operational Test and Evaluation:	1Q98	
IPR Production Decision	N/A	
TDP Available:	N/A	

INDIVIDUAL MODIFICATION																		Date	February 1997		
MODIFICATION TITLE (Cont):	M1 to M1A1 Modification Kits 1-92-06-4419																				
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	18	1.2																	18	1.2	
Installation Kits Nonrecurring		1.0																		1.0	
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																					
Total Procurement Cost		2.2																		2.2	

METHOD OF IMPLEMENTATION: Contractor ADMINISTRATIVE LEADTIME: 9 Months PRODUCTION LEADTIME: 18 Months

Contract Dates: FY 1997: FY 1998: FY 1999:

Delivery Date: FY 1997: FY 1998: FY 1999:

Installation Schedule: M1 to M1A1 Modification Kits 1-92-06-4419 Date February 1997

	FY 1996 & Prior	FY 1997 1	FY 1997 2	FY 1997 3	FY 1997 4	FY 1998 1	FY 1998 2	FY 1998 3	FY 1998 4	FY 1999 1	FY 1999 2	FY 1999 3	FY 1999 4	FY 2000 1	FY 2000 2	FY 2000 3	FY 2000 4	FY 2001 1	FY 2001 2	FY 2001 3	FY 2001 4	Total
Inputs																						
FY 1996 & Prior							4		4		4		4		2							18
FY 1997																						
FY 1998																						
FY 1999																						
Outputs																						
FY 1996 & Prior								4		4		4		4		2						18
FY 1997																						
FY 1998																						
FY 1999																						

	FY 2000 1	FY 2000 2	FY 2000 3	FY 2000 4	FY 2001 1	FY 2001 2	FY 2001 3	FY 2001 4	FY 2002 1	FY 2002 2	FY 2002 3	FY 2002 4	FY 2003 1	FY 2003 2	FY 2003 3	FY 2003 4	FY 2004 1	FY 2004 2	FY 2004 3	FY 2004 4	FY 2005 1	FY 2005 2	FY 2005 3	FY 2005 4	Total
Inputs																									
FY 2000																									
FY 2001																									
FY 2002																									
FY 2003																									
Outputs																									
FY 2000																									
FY 2001																									
FY 2002																									
FY 2003																									

Remarks:

Installation costs are included within the hardware contract and cannot be broken out.
Funds are for software modifications to provide ICOFT capability to M1A1 UCOFTs and MCOFTs within the reserve components.

INDIVIDUAL MODIFICATION	Date	February 1997

MODIFICATION TITLE: Conduct of Fire Trainer (COFT) Image Generator (IG) and Computer Upgrade TBD1

MODELS OF SYSTEMS AFFECTED: M1 and M1A1 COFTs

DESCRIPTION / JUSTIFICATION:

The Image Generator (IG) and computer subsystems that are presently being used in the COFTs are approaching obsolescence. It is becoming more difficult to obtain parts for these IGs since they are of the early 1980's design. Sustainability is becoming a major issue as repair and replacement parts are becoming more expensive or entirely not available on the commercial market. Likewise, the software designed to run on these components is also difficult to sustain. The goal is to obtain a replacement IG and computer that will provide for cheaper and easier software changes and more cost effective parts and maintenance. This will position the COFT fleet to support tank units and institutions beyond the year 2000.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

	PLANNED	ACCOMPLISHED
Preliminary Design Review:	N/A	
Critical Design Review:	N/A	
Contractor Test and Evaluation:	3Q98	
Development Test and Evaluation:	N/A	
Inital Operational Test and Evaluation:	4Q98	
IPR Production Decision	N/A	
TDP Available:	N/A	

INDIVIDUAL MODIFICATION																		Date	February 1997
MODIFICATION TITLE (Cont):	Conduct of Fire Trainer (COFT) Image Generator (IG) and Computer Upgrade TBD1																		
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					1	0.1	16	2.4	16	0.8	16	0.8	16	0.8					65	4.9
Installation Kits Nonrecurring				3.2		2.1														5.3
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																				
Total Procurement Cost				3.2		2.2		2.4		0.8		0.8		0.8						10.2

METHOD OF IMPLEMENTATION: Contractor ADMINISTRATIVE LEADTIME: 1 Months PRODUCTION LEADTIME: 15 Months

Contract Dates:	FY 1997:	Jun-97	FY 1998:	Jun-98	FY 1999:	Jun-99		
Delivery Date:	FY 1997:		FY 1998:	Sep-99	FY 1999:	Sep-00		

Installation Schedule: Conduct of Fire Trainer (COFT) Image Generator (IG) and Computer Upgrade Date February 1997

	FY 1996 & Prior	FY 1997 1	FY 1997 2	FY 1997 3	FY 1997 4	FY 1998 1	FY 1998 2	FY 1998 3	FY 1998 4	FY 1999 1	FY 1999 2	FY 1999 3	FY 1999 4	FY 2000 1	FY 2000 2	FY 2000 3	FY 2000 4	FY 2001 1	FY 2001 2	FY 2001 3	FY 2001 4	Total
Inputs																						
FY 1996 & Prior																						
FY 1997																						
FY 1998								1														1
FY 1999												16										16
Outputs																						
FY 1996 & Prior																						
FY 1997																						
FY 1998													1									1
FY 1999																	16					16

	FY 2000 1	FY 2000 2	FY 2000 3	FY 2000 4	FY 2001 1	FY 2001 2	FY 2001 3	FY 2001 4	FY 2002 1	FY 2002 2	FY 2002 3	FY 2002 4	FY 2003 1	FY 2003 2	FY 2003 3	FY 2003 4	FY 2004 1	FY 2004 2	FY 2004 3	FY 2004 4	FY 2005 1	FY 2005 2	FY 2005 3	FY 2005 4	Total
Inputs																									
FY 2000			16																						16
FY 2001							16																		16
FY 2002											16														16
FY 2003																									
Outputs																									
FY 2000								16																	16
FY 2001												16													16
FY 2002																16									16
FY 2003																									

Remarks:

Installation costs are included within the hardware contract and cannot be broken out.
Software block upgrades are included in these costs.

INDIVIDUAL MODIFICATION	Date	February 1997

MODIFICATION TITLE: AGTS/SEP MOD TBD2

MODELS OF SYSTEMS AFFECTED: M1A2 Advanced Gunnery Training System

DESCRIPTION / JUSTIFICATION:

AR 350-38 requires Program Managers to program and budget funds to support changes to fielded training devices resulting from changes or modifications to the system they support. This funding will modify existing M1A2 Advanced Gunnery Training Simulators to represent the most recent SEP changes to the M1A2.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

Examples	PLANNED	ACCOMPLISHED
Preliminary Design Review:	3Q01	
Critical Design Review:	3Q02	
Contractor Test and Evaluation:	3Q03	
Development Test and Evaluation:	3Q03	
Inital Operational Test and Evaluation:	4Q03	
IPR Production Decision	4Q03	
TDP Available:	4Q03	

INDIVIDUAL MODIFICATION — Date: February 1997

MODIFICATION TITLE (Cont): AGTS/SEP MOD TBD2

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															2	1.4	12	6.0	14	7.4
Installation Kits Nonrecurring												1.3		2.4		1.5				5.2
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																				
Total Procurement Cost												1.3		2.4		2.9		6.0		12.6

METHOD OF IMPLEMENTATION: Contractor — ADMINISTRATIVE LEADTIME: 6 Months — PRODUCTION LEADTIME: 18 Months

Contract Dates: FY 1997: FY 1998: FY 1999:

Delivery Date: FY 1997: FY 1998: FY 1999:

Installation Schedule: AGTS/SEP MOD TBD2 Date February 1997

	FY 1996 & Prior	FY 1997 1	2	3	4	FY 1998 1	2	3	4	FY 1999 1	2	3	4	FY 2000 1	2	3	4	FY 2001 1	2	3	4	Total
Inputs																						
FY 1996 & Prior																						
FY 1997																						
FY 1998																						
FY 1999																						
Outputs																						
FY 1996 & Prior																						
FY 1997																						
FY 1998																						
FY 1999																						

	FY 2000 1	2	3	4	FY 2001 1	2	3	4	FY 2002 1	2	3	4	FY 2003 1	2	3	4	FY 2004 1	2	3	4	FY 2005 1	2	3	4	Total
Inputs																									
FY 2000																									
FY 2001																									
FY 2002																									
FY 2003														2											2
Outputs																									
FY 2000																									
FY 2001																									
FY 2002																									
FY 2003																		2							2

Remarks:

Installation costs are included within the hardware contract and cannot be broken out.

INDIVIDUAL MODIFICATION	Date	February 1997

MODIFICATION TITLE: Tank Driver Trainer Mod (M1A2 SEP Upgrade) TBD3

MODELS OF SYSTEMS AFFECTED: M1A1 Tank Driver Trainer

DESCRIPTION / JUSTIFICATION:

The Tank Driver Trainer (TDT) simulates actual tank performance for beginner and transitioning drivers. It provides a range of motion and simulated environments, terrain and situations which are difficult or impossible for the driver to experience in normal training or operations. The M1A2 driver's compartment and tasks are significantly different from the M1A1. This project upgrades existing M1A1 Tank Driver Trainers at the Armor School to match projected throughput of students as more M1A2s enter the field.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

	PLANNED	ACCOMPLISHED
Preliminary Design Review:	N/A	
Critical Design Review:	N/A	
Contractor Test and Evaluation:	3Q00	
Development Test and Evaluation:	N/A	
Inital Operational Test and Evaluation:	4Q00	
IPR Production Decision	N/A	
TDP Available:	N/A	

INDIVIDUAL MODIFICATION																Date		February 1997	
MODIFICATION TITLE (Cont):	Tank Driver Trainer Mod (M1A2 SEP Upgrade) TBD3																		
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							1	1.5	1	1.5					1	0.6			3	3.6
Installation Kits Nonrecurring								2.5												2.5
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																				
Total Procurement Cost								4.0		1.5						0.6				6.1

METHOD OF IMPLEMENTATION: ADMINISTRATIVE LEADTIME: 6 Months PRODUCTION LEADTIME: 18 Months

Contract Dates:	FY 1997:	FY 1998:	FY 1999: Mar 99
Delivery Date:	FY 1997:	FY 1998:	FY 1999: Sep 01

Installation Schedule: Tank Driver Trainer Mod (M1A2 SEP Upgrade) TBD3

Date: February 1997

	FY 1996 & Prior	FY 1997 1	FY 1997 2	FY 1997 3	FY 1997 4	FY 1998 1	FY 1998 2	FY 1998 3	FY 1998 4	FY 1999 1	FY 1999 2	FY 1999 3	FY 1999 4	FY 2000 1	FY 2000 2	FY 2000 3	FY 2000 4	FY 2001 1	FY 2001 2	FY 2001 3	FY 2001 4	Total
Inputs																						
FY 1996 & Prior																						
FY 1997																						
FY 1998																						
FY 1999												1										1
Outputs																						
FY 1996 & Prior																						
FY 1997																						
FY 1998																						
FY 1999																				1		1

	FY 2000 1	FY 2000 2	FY 2000 3	FY 2000 4	FY 2001 1	FY 2001 2	FY 2001 3	FY 2001 4	FY 2002 1	FY 2002 2	FY 2002 3	FY 2002 4	FY 2003 1	FY 2003 2	FY 2003 3	FY 2003 4	FY 2004 1	FY 2004 2	FY 2004 3	FY 2004 4	FY 2005 1	FY 2005 2	FY 2005 3	FY 2005 4	Total
Inputs																									
FY 2000			1																						1
FY 2001																									
FY 2002																									
FY 2003															1										1
Outputs																									
FY 2000												1													1
FY 2001																									
FY 2002																									
FY 2003																				1					1

Remarks:

Installation costs are included within the hardware contract and cannot be broken out.

INDIVIDUAL MODIFICATION	Date	February 1997

MODIFICATION TITLE: Close Combat Tactical Trainer (CCTT)/SEP Mod TBD4

MODELS OF SYSTEMS AFFECTED: Close Combat Tactical Trainer (CCTT)

DESCRIPTION / JUSTIFICATION:

AR 350-38 requires Program Manager to program and budget funds to support changes to fielded training devices resulting from changes or modifications to the system they support. This funding will modify existing Close Combat Tactical Trainer modules to represent the most recent SEP changes to the M1A2.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

Examples	PLANNED	ACCOMPLISHED
Preliminary Design Review:	3Q01	
Critical Design Review:	4Q01	
Contractor Test and Evaluation:	3Q02	
Development Test and Evaluation:	3Q02	
Inital Operational Test and Evaluation:	4Q02	
IPR Production Decision	4Q02	
TDP Available:	4Q02	

INDIVIDUAL MODIFICATION — Date: February 1997

MODIFICATION TITLE (Cont): Close Combat Tactical Trainer (CCTT)/SEP Mod TBD4

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													14	2.7	8	2.5	12	2.7	34	7.9
Installation Kits Nonrecurring										0.2		1.8								2.0
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																				
Total Procurement Cost										0.2		1.8		2.7		2.5		2.7		9.9

METHOD OF IMPLEMENTATION: Contractor — ADMINISTRATIVE LEADTIME: 6 Months — PRODUCTION LEADTIME: 15 Months

Contract Dates: FY 1997: — FY 1998: — FY 1999:

Delivery Date: FY 1997: — FY 1998: — FY 1999:

Installation Schedule: Close Combat Tactical Trainer (CCTT)/SEP Mod TBD4 Date February 1997

	FY 1996 & Prior	FY 1997 1	FY 1997 2	FY 1997 3	FY 1997 4	FY 1998 1	FY 1998 2	FY 1998 3	FY 1998 4	FY 1999 1	FY 1999 2	FY 1999 3	FY 1999 4	FY 2000 1	FY 2000 2	FY 2000 3	FY 2000 4	FY 2001 1	FY 2001 2	FY 2001 3	FY 2001 4	Total
Inputs																						
FY 1996 & Prior																						
FY 1997																						
FY 1998																						
FY 1999																						
Outputs																						
FY 1996 & Prior																						
FY 1997																						
FY 1998																						
FY 1999																						

	FY 2000 1	FY 2000 2	FY 2000 3	FY 2000 4	FY 2001 1	FY 2001 2	FY 2001 3	FY 2001 4	FY 2002 1	FY 2002 2	FY 2002 3	FY 2002 4	FY 2003 1	FY 2003 2	FY 2003 3	FY 2003 4	FY 2004 1	FY 2004 2	FY 2004 3	FY 2004 4	FY 2005 1	FY 2005 2	FY 2005 3	FY 2005 4	Total
Inputs																									
FY 2000																									
FY 2001																									
FY 2002									14																14
FY 2003													8												8
Outputs																									
FY 2000																									
FY 2001																									
FY 2002												14													14
FY 2003																8									8

Remarks:

Installation costs are included within the hardware contract and cannot be broken out.

INDIVIDUAL MODIFICATION	Date	February 1997

MODIFICATION TITLE: Maintenance Training System (MTS) SEP Mod TBD5

MODELS OF SYSTEMS AFFECTED: M1A2 Maintenance Trainers

DESCRIPTION / JUSTIFICATION:

AR 350-38 requires Program Managers to program and budget funds to support changes to fielded training devices resulting from changes or modifications to the system they support. This funding will modify existing M1A2 Maintenance Training Systems to represent the most recent SEP changes to the M1A2.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

Examples	PLANNED	ACCOMPLISHED
Preliminary Design Review:	3Q00	
Critical Design Review:	3Q01	
Contractor Test and Evaluation:	3Q01	
Development Test and Evaluation:	3Q01	
Inital Operational Test and Evaluation:	4Q01	
IPR Production Decision	4Q01	
TDP Available:	4Q01	

INDIVIDUAL MODIFICATION																	Date	February 1997		
MODIFICATION TITLE (Cont):	Maintenance Training System (MTS) SEP Mod TBD5																			
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											34	1.0							34	1.0
Installation Kits Nonrecurring										0.3		0.8								1.1
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																				
Total Procurement Cost										0.3		1.8								2.1

METHOD OF IMPLEMENTATION: Contractor ADMINISTRATIVE LEADTIME: 6 Months PRODUCTION LEADTIME: 15 Months

Contract Dates: FY 1997: FY 1998: FY 1999:

Delivery Date: FY 1997: FY 1998: FY 1999:

Installation Schedule: Maintenance Training System (MTS) SEP Mod TBD5

Date: February 1997

	FY 1996 & Prior	FY 1997 1	FY 1997 2	FY 1997 3	FY 1997 4	FY 1998 1	FY 1998 2	FY 1998 3	FY 1998 4	FY 1999 1	FY 1999 2	FY 1999 3	FY 1999 4	FY 2000 1	FY 2000 2	FY 2000 3	FY 2000 4	FY 2001 1	FY 2001 2	FY 2001 3	FY 2001 4	Total
Inputs																						
FY 1996 & Prior																						
FY 1997																						
FY 1998																						
FY 1999																						
Outputs																						
FY 1996 & Prior																						
FY 1997																						
FY 1998																						
FY 1999																						

	FY 2000 1	FY 2000 2	FY 2000 3	FY 2000 4	FY 2001 1	FY 2001 2	FY 2001 3	FY 2001 4	FY 2002 1	FY 2002 2	FY 2002 3	FY 2002 4	FY 2003 1	FY 2003 2	FY 2003 3	FY 2003 4	FY 2004 1	FY 2004 2	FY 2004 3	FY 2004 4	FY 2005 1	FY 2005 2	FY 2005 3	FY 2005 4	Total
Inputs																									
FY 2000																									
FY 2001								34																	34
FY 2002																									
FY 2003																									
Outputs																									
FY 2000																									
FY 2001								34																	34
FY 2002																									
FY 2003																									

Remarks:

Installation costs are included within the hardware contract and cannot be broken out.

BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

APPROPRIATION / BUDGET ACTIVITY: PROCUREMENT OF WPNS & TRKD CMBT VEHS /Tracked Combat Vehicles

P-1 ITEM NOMENCLATURE: BRADLEY BASE SUSTAINMENT (G80718)

	Prior Years	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Program
QUANTITY	414	102	80	18	78	122	154	128	131	936	2163
COST (in millions)	456.2	133.9	234.8	125.6	342.4	370.0	452.3	376.2	388.9	2782.9	5663.2
Initial Spares (in millions)	12.5	5.2	9.3	0.3	1.5	1.9	1.4	4.1	4.1	57.2	97.5
Total (in millions)	468.7	139.1	244.1	125.9	343.9	371.9	453.7	380.3	393.0	2840.1	5760.7
Unit Cost (in millions)	1.1	1.4	3.1	7.0	4.4	3.0	2.9	3.0	3.0	3.0	2.7

DESCRIPTION: The Bradley Base Sustainment Program initiated a program to upgrade first generation Bradleys(A0) into the A2 configuration and bridge the production gap until the introduction of the A3 upgrade vehicles. FY98 marks the second production year of the A3 configuration. The upgraded A3 Bradley Fighting Vehicle will facilitate enhanced command and control, provide greater lethality, provide mobile protected transport of an infantry squad to critical points on the battlefield, and perform cavalry scout and other claimant missions in the 21 st century. Upgrades in this program include advanced technology in the areas of command and control, lethality, survivability, mobility, and sustainability required to defeat current and future threat forces while remaining operationally compatible with the main battle tank.

JUSTIFICATION: The FY98 Budget will provide the second year of LRIP for the A3 upgrade program. The M2A3 upgrade program will provide digital communications and target acquisition upgrades required to fight as a member of the combined arms team. These vehicles will be remanufactrued in the prime contractor's plant to preserve the critical skills and vendor base to allow for future modernization.

Quantities are all A0-A2's in FY96 and prior, 45 A0-A2 Linebackers and 35 A2-A3's in FY97, and A3's thereafter.

WTCV Cost Analysis	A. APPN / BUDGET ACTIVITY TITLE/NO: PROCUREMENT OF WPNS & TRKD CMBT VEHS / 1 / Tracked Combat Vehicles	B. WEAPON: BRADLEY BASE SUSTAINMENT (G80718)	C. MANUFACTURER NAME	D. DATE: February 1997

WTCV Cost Elements	ID CD	FY 96			FY 97			FY 98			FY 99		
		TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost
		$OOO	Each	$OOO	$OOO	Each	$OOO	$OOO	Each	$OOO	$OOO	Each	$OOO
BRADLEY BASE SUSTAINMENT (M2A2)		133869	105	1275	62478			7266			14014		
BRADLEY BASE SUSTAINMENT (M2A3)					172296	35	4923	118325	18	6574	328409	78	4210
TOTAL													

WTCV Cost Analysis		A. APPN / BUDGET ACTIVITY TITLE/NO PROCUREMENT OF WPNS & TRKD CMBT VEHS / 1 / Tracked Combat Vehicles			B. WEAPON BRADLEY BASE SUSTAINMENT (M2A2/) (G80716)			C. MANUFACTURER NAME			D. DATE February 1997		
WTCV Cost Elements	ID CD	**FY 96**			**FY 97**			**FY 98**			**FY 99**		
		TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost
		$OOO	Each	$OOO	$OOO	Each	$OOO	$OOO	Each	$OOO	$OOO	Each	$OOO
1. VEHICLE		61559	105	586	23059	45	512						
2. T2SS		9609	75	128									
3. Engine		4965	105	47	2250	45	50						
4. Track		1935	105	18	829	45	18						
5. Other GFE (Buy)		7567	105	72	2620	45	58						
6. Other GFE (Reman)		10926	105	104	4992	45	111						
7. STINGER Kits					17270	93	186						
SUBTOTAL		**96561**			**51020**								
8. Govt Test & Eval		651									1880		
9. Engineering-Contractor		16093			3280			4100			4420		
10. Engineering-Government		4303											
11. Project Management Admin		1754											
12. Fielding		6965			7478			3166			7714		
13. Reimbursable Matrix Supt		1933											
SUBTOTAL		**31699**			**10758**			**7266**			**14014**		
13. PSE		5609			700								
TOTAL		**133869**			**62478**			**7266**			**14014**		

BUDGET PROCUREMENT HISTORY AND PLANNING EXHIBIT (P-5A)

DATE: February 1997

B. APPROPRIATION / BUDGET ACTIVITY: PROCUREMENT OF WPNS & TRKD CMBT VEHS / 1 / Tracked Combat Vehicles

C. P-1 ITEM NOMENCLATURE: BRADLEY BASE SUSTAINMENT (M2A2/) (G80716)

LINE ITEM / FISCAL YEAR	CONTRACTOR AND LOCATION	CONTRACT METHOD AND TYPE	CONTRACTED BY	AWARD DATE	DATE OF FIRST DELIVERY	QTY Each	UNIT COST $OOO	SPECS AVAIL NOW	SPEC REV REQ'D	IF YES W/A
1. VEHICLE										
FY XX										
FY 96	UDLP, York PA	SS/FFP	TACOM	Jan-96	May-97	105	586	YES	NO	
FY 97				Apr-97	Jun-98	45	512	YES	NO	
2. T2SS										
FY XX										
FY 96	HAC, LaGrange GA	SS/FFP	AMCOM	Feb-96	Mar-97	75	128	YES	NO	
3. Engine										
FY XX										
FY 96	Cummins, Columbus, IN	SS/FFP	TACOM	Jan-96	Mar-96	105	47	YES	NO	
FY 97				Apr-97	Feb-98	45	50	YES	NO	
4. Track										
FY XX										
FY 96	Goodyear, Akron OH	C/FFP	TACOM	Feb-96	Feb-97	105	18	YES	NO	
FY 97	TBD			Apr-97	Feb-98	45	18	YES	NO	

REMARKS:

FY 98 / 99 BUDGET PRODUCTION SCHEDULE

P-1 ITEM NOMENCLATURE: BRADLEY BASE SUSTAINMENT (M2A2/) (G80716)

DATE: February 1997

COST ELEMENTS	MFR	FY	SERV	PROC QTY Each	ACCEP. PRIOR TO 1 OCT	BAL DUE AS OF 1 OCT	Fiscal Year 96 / Calendar Year 96												Fiscal Year 97 / Calendar Year 97										LATER
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1. VEHICLE		95 & Pr	A	355	80	275	11	10	8	10	10	10	10	10	10	10	10	10	10	10	9	10	10	10	10	10	10	10	10	10	37
	1	FY 96	A	105	0	105				A																3	4	2	4	4	88
		FY 97	A	45	0	45																			A						45
																				1											
TOTAL				505	80	425	11	10	8	10	10	10	10	10	10	10	10	10	10	10	9	10	10	10	10	13	14	12	14	14	170
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

MFR	NAME / LOCATION	PRODUCTION RATES MIN.	1-8-5	MAX.	REACHED D +
1	UDLP, York PA	8	8	20	6

MFR Number		ADMIN LEAD TIME Prior 1 Oct.	After 1 Oct.	MFR After 1 Oct.	TOTAL After 1 Oct.
	INITIAL	8	1	18	19
	REORDER	8	8	17	25
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				

REMARKS

FY 98 / 99 BUDGET PRODUCTION SCHEDULE

P-1 ITEM NOMENCLATURE: BRADLEY BASE SUSTAINMENT (M2A2/) (G80716)

DATE: February 1997

COST ELEMENTS	MFR	FY	SERV	PROC QTY Each	ACCEP. PRIOR TO 1 OCT	BAL DUE AS OF 1 OCT	Fiscal Year 98												Fiscal Year 99										LATER
							Calendar Year 98												Calendar Year 99										
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1. VEHICLE		95 & Pr	A	355	318	37	10	10	10	7																			
	1	FY 96	A	105	17	88	4	4	2	3	10	10	10	10					2	4	4	4	4	4	3	2	2	2		
		FY 97	A	45	0	45									10	6	8	8	5	4	4									
TOTAL				505	335	170	14	14	12	10	10	10	10	10	10	6	8	8	7	8	8	4	4	4	4	3	2	2	2	

MFR	NAME / LOCATION	PRODUCTION RATES MIN.	1-8-5	MAX.	REACHED D +
1	UDLP, York PA				

MFR Number		ADMIN LEAD TIME Prior 1 Oct.	After 1 Oct.	MFR After 1 Oct.	TOTAL After 1 Oct.
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				

REMARKS

WTCV Cost Analysis		A. APPN / BUDGET ACTIVITY TITLE/NO PROCUREMENT OF WPNS & TRKD CMBT VEHS / 1 / Tracked Combat Vehicles			B. WEAPON BRADLEY BASE SUSTAINMENT (M2A3) (G80717)			C. MANUFACTURER NAME			D. DATE February 1997		
WTCV Cost Elements	ID CD	**FY 96**			**FY 97**			**FY 98**			**FY 99**		
		TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost
		$OOO	Each	$OOO	$OOO	Each	$OOO	$OOO	Each	$OOO	$OOO	Each	$OOO
1. Vehicle					65779	35	1879	36280	18	2016	147645	78	1893
2. IBAS					34512	35	986	16974	18	943	65474	78	839
3. FLIR					37629	35	1075	12171	18	676	51566	78	661
4. Other GFE					1683	35	48	1112	18	62	4921	78	63
SUBTOTAL					**139603**	**35**	**3989**	**66537**	**18**	**3697**	**269606**	**78**	**3456**
5. Engineering-Government					8411			9526			12897		
6. Engineering-Contractor					6981			25549			27901		
7. Project Management Administration					1600			1786			1824		
8. Reimbursable Matrix Support					1973			2202			2249		
9. Test and Evaluation					1082			2640			2095		
SUBTOTAL					**20047**			**41703**			**46966**		
10.Cummins Engine Life-of-Type (LOT) Buy					8038	160	50						
11.Peculiar Support Equipment					4608			2200			2095		
12.Fielding								7885			9742		
TOTAL					**172296**			**118325**			**328409**		

BUDGET PROCUREMENT HISTORY AND PLANNING EXHIBIT (P-5A)

DATE: February 1997

B. APPROPRIATION / BUDGET ACTIVITY: PROCUREMENT OF WPNS & TRKD CMBT VEHS / 1 / Tracked Combat Vehicles

C. P-1 ITEM NOMENCLATURE: BRADLEY BASE SUSTAINMENT (M2A3) (G80717)

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. Vehicle										
FY XX										
FY 97	UDLP	SS/FFP	TACOM	Jun-97	Oct-98	35	1879	YES	NO	
FY 98	YORK PA			May-98	Jun-99	18	2016	YES	NO	
FY 99				Dec-98	May-00	78	1893	YES	NO	
2. IBAS										
FY XX										
FY 97	TEXAS INSTRUMENTS	C/FFP	MICOM	Jul-97	Jul-98	35	986	YES	NO	
FY 98	DALLAS TEXAS;			Jun-98	Mar-99	18	943	YES	NO	
FY 99	HAC GEORGIA			Jan-99	Feb-00	78	839	YES	NO	
3. FLIR										
FY XX										
FY 97	TEXAS INSTRUMENTS	SS/FFP	NVL	Mar-97	Apr-98	35	1075	YES	NO	
FY 98	DALLAS TEXAS			Jan-98	Jan-99	18	676	YES	NO	
FY 99				Jan-99	Dec-99	78	661	YES	NO	

REMARKS:

FY 98 / 99 BUDGET PRODUCTION SCHEDULE

P-1 ITEM NOMENCLATURE: BRADLEY BASE SUSTAINMENT (M2A3) (G80717)

DATE: February 1997

COST ELEMENTS	MFR	FY	SERV	PROC QTY Each	ACCEP. PRIOR TO 1 OCT	BAL DUE AS OF 1 OCT	Fiscal Year 96 / Calendar Year 96												Fiscal Year 97 / Calendar Year 97										LATER
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1. Vehicle																														
	1	FY 97	A	35	0	35																					A				35
		FY 98	A	18	0	18																									18
		FY 99	A	78	0	78																									78
TOTAL				131		131																									131

MFR	NAME / LOCATION	PRODUCTION RATES MIN.	1-8-5	MAX.	REACHED D +	MFR Number		ADMIN LEAD TIME Prior 1 Oct.	After 1 Oct.	MFR After 1 Oct.	TOTAL After 1 Oct.	REMARKS
1	UDLP	TBD	TBD	TBD			INITIAL		9	16	25	
	YORK PA						REORDER					
							INITIAL					
							REORDER					
							INITIAL					
							REORDER					
							INITIAL					
							REORDER					
							INITIAL					
							REORDER					

FY 98 / 99 BUDGET PRODUCTION SCHEDULE

P-1 ITEM NOMENCLATURE: BRADLEY BASE SUSTAINMENT (M2A3) (G80717)

DATE: February 1997

COST ELEMENTS	MFR	FY	SERV	PROC QTY Each	ACCEP. PRIOR TO 1 OCT	BAL DUE AS OF 1 OCT	Fiscal Year 98 / Calendar Year 98												Fiscal Year 99 / Calendar Year 99										LATER
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1. Vehicle																														
	1	FY 97	A	35	0	35													2	4	4	4	4	4	4	3	2	2	2	
		FY 98	A	18	0	18								A												1	2	2	2	3	8
		FY 99	A	78	0	78															A										78
TOTAL				131		131													2	4	4	4	4	4	4	4	4	4	4	3	86

MFR	NAME / LOCATION	PRODUCTION RATES MIN.	1-8-5	MAX.	REACHED D +
1	UDLP				
	YORK PA				

MFR Number		ADMIN LEAD TIME Prior 1 Oct.	After 1 Oct.	MFR After 1 Oct.	TOTAL After 1 Oct.
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				

REMARKS

FY 98 / 99 BUDGET PRODUCTION SCHEDULE

P-1 ITEM NOMENCLATURE: BRADLEY BASE SUSTAINMENT (M2A3) (G80717)

DATE: February 1997

COST ELEMENTS	MFR	FY	SERV	PROC QTY Each	ACCEP. PRIOR TO 1 OCT	BAL DUE AS OF 1 OCT	Fiscal Year 00 / Calendar Year 00												Fiscal Year 01 / Calendar Year 01												LATER
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1. Vehicle																														
	1	FY 97	A	35	35																									
		FY 98	A	18	10	8	2	2	2	2																				
		FY 99	A	78	0	78					1	2	3	3	6	7	7	7	7	7	7	7	7	7							
TOTAL				131	45	86	2	2	2	2	1	2	3	3	6	7	7	7	7	7	7	7	7	7							
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

MFR	NAME / LOCATION	PRODUCTION RATES MIN.	1-8-5	MAX.	REACHED D +
1	UDLP				
	YORK PA				

MFR Number		ADMIN LEAD TIME Prior 1 Oct.	After 1 Oct.	MFR After 1 Oct.	TOTAL After 1 Oct.
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				

REMARKS

CODE "B" ITEM DESCRIPTION

DATE	REPORT CONTROL SYMBOL
February 1997	DD-COMP(AR)1092

APPROPRIATION	ACTIVITY	P-1 ITEM NOMENCLATURE
2040	Tracked Combat Vehicles	BRADLEY BASE SUSTAINMENT (G80718)

1. CURRENT DEVELOPMENT AND TEST STATUS

		SCHEDULE DATE		
		CURRENT (1)	LAST RPTD (2)	REASON FOR DELAY* (3)
a. DEV TEST & EVAL (DT&E)	PLAN / ACTUAL	Oct-97	Oct-97	
b. INITIAL OPER TEST & EVAL (IOT&E)	PLAN / ACTUAL	Mar-99	Mar-99	
c. OPER TEST & EVAL (OT&E)	PLAN / ACTUAL	N/A	N/A	
d. AVAIL DATE OF TECH DATA PKG (TDP) OR PERFORMANCE SPECIFICATIONS		Nov-99	Nov-99	

2. ESTIMATED DATE OF APPROVAL FOR SERVICE USE 4Q00

3. EQUIPMENT ITEM(S) TO BE REPLACED

M2A2/M3A2

4. EXTENT OF IMPROVEMENT OVER ITEM(S) OF EQUIPMENT TO BE REPLACED

LETAHALITY,COMAND &CONTROL

5. DEVELOPMENT CONTRACT INFORMATION

CONTRACTOR NAME (1)	PLANT LOCATION (2)	COMPONENT (3)	THROUGH 1996 (4)	1997 (5)	1998 (6)	1999 (7)	BEYOND BYs (8)
UDLP	YORK, PA	INTEGRATION	165234.0	56086.0	43900.0	14600.0	
TEXAS INSTRUMENTS	MCKINNEY,TEXAS	IBAS	53344.0	7754.0	1100.0		
	GOVERNMENT	N/A	35028.0	18763.0	18039.0	10245.0	2020.0
	TEST	N/A	302.0	5150.0	6455.0	9144.0	
TOTAL RDT&E FUNDING			253908.0	87753.0	69494.0	33989.0	2020.0

6. REMARKS

BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

APPROPRIATION / BUDGET ACTIVITY: PROCUREMENT OF WPNS & TRKD CMBT VEHS /Tracked Combat Vehicles

P-1 ITEM NOMENCLATURE: BRADLEY FVS TRAINING DEVICES (G20900)

	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)	0.0	0.6	1.4	9.6	21.1	13.3	4.8	3.4

DESCRIPTION:

1. The Advanced Gunnery Training (AGTS) training objective is proficiency in the use of primary and alternate fire control and sighting equipment against mobile and stationary targets, and single and multiple target arrays in a realistic battlefield environment during daylight, at night, and reduced visibility. The training objectives of AGTS are target acquisition, identification, and engagement IAW established tactical doctrine and procedures. The AGTS is configured in two variants:
   a. Permanent (PAGTS)--used to support institutional training.
   b. Mobile (MAGTS)--used to support unit training. Is deployable anywhere in the world.
2. Hands On Turrent Trainer (HOTT) is a stand alone maintenance trainer used to support institutional training. It replicates an actual Bradley Turret allowing maintainers to trouble shoot, fault isolate, and repair over 100 induced faults.
3. Turret Diagnostic/Troubleshooter is a virtual reality desk top trainer used to suport institutional training. It is designed to support turret related operational repair and alignment skills for proper maintenance.
4. Hull Diagnostic/Troubleshooter is a virtual reality desk top trainer used to support institutional training. It is designed to support turret related operational repair and alignment skills for proper maintenance.
5. Upgrade of Precision Gunnery System (PGS). This currently fielded non-system training device (NSTD) is not compatible on the M2A3/M3A3 Bradley Fighting Vehicle.
6. Upgrade of Thru-Sight Video (TSV). This currently fielded NSTD is not compatible on the M2A3/M3A3 Bradley Fighting Vehicle.
7. Upgrade of MILES 2000. This currently fielded NSTD is not compatible on the M2A3/M3A3 Bradley Fightly Vehicle.
8. Upgrade MILES SAWE. This currently fielded NSTD is not compatible on the M2A3/M3A3 Bradley Fighting Vehicle.
9. Upgrade of Close Combat Tactical (CCTT). CCTT is a combined arms simulation trainer. The currently fielded NSTD simulators at each facility were positioned in an M2A2 configuration. The CCTT simulators at specific installation must be upgraded to reflect the vehicles on that installation.
10. Bradley Desktop Trainer (BDT) is a desktop computer designed to support individual and networked unit training. The computer replicates the interior turret operation of the Bradley vehicle. It provides hands on training of the commanders computer.

JUSTIFICATION:

Introduction of the more technologically advanced Infantry Fighting Vehicle and Cavalry Fighting Vehicles into the Army inventory necessitates a redesign of existing training equipment. The rising cost of fuel, ammunition, repair parts, environmental restrictions, vehicles used exclusively for training, and restriction on the availability of suitable training areas will drastically reduce the capability to provide effective, realistic training on the BFVS through the operational use of the vehicle. The goal of training devices is to provide cost effective training to the soldiers without sacrificing realism. This training equipment will be part of an overall training package which will be used to replicate or substitute for actual vehicle use.

WTCV Cost Analysis	A. APPN / BUDGET ACTIVITY TITLE/NO	B. WEAPON	C. MANUFACTURER NAME	D. DATE
	PROCUREMENT OF WPNS & TRKD CMBT VEHS / 1 / Tracked Combat Vehicles	BRADLEY FVS TRAINING DEVICES (G20900)		February 1997

WTCV Cost Elements	ID CD	FY 96			FY 97			FY 98			FY 99		
		TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost
		$OOO	Each	$OOO	$OOO	Each	$OOO	$OOO	Each	$OOO	$OOO	Each	$OOO
	A												
1.ADVANCED GUNNERY TRAINING SYS													
a. Production											3660	3	1220
b. Government Engineering											360		
SUBTOTAL											**4020**		
2. MAINTENANCE TRAINERS													
a. HOTTS					550	1	550	672	1	672	1629	3	543
b. Hull D/T								290	5	58	290	5	58
c. Turret DTt								400	5	80	400	5	80
d. Government Engineering					22			55			110		
SUBTOTAL					**572**			**1417**			**2429**		
3. PRECISION GUNNERY SYSTEM													
a. Production													
b. Government Engineerig											43		
SUBTOTAL											**43**		
4. MILES 2000													
a. Production											352	44	8
b. Government Engineering											45		
SUBTOTAL											**397**		
BDT													
a. Production											2592	96	27
b. Government Engineering											63		
SUBTOTAL													
TOTAL					**572**			**1417**			**9544**		

BUDGET PROCUREMENT HISTORY AND PLANNING EXHIBIT (P-5A)

DATE: February 1997

B. APPROPRIATION / BUDGET ACTIVITY: PROCUREMENT OF WPNS & TRKD CMBT VEHS / 1 / Tracked Combat Vehicles

C. P-1 ITEM NOMENCLATURE: BRADLEY FVS TRAINING DEVICES (G20900)

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.ADVANCED GUNNERY TRAINING SYS										
FY 99	Lockheed Martin, Orlando, FL	FFP	STRICOM	Oct-98	Aug-00	3	1220	N/A	N/A	N/A
2. MAINTENANCE TRAINERS										
a. HOTT										
FY 97	Contraves, Tampa, FL	FFP	STRICOM	Nov-97	May-99	1	550	N/A	N/A	N/A
FY 98	Contraves, Tampa, FL	FFP	STRICOM	Nov-97	May-00	1	672	N/A	N/A	N/A
FY 99	Contraves, Tampa, FL	FFP	STRICOM	Nov-98	Jun-00	3	543	N/A	N/A	N/A
b. Hull D/T										
FY 98	Contraves, Tampa, FL	FFP	STRICOM	Nov-97	May-99	5	58	N/A	N/A	N/A
FY 99	Contraves, Tampa, FL	FFP	STRICOM	Nov-98	May-00	5	58	N/A	N/A	N/A
c. Turret D/T										
FY 98	Contraves, Tampa, FL	FFP	STRICOM	Nov-97	May-99	5	80	N/A	N/A	N/A
FY99	Contraves, Tampa, FL	FFP	STRICOM	Nov-98	May-00	5	80	N/A	N/A	N/A
4. MILES 2000										
FY99	Cubic Defense, San Diego CA	FFP	STRICOM	Dec-98	Aug-00	44	5	N/A	N/A	N/A
5. BDT										
FY99	UDLP	FFP	STRICOM	Nov-98	Aug-00	96	27	N/A	N/A	N/A

REMARKS:

BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

APPROPRIATION / BUDGET ACTIVITY: PROCUREMENT OF WPNS & TRKD CMBT VEHS /Tracked Combat Vehicles

P-1 ITEM NOMENCLATURE: HEAVY ASSAULT BRIDGE (HAB) TRAINING DEVICES (G84600)

	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003
QUANTITY					5			
COST (In millions)				0.4	15.8	1.3	1.1	

DESCRIPTION: The Wolverine (Heavy Assault Bridge) simulator is an institutional operator training system (near term implementation) and will evolve into a future unit collective training system (mid to far term) implementation. Five institutional operator simulator systems will be located and housed at Ft. Leonard Wood to accomplish Advanced Individual Training (AIT) for the Military Occupational Specialty (MOS) 12B Combat Engineer on Wolverine driver/operator mission functions. Mission functions will include, driving the vehicle and conducting gap crossing operations (e.g. launch and retrieve the bridge) - day/night and in all weather/environmental conditions. Each simulator system will have the capability to train two Wolverine crews (4 MOS 12Fs) concurrently. The average student throughput is approximately 208.

JUSTIFICATION: The simulators will optimize training effectiveness at reduced institutional OPTEMPO costs and will minimize environmental impact to the installation.

WTCV Cost Analysis	A. APPN / BUDGET ACTIVITY TITLE/NO: PROCUREMENT OF WPNS & TRKD CMBT VEHS / 1 / Tracked Combat Vehicles	B. WEAPON: HAB TRAINING DEVICES (G84600)	C. MANUFACTURER NAME: N/A	D. DATE: February 1997

WTCV Cost Elements	ID CD	FY 96			FY 97			FY 98			FY 99		
		TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost
		$OOO	Each	$OOO	$OOO	Each	$OOO	$OOO	Each	$OOO	$OOO	Each	$OOO
Gov't Program Mgmt											398		

FY 96 / 97 BUDGET PRODUCTION SCHEDULE

P-1 ITEM NOMENCLATURE: HAB TRAINING DEVICES (G84600)

DATE: February 1997

COST ELEMENTS	MFR	FY	SERV	PROC QTY Each	ACCEP. PRIOR TO 1 OCT	BAL DUE AS OF 1 OCT	Fiscal Year 96 / Calendar Year 96 OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	Fiscal Year 97 / Calendar Year 97 OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	LATER
HAB Training Device		96 & Pr			0																										
		FY 97			0																										
		FY 98			0																										
		FY 99			0																										
TOTAL																															

MFR	NAME / LOCATION	PRODUCTION RATES MIN.	1-8-5	MAX.	REACHED D +

MFR Number		ADMIN LEAD TIME Prior 1 Oct.	After 1 Oct.	MFR After 1 Oct.	TOTAL After 1 Oct.
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				

REMARKS

The only funding for the budgeted years is in FY99 which is gov't support only. Actual buys will not occur until FY00, therefore there are no reportable deliveries.

FY 96 / 97 BUDGET PRODUCTION SCHEDULE

P-1 ITEM NOMENCLATURE: ABRAMS TANK TRAINING DEVICES (GB1300)

DATE: February 1997

COST ELEMENTS	MFR	FY	SERV	PROC QTY Each	ACCEP. PRIOR TO 1 OCT	BAL DUE AS OF 1 OCT	Fiscal Year 97 / Calendar Year 97												Fiscal Year 98 / Calendar Year 98												LATER
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
		96 & Pr			0																										
		FY 97			0																										
		FY 98			0																										
		FY 99			0																										
TOTAL																														

MFR	NAME / LOCATION	PRODUCTION RATES MIN.	1-8-5	MAX.	REACHED D +

MFR Number		ADMIN LEAD TIME Prior 1 Oct.	After 1 Oct.	MFR After 1 Oct.	TOTAL After 1 Oct.
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				

REMARKS

BUDGET ITEM JUSTIFICATION SHEET				DATE: February 1997				
APPROPRIATION / BUDGET ACTIVITY: PROCUREMENT OF WPNS & TRKD CMBT VEHS /Tracked Combat Vehicles				P-1 ITEM NOMENCLATURE: BRADLEY FVS TRAINING DEVICES (MOD) (GZ2500)				
	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003
QUANTITY								
COST (in millions)	1. 8	0.9	0.0	2.1	4.6	4.9	0.0	0.0

DESCRIPTION: (1) The Conduct of Fire Trainers(COFT) for the Bradley Fighting Vehicle provide training in target acquisition identification and engagement using primary, secondary, and auxiliary fire control and sighting equipment. This training equipment is part of an overall training package which is used to simulate or substitute for actual vehicle use. (2) The requirement to upgrade a specified number (30) of M2A1/M3AI COFTS to replicate the M2A2/M3A2ODS configuration was the result of Operation Desert Storm. (3) Software Upgrades to Bradley Training to Bradley Training Devices to M2/M3A1 COFTs, ODS COFTs, PGS, CCTT, AGTS, Bradley Desktop Trainer.

The intended sites for the M2/M3A1 Conduct of Fire Trainers (COFTs) by converting fifteen (15) M60A3 Mobile Conduct of Fire Trainers (M-COFTs) to M2/M3A1 M-COFTs and two (2) M60A3 Unit of Fire Trainers (U-COFTs) to M2/M3A1 U-COFTs are listed below.

3-161 IN (81 SMB)	1-120 IN (30 SMB)	278 ACR
1-118 IN (218 SMB)	1-167 IN (31 SAB)	2-121 IN (48 SMB)
1-163 IN (116 SAB)	1-124 CAV (49 AD)	E131 CAV (11 ACR)
2-136 IN (MN-STARC)	1-141 IN (49 AD)	
2-278 ACS (278 ACR)	2-141 IN (49 AD)	
3-278 ACS (278 ACR)	3-144 IN (49 AD	
1-119 IN (30 SMB)	CAMP SHELBYTC	

JUSTIFICATION: (1) Conversion of fifteen (15) M60A3 M-COFTS to M2A1/M3A1 M-COFTS and two (2) M60A3 U-COFTs to M2/M3A1 U-COFTs; (2) M2A2/M3A2 Bradley Fighting Vehicle COFT Operation Desert Storm Enhancement Program are required to meet Army's new force structure requirements. (3) Software updates will be required of training devices. Training devices now function based on software. As a system is upgraded/ modified, software on the training device must be modified to ensure no negative training for the soldier.

The average soldier sustainment throughput per year is approximately 3,600 for the BFV Commanders and Gunners in the units who will be receiving training on these COFTS.

BUDGET ITEM JUSTIFICATION SHEET	DATE: February 1997
APPROPRIATION / BUDGET ACTIVITY: PROCUREMENT OF WPNS & TRKD CMBT VEHS /Tracked Combat Vehicles	P-1 ITEM NOMENCLATURE: BRADLEY FVS TRAINING DEVICES (MOD) (GZ2500)

OSIP No. / Classification	Description / All PYs	FY 1997	FY 1998	FY 1999	FY 2000	FY2001	FY 2002	FY 2003
1-93-05-4429	M-COFT CONVERSION							
N/A	7.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1-96-05-4509	ODS COFT ENHANCEMENT							
Operational	8.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1-96-05-4513	Software Upgrades							
Operational	0.0	0.9	0.0	2.1	4.6	4.9	0.0	0.0
Totals	15.7	0.9	0.0	2.1	4.6	4.9	0.0	0.0

MODIFICATION INSTALLATION SUMMARY

Date: September 1996

(TOA, Dollars in Millions)

System/Modification	py FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY2001	FY 2002	FY 2003	TOTAL
No P3a Set for modification									
BRADLEY FVS TRAINING DEVICES (MOD)									
GZ2500									
M-COFT CONVERSION	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ODS COFT ENHANCEMENT	4.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.3
Software Upgrades	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Totals	4.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.3

NOTE: INSTALLATION COST IS NOT SEPARATELY IDENTIFIED ON THE CONTRACT. THEREFORE, P3N NOT APPLICABLE

INDIVIDUAL MODIFICATION	Date	September 1996

MODIFICATION TITLE: M-COFT CONVERSION 1-93-05-4429

MODELS OF SYSTEMS AFFECTED: M2/M3AI M-COFTS

DESCRIPTION / JUSTIFICATION:

The conversion is required to provide the number of M2AI/M3A1 M-COFTS identified by the latest force structure.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

Examples	PLANNED	ACCOMPLISHED
Preliminary Design Review:	N/A	N/A
Critical Design Review:	N/A	N/A
Contractor Test and Evaluation:	1Q96	2Q96
Development Test and Evaluation:	N/A	N/A
Inital Operational Test and Evaluation:	1Q96	2Q96
IPR Production Decision	N/A	N/A
TDP Available:	N/A	N/A

INDIVIDUAL MODIFICATION — Date: September 1996

MODIFICATION TITLE (Cont): M-COFT CONVERSION 1-93-05-4429

FINANCIAL PLAN: ($ In Millions)

	FY 1996 and Prior		FY1997		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	17	7.1																	17	7.1
Installation Kits																				
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	7		8																15	
FY1997 Eqpt -- Kits																				
FY 1998 Eqpt -- Kits					2														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		8		2														17	
Total Procurement Cost		7.1																		7.1

METHOD OF IMPLEMENTATION:

ADMINISTRATIVE LEADTIME: 6 Months

PRODUCTION LEADTIME: 13 Months

Contract Dates:	FY1997:	FY 1998:	FY 1999:
Delivery Date:	FY1997:	FY 1998:	FY 1999:

Installation Schedule: M-COFT CONVERSION 1-93-05-4429 Date September 1996

	FY 1996 & Prior	FY 1997 1	2	3	4	FY 1998 1	2	3	4	FY 1999 1	2	3	4	FY 2000 1	2	3	4	FY 2001 1	2	3	4	Total
Inputs																						
FY 1996 & Prior	17																					17
FY 1997																						
FY 1998																						
FY 1999																						
Outputs																						
FY 1996 & Prior	7			4	4	2																17
FY 1997																						
FY 1998																						
FY 1999																						

	FY 2000 1	2	3	4	FY 2001 1	2	3	4	FY 2000 1	2	3	4	FY 2001 1	2	3	4	FY 2002 1	2	3	4	FY 2003 1	2	3	4	Total
Inputs																									
FY 2000																									
FY 2001																									
FY 2000																									
FY 2001																									
Outputs																									
FY 2000																									
FY 2001																									
FY 2000																									
FY 2001																									

Remarks:

INDIVIDUAL MODIFICATION	Date	September 1996

MODIFICATION TITLE: ODS COFT Enhancement Prog 1-96-05-4509

MODELS OF SYSTEMS AFFECTED: M2/M3A1 U-COFTS

DESCRIPTION / JUSTIFICATION:

The enhancement is required to provide the number of M2A1/M3A1 U-COFTS identified by the latest force structure.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

	PLANNED	ACCOMPLISHED
Preliminary Design Review:	3Q95	3Q95
Critical Design Review:	4Q95	4Q95
Contractor Test and Evaluation:	2Q96	2Q96
Development Test and Evaluation:	N/A	N/A
Inital Operational Test and Evaluation:	3Q96	3Q96
IPR Production Decision	NA	NA
TDP Available:	NA	NA

INDIVIDUAL MODIFICATION																	Date	September 1996		
MODIFICATION TITLE (Cont):	ODS COFT ENHANCEMENT 1-96-05-4509																			
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	30	4.3																	30	4.3
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	30	4.3																	30	4.3
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	30	4.3																	30	4.3
Total Procurement Cost		8.6																		8.6

METHOD OF IMPLEMENTATION: ADMINISTRATIVE LEADTIME: 6 Months PRODUCTION LEADTIME: 22 Months

Contract Dates:	FY 1997:	N/A	FY 1998:	N/A	FY 1999:	N/A
Delivery Date:	FY 1997:	N/A	FY 1998:	NA	FY 1999:	N/A

Installation Schedule: ODS COFT Enhancement Prog 1-96-05-4509 Date September 1996

	FY 1996 & Prior	FY 1997 1	2	3	4	FY 1998 1	2	3	4	FY 1999 1	2	3	4	FY 2000 1	2	3	4	FY 2001 1	2	3	4	Total
Inputs																						
FY 1996 & Prior	30																					30
FY 1997																						
FY 1998																						
FY 1999																						
Outputs																						
FY 1996 & Prior	30																					30
FY 1997																						
FY 1998																						
FY 1999																						

	FY 2000 1	2	3	4	FY 2001 1	2	3	4	FY 2000 1	2	3	4	FY 2001 1	2	3	4	FY 2002 1	2	3	4	FY 2003 1	2	3	4	Total
Inputs																									
FY 2000																									
FY 2001																									
FY 2000																									
FY 2001																									
Outputs																									
FY 2000																									
FY 2001																									
FY 2000																									
FY 2001																									

Remarks:

INDIVIDUAL MODIFICATION	Date	September 1996

MODIFICATION TITLE: Software Upgrades 1-96-05-4513

MODELS OF SYSTEMS AFFECTED: M2/M3AI COFTS, ODS COFTS, Precision Gunnery System, CCTT, AGTS, Bradley Desktop Trainer, and Maintenance Training Systems (HOTT).

DESCRIPTION / JUSTIFICATION:

Software updates will be required of training devices. Training devices now function based on software. As a system is upgraded/modified, software on the training device must be modified to ensure no negative training for the soldier.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES: NOT APPLICABLE FOR SOFTWARE UPGRADES.

	PLANNED	ACCOMPLISHED
Preliminary Design Review:		
Critical Design Review:		
Contractor Test and Evaluation:		
Development Test and Evaluation:		
Inital Operational Test and Evaluation:		
IPR Production Decision		
TDP Available:		

INDIVIDUAL MODIFICATION																	Date	September 1996	
MODIFICATION TITLE (Cont):	Software Upgrades 1-96-05-4513																		
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				0.9				2.1		4.6		4.9								12.5
Installation Kits																				
Installation Kits Nonrecurring																				
Equipment																				
Equipment Nonrecurring																				
Engineering Change Orders																				
Data																				
Training Equipment																				
Support Equipment																				
Other																				
Interim Contractor Support																				
Installation of Hardware																				
FY 1994 & Prior Eqpt -- Kits																				
FY 1995 Eqpt -- Kits																				
FY 1996 Eqpt -- Kits																				
FY 1997 Eqpt -- Kits																				
FY 1998 Eqpt -- kits																				
FY 1999 Eqpt -- kits																				
FY 2000 Eqpt -- kits																				
FY 2001 Eqpt -- kits																				
(FY(TC) Eqpt (xx kits)																				
Total Installation Cost																				
Total Procurement Cost				0.9				2.1		4.6		4.9								12.5

METHOD OF IMPLEMENTATION: Enter Method ADMINISTRATIVE LEADTIME: 24 Months PRODUCTION LEADTIME: 24 Months

Contract Dates:	FY 1997:	N/A	FY 1998:	N/A	FY 1999:	N/A
Delivery Date:	FY 1997:	N/A	FY 1998:	N/A	FY 1999:	N/A

Installation Schedule: Software Upgrades 1-96-05-4513 Date September 1996

	FY 1996 & Prior	FY 1997 1	2	3	4	FY 1998 1	2	3	4	FY 1999 1	2	3	4	FY 2000 1	2	3	4	FY 2001 1	2	3	4	Total
Inputs																						
FY 1996 & Prior																						
FY 1997																						
FY 1998																						
FY 1999																						
Outputs																						
FY 1996 & Prior																						
FY 1997																						
FY 1998																						
FY 1999																						

	FY 2000 1	2	3	4	FY 2001 1	2	3	4	FY 2000 1	2	3	4	FY 2001 1	2	3	4	FY 2002 1	2	3	4	FY 2003 1	2	3	4	Total
Inputs																									
FY 2000																									
FY 2001																									
FY 2000																									
FY 2001																									
Outputs																									
FY 2000																									
FY 2001																									
FY 2000																									
FY 2001																									

Remarks: KIT INSTALLATION NOT APPLICABLE FOR SOFTWARE UPGRADE.

BUDGET ITEM JUSTIFICATION SHEET					DATE February 1997						
APPROPRIATION / BUDGET ACTIVITY PROCUREMENT OF WPNS & TRKD CMBT VEHS /Tracked Combat Vehicles					P-1 ITEM NOMENCLATURE FIELD ARTILLERY AMMUNITION SUPPORT VEH (G80100)						
	Prior Years	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Program
QUANTITY	805	48	48								901
COST (in millions)	408.9	50.0	64.1	0.0	0.0	0.0	0.0	0.0	0.0		523.0
Initial Spares (in millions)	1.8										1.8
Total (in millions)	410.7	50.0	64.1								524.8
Unit Cost (in millions)	0.5	1.0	1.3								0.6

DESCRIPTION:

The Field Artillery Support Vehicle (FAASV) is a full tracked armored ammunition vehicle with onboard Ammunition Handling Equipment (AHE). The M992 is used to support the M109 Self-Propelled Howitzer (SPH). The FAASV is capable of transporting a minimum 12,000 pounds of 155mm ammunition over improved, unimproved, and/or cross-country roads. Armor shielding provides necessary ballistic protection . An armored rear door hinges upward and outward to provide the overhead ballistic protection between the FAASV and the Howitzer during loading operations. A conveyor is used for passing prepared projectiles and propellant charges from the FAASV into the supported Howitzer, Modifications to the rear door, conveyor, and propellant canister racks is incorporated to make the FAASV compatible with the M109A6 Paladin. The FAASV has the mobility equivalent to its supported Self-Propelled Howitzers. The FAASV is designed to operate in all geographical areas and climatic conditions in which the Howitzer operates. The M992A2 was type classified standard in JULY 1994.

JUSTIFICATION:

The Carrier, Ammunition, Tracked (155mm, M992A2) provides a significant Improvement to the Army's offensive ground combat capability. The FAASV provides 100% increase in armor protection for the crew and ammunition, an 80% increase in Ammunition Handling Equipment (AHE) capability and a 50% increase in vehicle mobility over the current M548, which is being replaced on a one-for-one basis. Thus, high artillery firing rates can be maintained while minimizing casualties. The FAASV has a ventilated face piece Nuclear, Biological, Chemical(NBC) system, a Simplified Test Equipment - Internal Combustion Engine (STE-ICE), and an Automatic Fire Extinguisher System. The FAASV is a companion vehicle to, and is required to support the M109A6 Self-Propelled Howitzer (SPH). It also preserves a warm mobilization base for the SPH with the only tooled and experienced producer.

WTCV Cost Analysis		A. APPN / BUDGET ACTIVITY TITLE/NO PROCUREMENT OF WPNS & TRKD CMBT VEHS / 1 / Tracked Combat Vehicles			B. WEAPON FIELD ARTILLERY AMMUNITION SUPPORT VEH (G80100)			C. MANUFACTURER NAME UDLP-GSD			D. DATE February 1997		
WTCV Cost Elements	ID CD	**FY 96**			**FY 97**			**FY 98**			**FY 99**		
		TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost
		$OOO	Each	$	$OOO	Each	$	$OOO	Each	$	$OOO	Each	$
1. Basic Vehicle	A	38637	48	804938	35216	48	733667						
2. Engine		1319	48	27479	1319	48	27479						
3. Roadwheels		144	1344	107	144	1344	107						
4. Track		895	7872	114	897	7872	114						
5. BII		305	48	6354	324	48	6750						
6. Government Furnished Materiel		2955			3702								
7. Engineering Change Orders		95			96								
8. Engineering - Government		1506			6889								
9. Engineering - Contractor		2448			12699								
10. Project Management Administration		600			1370								
11. Initial Production Test		259			332								
12. Fielding		825			1152								
Total		49988		1041417	64140		1336250						

BUDGET PROCUREMENT HISTORY AND PLANNING EXHIBIT (P-5A)

DATE: February 1997

B. APPROPRIATION / BUDGET ACTIVITY

PROCUREMENT OF WPNS & TRKD CMBT VEHS / 1 / Tracked Combat Vehicles

C. P-1 ITEM NOMENCLATURE

FIELD ARTILLERY AMMUNITION SUPPORT VEH (G80100)

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
1. Basic Vehicle										
FY 96	United Defense (UDLP-GSD) York, PA	SS/FFP	TACOM	Jul-96	May-98	48	804938			
FY 97	United Defense (UDLP-GSD) York, PA	OPTION	TACOM	Feb-97	Nov-98	48	733667			
2. Engine										
FY 96	Detroit Deisel Detroit, MI	SS/FFP EPA	TACOM	Jul-96	Nov-97	48	27479			
FY 97	Detroit Deisel Detroit, MI	SS/FFP EPA	TACOM	Jan-97	Aug-98	48	27479			
3. Roadwheels										
FY 96	North American Molded Products Hartville, OH	C/FFP	TACOM	May-96	Oct-97	1344	107			
FY 97	North American Molded Products Hartville, OH	C/FFP	TACOM	Jan-97	Jan-98	1344	107			
4. Track										
FY 96	VAREC, Belgium	C/FFP	TACOM	Jul-96	Oct-98	7672	114			
FY 97	TBD	C/FFP	TACOM	Aug-97	May-98	7672	114			

REMARKS:

FY 98 / 99 BUDGET PRODUCTION SCHEDULE

P-1 ITEM NOMENCLATURE: FIELD ARTILLERY AMMUNITION SUPPORT VEH (G80100)

DATE: February 1997

COST ELEMENTS	MFR	FY	SERV	PROC QTY Each	ACCEP. PRIOR TO 1 OCT	BAL DUE AS OF 1 OCT	Fiscal Year 96 / Calendar Year 96 OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	Fiscal Year 97 / Calendar Year 97 OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	LATER
1. Basic Vehicle		95 & Pr	A		0																										
	1	FY 96	A	48	0	48										A															48
	1	FY 97	A	48	0	48																A									48
TOTAL				96		96																									96

MFR	NAME / LOCATION	PRODUCTION RATES MIN.	1-8-5	MAX.	REACHED D +	MFR Number		ADMIN LEAD TIME Prior 1 Oct.	After 1 Oct.	MFR After 1 Oct.	TOTAL After 1 Oct.	REMARKS
1	United Defense (UDLP-GSD)	6	9	15			INITIAL	6	10	22	32	
							REORDER	3	4	22	26	
							INITIAL					
							REORDER					
							INITIAL					
							REORDER					
							INITIAL					
							REORDER					
							INITIAL					
							REORDER					

FY 98 / 99 BUDGET PRODUCTION SCHEDULE

P-1 ITEM NOMENCLATURE: FIELD ARTILLERY AMMUNITION SUPPORT VEH (G80100)

DATE: February 1997

COST ELEMENTS	MFR	FY	SERV	PROC QTY Each	ACCEP. PRIOR TO 1 OCT	BAL DUE AS OF 1 OCT	Fiscal Year 98 / Calendar Year 98												Fiscal Year 99 / Calendar Year 99										LATER
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1. Basic Vehicle		95 & Pr	A		0																									
	1	FY 96	A	48	0	48								4	9	8	9	9	9											
	1	FY 97	A	48	0	48														8	8	8	8	8	8					
TOTAL				96		96								4	9	8	9	9	9	8	8	8	8	8	8					

MFR	NAME / LOCATION	PRODUCTION RATES MIN.	1-8-5	MAX.	REACHED D +
1	United Defense (UDLP-GSD)	6	9	15	

MFR Number		ADMIN LEAD TIME Prior 1 Oct.	After 1 Oct.	MFR After 1 Oct.	TOTAL After 1 Oct.
	INITIAL	6	10	22	32
	REORDER	3	4	22	26
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				

REMARKS

BUDGET ITEM JUSTIFICATION SHEET						DATE February 1997		
APPROPRIATION / BUDGET ACTIVITY PROCUREMENT OF WPNS & TRKD CMBT VEHS /Tracked Combat Vehicles				P-1 ITEM NOMENCLATURE ARMORED COMBAT EARTHMOVER (G82303)				
	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003
QUANTITY	0	54	0	0	0	0	0	0
COST (in millions)	0.0	51.0	0.0	0.0	0.0	0.0	0.0	0.0

DESCRIPTION: The M9 Armored Combat Earthmover (ACE) is a highly mobile, high speed, tracked, armored combat earthmover. It is air transportable in C130, C141, and C5 aircraft. It provides light armor and chemical protection for the operator and armor protection for the engine and power train. The M9 provides the unique capability to travel at high speeds while retaining the capability for heavy digging. It has been provided to combat engineers and engineer support units. Its primary use is to support maneuver forces by digging survivable fighting positions for tank, infantry, and artillery units and create anti-tank ditches for obstacles.

JUSTIFICATION: Vehicles are required for 4ID units and the mission is to prepare fighting positions for the Army's prime ground combat vehicles, the M1 and M2/M3.

WTCV Cost Analysis	A. APPN / BUDGET ACTIVITY TITLE/NO: PROCUREMENT OF WPNS & TRKD CMBT VEHS / 1 / Tracked Combat Vehicles	B. WEAPON: ARMORED COMBAT EARTHMOVER (G82303)	C. MANUFACTURER NAME	D. DATE: February 1997

WTCV Cost Elements	ID CD	FY 96			FY 97			FY 98			FY 99		
		TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost
		$OOO	Each	$OOO	$OOO	Each	$OOO	$OOO	Each	$OOO	$OOO	Each	$OOO
1. Hardware	A				48060	54	890						
2. Engines					2700	54	50						
3. Engineering													
In House Support					192								
TOTAL					50952								

BUDGET PROCUREMENT HISTORY AND PLANNING EXHIBIT (P-5A)

DATE: February 1997

B. APPROPRIATION / BUDGET ACTIVITY: PROCUREMENT OF WPNS & TRKD CMBT VEHS / 1 / Tracked Combat Vehicles

C. P-1 ITEM NOMENCLATURE: ARMORED COMBAT EARTHMOVER (G82303)

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. Hardware FY97	United Defense LP York, Pennsylvania	SS/FFP	TACOM	Jul-97	Oct-98	54	890	Yes	No	

REMARKS: Breakout of hardware can't be determined until ALPHA contract process is completed. Costs will be determined by using cost as an independent variable.

FY 98 / 99 BUDGET PRODUCTION SCHEDULE

P-1 ITEM NOMENCLATURE: ARMORED COMBAT EARTHMOVER (G82303)

DATE: February 1997

COST ELEMENTS	MFR	FY	SERV	PROC QTY Each	ACCEP. PRIOR TO 1 OCT	BAL DUE AS OF 1 OCT	Fiscal Year 96 / Calendar Year 96												Fiscal Year 97 / Calendar Year 97												LATER
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1. Hardware	1	FY97	A	54	0	54																						A			54
TOTAL				54		54																									54

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

MFR	NAME / LOCATION	PRODUCTION RATES MIN.	1-8-5	MAX.	REACHED D+	MFR Number		ADMIN LEAD TIME Prior 1 Oct.	After 1 Oct.	MFR After 1 Oct.	TOTAL After 1 Oct.	REMARKS
1	UNITED DEFENSE LP/YORK, PENNSYLVANIA	1	7	14		1	INITIAL	0	9	16	25	
							REORDER					
							INITIAL					
							REORDER					
							INITIAL					
							REORDER					
							INITIAL					
							REORDER					
							INITIAL					
							REORDER					

FY 98 / 99 BUDGET PRODUCTION SCHEDULE

P-1 ITEM NOMENCLATURE: ARMORED COMBAT EARTHMOVER (G82303)

DATE: February 1997

COST ELEMENTS	MFR	FY	SERV	PROC QTY Each	ACCEP. PRIOR TO 1 OCT	BAL DUE AS OF 1 OCT	FY98 OCT	FY98 NOV	FY98 DEC	CY98 JAN	CY98 FEB	CY98 MAR	CY98 APR	CY98 MAY	CY98 JUN	CY98 JUL	CY98 AUG	CY98 SEP	FY99 OCT	FY99 NOV	FY99 DEC	CY99 JAN	CY99 FEB	CY99 MAR	CY99 APR	CY99 MAY	CY99 JUN	CY99 JUL	CY99 AUG	CY99 SEP	LATER
1. Hardware	1	FY97	A	54	0	54													2	3	7	7	7	7	7	7	7				
TOTAL				54		54													2	3	7	7	7	7	7	7	7				

MFR	NAME / LOCATION	PRODUCTION RATES MIN.	1-8-5	MAX.	REACHED D+
1	UNITED DEFENSE LP/YORK, PENNSYLVANIA	1	7	14	

MFR Number		ADMIN LEAD TIME Prior 1 Oct.	After 1 Oct.	MFR After 1 Oct.	TOTAL After 1 Oct.
1	INITIAL	0	9	16	25
	REORDER				
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				

REMARKS

BUDGET ITEM JUSTIFICATION SHEET				DATE: February 1997				
APPROPRIATION / BUDGET ACTIVITY: PROCUREMENT OF WPNS & TRKD CMBT VEHS /Tracked Combat Vehicles				P-1 ITEM NOMENCLATURE: ABRAMS TANK TRAINING DEVICES (GB1300)				
	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)	6.1	12.6	13.4	13.9	8.5	11.2	12.6	13.1

M1A2 TRAINING DEVICES

DESCRIPTION: The family of M1A2 Training Aids, Devices, Simulators and Simulations (TADSS) will replicate actual tank performance without incurring the much higher costs of operating the tank itself.

- Advance Gunnery Training System (AGTS) - These are precision gunnery trainers which provide realistic commander and gunner training under varying scenarios as well as atmospheric conditions. The System Enhancement Program (SEP) improvements will be cut into production in FY98.

- Maintenance Trainers - These systems provide training in essential unit and direct support/general support tasks. There are four different trainers: M1A2 Hands-on-Trainer (HOT); Hull Electrical Diagnostic/Troubleshooting (D/T) Trainer; Turret/Fire control D/T Trainer; and Direct Support Electrical System Test Set Line Replaceable Unit (DSESTS LRU) simulators. The students (approx 600/yr) will learn about the sub-systems and procedures for troubleshooting and fault isolating the tank system. The intended sites are Ft. Knox and Aberdeen Proving Grounds.

- SEP Integration - This funding provides for integration of SEP improvements into the various training devices impacted by those changes on the tank.

JUSTIFICATION: Fielding of the M1A2 Main Battle Tank requires concurrent fielding of a training support package. Rising O&S costs will drastically reduce the capability to provide effective, realistic training on the M1A2 tanks through the operational use of the vehicle. Realistic training on a family of training devices simply makes better economic sense.

WTCV Cost Analysis		A. APPN / BUDGET ACTIVITY TITLE/NO PROCUREMENT OF WPNS & TRKD CMBT VEHS / 1 / Tracked Combat Vehicles			B. WEAPON ABRAMS TANK TRAINING DEVICES (GB1300)			C. MANUFACTURER NAME Various			D. DATE February 1997		
WTCV Cost Elements	ID CD	FY 96			FY 97			FY 98			FY 99		
		TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost
		$OOO	Each	$OOO	$OOO	Each	$OOO	$OOO	Each	$OOO	$OOO	Each	$OOO
Adv Gunnery Training System (AGTS)	A												
SUBTOTAL													
1) Production		1819			6600			7700			8800		
2) Gov't Spt		206			550			550			400		
3) First Article Test		268									300		
4) Non Recurring Cost		2907			2840			1768					
SUBTOTAL		**5200**	**7**	**743**	**9990**	**6**	**1665**	**10018**	**6**	**1670**	**9500**	**8**	**1188**
M1A2 Maintenance Trainers	A												
1) Production		750											
2) Gov't Spt		183											
3) First Article Test													
4) Non Recurring Cost													
SUBTOTAL		**933**	**VAR**	**VAR**									
M1A2 Non System Integration Kits	A												
1) Production					550								
2) Gov't Spt					50								
3) First Article Test													
4) Non Recurring Cost													
SUBTOTAL					**600**	**VAR**	**VAR**						
M1A2 Software Upgrades	A												
1) Production													
2) Gov't Spt								100			100		
3) First Article Test					100								
4) Non Recurring Cost					900			1100			1100		
SUBTOTAL					**1000**	**VAR**	**VAR**	**1200**	**VAR**	**VAR**	**1200**	**VAR**	**VAR**
SEP Integration	A												
1) Production								633			3000		
2) Gov't Spt								50			50		
3) First Article Test											100		
4) Non Recurring Cost					1000			1450					
SUBTOTAL					**1000**	**VAR**	**VAR**	**2133**	**VAR**	**VAR**	**3150**	**VAR**	**VAR**
TOTAL		**6133**			**12590**			**13351**			**13850**		

BUDGET PROCUREMENT HISTORY AND PLANNING EXHIBIT (P-5A)

DATE: February 1997

B. APPROPRIATION / BUDGET ACTIVITY: PROCUREMENT OF WPNS & TRKD CMBT VEHS / 1 / Tracked Combat Vehicles

C. P-1 ITEM NOMENCLATURE: ABRAMS TANK TRAINING DEVICES (GB1300)

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
Adv Gunnery Training System (AGTS)										
FY 96	Lockheed Martin, Orlando, FL	C-FPI	STRICOM	Feb-96	May-97	VAR	VAR	Yes	No	
FY 97	Lockheed Martin, Orlando, FL	C-FPI	STRICOM	Jan-97	Mar-98	VAR	VAR	Yes	No	
FY 98	Lockheed Martin, Orlando, FL	C-FPI	STRICOM	Mar-98	Mar-00	VAR	VAR			
FY 99	Lockheed Martin, Orlando, FL	C-FPI	STRICOM	Jan-99	Mar-01	VAR	VAR			
M1A2 Maintenance Trainers										
FY 96	Contraves, Tampa, FL	C-FFP	STRICOM	Mar-96	Mar-98	VAR	VAR	Yes	No	
M1A2 Non System Integration Kits 1/										
FY 97	Various	C-FFP	STRICOM	Mar-97	Jun-98	VAR	VAR	No	No	
M1A2 Software Upgrades 2/										
FY 97	Various	C-FFP	STRICOM	Dec-96	Dec-97	VAR	VAR	No	No	
FY 98	Various	C-FFP	STRICOM	Dec-97	Dec-98	VAR	VAR	No	No	
FY 98	Various	C-FFP	STRICOM	Dec-98	Dec-99	VAR	VAR	No	No	
SEP Integration										
FY 97	Lockheed Martin, Orlando, FL	C-PIF	STRICOM	Feb-97	NA	VAR	VAR	No	No	
FY 98	Lockheed Martin, Orlando, FL	C-PIF	STRICOM	Feb-98	NA	VAR	VAR	No	No	
FY 99	Lockheed Martin, Orlando, FL	C-PIF	STRICOM	Feb-99	Mar-00	VAR	VAR	No	No	

REMARKS:

1/ M1A2 Non-System Integration Kits provide system unique kits allowing the installation of Non-System Training Devices, such as Thru Sight Video (TSV), Tank Weapon Gun Simulation System (TWGSS) and Precision Range Integrated Maneuver Exercise (PRIME), and Multiple Integrated Laser Engagement System (MILES) onto the M1A2 tank.

2/ M1A2 trainer software upgrades update M1A2 training devices to keep pace with changes in the M1A2 tank.

FY 98 / 99 BUDGET PRODUCTION SCHEDULE

P-1 ITEM NOMENCLATURE: ABRAMS TANK TRAINING DEVICES (GB1300)

DATE: February 1997

COST ELEMENTS	MFR	FY	SERV	PROC QTY Each	ACCEP. PRIOR TO 1 OCT	BAL DUE AS OF 1 OCT	Fiscal Year 96 / Calendar Year 96												Fiscal Year 97 / Calendar Year 97										LATER
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
Adv Gunnery Training System (AGTS)	1	95 & Pr	A	6	4	2																					1			1
	1	FY 96	A	2	0	2					A																			2
	1	FY 97	A	6	0	6																A								6
	1	FY 98	A	7	0	7																								7
	1	FY 99	A	8	0	8																								8
TOTAL				29	4	25																					1			24

MFR	NAME / LOCATION	PRODUCTION RATES MIN.	1-8-5	MAX.	REACHED D +
1	Lockheed Martin, Orlando, FL	N/A	N/A	N/A	N/A

MFR Number		ADMIN LEAD TIME Prior 1 Oct.	After 1 Oct.	MFR After 1 Oct.	TOTAL After 1 Oct.
1	INITIAL	6	2	18	20
	REORDER	2	2	6	8
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				

REMARKS

FY 98 / 99 BUDGET PRODUCTION SCHEDULE

P-1 ITEM NOMENCLATURE: ABRAMS TANK TRAINING DEVICES (GB1300)

DATE: February 1997

COST ELEMENTS	MFR	FY	SERV	PROC QTY Each	ACCEP. PRIOR TO 1 OCT	BAL DUE AS OF 1 OCT	Fiscal Year 98 / Calendar Year 98 OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	Fiscal Year 99 / Calendar Year 99 OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	LATER
Adv Gunnery Training System (AGTS)	1	95 & Pr	A	6	5	1	1																								
	1	FY 96	A	2	0	2	2																								
	1	FY 97	A	6	0	6						4	2																		
	1	FY 98	A	7	0	7						A																			7
	1	FY 99	A	8	0	8																A									8
TOTAL				29	5	24	3					4	2																		15

MFR	NAME / LOCATION	PRODUCTION RATES MIN.	1-8-5	MAX.	REACHED D +
1	Lockheed Martin, Orlando, FL	N/A	N/A	N/A	N/A

MFR Number		ADMIN LEAD TIME Prior 1 Oct.	After 1 Oct.	MFR After 1 Oct.	TOTAL After 1 Oct.
1	INITIAL	6	2	18	20
	REORDER	2	2	6	8
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				

REMARKS

FY 98 / 99 BUDGET PRODUCTION SCHEDULE

P-1 ITEM NOMENCLATURE: ABRAMS TANK TRAINING DEVICES (GB1300)

DATE: February 1997

COST ELEMENTS	MFR	FY	SERV	PROC QTY Each	ACCEP. PRIOR TO 1 OCT	BAL DUE AS OF 1 OCT	Fiscal Year 00 / Calendar Year 00												Fiscal Year 01 / Calendar Year 01										LATER
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
Adv Gunnery Training System (AGTS)	1	95 & Pr	A	6	6																								
	1	FY 96	A	2	2																								
	1	FY 97	A	6	6																								
	1	FY 98	A	7	0	7						2	1	4															
	1	FY 99	A	8	0	8																		4	2	2				
																				1										
TOTAL				29	14	15						2	1	4										4	2	2				

MFR	NAME / LOCATION	PRODUCTION RATES MIN.	1-8-5	MAX.	REACHED D +
1	Lockheed Martin, Orlando, FL	N/A	N/A	N/A	N/A

MFR Number		ADMIN LEAD TIME Prior 1 Oct.	After 1 Oct.	MFR After 1 Oct.	TOTAL After 1 Oct.
1	INITIAL	6	2	18	20
	REORDER	2	2	6	8
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				

REMARKS

BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

APPROPRIATION / BUDGET ACTIVITY: PROCUREMENT OF WPNS & TRKD CMBT VEHS /Tracked Combat Vehicles

P-1 ITEM NOMENCLATURE: COMMAND & CONTROL VEHICLE (G84200)

	Prior Years	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Program
QUANTITY			5	5	14	22	35	22	35	301	439
COST (in millions)			48.9	30.9	62.7	100.0	122.9	86.8	123.9	1008.0	1584.1
Initial Spares (in millions)				1	1						1.8
Total (in millions)			48.9	31.8	63.6	100.0	122.9	86.8	123.9	1008.0	1585.9
Unit Cost (in millions)			9.8	6.4	4.5	4.5	3.5	3.9	3.5	3.3	3.6

DESCRIPTION: The Command and Control Vehicle (C2V), XM4 provides a fully tracked, armored vehicle based on Bradley A2 and MLRS designs and components. It will ensure a mobile, responsive, and survivable command and control capability for the heavy force, and it provides the platform to support command and control on the move. C2V was developed in response to lessons learned during Operation Desert Storm. It supports the Army Digitization Effort, incorporating communications and electronic systems compatible with Army Tactical Command and Control Systems (ATCCS). .

JUSTIFICATION: This program was initiated as a result of deficiencies in existing command and control vehicles identified during Operation Desert Storm.

WTCV Cost Analysis		A. APPN / BUDGET ACTIVITY TITLE/NO PROCUREMENT OF WPNS & TRKD CMBT VEHS / 1 / Tracked Combat Vehicles			B. WEAPON COMMAND & CONTROL VEHICLE (G84200)			C. MANUFACTURER NAME United Defense Limited Partnership (UDLP)			D. DATE February 1997		
WTCV Cost Elements	ID CD	**FY 96**			**FY 97**			**FY 98**			**FY 99**		
		TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost
		$OOO	Each	$OOO	$OOO	Each	$OOO	$OOO	Each	$OOO	$OOO	Each	$OOO
1. Vehicle					12394	5	2479	15668	5	3134	35507	14	2536
2. Engine (included in LOT buy)													
3. Transmission					739	5	148	754	5	151	2155	14	154
4. Primary Power Unit											2656	14	190
5. Environmental Control Unit											592	14	42
6. Bio Chem Unit											1654	14	118
7. Spall Liners (Kevlar)											820	14	59
8. Other GFE					141	5	28	155	5	31	442	14	32
9. Mission Component Integration					1826	5	365	1475	5	295	3087	14	221
10. Veh Inter/Intra Communication System (VIICS)					396	5	79	226	5	45	629	14	45
Subtotal Hardware Cost					**15496**			**18278**			**47542**		
11. Tooling													
12. FAT/Qual of Vendors													
Subtotal Non Recurring Production													
13. Test								680			964		
14. Engineering-Government					1185			2791			2845		
15. Engineering Contractor					9296			7179			9761		
16. Project Management Administration					300			408			438		
17. Reimbursable Matrix Support					190			389			418		
18. Software Support					522			286			292		
19. Logistics								886			421		
20. Cummins Engine Life-of-Type (LOT) Buy					21950	439	50						
TOTAL					**48939**			**30897**			**62681**		

BUDGET PROCUREMENT HISTORY AND PLANNING EXHIBIT (P-5A)

DATE: February 1997

B. APPROPRIATION / BUDGET ACTIVITY: PROCUREMENT OF WPNS & TRKD CMBT VEHS / 1 / Tracked Combat Vehicles

C. P-1 ITEM NOMENCLATURE: COMMAND & CONTROL VEHICLE (G84200)

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. Vehicle										
FY 97	UDLP, York, PA	SS/FFP	TACOM	Dec-96	Apr-98	5	2479		No	
FY 98	UDLP, York, PA	SS/FFP	TACOM	Dec-97	Apr-99	5	3134		No	
FY 99	UDLP, York, PA	SS/FFP	TACOM	Dec-98	Apr-00	14	2536		No	
3. Transmission										
FY 97	Lockheed-Martin, Pittsfield, MA	SS/FFP	TACOM	Mar-97	Apr-98	5	148		No	
FY 98	Lockheed-Martin, Pittsfield, MA	SS/FFP	TACOM	Mar-98	Apr-99	5	151		No	
FY 99	Lockheed-Martin, Pittsfield, MA	SS/FFP	TACOM	Mar-99	Apr-00	14	154		No	
4. Primary Power Unit										
FY 99	TBD	TBD	TACOM	Dec-98	Apr-00	14	190		No	
5. Environmental Control Unit										
FY 99	TBD	TBD	TACOM	Dec-98	Apr-00	14	42		No	
6. Bio Chem Unit										
FY 99	TBD	TBD	TACOM	Dec-98	Apr-00	14	118		No	
7. Kevlar Armor										
FY 99	TBD	TBD	TACOM	Dec-98	Apr-00	14	59		No	
9. Mission Component Integration										
FY 97	LM West Dev Lab, San Jose, CA	FP-Op	CECOM	Feb-97	Apr-98	5	365		No	
FY 98	LM West Dev Lab, San Jose, CA	FP-Op	CECOM	Dec-97	Apr-99	5	295		No	
FY 99	LM West Dev Lab, San Jose, CA	FP-Op	CECOM	Dec-98	Apr-00	14	221		No	

REMARKS: LM West Dev Lab - Lockheed-Martin Western Development Labs

FY 98: High vehicle cost reflects reduced business base

FY 99: Breakout of Primary Power Unit, Environmental Control Unit, Bio Chem Unit, and Kevlar Armor

BUDGET PROCUREMENT HISTORY AND PLANNING EXHIBIT (P-5A)

DATE: February 1997

B. APPROPRIATION / BUDGET ACTIVITY: PROCUREMENT OF WPNS & TRKD CMBT VEHS / 1 / Tracked Combat Vehicles

C. P-1 ITEM NOMENCLATURE: COMMAND & CONTROL VEHICLE (G84200)

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
10. Veh Inter/Intra Communication System										
FY 97	LM West Dev Lab, San Jose, CA	FP	CECOM	Feb-97	Apr-98	5	79		No	
FY 98	LM West Dev Lab, San Jose, CA	FP	CECOM	Dec-97	Apr-99	5	45		No	
FY 99	LM West Dev Lab, San Jose, CA	FP	CECOM	Dec-98	Apr-00	14	45		No	

REMARKS: LM West Dev Lab - Lockheed-Martin Western Development Labs

FY 98: High vehicle cost reflects reduced business base

FY 99: Breakout of Primary Power Unit, Environmental Control Unit, Bio Chem Unit, and Spall Liners(Kevlar)

FY 98 / 99 BUDGET PRODUCTION SCHEDULE

P-1 ITEM NOMENCLATURE: COMMAND & CONTROL VEHICLE (G84200)

DATE: February 1997

COST ELEMENTS	MFR	FY	SERV	PROC QTY Each	ACCEP. PRIOR TO 1 OCT	BAL DUE AS OF 1 OCT	Fiscal Year 97 / Calendar Year 97												Fiscal Year 98 / Calendar Year 98										LATER
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1. Vehicle																														
	1	FY 97	A	5	0	5																			2	1	2				
	1	FY 98	A	5	0	5															A										5
	1	FY 99	A	14	0	14																									14
TOTAL				24		24																			2	1	2				19

MFR	NAME / LOCATION	PRODUCTION RATES MIN.	PRODUCTION RATES 1-8-5	PRODUCTION RATES MAX.	REACHED D +
1	UDLP, York, PA				

MFR Number		ADMIN LEAD TIME Prior 1 Oct.	ADMIN LEAD TIME After 1 Oct.	MFR After 1 Oct.	TOTAL After 1 Oct.
1	INITIAL		8	14	22
	REORDER		8	14	22
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				

REMARKS

FY 98 / 99 BUDGET PRODUCTION SCHEDULE

P-1 ITEM NOMENCLATURE: COMMAND & CONTROL VEHICLE (G84200)

DATE: February 1997

COST ELEMENTS	MFR	FY	SERV	PROC QTY Each	ACCEP. PRIOR TO 1 OCT	BAL DUE AS OF 1 OCT	Fiscal Year 99 / Calendar Year 99												Fiscal Year 00 / Calendar Year 00												LATER
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1. Vehicle																															
	1	FY 97	A	5	5																										
	1	FY 98	A	5	0	5							2	1	2																
	1	FY 99	A	14	0	14			A																1	1	1	1	1	1	8
TOTAL				24	5	19							2	1	2										1	1	1	1	1	1	8

MFR	NAME / LOCATION	PRODUCTION RATES MIN.	1-8-5	MAX.	REACHED D +
1	UDLP, York, PA				

MFR Number		ADMIN LEAD TIME Prior 1 Oct.	After 1 Oct.	MFR After 1 Oct.	TOTAL After 1 Oct.
1	INITIAL		8	14	22
	REORDER		8	14	22
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				
	INITIAL				
	REORDER(2)				
	INITIAL				
	REORDER				

REMARKS

FY 98 / 99 BUDGET PRODUCTION SCHEDULE

P-1 ITEM NOMENCLATURE: COMMAND & CONTROL VEHICLE (G84200)

DATE: February 1997

COST ELEMENTS	MFR	FY	SERV	PROC QTY Each	ACCEP. PRIOR TO 1 OCT	BAL DUE AS OF 1 OCT	Fiscal Year 01 / Calendar Year 01												Fiscal Year 02 / Calendar Year 02												LATER
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1. Vehicle																														
	1	FY 97	A	5	5																									
	1	FY 98	A	5	5																									
	1	FY 99	A	14	6	8	1	1	1	1	2	2								1										
TOTAL				24	16	8	1	1	1	1	2	2																		

MFR	NAME / LOCATION	PRODUCTION RATES MIN.	1-8-5	MAX.	REACHED D +
1	UDLP, York, PA				

MFR Number		ADMIN LEAD TIME Prior 1 Oct.	After 1 Oct.	MFR After 1 Oct.	TOTAL After 1 Oct.
1	INITIAL		8	14	22
	REORDER		8	14	22
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				

REMARKS

CODE "B" ITEM DESCRIPTION

DATE	REPORT CONTROL SYMBOL
February 1997	DD-COMP(AR)1092

APPROPRIATION	ACTIVITY	P-1 ITEM NOMENCLATURE
PROCUREMENT OF WPNS & TRKD CMBT VEHS	Tracked Combat Vehicles	COMMAND & CONTROL VEHICLE (G84200)

1. CURRENT DEVELOPMENT AND TEST STATUS

		SCHEDULE DATE		
		CURRENT (1)	LAST RPTD (2)	REASON FOR DELAY* (3)
a. DEV TEST & EVAL (DT&E)	PLAN / ACTUAL	Aug-95	Aug-95	
b. INITIAL OPER TEST & EVAL (IOT&E)	PLAN / ACTUAL	Mar-99	Mar-99	
c. OPER TEST & EVAL (OT&E)	PLAN / ACTUAL			
d. AVAIL DATE OF TECH DATA PKG (TDP) OR PERFORMANCE SPECIFICATIONS		Sep-98	Sep-98	

2. ESTIMATED DATE OF APPROVAL FOR SERVICE USE

3. EQUIPMENT ITEM(S) TO BE REPLACED

M577

4. EXTENT OF IMPROVEMENT OVER ITEM(S) OF EQUIPMENT TO BE REPLACED

Increased servivability,mobility, responsiveness, and growth. A Desert Storm Initiative.

5. DEVELOPMENT CONTRACT INFORMATION

CONTRACTOR NAME (1)	PLANT LOCATION (2)	COMPONENT (3)	THROUGH 1996 (4)	1997 (5)	1998 (6)	1999 (7)	BEYOND BYs (8)
UDLP	San Jose CA/York PA		61.1	2.8	1.8		
Other Contract	San Jose CA		18.0	1.1			
In House/Other			16.2	3.8	7.1		
TOTAL RDT&E FUNDING			95.3	7.7	8.9		

6. REMARKS

TDP development relates to spares only and not to the entire vehicle due to Army templating.

* Reference entries on attachment to P-19 if additional space is required to adequately explain delay from previous date.

BUDGET ITEM JUSTIFICATION SHEET						DATE February 1997		
APPROPRIATION / BUDGET ACTIVITY PROCUREMENT OF WPNS & TRKD CMBT VEHS /Tracked Combat Vehicles				P-1 ITEM NOMENCLATURE CARRIER, MOD (GB1930)				
	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)	48.0	43.0	20.2	34.0	41.3	41.2	44.7	45.4

DESCRIPTION: The M113 Family will consist of 21,400 vehicles on the FY96 Table of Authorization and Equipment with almost 700 carriers in each mechanized division. These carriers provide essential transport for troops, antitank weapons, air defense systems, electronic warfare (EW) shelters, mortars, command centers, and cargo. The current fleet will be required for at least 20-30 more years and must be continuously modified to ensure safety, provide operational stability and reduce logistical burden. Operations Just Cause and Desert Storm highlighted the need to upgrade the mobility and chemical protection of this fleet, to further enhance performance, reliability, survivability, and supportability.

JUSTIFICATION:

1. CREW CHEMICAL PROTECTION: Provides vehicular adaptation, attachments, and connections to permit use of the current Ventilated Face Mask (VFM) subsystems. The VFM system includes the necessary blowers, filters, heaters, hoses and switches, and vehicle and subsystem electrical installation hardware for use in conjunction with an individual's personal M14A1 face mask. Permits operational use of the vehicle in a nuclear, biological, and chemical (NBC) environment.

2. DRIVER'S NIGHT VIEWER: The M19 image intensifier currently used on the M113 FOV has limited night vision. The AN/VVS-2(V)1A driver's night viewer has been adapted for use on the M113 FOV. The driver's night viewer enhances operational capability by providing capability for travelling in darkness and low visibility conditions equal to that on the Abrams and Bradley forces.

3. BLOCK 1: Provides improvements to enhance crew survivability and mobility to meet operational requirements. Addition of a turbo charged diesel engine provides horsepower which increases vehicle survivability/mobility. Coupling the higher output engine with the improved transmission results in a more reliable power train. The spall liner and external fuel tanks significantly improve crew survivability.

4. FUEL SYSTEM: The M577A2 currently incorpoates a 4.2KW mogas powered generator. The Army transitioned to all diesel generators in the mid 1980's and a new diesel generator is scheduled to be available by FY 96. This modification incorporates additional fuel lines to permit the generators to use on board vehicle diesel fuel. This modification will be incorporated at a rate consistent with receipt of new generators.

BUDGET ITEM JUSTIFICATION SHEET	DATE: February 1997
APPROPRIATION / BUDGET ACTIVITY: PROCUREMENT OF WPNS & TRKD CMBT VEHS /Tracked Combat Vehicles	P-1 ITEM NOMENCLATURE: CARRIER, MOD (GB1930)

OSIP No. / Classification	Description: All PYs	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003
1-91-05-4311	Crew Chemical Protection							
Oper Capability	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
1-94-05-4463	Driver's Night Viewer							
Oper Capability	1.4	1.1	1.6	1.8	1.4	1.4	1.4	1.4
1-84-05-4026	Block I							
Oper Capability	276.9	40.1	16.9	30.6	37.7	37.6	41.1	41.8
1-91-05-4312	Fuel Systems							
Oper Capability	3.4	0.8	0.7	0.6	1.2	1.2	1.2	1.2
Totals	282.7	43.0	20.2	34.0	41.3	41.2	44.7	45.4

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
CARRIER, MOD									
GB1930									
Crew Chemical Protection	0.0	0.5	0.4	0.4	0.4	0.4	0.4	0.4	2.9
Driver's Night Viewer	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Block I	7.2	8.1	5.9	1.4	4.9	5.2	5.2	5.8	43.7
Fuel Systems	0.2	0.6	0.1	0.2	0.1	0.3	0.2	0.3	2.0
Totals	7.4	9.2	6.4	2.0	5.4	5.9	5.8	6.5	48.6

INDIVIDUAL MODIFICATION	Date	February 1997

MODIFICATION TITLE: Crew Chemical Protection 1-91-05-4311

MODELS OF SYSTEMS AFFECTED: M113A2, M113A3, M577A2

DESCRIPTION / JUSTIFICATION:

Provides vehicular adaptation, attachments and connections to permit use of the current Ventilated Face Mask (VFM) subsystem. The VFM system includes the necessary blowers, filters, heaters, hoses and switches, and vehicle and subsystem electrical installation hardware for use in conjunction with an individual's personal M14A1 face mask. Permits operational use of the vehicle in a nuclear, biological, and chemical (NBC) environment.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

	PLANNED	ACCOMPLISHED
Preliminary Design Review:		N/A
Critical Design Review:		N/A
Contractor Test and Evaluation:		N/A
Development Test and Evaluation:		N/A
Inital Operational Test and Evaluation:		N/A
IPR Production Decision		N/A
TDP Available:		Feb-92

INDIVIDUAL MODIFICATION																	Date	February 1997		
MODIFICATION TITLE (Cont):	Crew Chemical Protection 1-91-05-4311																			
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	382	1.0	188	0.5	221	0.6	216	0.6	211	0.6	207	0.6	202	0.6	198	0.6	3224	10.9	5049	16.0
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			287	0.5	95	0.2													382	0.7
FY 1997 Eqpt -- Kits					141	0.2	47	0.1											188	0.3
FY 1998 Eqpt -- Kits							166	0.3	55	0.1									221	0.4
FY 1999 Eqpt -- Kits									162	0.3	54	0.1							216	0.4
FY 2000 Eqpt -- kits											159	0.3	52	0.1					211	0.4
FY 2001 Eqpt -- kits													156	0.3	51	0.1			207	0.4
FY 2002 Eqpt -- kits															152	0.3	50	0.1	202	0.4
FY 2003 Eqpt -- kits																	198	0.4	198	0.4
(FY(TC) Eqpt (xx kits)																	3224	7.3	3224	7.3
Total Installation Cost			287	0.5	236	0.4	213	0.4	217	0.4	213	0.4	208	0.4	203	0.4	3472	7.8	5049	10.7
Total Procurement Cost		1.0		1.0		1.0		1.0		1.0		1.0		1.0		1.0		18.7		26.7

METHOD OF IMPLEMENTATION: Depot ADMINISTRATIVE LEADTIME: 5 Months PRODUCTION LEADTIME: 10 Months

Contract Dates:	FY 1997:	Jan 97	FY 1998:	Dec 97	FY 1999:	Dec 98
Delivery Date:	FY 1997:	Oct 97	FY 1998:	Oct 98	FY 1999:	Oct 99

Installation Schedule: Crew Chemical Protection 1-91-05-4311 Date February 1997

	FY 1996 & Prior	FY 1997 1	FY 1997 2	FY 1997 3	FY 1997 4	FY 1998 1	FY 1998 2	FY 1998 3	FY 1998 4	FY 1999 1	FY 1999 2	FY 1999 3	FY 1999 4	FY 2000 1	FY 2000 2	FY 2000 3	FY 2000 4	FY 2001 1	FY 2001 2	FY 2001 3	FY 2001 4	Total
Inputs																						
FY 1996 & Prior			128	127	127																	382
FY 1997						47	47	47	47													188
FY 1998										56	55	55	55									221
FY 1999														54	54	54	54					216
Outputs																						
FY 1996 & Prior			96	96	95	95																382
FY 1997							47	47	47	47												188
FY 1998											56	55	55	55								221
FY 1999															54	54	54	54				216

	FY 2000 1	FY 2000 2	FY 2000 3	FY 2000 4	FY 2001 1	FY 2001 2	FY 2001 3	FY 2001 4	FY 2002 1	FY 2002 2	FY 2002 3	FY 2002 4	FY 2003 1	FY 2003 2	FY 2003 3	FY 2003 4	FY 2004 1	FY 2004 2	FY 2004 3	FY 2004 4	FY 2005 1	FY 2005 2	FY 2005 3	FY 2005 4	Total
Inputs																									
FY 2000					53	53	53	52																	211
FY 2001									52	52	52	51													207
FY 2002													51	51	50	50									202
FY 2003																	50	50	49	49					198
Outputs																									
FY 2000						53	53	53	52																211
FY 2001										52	52	52	51												207
FY 2002														51	51	50	50								202
FY 2003																		50	50	49	49				198

Remarks:

INDIVIDUAL MODIFICATION	Date	February 1997

MODIFICATION TITLE: Driver's Night Viewer 1-94-05-4463

MODELS OF SYSTEMS AFFECTED: M113 Family of Vehicles

DESCRIPTION / JUSTIFICATION:

The M19 image intensifier currently used on the M113 FOV has limited night vision. The AN/VVS-2(V)1a driver's night viewer has been adapted for use on the M113 FOV. The driver's night viewer enhances operational capability by providing capability for travelling in darkness and low visibility conditions equal to that on the Abrams and Bradley forces.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

	PLANNED	ACCOMPLISHED
Preliminary Design Review:		N/A
Critical Design Review:		N/A
Contractor Test and Evaluation:		N/A
Development Test and Evaluation:		N/A
Inital Operational Test and Evaluation:		N/A
IPR Production Decision		N/A
TDP Available:		Sep 94

INDIVIDUAL MODIFICATION																	Date	February 1997		
MODIFICATION TITLE (Cont):	Driver's Night Viewer 1-94-05-4463																			
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	223	1.4	168	1.1	239	1.6	263	1.8	200	1.4	196	1.4	192	1.4	188	1.4	1931	15.9	3600	27.4
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	67		156																223	
FY 1997 Eqpt -- Kits					168														168	
FY 1998 Eqpt -- Kits							239												239	
FY 1999 Eqpt -- Kits									263										263	
FY 2000 Eqpt -- kits											200								200	
FY 2001 Eqpt -- kits													196						196	
FY 2002 Eqpt -- kits															192				192	
FY 2003 Eqpt -- kits																	188		188	
(FY(TC) Eqpt (xx kits)																	1931	0.1	1931	0.1
Total Installation Cost	67		156		168		239		263		200		196		192		2119	0.1	3600	0.1
Total Procurement Cost		1.4		1.1		1.6		1.8		1.4		1.4		1.4		1.4		16.0		27.5

METHOD OF IMPLEMENTATION: Depot ADMINISTRATIVE LEADTIME: 3 Months PRODUCTION LEADTIME: 8 Months

Contract Dates: FY 1997: Jan 97 FY 1998: Dec 97 FY 1999: Dec 98

Delivery Date: FY 1997: Aug 97 FY 1998: Aug 98 FY 1999: Aug 99

Installation Schedule: Driver's Night Viewer 1-94-05-4463 Date February 1997

	FY 1996 & Prior	FY 1997 1	FY 1997 2	FY 1997 3	FY 1997 4	FY 1998 1	FY 1998 2	FY 1998 3	FY 1998 4	FY 1999 1	FY 1999 2	FY 1999 3	FY 1999 4	FY 2000 1	FY 2000 2	FY 2000 3	FY 2000 4	FY 2001 1	FY 2001 2	FY 2001 3	FY 2001 4	Total
Inputs																						
FY 1996 & Prior																						
FY 1997					42	42	42	42														168
FY 1998									60	60	60	59										239
FY 1999													66	66	66	65						263
Outputs																						
FY 1996 & Prior																						
FY 1997						42	42	42	42													168
FY 1998										60	60	60	59									239
FY 1999														66	66	66	65					263

	FY 2000 1	FY 2000 2	FY 2000 3	FY 2000 4	FY 2001 1	FY 2001 2	FY 2001 3	FY 2001 4	FY 2002 1	FY 2002 2	FY 2002 3	FY 2002 4	FY 2003 1	FY 2003 2	FY 2003 3	FY 2003 4	FY 2004 1	FY 2004 2	FY 2004 3	FY 2004 4	FY 2005 1	FY 2005 2	FY 2005 3	FY 2005 4	Total
Inputs																									
FY 2000				50	50	50	50																		200
FY 2001								49	49	49	49														196
FY 2002												48	48	48	48										192
FY 2003																47	47	47	47						188
Outputs																									
FY 2000					50	50	50	50																	200
FY 2001									49	49	49	49													196
FY 2002													48	48	48	48									192
FY 2003																	47	47	47	47					188

Remarks:

INDIVIDUAL MODIFICATION	Date	February 1997

MODIFICATION TITLE: Block I 1-84-05-4026

MODELS OF SYSTEMS AFFECTED: M113A2, M548, M577A2, M981, M1059, M1064, M1068

DESCRIPTION / JUSTIFICATION:

Provides improvements to enhance crew survivability and mobility to meet operational requirements. Addition of a turbo charged diesel engine provides horsepower which increases vehicle survivability/mobility. Coupling the higher output engine with the improved tranmission results in a more reliable power train. The spall liner and external fuel tanks significantly improve crew survivability.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

	PLANNED	ACCOMPLISHED
Preliminary Design Review:		N/A
Critical Design Review:		N/A
Contractor Test and Evaluation:		N/A
Development Test and Evaluation:		N/A
Inital Operational Test and Evaluation:		N/A
IPR Production Decision		May-86
TDP Available:		Jun-86

INDIVIDUAL MODIFICATION — Date: February 1997

MODIFICATION TITLE (Cont): Block I 1-84-05-4026

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		1.0																		1.0
PROCUREMENT																				
Kit Quantity																				
Installation Kits	2334	223.4	258	27.7	66	7.1	226	25.8	230	26.8	222	26.3	245	29.7	238	29.7	2003	271.3	5822	667.8
Installation Kits Nonrecurring																				
Equipment		3.4																		3.4
Equipment Nonrecurring																				
Engineering Change Orders																				
Data		40.2		2.9		2.9		3.0		5.1		5.2		5.3		5.4		33.4		103.4
Training Equipment																				
Support Equipment																				
Other																				
Interim Contractor Support																				
FDT		0.1		0.1		0.1				0.1		0.1		0.1		0.1		0.6		1.3
TPF		2.6		1.3		0.9		0.4		0.8		0.8		0.8		0.8		7.7		16.1
Installation of Hardware																				
FY 1996 & Prior Eqpt -- Kits	379	7.2	363	8.1															742	15.3
FY 1997 Eqpt -- Kits					258	5.9													258	5.9
FY 1998 Eqpt -- Kits							66	1.4											66	1.4
FY 1999 Eqpt -- Kits									226	4.9									226	4.9
FY 2000 Eqpt -- kits											230	5.2							230	5.2
FY 2001 Eqpt -- kits													222	5.2					222	5.2
FY 2002 Eqpt -- kits															245	5.8			245	5.8
FY 2003 Eqpt -- kits																	238	5.7	238	5.7
(FY(TC) Eqpt (xx kits)																	2003	54.1	2003	54.1
Total Installation Cost	379	7.2	363	8.1	258	5.9	66	1.4	226	4.9	230	5.2	222	5.2	245	5.8	2241	59.8	4230	103.5
Total Procurement Cost		276.9		40.1		16.9		30.6		37.7		37.6		41.1		41.8		372.8		895.5

METHOD OF IMPLEMENTATION: Depot/Contractor — ADMINISTRATIVE LEADTIME: 3 Months — PRODUCTION LEADTIME: 8 Months

Contract Dates: FY 1997: Jan 97 — FY 1998: Dec 97 — FY 1999: Dec 98

Delivery Date: FY 1997: Jul 97 — FY 1998: Jul 98 — FY 1999: Jul 99

Installation Schedule: Block I 1-84-05-4026 Date February 1997

	FY 1996 & Prior	FY 1997 1	2	3	4	FY 1998 1	2	3	4	FY 1999 1	2	3	4	FY 2000 1	2	3	4	FY 2001 1	2	3	4	Total
Inputs																						
FY 1996 & Prior	379	91	91	91	90																	742
FY 1997						65	65	64	64													258
FY 1998										17	17	16	16									66
FY 1999														57	57	56	56					226
Outputs																						
FY 1996 & Prior	379	91	91	91	90																	742
FY 1997						65	65	64	64													258
FY 1998										17	17	16	16									66
FY 1999														57	57	56	56					226

	FY 2000 1	2	3	4	FY 2001 1	2	3	4	FY 2002 1	2	3	4	FY 2003 1	2	3	4	FY 2004 1	2	3	4	FY 2005 1	2	3	4	Total
Inputs																									
FY 2000					58	58	57	57																	230
FY 2001									56	56	55	55													222
FY 2002													62	61	61	61									245
FY 2003																	60	60	59	59					238
Outputs																									
FY 2000					58	58	57	57																	230
FY 2001									56	56	55	55													222
FY 2002													62	61	61	61									245
FY 2003																	60	60	59	59					238

Remarks:

INDIVIDUAL MODIFICATION	Date	February 1997

MODIFICATION TITLE: Fuel Systems 1-91-05-4312

MODELS OF SYSTEMS AFFECTED: M577A2 Command Post Carrier

DESCRIPTION / JUSTIFICATION:

The M577A2 currently incorporates a 4.2 KW mogas powered generator. The Army transitioned to all diesel generators in the mid 1980's and a new diesel generator became available in FY 96. This modification incorporates additional fuel lines to permit the generators to use on board vehicle diesel fuel. This modification will be incorporated at a rate consistent with receipt of new generators.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

	PLANNED	ACCOMPLISHED
Preliminary Design Review:		N/A
Critical Design Review:		N/A
Contractor Test and Evaluation:		N/A
Development Test and Evaluation:		N/A
Inital Operational Test and Evaluation:		N/A
IPR Production Decision		N/A
TDP Available:		Sep-92

INDIVIDUAL MODIFICATION																Date	February 1997		
MODIFICATION TITLE (Cont):	Fuel Systems 1-91-05-4312																		
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	364	3.2	22	0.2	65	0.6	43	0.4	114	1.1	92	0.9	100	1.0	88	0.9	612	6.9	1500	15.2
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	91	0.2	273	0.6															364	0.8
FY 1997 Eqpt -- Kits					22	0.1													22	0.1
FY 1998 Eqpt -- Kits							65	0.2											65	0.2
FY 1999 Eqpt -- Kits									43	0.1									43	0.1
FY 2000 Eqpt -- kits											114	0.3							114	0.3
FY 2001 Eqpt -- kits													92	0.2					92	0.2
FY 2002 Eqpt -- kits															100	0.3			100	0.3
FY 2003 Eqpt -- kits																	88	0.2	88	0.2
(FY(TC) Eqpt (xx kits)																	612	1.8	612	1.8
Total Installation Cost	91	0.2	273	0.6	22	0.1	65	0.2	43	0.1	114	0.3	92	0.2	100	0.3	700	2.0	1500	4.0
Total Procurement Cost		3.4		0.8		0.7		0.6		1.2		1.2		1.2		1.2		8.9		19.2

METHOD OF IMPLEMENTATION: Depot ADMINISTRATIVE LEADTIME: 4 Months PRODUCTION LEADTIME: 5 Months

Contract Dates:	FY 1997:	Jan 97	FY 1998:	Dec 97	FY 1999:	Dec 98
Delivery Date:	FY 1997:	Apr 97	FY 1998:	Apr 98	FY 1999:	Apr 99

Installation Schedule: Fuel Systems 1-91-05-4312

Date: February 1997

	FY 1996 & Prior	FY 1997 1	FY 1997 2	FY 1997 3	FY 1997 4	FY 1998 1	FY 1998 2	FY 1998 3	FY 1998 4	FY 1999 1	FY 1999 2	FY 1999 3	FY 1999 4	FY 2000 1	FY 2000 2	FY 2000 3	FY 2000 4	FY 2001 1	FY 2001 2	FY 2001 3	FY 2001 4	Total
Inputs																						
FY 1996 & Prior	91	69	68	68	68																	364
FY 1997						6	6	5	5													22
FY 1998										17	16	16	16									65
FY 1999														11	11	11	10					43
Outputs																						
FY 1996 & Prior	91	69	68	68	68																	364
FY 1997						6	6	5	5													22
FY 1998										17	16	16	16									65
FY 1999														11	11	11	10					43

	FY 2000 1	FY 2000 2	FY 2000 3	FY 2000 4	FY 2001 1	FY 2001 2	FY 2001 3	FY 2001 4	FY 2002 1	FY 2002 2	FY 2002 3	FY 2002 4	FY 2003 1	FY 2003 2	FY 2003 3	FY 2003 4	FY 2004 1	FY 2004 2	FY 2004 3	FY 2004 4	FY 2005 1	FY 2005 2	FY 2005 3	FY 2005 4	Total
Inputs																									
FY 2000					29	29	28	28																	114
FY 2001									23	23	23	23													92
FY 2002													25	25	25	25									100
FY 2003																	22	22	22	22					88
Outputs																									
FY 2000					29	29	28	28																	114
FY 2001									23	23	23	23													92
FY 2002													25	25	25	25									100
FY 2003																	22	22	22	22					88

Remarks:

BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

APPROPRIATION / BUDGET ACTIVITY: PROCUREMENT OF WPNS & TRKD CMBT VEHS /Tracked Combat Vehicles

P-1 ITEM NOMENCLATURE: FIST VEHICLE (MOD) (GZ2300)

	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003
QUANTITY	0	0	9	15	32	46	68	85
COST (in millions)	0.0	0.0	14.7	16.2	29.3	36.6	51.7	64.1

DESCRIPTION: The Bradley Support Vehicle (BFIST) conducts two primary missions on the heavy force battlefield. The first mission is fire mission planning and execution for maneuver company commanders. The second is targeting enemy positions with conventional munitions or designating enemy targets for delivery of various forms of laser guided munitions. The Fire Support Team (FIST) is attached to a mechanized infantry or armor company and is primarily responsible for developing and executing fire support plans that enable success on the battlefield. The Bradley based Combat Observation Lasing Team (COLT) is typically placed in direct support of the maneuver brigade commander. As a brigade commander asset, the COLT will observe key and decisive terrain of brigade interest and direct artillery assets as planned on this terrain. COLTs are also assigned to division cavalry troops where they perform a similar mission for the Division Commander. There is no technical difference between the COLT and FIST Bradley vehicles. The BFIST will accomplish both missions. The FIST team is typically engaged in fire mission planning and execution. Designating targets for special munitions is a secondary mission. The COLT is primarily focused on preparing key and decisive terrain for targeting conventional munitions or designating special artillery or Air Force delivered munitions.

JUSTIFICATION: The current Fire Support Vehicle M981 was unable to maintain the operational tempo of Bradley/Abrams equipped maneuver forces during Operation Desert Storm (ODS). Additionally, the M981 displayed a number of operational deficiencies and shortcomings remedied by the BFIST design.

WTCV Cost Analysis	A. APPN / BUDGET ACTIVITY TITLE/NO: PROCUREMENT OF WPNS & TRKD CMBT VEHS / 1 / Tracked Combat Vehicles	B. WEAPON: FIST VEHICLE (MOD) (GZ2300)	C. MANUFACTURER NAME: United Defense Limited Partnership (UDLP)	D. DATE: February 1997

WTCV Cost Elements	ID CD	FY 96			FY 97			FY 98			FY 99		
		TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost
		$OOO	Each	$OOO	$OOO	Each	$OOO	$OOO	Each	$OOO	$OOO	Each	$OOO
Hardware Cost													
1. Vehicle Upgrade								7152	9	795	12188	15	813
SUBTOTAL								**7152**			**12188**		
Non Recurring Production													
2. Engineering Contractor								5002			1349		
3. Engineering Government								1770			1620		
4. Program Management Administration								73			80		
5. Reimbursable Matrix Support								659			728		
6. Fielding											204		
SUBTOTAL								**7504**			**3981**		
TOTAL								**14656**			**16169**		

BUDGET PROCUREMENT HISTORY AND PLANNING EXHIBIT (P-5A)

DATE: February 1997

B. APPROPRIATION / BUDGET ACTIVITY: PROCUREMENT OF WPNS & TRKD CMBT VEHS / 1 / Tracked Combat Vehicles

C. P-1 ITEM NOMENCLATURE: FIST VEHICLE (MOD) (GZ2300)

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. Vehicle Upgrade										
FY 98	UDLP, York, PA	SS/FFP	TACOM	Dec-97	Apr-99	9	795		No	
FY 99	UDLP, York, PA	SS/FFP	TACOM	Nov-98	Mar-00	15	813		No	

REMARKS:

FY 98 / 99 BUDGET PRODUCTION SCHEDULE

P-1 ITEM NOMENCLATURE: FIST VEHICLE (MOD) (GZ2300)

DATE: February 1997

COST ELEMENTS	MFR	FY	SERV	PROC QTY Each	ACCEP. PRIOR TO 1 OCT	BAL DUE AS OF 1 OCT	Fiscal Year 98 / Calendar Year 98												Fiscal Year 99 / Calendar Year 99												LATER
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1. Vehicle Upgrade																														
	1	FY 98	A	9	0	9			A																1	1	1	1	1	1	3
	1	FY 99	A	15	0	15														A											15
TOTAL				24		24																			1	1	1	1	1	1	18

MFR	NAME / LOCATION	PRODUCTION RATES MIN.	1-8-5	MAX.	REACHED D +	MFR Number		ADMIN LEAD TIME Prior 1 Oct.	After 1 Oct.	MFR After 1 Oct.	TOTAL After 1 Oct.	REMARKS
1	UDLP, York, PA					1	INITIAL		18	9	27	
							REORDER		18	9	27	
							INITIAL					
							REORDER					
							INITIAL					
							REORDER					
							INITIAL					
							REORDER					
							INITIAL					
							REORDER					

FY 98 / 99 BUDGET PRODUCTION SCHEDULE

P-1 ITEM NOMENCLATURE: FIST VEHICLE (MOD) (GZ2300)

DATE: February 1997

COST ELEMENTS	MFR	FY	SERV	PROC QTY Each	ACCEP. PRIOR TO 1 OCT	BAL DUE AS OF 1 OCT	Fiscal Year 00 / Calendar Year 00												Fiscal Year 01 / Calendar Year 01										LATER
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1. Vehicle Upgrade																														
		FY 98	A	9	6	3	1	1	1																					
	1	FY 99	A	15	0	15				1	1	1	1	1	1	1	1	1	2	2	2									
TOTAL				24	6	18	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2									

MFR	NAME / LOCATION	PRODUCTION RATES MIN.	PRODUCTION RATES 1-8-5	PRODUCTION RATES MAX.	REACHED D +
1	UDLP, York, PA				

MFR Number		ADMIN LEAD TIME Prior 1 Oct.	ADMIN LEAD TIME After 1 Oct.	MFR After 1 Oct.	TOTAL After 1 Oct.
1	INITIAL		14	12	26
	REORDER		14	12	26
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				

REMARKS

CODE "B" ITEM DESCRIPTION

DATE	REPORT CONTROL SYMBOL
February 1997	DD-COMP(AR)1092

APPROPRIATION	ACTIVITY	P-1 ITEM NOMENCLATURE
PROCUREMENT OF WPNS & TRKD CMBT VEHS	Tracked Combat Vehicles	FIST VEHICLE (MOD) (GZ2300)

1. CURRENT DEVELOPMENT AND TEST STATUS

		SCHEDULE DATE		
		CURRENT (1)	LAST RPTD (2)	REASON FOR DELAY* (3)
a. DEV TEST & EVAL (DT&E)	PLAN / ACTUAL	Jan-97		
b. INITIAL OPER TEST & EVAL (IOT&E)	PLAN / ACTUAL	Jun-98		
c. OPER TEST & EVAL (OT&E)	PLAN / ACTUAL	Mar-98		
d. AVAIL DATE OF TECH DATA PKG (TDP) OR PERFORMANCE SPECIFICATIONS		Sep-97		

2. ESTIMATED DATE OF APPROVAL FOR SERVICE USE

3. EQUIPMENT ITEM(S) TO BE REPLACED

Enables FIST support to maintain the operational tempo of Bradley/Abrams equipped maneuver forces. Operation Desert Storm initiative.

4. EXTENT OF IMPROVEMENT OVER ITEM(S) OF EQUIPMENT TO BE REPLACED

5. DEVELOPMENT CONTRACT INFORMATION

CONTRACTOR NAME (1)	PLANT LOCATION (2)	COMPONENT (3)	THROUGH 1996 (4)	1997 (5)	1998 (6)	1999 (7)	BEYOND BYs (8)
UDLP	San Jose, CA		30.4	15.5	3.0	6.5	2.0
In-House Tasks			5.5	4.9	2.7	2.5	0.1
TOTAL RDT&E FUNDING			35.9	20.4	5.7	9.0	2.1

6. REMARKS

* Reference entries on attachment to P-19 if additional space is required to adequately explain delay from previous date.

BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

APPROPRIATION / BUDGET ACTIVITY: PROCUREMENT OF WPNS & TRKD CMBT VEHS /Tracked Combat Vehicles

P-1 ITEM NOMENCLATURE: BFVS SERIES (MOD) (GZ2400)

	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)	93.1	119.0	61.2	46.6	60.6	57.5	65.2	65.7

DESCRIPTION: The funds appropriated, budgeted, and programmed in this budget line will provide for the procurement and application of modification kits for the Bradley Fighting Vehicle to improve lethality, survivability, mobility and situational awareness. The Operation Desert Storm improvements are 6 ECPs which will correct deficiencies identified in Operation Desert Storm and include: Laser Range Finder, Position Navigation System, Equipment Restow Improvement, Combat Identification System, Drivers Vision Enhancer and Missile Countermeasure Device. The A1 to A2 conversion effort increases the vehicle survivability and brings the vehicle up to the current A2 configuration, with the addition of the High Survivability Kit and the 600HP power pack. The Optically Improved Backup Sights and Periscopes provide eye protection for the crew against near term lasers.Operational improvements are the Transmission Electronic Controller, the Armament Control Unit Pillow Block, the Vehicle Intercommunications System, TOW mod for AO, Armor Tiles, Engine Access Door Lift Pump and TOW Subsystem Support Equipment Mod. One safety mod, the A2 Card Retrofit, will prevent inadvertent TOW missile launch. Additionally, there is the Presidentially directed HALON Replacement Program. Most of these modifications will be applied concurrently in "blocks" to reduce application cost and inconvenience to the unit. The programs in these P-Forms were initiated to meet requirements identified to improve the Bradley performance and correct deficiencies. Reduced Bradley Fighting Vehicle capability, survivability, and mobility will occur if these modifications are delayed or reduced.

BUDGET ITEM JUSTIFICATION SHEET		DATE: February 1997
APPROPRIATION / BUDGET ACTIVITY: PROCUREMENT OF WPNS & TRKD CMBT VEHS /Tracked Combat Vehicles	P-1 ITEM NOMENCLATURE: BFVS SERIES (MOD) (GZ2400)	

OSIP No. / Classification	Description / All PYs	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003
1-84-05-4038	A1-A2 Conversion							
Oper. capability	345.7	11.5	13.5	11.0	0.0	0.0	0.0	0.0
1-92-05-4404	A2 ODS Mods							
Oper. capability	69.3	48.9	34.6	29.5	1.8	0.0	0.0	0.0
1-90-05-4282	Transmission Electronic Controller (TEC)							
Oper. capability	5.8	4.1	3.8	3.4	0.0	0.0	0.0	0.0
1-86-05-4115	OI Backup Sights/Periscopes							
Oper. capability	19.5	0.7	0.0	0.0	0.0	0.0	0.0	0.0
1-91-05-4314	ACU Pillow Block Mod							
Oper. capability	5.7	0.9	0.7	0.0	0.0	0.0	0.0	0.0
1-90-05-4284	Vehicle Intercom System							
Oper. capability	8.5	3.4	2.2	0.0	0.0	0.0	0.0	0.0
1-93-05-4441	DECA							
Oper. capability	11.5	5.7	1.4	2.7	0.0	0.0	0.0	0.0
1-92-05-4422	HALON Replacement							
Legislative Compl.	4.3	1.0	4.9	0.0	0.0	0.0	0.0	0.0
1-84-05-4038	Armor Tiles							
Oper. capability	41.0	35.5	0.0	0.0	0.0	0.0	0.0	0.0
1-92-05-4421	Engine Access Door Lift							
Oper. capability	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1-90-05-4300	TOW Subsystem Support Equipment							
Oper. capability	0.0	6.7	0.0	0.0	0.0	0.0	0.0	0.0
1-96-05-4510	TOW Mod for AO BFVS							
Oper. capability	13.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1-96-05-4514	Suite of Survivability Enhancement Systems (No P3a Set)							
Oper. capability	0.0	0.0	0.0	0.0	13.0	13.0	11.4	10.3
Not Applicable	A3 Improvements (No P3a Set)							
Oper. capability	0.0	0.0	0.0	0.0	45.8	44.5	53.7	55.4
1-96-05-4517	A2 Card Retrofit							
safety	0.0	0.8	0.2	0.0	0.0	0.0	0.0	0.0

BUDGET ITEM JUSTIFICATION SHEET							DATE February 1997	
APPROPRIATION / BUDGET ACTIVITY PROCUREMENT OF WPNS & TRKD CMBT VEHS /Tracked Combat Vehicles			P-1 ITEM NOMENCLATURE BFVS SERIES (MOD) (GZ2400)					
Totals	526.9	119.0	61.2	46.6	60.6	57.5	65.2	65.7

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
No P3a Set for modification	*									
BFVS SERIES (MOD)										
GZ2400										
A1-A2 Conversion		72.1	8.4	13.5	11.0	0.0	0.0	0.0	0.0	105.0
A2 ODS Mods		1.8	2.3	1.3	1.0	1.8	0.0	0.0	0.0	8.2
Transmission Electronic Controller (TEC)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OI Backup Sights/Periscopes		1.7	0.7	0.0	0.0	0.0	0.0	0.0	0.0	2.4
ACU Pillow Block Mod		1.3	0.9	0.7	0.0	0.0	0.0	0.0	0.0	2.8
Vehicle Intercom System		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DECA		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HALON Replacement		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Armor Tiles		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Engine Access Door Lift		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOW Subsystem Support Equipment		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOW Mod for AO BFVS		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Suite of Survivability Enhancement Systems	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
A3 Improvements	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
A2 Card Retrofit		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Totals		76.9	12.2	15.5	12.1	1.8	0.0	0.0	0.0	118.4

INDIVIDUAL MODIFICATION	Date	February 1997

MODIFICATION TITLE: A1-A2 Conversion 1-84-05-4038

MODELS OF SYSTEMS AFFECTED: M2A1 (IFV) / M3A1 (CFV)

DESCRIPTION / JUSTIFICATION:

The BFVS conversion effort converts the A1 configuration to an A2 configuration.
The conversion effort includes:
1. High Survivability (HS) Kit which will enhance vehicle survivability through the application of alternate armor and selective use of crew compartment spall liners for increased protection against threat from frontal attack. The HS kit also contains other associated changes such as restowage, swim curtain, IFV firing ports, and M240 gun upright.
2. The 600HP power pack, which includes the 600 HP engine and the reliability improved 500-3 Transmission which eliminates the adverse impact of increased vehicle weight on vehicle performance and reliability, resulting from High Survivability changes.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES: ACCOMPLISHED

	HS KITS	600HP ENGINE	500-3 TRANSMISSION
Preliminary Design Review:	1Q86	4Q87	1Q87
Critical Design Review:	1Q86	1Q89	2Q88
Contractor Test and Evaluation:	3Q87	3Q88	2Q88
Development Test and Evaluation:	4Q87	4Q88	2Q88
Inital Operational Test and Evaluation:	3Q87	NA	4Q89
IPR Production Decision	4Q87	1Q89	NA
TDP Available:	1Q89	1Q89	2Q88

INDIVIDUAL MODIFICATION — Date: February 1997

MODIFICATION TITLE (Cont): A1-A2 Conversion 1-84-05-4038

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																				
High Survivability kits	1358	187.9		1.2															1358	189.1
600 HP Engine	1317	45.6	41	1.9															1358	47.5
500-3 Transmission	1358	39.2																	1358	39.2
Engineering Change Orders		0.9																		0.9
Data																				
Training Equipment																				
Support Equipment																				
Other																				
Interim Contractor Support																				
Installation of Hardware																				
FY 1996 & Prior Eqpt -- Kits	957	72.1	98	8.4	168	13.5	94	7.7											1317	101.7
FY 1997 Eqpt -- Kits							41	3.3											41	3.3
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	957	72.1	98	8.4	168	13.5	135	11.0											1358	105.0
Total Procurement Cost		345.7		11.5		13.5		11.0												381.7

METHOD OF IMPLEMENTATION: Depot Conversion — ADMINISTRATIVE LEADTIME: 6 Months — PRODUCTION LEADTIME: 12 Months

Contract Dates: FY 1997: Jan 97 — FY 1998: — FY 1999:

Delivery Date: FY 1997: — FY 1998: — FY 1999:

Installation Schedule: A1-A2 Conversion 1-84-05-4038 Date February 1997

	FY 1996 & Prior	FY 1997 1	2	3	4	FY 1998 1	2	3	4	FY 1999 1	2	3	4	FY 2000 1	2	3	4	FY 2001 1	2	3	4	Total
Inputs																						
FY 1996 & Prior	887	42	42	42	42	42	42	42	42	42	42	10										1317
FY 1997												32	9									41
FY 1998																						
FY 1999																						
Outputs																						
FY 1996 & Prior	887	42	42	42	42	42	42	42	42	42	42	10										1317
FY 1997												32	9									41
FY 1998																						
FY 1999																						

	FY 2000 1	2	3	4	FY 2001 1	2	3	4	FY 2002 1	2	3	4	FY 2003 1	2	3	4	FY 2004 1	2	3	4	FY 2005 1	2	3	4	Total
Inputs																									
FY 2000																									
FY 2001																									
FY 2002																									
FY 2003																									
Outputs																									
FY 2000																									
FY 2001																									
FY 2002																									
FY 2003																									

Remarks:

Bankruptcy of prime High Survivability kit producer contractor forced reprocurement of kits procured with prior year funds and associated delay in application.

INDIVIDUAL MODIFICATION	Date	February 1997

MODIFICATION TITLE: A2 ODS Mods 1-92-05-4404

MODELS OF SYSTEMS AFFECTED: M2A2/M3A2

DESCRIPTION / JUSTIFICATION:

Six vehicle improvements (ECP's) which will correct deficiencies identified in Operation Desert Storm. These increase vehicle lethality and survivability and situational awareness.
a. Laser Range Finder: will give the BFVS a first burst on target capability and reduce the time required to acquire and kill a target.
b. Position Navigation System: Global Positioning System (GPS) integrating hardware and a self calibrating digital compass. This will enable the Bradley commander to determine his exact location at all times and determine the heading and distance to any location.
c. Equipment Restow Improvement: Improves the method of stowing internal and external equipment.
d. Combat Identification System (CID): Provides integration hardware for the passive CID system that will provide visual and thermal signatures detectable between ground to ground vehicles and from air to ground.
e. Driver's Thermal Viewer: Increases the driver's ability to see through battlefield obscurants such as dust, fog and smoke during night and day.
f. Missile Countermeasure Device: Provides additional protection against a variety of anti tank missiles.
Additionally, included in this effort are Armored Hatches to further improve vehicle survivability.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

	PLANNED	ACCOMPLISHED
Preliminary Design Review:	4Q93	4Q93
Critical Design Review:	2Q94	2Q94
Contractor Test and Evaluation:	3Q94	3Q94
Development Test and Evaluation:	4Q94	1Q95
Inital Operational Test and Evaluation:	1Q95	1Q95
IPR Production Decision	2Q95	2Q95

INDIVIDUAL MODIFICATION																			Date	February 1997
MODIFICATION TITLE (Cont):	A2 ODS Mods 1-92-05-4404																			
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	565	65.3	415	46.6	300	33.3	213	28.5											1493	173.6
Installation Kits Nonrecurring																				
Equipment																				
Equipment Nonrecurring		1.9																		1.9
Engineering Change Orders																				
Data																				
Training Equipment																				
Support Equipment		0.2																		0.2
Other																				
Interim Contractor Support																				
Installation of Hardware																				
FY 1996 & Prior Eqpt -- Kits	193	1.8	210	2.3															403	4.1
FY 1997 Eqpt -- Kits					68	1.3													68	1.3
FY 1998 Eqpt -- Kits							53	1.0											53	1.0
FY 1999 Eqpt -- Kits									88	1.8									88	1.8
FY 2000 Eqpt -- kits																				
FY 2001 Eqpt -- kits																				
FY 2002 Eqpt -- kits			NOTE: Application quantities and costs reflect kits applied by field retrofit only. Costs for ODS application																	
FY 2003 Eqpt -- kits			during AO-A2 remanufacture and A1-A2 conversion are reflected on their respective P-forms.																	
(FY(TC) Eqpt (xx kits)																				
Total Installation Cost	193	1.8	210	2.3	68	1.3	53	1.0	88	1.8									612	8.2
Total Procurement Cost		69.3		48.9		34.6		29.5		1.8										184.0

METHOD OF IMPLEMENTATION: Contractor/Depot/field retro. ADMINISTRATIVE LEADTIME: 6 Months PRODUCTION LEADTIME: 12 Months

Contract Dates:	FY 1997:	Mar 97	FY 1998:	Mar 98	FY 1999:	Mar 99
Delivery Date:	FY 1997:	Mar 98	FY 1998:	Mar 99	FY 1999:	Mar 00

Installation Schedule: A2 ODS Mods 1-92-05-4404 Date February 1997

	FY 1996 & Prior	FY 1997 1	FY 1997 2	FY 1997 3	FY 1997 4	FY 1998 1	FY 1998 2	FY 1998 3	FY 1998 4	FY 1999 1	FY 1999 2	FY 1999 3	FY 1999 4	FY 2000 1	FY 2000 2	FY 2000 3	FY 2000 4	FY 2001 1	FY 2001 2	FY 2001 3	FY 2001 4	Total
Inputs																						
FY 1996 & Prior	28	154	154	154	77																	567
FY 1997					77	112	112	112	2													415
FY 1998									110	72	72	46										300
FY 1999												26	71	58	58							213
Outputs																						
FY 1996 & Prior	28	154	154	154	77																	567
FY 1997					77	112	112	112	2													415
FY 1998									110	72	72	46										300
FY 1999												26	71	58	58							213

	FY 2000 1	FY 2000 2	FY 2000 3	FY 2000 4	FY 2001 1	FY 2001 2	FY 2001 3	FY 2001 4	FY 2002 1	FY 2002 2	FY 2002 3	FY 2002 4	FY 2003 1	FY 2003 2	FY 2003 3	FY 2003 4	FY 2004 1	FY 2004 2	FY 2004 3	FY 2004 4	FY 2005 1	FY 2005 2	FY 2005 3	FY 2005 4	Total
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: Transmission Electronic Controller (TEC) 1-90-05-4282

MODELS OF SYSTEMS AFFECTED: M2A2/M3A2

DESCRIPTION / JUSTIFICATION:

The Transmission Electronic Controller (TEC) replaces the hydromechanical transmission control with an electromechanical control. the TEC directly improves transmission maintainability and reliability. The control features of TEC will provide improved acceleration, fuel utilization and hot and cold performance, and better low speed maneuverability.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

	PLANNED	ACCOMPLISHED
Preliminary Design Review:	NA	
Critical Design Review:	NA	
Contractor Test and Evaluation:	NA	
Development Test and Evaluation:	NA	
Inital Operational Test and Evaluation:	NA	
IPR Production Decision	2Q94	2Q94
TDP Available:	2Q94	2Q94

INDIVIDUAL MODIFICATION — Date: February 1997

MODIFICATION TITLE (Cont): Transmission Electronic Controller (TEC) 1-90-05-4282

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	333	5.8	256	4.1	237	3.8	208	3.4											1034	17.1
Installation Kits Nonrecurring																				
Equipment																				
Equipment Nonrecurring																				
Engineering Change Orders																				
Data																				
Training Equipment																				
Support Equipment																				
Other																				
Interim Contractor Support																				
APPLICATION IS BUDGETED AS PART OF THE A2 ODS PROGRAM																				
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		5.8		4.1		3.8		3.4												17.1

METHOD OF IMPLEMENTATION: Contractor/Depot/field mod ADMINISTRATIVE LEADTIME: 6 Months PRODUCTION LEADTIME: 8 Months

Contract Dates:	FY 1997:	Dec 96	FY 1998:	Dec 97	FY 1999:	Dec 98
Delivery Date:	FY 1997:	Aug 97	FY 1998:	Aug 98	FY 1999:	Aug 99

Installation Schedule: Transmission Electronic Controller (TEC) 1-90-05-4282 Date February 1997

	FY 1996 & Prior	FY 1997 1	2	3	4	FY 1998 1	2	3	4	FY 1999 1	2	3	4	FY 2000 1	2	3	4	FY 2001 1	2	3	4	Total
Inputs																						
FY 1996 & Prior	28	76	76	76	77																	333
FY 1997						77	76	76	27													256
FY 1998									57	68	68	44										237
FY 1999												24	68	58	58							208
Outputs																						
FY 1996 & Prior	76	67	68	68	54																	333
FY 1997					12	61	61	61	61													256
FY 1998										60	59	59	59									237
FY 1999														52	52	52	52					208

	FY 2000 1	2	3	4	FY 2001 1	2	3	4	FY 2002 1	2	3	4	FY 2003 1	2	3	4	FY 2004 1	2	3	4	FY 2005 1	2	3	4	Total
Inputs																									
FY 2000																									
FY 2001																									
FY 2002																									
FY 2003																									
Outputs																									
FY 2000																									
FY 2001																									
FY 2002																									
FY 2003																									

Remarks:

Installation occurs during application of ODS mods by contractor & depot.

INDIVIDUAL MODIFICATION	Date	February 1997

MODIFICATION TITLE: OI Backup Sights/Periscopes 1-86-05-4115

MODELS OF SYSTEMS AFFECTED: M2A2/M3A2

DESCRIPTION / JUSTIFICATION:

This materiel change will add a filter to the present configuration of the Unity Vision Block (periscopes) and the Backup Sight to provide eye protection for the crew against near-term lasers.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

	PLANNED	ACCOMPLISHED
Preliminary Design Review:	2Q87	2Q87
Critical Design Review:	3Q87	3Q87
Contractor Test and Evaluation:	4Q88	4Q88
Development Test and Evaluation:	2Q88	2Q88
Inital Operational Test and Evaluation:	NA	NA
IPR Production Decision	4Q89	4Q89
TDP Available:	2Q90	3Q90

INDIVIDUAL MODIFICATION																			Date	February 1997
MODIFICATION TITLE (Cont):	OI Backup Sights/Periscopes 1-86-05-4115																			
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	2499	17.8																	2499	17.8
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	1678	1.7	821	0.7															2499	2.4
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	1678	1.7	821	0.7															2499	2.4
Total Procurement Cost		19.5		0.7																20.2

METHOD OF IMPLEMENTATION: Contractor field teams ADMINISTRATIVE LEADTIME: PRODUCTION LEADTIME:

Contract Dates: FY 1997: Jun 97 FY 1998: FY 1999:

Delivery Date: FY 1997: FY 1998: FY 1999:

Installation Schedule: OI Backup Sights/Periscopes 1-86-05-4115

Date: February 1997

	FY 1996 & Prior	FY 1997 1	2	3	4	FY 1998 1	2	3	4	FY 1999 1	2	3	4	FY 2000 1	2	3	4	FY 2001 1	2	3	4	Total
Inputs																						
FY 1996 & Prior	1678				205	205	206	205														2499
FY 1997																						
FY 1998																						
FY 1999																						
Outputs																						
FY 1996 & Prior	1678				205	205	206	205														2499
FY 1997																						
FY 1998																						
FY 1999																						

	FY 2000 1	2	3	4	FY 2001 1	2	3	4	FY 2002 1	2	3	4	FY 2003 1	2	3	4	FY 2004 1	2	3	4	FY 2005 1	2	3	4	Total
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: ACU Pillow Block Mod 1-91-05-4314

MODELS OF SYSTEMS AFFECTED: TOW 2 SUBSYSTEM

DESCRIPTION / JUSTIFICATION:

This block modification combines 5 class 1 ECPs into a consolidated block ACU package. The ACU is part of the TOW missile launcher. These modifications will seal against moisture and eliminate pillow block associated damage to the ACU which can result in critical failures of the TOW weapon system package.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

	PLANNED	ACCOMPLISHED
Preliminary Design Review:	NA	NA
Critical Design Review:	NA	NA
Contractor Test and Evaluation:	NA	NA
Development Test and Evaluation:	NA	NA
Inital Operational Test and Evaluation:	NA	NA
IPR Production Decision	1Q92	1Q92
TDP Available:	NA	NA

INDIVIDUAL MODIFICATION — Date: February 1997

MODIFICATION TITLE (Cont): ACU Pillow Block Mod 1-91-05-4314

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	4275	4.4																	4275	4.4
Equipment Nonrecurring																				
Engineering Change Orders																				
Data																				
Training Equipment																				
Support Equipment																				
Other																				
Interim Contractor Support																				
Installation of Hardware																				
FY 1996 & Prior Eqpt -- Kits	1874	1.3	1335	0.9	1066	0.7													4275	2.8
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	1874	1.3	1335	0.9	1066	0.7													4275	2.8
Total Procurement Cost		5.7		0.9		0.7														7.2

METHOD OF IMPLEMENTATION: Contractor teams — ADMINISTRATIVE LEADTIME: — PRODUCTION LEADTIME:

Contract Dates: FY 1997: Feb 97 — FY 1998: 35827 — FY 1999:

Delivery Date: FY 1997: — FY 1998: — FY 1999:

Installation Schedule: ACU Pillow Block Mod 1-91-05-4314 Date February 1997

	FY 1996 & Prior	FY 1997 1	FY 1997 2	FY 1997 3	FY 1997 4	FY 1998 1	FY 1998 2	FY 1998 3	FY 1998 4	FY 1999 1	FY 1999 2	FY 1999 3	FY 1999 4	FY 2000 1	FY 2000 2	FY 2000 3	FY 2000 4	FY 2001 1	FY 2001 2	FY 2001 3	FY 2001 4	Total
Inputs																						
FY 1996 & Prior	1874	334	334	334	333	267	266	267	266													4275
FY 1997																						
FY 1998																						
FY 1999																						
Outputs																						
FY 1996 & Prior	1874	334	334	334	333	267	266	267	266													4275
FY 1997																						
FY 1998																						
FY 1999																						

	FY 2000 1	FY 2000 2	FY 2000 3	FY 2000 4	FY 2001 1	FY 2001 2	FY 2001 3	FY 2001 4	FY 2002 1	FY 2002 2	FY 2002 3	FY 2002 4	FY 2003 1	FY 2003 2	FY 2003 3	FY 2003 4	FY 2004 1	FY 2004 2	FY 2004 3	FY 2004 4	FY 2005 1	FY 2005 2	FY 2005 3	FY 2005 4	Total
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: Vehicle Intercom System 1-90-05-4284

MODELS OF SYSTEMS AFFECTED: A2 ODS M2/M3

DESCRIPTION / JUSTIFICATION:

The VIS system is a replacement for the AN/VIC-1 intercom system. It is a digital intercom system which provides internal communications as well as access to the vehicle radios. This is a non-developmental item to be applied to the A2 ODS vehicles.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

	PLANNED	ACCOMPLISHED
Preliminary Design Review:	NA	NA
Critical Design Review:	NA	NA
Contractor Test and Evaluation:	NA	NA
Development Test and Evaluation:	NA	NA
Inital Operational Test and Evaluation:	2Q95	2Q95
IPR Production Decision	3Q95	3Q95
TDP Available:	NA	NA

INDIVIDUAL MODIFICATION — Date: February 1997

MODIFICATION TITLE (Cont): Vehicle Intercom System 1-90-05-4284

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	553	8.5	262	3.4	218	2.2													1033	14.0
Installation Kits Nonrecurring																				
Equipment																				
Equipment Nonrecurring																				
Engineering Change Orders																				
Data																				
Training Equipment																				
Support Equipment																				
Other																				
Interim Contractor Support																				
Installation of Hardware																				
APPLICATION SCHEDULED AND BUDGETED AS PART OF A2 ODS APPLICATION																				
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		8.5		3.4		2.2														14.0

METHOD OF IMPLEMENTATION: Contractor/Depot — ADMINISTRATIVE LEADTIME: 6 Months — PRODUCTION LEADTIME: 6 Months

Contract Dates:	FY 1997:	Mar 97	FY 1998:	Mar 98	FY 1999:	Mar 99
Delivery Date:	FY 1997:	Sep 97	FY 1998:	Sep 98	FY 1999:	Sep 99

Installation Schedule: Vehicle Intercom System 1-90-05-4284 Date February 1997

	FY 1996 & Prior	FY 1997 1	FY 1997 2	FY 1997 3	FY 1997 4	FY 1998 1	FY 1998 2	FY 1998 3	FY 1998 4	FY 1999 1	FY 1999 2	FY 1999 3	FY 1999 4	FY 2000 1	FY 2000 2	FY 2000 3	FY 2000 4	FY 2001 1	FY 2001 2	FY 2001 3	FY 2001 4	Total
Inputs																						
FY 1996 & Prior	28	70	70	70	71	84	84	76														553
FY 1997								8	84	68	68	34										262
FY 1998												34	68	58	58							218
FY 1999																						
Outputs																						
FY 1996 & Prior	28	70	70	70	71	84	84	76														553
FY 1997								8	84	68	68	34										262
FY 1998												34	68	58	58							218
FY 1999																						

	FY 2000 1	FY 2000 2	FY 2000 3	FY 2000 4	FY 2001 1	FY 2001 2	FY 2001 3	FY 2001 4	FY 2002 1	FY 2002 2	FY 2002 3	FY 2002 4	FY 2003 1	FY 2003 2	FY 2003 3	FY 2003 4	FY 2004 1	FY 2004 2	FY 2004 3	FY 2004 4	FY 2005 1	FY 2005 2	FY 2005 3	FY 2005 4	Total
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: DECA 1-93-05-4441

MODELS OF SYSTEMS AFFECTED: M2A2/M3A2

DESCRIPTION / JUSTIFICATION:

The DECA is the microprocessor based controller of the turret drive system. It transfers signals from crew and sensor inputs to the appropriate subsystem to execute a specific task. The DECA replaces the Electronic Control Assembly (ECA) and provides built in testing, improved reliability and elimination of hull and turret gyro.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

	PLANNED	ACCOMPLISHED
Preliminary Design Review:	NA	
Critical Design Review:	NA	
Contractor Test and Evaluation:	NA	
Development Test and Evaluation:	NA	
Inital Operational Test and Evaluation:	NA	
IPR Production Decision	3Q89	3Q89
TDP Available:	3Q89	3Q89

INDIVIDUAL MODIFICATION — Date: February 1997

MODIFICATION TITLE (Cont): DECA 1-93-05-4441

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	450	11.5	233	5.7	54	1.4	104	2.7											841	21.2
Equipment Nonrecurring																				
Engineering Change Orders																				
Data																				
Training Equipment																				
Support Equipment																				
Other																				
Interim Contractor Support																				
APPLICATION BUDGETED AS PART OF A1-A2 CONVERSION AND A2 ODS APPLICATION																				
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		11.5		5.7		1.4		2.7												21.2

METHOD OF IMPLEMENTATION: Contractor & Depot — ADMINISTRATIVE LEADTIME: 6 Months — PRODUCTION LEADTIME: 8 Months

Contract Dates:	FY 1997:	Mar 97	FY 1998:	Mar 98	FY 1999:	Mar 99
Delivery Date:	FY 1997:	Nov 97	FY 1998:	Nov 98	FY 1999:	Nov 99

Installation Schedule: DECA 1-93-05-4441 Date February 1997

	FY 1996 & Prior	FY 1997 1	2	3	4	FY 1998 1	2	3	4	FY 1999 1	2	3	4	FY 2000 1	2	3	4	FY 2001 1	2	3	4	Total
Inputs																						
FY 1996 & Prior	26	25	30	30	30	84	84	84	57													450
FY 1997									27	75	75	54	2									233
FY 1998													52	2								54
FY 1999														51	53							104
Outputs																						
FY 1996 & Prior	26	25	30	30	30	84	84	84	57													450
FY 1997									27	75	75	54	2									233
FY 1998													52	2								54
FY 1999														51	53							104

	FY 2000 1	2	3	4	FY 2001 1	2	3	4	FY 2002 1	2	3	4	FY 2003 1	2	3	4	FY 2004 1	2	3	4	FY 2005 1	2	3	4	Total
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: HALON Replacement 1-92-05-4422

MODELS OF SYSTEMS AFFECTED: Bradley Fighting Vehicle System

DESCRIPTION / JUSTIFICATION:

The Halon replacement program is in response to DOD and Army policy to eliminate the unnecessary release of Halon into the atmosphere. This program will provide an alternate agent to use in the BFV engine compartment fire extinguishers.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

	PLANNED	ACCOMPLISHED
Preliminary Design Review:	3Q95	1Q96
Critical Design Review:	4Q96	1Q97
Contractor Test and Evaluation:	NA	NA
Development Test and Evaluation:	4Q96	
Initial Operational Test and Evaluation:	NA	NA
IPR Production Decision	2Q97	
Approve ECP:	2Q97	

INDIVIDUAL MODIFICATION — Date: February 1997

MODIFICATION TITLE (Cont): HALON Replacement 1-92-05-4422

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					467	4.9											6257	70.6	6724	75.5
Equipment																				
Equipment Nonrecurring																				
Engineering Change Orders																				
Data		4.3		1.0																5.3
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																				
Total Procurement Cost		4.3		1.0		4.9												70.6		80.9

METHOD OF IMPLEMENTATION: Contractor teams — ADMINISTRATIVE LEADTIME: 6 Months — PRODUCTION LEADTIME: 12 Months

Contract Dates:	FY 1997:	Aug 97	FY 1998:	Mar 98	FY 1999:	
Delivery Date:	FY 1997:	N/A	FY 1998:	N/A	FY 1999:	

Installation Schedule: HALON Replacement 1-92-05-4422

Date: February 1997

	FY 1996 & Prior	FY 1997 1	2	3	4	FY 1998 1	2	3	4	FY 1999 1	2	3	4	FY 2000 1	2	3	4	FY 2001 1	2	3	4	Total
Inputs																						
FY 1996 & Prior																						
FY 1997																						
FY 1998											467											467
FY 1999																						
Outputs																						
FY 1996 & Prior																						
FY 1997																						
FY 1998											467											467
FY 1999																						

	FY 2000 1	2	3	4	FY 2001 1	2	3	4	FY 2002 1	2	3	4	FY 2003 1	2	3	4	FY 2004 1	2	3	4	FY 2005 1	2	3	4	Total
Inputs																									
FY 2000																									
FY 2001																									
FY 2002																									
FY 2003																									
Outputs																									
FY 2000																									
FY 2001																									
FY 2002																									
FY 2003																									

Remarks:

Procurement contract includes cost to apply mod by contractor team

INDIVIDUAL MODIFICATION	Date	February 1997

MODIFICATION TITLE: Armor Tiles 1-84-05-4038

MODELS OF SYSTEMS AFFECTED: M2A2(IFV)/M3A2(CFV)

DESCRIPTION / JUSTIFICATION:

Armor tiles are one of the High Survivability improvements to the BFVS. The tiles provide increased armor protection for shaped charge threats, including hand held heat and other classes of warheads as specified in the BFVS material need area. There are 5 configurations of tiles covering the vehicle front, sides and turret.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

	PLANNED	ACCOMPLISHED
Preliminary Design Review:	NA	
Critical Design Review:	3Q90	3Q90
Contractor Test and Evaluation:	NA	
Development Test and Evaluation:	NA	
Inital Operational Test and Evaluation:	NA	
IPR Production Decision	2Q92	2Q93
TDP Available:	NA	

INDIVIDUAL MODIFICATION — Date: February 1997

MODIFICATION TITLE (Cont): Armor Tiles 1-84-05-4038

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		4.0																		4.0
PROCUREMENT																				
Kit Quantity																				
Installation Kits																				
Installation Kits Nonrecurring																				
Equipment	142	34.3	104	33.0															246	67.3
Equipment Nonrecurring																				
Engineering Change Orders																				
Data																				
Training Equipment																				
Support Equipment																				
Other		6.7		2.5																9.2
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		41.0		35.5																76.5

METHOD OF IMPLEMENTATION: Troop Installed — ADMINISTRATIVE LEADTIME: 6 Months — PRODUCTION LEADTIME: 6 Months

Contract Dates:	FY 1997:	Mar 97	FY 1998:		FY 1999:
Delivery Date:	FY 1997:		FY 1998:		FY 1999:

Installation Schedule: Armor Tiles 1-84-05-4038 Date February 1997

	FY 1996 & Prior	FY 1997 1	2	3	4	FY 1998 1	2	3	4	FY 1999 1	2	3	4	FY 2000 1	2	3	4	FY 2001 1	2	3	4	Total
Inputs																						
FY 1996 & Prior																						
FY 1997																						
FY 1998																						
FY 1999																						
Outputs																						
FY 1996 & Prior																						
FY 1997																						
FY 1998																						
FY 1999																						

	FY 2000 1	2	3	4	FY 2001 1	2	3	4	FY 2002 1	2	3	4	FY 2003 1	2	3	4	FY 2004 1	2	3	4	FY 2005 1	2	3	4	Total
Inputs																									
FY 2000																									
FY 2001																									
FY 2002																									
FY 2003																									
Outputs																									
FY 2000																									
FY 2001																									
FY 2002																									
FY 2003																									

Remarks:

Armor Tiles will be installed by troops.

INDIVIDUAL MODIFICATION	Date	February 1997

MODIFICATION TITLE: Engine Access Door Lift 1-92-05-4421

MODELS OF SYSTEMS AFFECTED: M2A2(IFV)/M3A2(CFV)

DESCRIPTION / JUSTIFICATION:

This is the last of a group of four modifications to correct four deficiencies identified during Desert Storm. The Engine Access Door Lift Mechanism is a redesigned pump to eliminate failures encountered when raising the armored engine access door.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

	PLANNED	ACCOMPLISHED
Preliminary Design Review:	1Q92	1Q92
Critical Design Review:	2Q92	2Q92
Contractor Test and Evaluation:	3Q92	3Q92
Development Test and Evaluation:	3Q92	3Q92
Inital Operational Test and Evaluation:	3Q92	3Q92
IPR Production Decision	3Q94	3Q94
TDP Available:	3Q94	3Q94

INDIVIDUAL MODIFICATION																	Date		February 1997	
MODIFICATION TITLE (Cont):			Engine Access Door Lift 1-92-05-4421																	
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	2000	2.6																	2000	2.6
Equipment Nonrecurring																				
Engineering Change Orders																				
Data																				
Training Equipment																				
Support Equipment																				
Other																				
Interim Contractor Support																				
THE ENGINE ACCESS DOOR LIFT MOD APPLICATION IS SCHEDULED AND BUDGETED IN A1-A2 CONVERSION AND A2ODS MOD																				
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		2.6																		2.6

METHOD OF IMPLEMENTATION: Contractor & depot
ADMINISTRATIVE LEADTIME:
PRODUCTION LEADTIME:

Contract Dates:	FY 1997:	FY 1998:	FY 1999:
Delivery Date:	FY 1997:	FY 1998:	FY 1999:

Installation Schedule: Engine Access Door Lift 1-92-05-4421 Date February 1997

	FY 1996 & Prior	FY 1997 1	2	3	4	FY 1998 1	2	3	4	FY 1999 1	2	3	4	FY 2000 1	2	3	4	FY 2001 1	2	3	4	Total
Inputs																						
FY 1996 & Prior	26	141	141	141	141	141	141	141	141	141	141	141	141	141	141							2000
FY 1997																						
FY 1998																						
FY 1999																						
Outputs																						
FY 1996 & Prior	26	141	141	141	141	141	141	141	141	141	141	141	141	141	141							2000
FY 1997																						
FY 1998																						
FY 1999																						

	FY 2000 1	2	3	4	FY 2001 1	2	3	4	FY 2002 1	2	3	4	FY 2003 1	2	3	4	FY 2004 1	2	3	4	FY 2005 1	2	3	4	Total
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: TOW Subsystem Support Equipment 1-90-05-4300

MODELS OF SYSTEMS AFFECTED: TOW 2 SUBSYSTEM SUPPORT EQUIPMENT

DESCRIPTION / JUSTIFICATION:

This modification combines 20 class 1 ECPs into a consolidated Block modification which will expand the capabilities and life cycle of the TOW support equipment and bring all assets to a uniform configuration. Benefits include reduced diagnostic spares, improved reliability, and improved user awareness of handling/lifting restrictions of MIL-STD-1472C.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

	PLANNED	ACCOMPLISHED
Preliminary Design Review:	NA	NA
Critical Design Review:	NA	NA
Contractor Test and Evaluation:	NA	NA
Development Test and Evaluation:	NA	NA
Inital Operational Test and Evaluation:	NA	NA
IPR Production Decision	1Q92	1Q92
TDP Available:	NA	NA

INDIVIDUAL MODIFICATION — Date: February 1997

MODIFICATION TITLE (Cont): TOW Subsystem Support Equipment 1-90-05-4300

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			597	6.7															597	6.7
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 -- 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				6.7																6.7

METHOD OF IMPLEMENTATION: Contractor — ADMINISTRATIVE LEADTIME: 6 Months — PRODUCTION LEADTIME: 12 Months

Contract Dates:	FY 1997:	Mar 97	FY 1998:		FY 1999:		
Delivery Date:	FY 1997:	Mar 98	FY 1998:		FY 1999:		

Installation Schedule: TOW Subsystem Support Equipment 1-90-05-4300 Date February 1997

	FY 1996 & Prior	FY 1997 1	2	3	4	FY 1998 1	2	3	4	FY 1999 1	2	3	4	FY 2000 1	2	3	4	FY 2001 1	2	3	4	Total
Inputs																						
FY 1996 & Prior																						
FY 1997								75	75	75	93	93	93	93								597
FY 1998																						
FY 1999																						
Outputs																						
FY 1996 & Prior																						
FY 1997								75	75	75	93	93	93	93								597
FY 1998																						
FY 1999																						

	FY 2000 1	2	3	4	FY 2001 1	2	3	4	FY 2002 1	2	3	4	FY 2003 1	2	3	4	FY 2004 1	2	3	4	FY 2005 1	2	3	4	Total
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: TOW Mod for AO BFVS 1-96-05-4510

MODELS OF SYSTEMS AFFECTED: M2AO(IFV)/M3AO(CFV)

DESCRIPTION / JUSTIFICATION:

This modification is for procurement and application of modification kits to the Bradley AO TOW Subsystem (TSS) and associated TOW subsystem Test Sets (TSS-TS) to provide the capability to fire and guide the TOW 2 family of missiles. This mod increases system lethality by incorporating optimized flight algorithms for the TOW 2A and TOW 2b missiles when fired from Bradley AO vehicles.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

	PLANNED	ACCOMPLISHED
Preliminary Design Review:	NA	NA
Critical Design Review:	NA	NA
Contractor Test and Evaluation:	NA	NA
Development Test and Evaluation:	NA	NA
Inital Operational Test and Evaluation:	NA	NA
IPR Production Decision	NA	NA
TDP Available:	4Q96	4Q96

INDIVIDUAL MODIFICATION																	Date	February 1997		
MODIFICATION TITLE (Cont):	TOW Mod for AO BFVS 1-96-05-4510																			
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	369	10.7																	369	10.7
Equipment Nonrecurring																				
Engineering Change Orders																				
Data																				
Training Equipment																				
Support Equipment		2.4																		2.4
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		13.1																		13.1

METHOD OF IMPLEMENTATION: Contractor ADMINISTRATIVE LEADTIME: 12 Months PRODUCTION LEADTIME: 12 Months

Contract Dates: FY 1997: FY 1998: FY 1999:

Delivery Date: FY 1997: FY 1998: FY 1999:

Installation Schedule: TOW Mod for AO BFVS 1-96-05-4510 Date February 1997

	FY 1996 & Prior	FY 1997 1	2	3	4	FY 1998 1	2	3	4	FY 1999 1	2	3	4	FY 2000 1	2	3	4	FY 2001 1	2	3	4	Total
Inputs																						
FY 1996 & Prior						92	93	92	92													369
FY 1997																						
FY 1998																						
FY 1999																						
Outputs																						
FY 1996 & Prior						92	93	92	92													369
FY 1997																						
FY 1998																						
FY 1999																						

	FY 2000 1	2	3	4	FY 2001 1	2	3	4	FY 2002 1	2	3	4	FY 2003 1	2	3	4	FY 2004 1	2	3	4	FY 2005 1	2	3	4	Total
Inputs																									
FY 2000																									
FY 2001																									
FY 2002																									
FY 2003																									
Outputs																									
FY 2000																									
FY 2001																									
FY 2002																									
FY 2003																									

Remarks:

Procurement contract includes cost to apply mod by contractor team.

INDIVIDUAL MODIFICATION	Date	February 1997

MODIFICATION TITLE: A2 Card Retrofit 1-96-05-4517

MODELS OF SYSTEMS AFFECTED: TOW 2 Subsystem (T2SS) Missile Guidance System (MGS)

DESCRIPTION / JUSTIFICATION:

The relay/squib circuit card assembly (CCA) controls the power up/power down functions of the MGS and provides indications of missile launch, flight status and modes of operation. It also generates the PREFIRE and FIRE squib control signals required to launch the missile and the WIRECUT squib control signal used to cut the missile quidance wires. This mod will add a semiconductor device diode across resistor "R39" on the A2 CCA to increase the speed of discharge for capacitor C21 and to prevent an inadvertent missile launch.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

Examples	PLANNED	ACCOMPLISHED
Preliminary Design Review:	N/A	N/A
Critical Design Review:	N/A	N/A
Contractor Test and Evaluation:	N/A	N/A
Development Test and Evaluation:	N/A	N/A
Inital Operational Test and Evaluation:	N/A	N/A
IPR Production Decision	Oct-96	Oct-96
TDP Available:	Oct-96	Oct-96

INDIVIDUAL MODIFICATION — Date: February 1997

MODIFICATION TITLE (Cont): A2 Card Retrofit 1-96-05-4517

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			2401	0.8	857	0.2													3258	1.0
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																				
Total Procurement Cost				0.8		0.2														1.0

METHOD OF IMPLEMENTATION: contractor applied — ADMINISTRATIVE LEADTIME: 9 Months — PRODUCTION LEADTIME: 2 Months

Contract Dates:	FY 1997:	May 97	FY 1998:	May 98	FY 1999:	Enter Date Here
Delivery Date:	FY 1997:	Enter Date Here	FY 1998:	Enter Date Here	FY 1999:	Enter Date Here

Installation Schedule: A2 Card Retrofit 1-96-05-4517 Date February 1997

	FY 1996 & Prior	FY 1997 1	2	3	4	FY 1998 1	2	3	4	FY 1999 1	2	3	4	FY 2000 1	2	3	4	FY 2001 1	2	3	4	Total
Inputs																						
FY 1996 & Prior																						
FY 1997					600	600	600	601														2401
FY 1998									215	214	214	214										857
FY 1999																						
Outputs																						
FY 1996 & Prior																						
FY 1997		600	600	600	601																	2401
FY 1998						215	214	214	214													857
FY 1999																						

	FY 2000 1	2	3	4	FY 2001 1	2	3	4	FY 2002 1	2	3	4	FY 2003 1	2	3	4	FY 2004 1	2	3	4	FY 2005 1	2	3	4	Total
Inputs																									
FY 2000																									
FY 2001																									
FY 2002																									
FY 2003																									
Outputs																									
FY 2000																									
FY 2001																									
FY 2002																									
FY 2003																									

Remarks:

Procurement cost includes cost to apply by contractor retrofit teams.

BUDGET ITEM JUSTIFICATION SHEET						DATE February 1997		
APPROPRIATION / BUDGET ACTIVITY PROCUREMENT OF WPNS & TRKD CMBT VEHS /Tracked Combat Vehicles				P-1 ITEM NOMENCLATURE HOWITZER, MED SP FT 155MM M109A6 (MOD) (GA0400)				
	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003
QUANTITY								
COST (in millions)	282.0	105.9	18.7	11.5	4.4	0.0	0.0	0.0

DESCRIPTION: Funds the procurement of approved modifications to the 155MM M109 Self-Propelled Howitzer (See detailed description/justification on following exhibit P-3A).

COOPERATIVE AGREEMENTS:

The Government of the United States of America , as represented by the Department of the Army (DA), and the Government of Israel (GOI), as represented by the Ministry of Defense (MOD), agreed to cooperate on a joint development project to improve the M109 Series 155mm Self-Propelled Howitzer in November 1985. This program incorporated already developed items, together with items which were developed under contract, into prototype M109s. DA and MOD supplied their own M109s for prototype work. GOI funding for its share of the program was $30.7 million over Fiscal Years (FY) 1986-1990. The U.S. Howitzer is currently in the full scale production phase and has been named the M109A6 Paladin. The U.S./Israeli Joint Development Agreement has expired effective with the Paladin Milestone III Full Scale Production Decision . The system developer, BMY, a Division of Harsco Corporation, was awarded a full scale engineeering development contract in October 1985, and a low rate production contract in September 1990. In April 1993, FMC Corporation (now known as United Defense, Limited Partnership, Paladin Production Division) won a competitive multiyear procurement contract for full scale production of remaining Paladin requirements during FY 1993-1996 programs.

BUDGET ITEM JUSTIFICATION SHEET	DATE: February 1997
APPROPRIATION / BUDGET ACTIVITY: PROCUREMENT OF WPNS & TRKD CMBT VEHS /Tracked Combat Vehicles	P-1 ITEM NOMENCLATURE: HOWITZER, MED SP FT 155MM M109A6 (MOD) (GA0400)

OSIP No. / Classification	Description / All PYs	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003
1-81-05-1002	Howitzer Improvement Program							
unclassified	1,207.4	105.9	12.3	11.5	4.4	0.0	0.0	0.0
1-96-05-1003	Chlorofluorocarbon (CFC) Elimination							
unclassified	0.0	0.0	6.4	0.0	0.0	0.0	0.0	0.0
Totals	1,207.4	105.9	18.7	11.5	4.4	0.0	0.0	0.0

MODIFICATION INSTALLATION SUMMARY
(TOA, Dollars in Millions)

Date: February 1997

System/Modification	FY 1996 and Prior	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	TOTAL
No P3a Set for modification									
HOWITZER, MED SP FT 155MM M109A6 (MOD)									
GA0400									
Howitzer Improvement Program	53.2	11.4	0.0	0.0	0.0	0.0	0.0	0.0	64.6
Chlorofluorocarbon (CFC) Elimination	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Totals	53.2	11.4	0.0	0.0	0.0	0.0	0.0	0.0	64.6

INDIVIDUAL MODIFICATION	Date	February 1997

MODIFICATION TITLE: Howitzer Improvement Program 1-81-05-1002

MODELS OF SYSTEMS AFFECTED: Howitzer, Med Sp Ft 155mm M109 Ser (Mod) (MYP).

DESCRIPTION / JUSTIFICATION:

The M109A6 Paladin, approved for full scale production, has been designed to upgrade the M109A2/A3 Howitzer's responsiveness, effectiveness, survivability; and Reliability, Availability, and Maintainability-Durability (RAM-D). This meets the user's urgent need for a product improved system that satisfies the deficiencies cited in these areas by the Mission Element Need Statement (MENS), approved by the Secretary of Defense in December 1980. The production phase of the program involves a combined effort between Letterkenny Army Depot and the contractor. M109A2/A3 Howitzers from CONUS and OCONUS field units are being shipped to Letterkenny Army Depot. Letterkenny removes traverse mechanism, disassembles the howitzer, reconditions turret components to be reset in the new turret, and overhauls/ modifies the chassis to the Paladin configuration. The reconditioned turret components, and the overhauled/modified chassis with the new M284 Cannon and M182 Gun Mount manufactured by Watervliet and Rock Island Arsenals, respectively, are shipped to the contractor for final integration and assembly, and acceptance testing. The acquisition strategy for FY89/90-FY92 called for sole source contracts. A FY93-FY96 competitive multiyear production contract was awarded in April 1993. The fiscal program identified herein reflects the economies and efficiencies of a competitive multiyear contract strategy. An FY97 follow-on sole source single year contract for an additional 37 M109A6 Paladin Vehicles is planned for award to UDLP, the current full scale production producer.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

The M109A6 was approved for entry into full scale development in November 1984. At that time, DA decided to modify M109A2/A3 Howitzers to a HIP configuration. It was decided to merge the Howitzer Extended Life Program (HELP) into the HIP where kits from both programs would be applied to the M109A2/A3 Howitzer. The improved 155mm Self-Propelled Howitzer was approved for Type Classification-Low Rate Production (TC-LRP) and designated the M109A6 Howitzer following a Milestone III-A ASARC on 7 February 1990. In March 1993 a Milestone III Pre-ASARC review was chaired by the Assistant Secretary of the Army for Research, Development and Acquisition, and the M109A6 Paladin was approved for Type Classification-Standard and full rate production and deployment. This Milestone III approval is documented in Aquisition Decision Memorandum dated 9 April 1993. The Paladin production program is within schedule and, as of 1 February 1997, has successfully fielded 359 M109A6 Howitzers and all associated items of equipment.

	PLANNED	ACTUAL
Critical Design Review		2QFY86
Complete Prototype Qualification Testing (Vehicles 1 & 2)		4QFY88
Complete Technical Testing (TT) (Critical Subtests)		1QFY90
Milestone III-A (Type Classified-Low Rate Production) (TC-LRP)		2QFY90
First M109A6 Delivery		3QFY92
Follow-on Test & Evaluation (FOTE)		1QFY93
Milestone III Decision (Full Scale Production) (TC-FSP)		3QFY93
First Unit Equipped (FUE)		3QFY93
Depot Support Capability		1QFY95
Organic Maintenance Capability		4QFY95

INDIVIDUAL MODIFICATION — Date: February 1997

MODIFICATION TITLE (Cont): Howitzer Improvement Program 1-81-05-1002

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		149.4																		149.4
PROCUREMENT																				
Kit Quantity	877		37																914	
Equipment		698.6		49.2		5.0		0.8												753.6
Equipment Nonrecurring		235.3		5.2																240.5
Engineering Change Orders		162.2		20.1				3.3		0.4										186.0
Data		11.4		2.0																13.4
Training Equipment		14.1																		14.1
Vehicular Intercom System		9.2		0.5																9.7
Other		4.4		0.8																5.2
Project Management Admin		9.2		4.7				3.0												16.9
Fielding		9.8		12.0		7.3		4.4		4.0										37.5
Installation of Hardware																				
FY 1996 & Prior -- Kits	716	53.2	161	9.2															877	62.4
FY 1997 Eqpt -- Kits			37	2.2															37	2.2
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	716	53.2	198	11.4															914	64.6
Total Procurement Cost		1,207.4		105.9		12.3		11.5		4.4										1,341.5

METHOD OF IMPLEMENTATION: Letterkenny Army Depot and System Contractor

Contract Dates:	FY 1997: Feb 1997	FY 1998:	FY 1999:	
Delivery Date:	FY 1997: Dec 1998	FY 1998:	FY 1999:	

Installation Schedule: Howitzer Improvement Program 1-81-05-1002 Date February 1997

	FY 1996 & Prior	FY 1997 1	FY 1997 2	FY 1997 3	FY 1997 4	FY 1998 1	FY 1998 2	FY 1998 3	FY 1998 4	FY 1999 1	FY 1999 2	FY 1999 3	FY 1999 4	FY 2000 1	FY 2000 2	FY 2000 3	FY 2000 4	FY 2001 1	FY 2001 2	FY 2001 3	FY 2001 4	Total
Inputs																						
FY 1996 & Prior	555	54	54	54	54	54	52															877
FY 1997							2	18	17													37
FY 1998																						
FY 1999																						
Total																						914
Outputs																						
FY 1996 & Prior	417	49	54	54	54	54	54	54	54	33												877
FY 1997										7	18	12										37
FY 1998																						
FY 1999																						
Total																						914

	FY2002 1	FY2002 2	FY2002 3	FY2002 4	FY2003 1	FY2003 2	FY2003 3	FY2003 4	FY2004 1	FY2004 2	FY2004 3	FY2004 4	FY2005 1	FY2005 2	FY2005 3	FY2005 4	FY2006 1	FY2006 2	FY2006 3	FY2006 4	FY2007 1	FY2007 2	FY2007 3	FY2007 4	Total
Inputs																									
FY 2000																									
FY 2001																									
FY2004																									
FY2005																									
Outputs																									
FY 2000																									
FY 2001																									
FY2004																									
FY2005																									

Remarks:

INDIVIDUAL MODIFICATION	Date February 1997

MODIFICATION TITLE: Chlorofluorocarbon (CFC) Elimination 1-96-05-1003

MODELS OF SYSTEMS AFFECTED: M109A6 Paladin Howitzer.

DESCRIPTION / JUSTIFICATION:

References: DOD Directive 6050.0; DA Policy Letter 200.90-1; AMC Regulation 70-68; Montreal Protocol of 1986.
The previous references mandate the replacement of R-12 Freon, used in the current M109A6 Paladin's Microclimatic Cooling System (MCS), with a non-chlorofluorocarbon (CFC) substitute. This schedule is based on the premise that a freon replacement will be identifed no later than January 1997.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

	PLANNED	ACCOMPLISHED
Preliminary Design Review:	3QFY97	
Critical Design Review	1QFY98	
Joint Government Contractor Test and Evaluation	2QFY98	
IPR Production Decision	2QFY98	
TDP Available	2QFY98	

INDIVIDUAL MODIFICATION | Date February 1997

MODIFICATION TITLE (Cont): Chlorofluorocarbon (CFC) Elimination 1-96-05-1003

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																				
Retrofit Qty					120												794		914	
Hardware						5.9												40.6		46.5
Testing						0.5														0.5
Installation of Hardware																				
FY 1996 &Prior Eqpt--Kits																				
FY 1997 Eqpt--Kits																				
FY 1998 Eqpt--Kits																				
FY 1999 Eqpt--Kits																	300	0.8	300	0.8
FY 2000 Eqpt--Kits																	300	0.8	300	0.8
FY 2001 Eqpt--Kits																	314	0.8	314	0.8
FY 2002 Eqpt--Kits																				
FY 2003 Eqpt--Kits																				
TC Eqpt--Kits																				
Total Installation Cost																	914	2.4	914	2.4
Total Procurement Cost						6.4												43.0		49.4

METHOD OF IMPLEMENTATION: Enter Method | ADMINISTRATIVE LEADTIME: 8 Months | PRODUCTION LEADTIME: 5 Months

Contract Dates: FY 1997: | FY 1998: Contract Mod -May 1998 | FY 1999:

Delivery Date: FY 1997: | FY 1998: Oct 1998 | FY 1999:

Installation Schedule: Chlorofluorocarbon (CFC) Elimination 1-96-05-1003 Date February 1997

	FY 1996 & Prior	FY 1997 1	2	3	4	FY 1998 1	2	3	4	FY 1999 1	2	3	4	FY 2000 1	2	3	4	FY 2001 1	2	3	4	Total
Inputs																						
FY 1996 & Prior																						
FY 1997																						
FY 1998										29	35	56										120
FY 1999																						
Outputs																						
FY 1996 & Prior																						
FY 1997																						
FY 1998											29	35	56									120
FY 1999																						

	FY 2002 1	2	3	4	FY 2003 1	2	3	4	FY 2004 1	2	3	4	FY 2005 1	2	3	4	FY 2006 1	2	3	4	FY 2007 1	2	3	4	Total
Inputs																									
FY 1996 & Prior																									
FY 1997																									
FY 1998																									
FY 1999																									
Outputs																									
FY 1996 & Prior																									
FY 1997																									
FY 1998																									
FY 1999																									

Remarks:

BUDGET ITEM JUSTIFICATION SHEET				DATE February 1997				
APPROPRIATION / BUDGET ACTIVITY PROCUREMENT OF WPNS & TRKD CMBT VEHS /Tracked Combat Vehicles				P-1 ITEM NOMENCLATURE FAASV PIP TO FLEET (GA8010)				
	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)	6.4	13.8	1.9	0.4	0.1	0.0	0.0	0.0

DESCRIPTION: Funds the procurement of approved modifications to the M992 Field Artillery Support Vehicle (See detailed Description/Justification on the following exhibit P-3A).

BUDGET ITEM JUSTIFICATION SHEET	DATE
	February 1997
APPROPRIATION / BUDGET ACTIVITY	P-1 ITEM NOMENCLATURE
PROCUREMENT OF WPNS & TRKD CMBT VEHS /Tracked Combat Vehicles	FAASV PIP TO FLEET (GA8010)

OSIP No.	Description							
Classification	All PYs	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003
1-93-05-4457	FAASV MATERIEL CHANGE (A2 Conversion)							
UNCLASSIFIED	72.6	12.8	0.1	0.1	0.1	0.0	0.0	0.0
1-94-05-4477	FAASV HALON REPLACEMENT							
UNCLASSIFIED	0.3	1.0	1.8	0.3	0.0	0.0	0.0	0.0
Totals	72.9	13.8	1.9	0.4	0.1	0.0	0.0	0.0

MODIFICATION INSTALLATION SUMMARY (TOA, Dollars in Millions)									Date: February 1997
System/Modification	py FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	TOTAL
No P3a Set for modification									
FAASV PIP TO FLEET									
GA8010									
FAASV MATERIEL CHANGE (A2 Conversion)	15.4	2.6	0.0	0.0	0.0	0.0	0.0	0.0	18.0
FAASV HALON REPLACEMENT	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.3
Totals	15.4	2.6	0.0	0.3	0.0	0.0	0.0	0.0	18.3

INDIVIDUAL MODIFICATION	Date	February 1997

MODIFICATION TITLE: FAASV MATERIEL CHANGE (A2 Conversion) 1-93-05-4457

MODELS OF SYSTEMS AFFECTED: FAASV M992A2

DESCRIPTION / JUSTIFICATION:

The FAASV materiel change encompasses the previously approved FAASV HELP (Howitzer Extended Life Program) and Survivability Materiel Changes. The materiel change incorporates M109 Family of Vehicles improvements into the FAASV in order to maintain a common chasis. These Improvements include the Low Heat Rejection/Cold Start Engine, improved XTG 411-4 Transmission, Reliability, and Maintainability (RAM) improvements to the cooling, electrical, and suspension systems, relocated heater and hydraulic reservoir, stronger fuel cell, and modifications to provide interoperability with the M109A6 Paladin Howitzer. The enhancements provided by the materiel change will permit the FAASV crew to operate in the same environment as the M109A6 Paladin. This means the operation and maintenance features will be common (i.e spares, repair parts, special tools, training) and the FAASV cold starting and RAM features will be comparable. The modifications to the rear door convevor and propellant racks will improve M109A6 supportabilitv.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

Examples	PLANNED	ACCOMPLISHED
Preliminary Design Review:		1QFY91
Critical Design Review:		4QFY91
Contractor Test and Evaluation:		2QFY93
IPR Production Decision		3QFY93
TDP Available:		3QFY93
M992A2 First Delivery		3QFY94
M992A First Unit Equipped		1QFY95

INDIVIDUAL MODIFICATION — Date: February 1997

MODIFICATION TITLE (Cont): FAASV MATERIEL CHANGE (A2 Conversion) 1-93-05-4457

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	664																		664	
Installation Kits		42.4																		42.4
Engineering Change Orders		10.2		0.1														1.5		11.8
Project Management Admin.		1.0		0.4														0.3		1.7
Testing		0.1																		0.1
Vehicular Intercom System				9.1																9.1
Fielding		3.5		0.6		0.1		0.1		0.1								1.3		5.8
Installation of Hardware																				
FY 1996 & Prior Eqpt -- Kits	462	15.4	79	2.6													123	5.0	664	23.0
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	462	15.4	79	2.6													123	5.0	664	23.0
Total Procurement Cost		72.6		12.8		0.1		0.1		0.1								8.1		93.9

METHOD OF IMPLEMENTATION: Letterkennv Armv Depot & ADMINISTRATIVE LEADTIME: 4 Months PRODUCTION LEADTIME: 9 Months

Contract Dates:	FY 1997: Jan 97	FY 1998:	FY 1999:	
Delivery Date:	FY 1997: Oct 97	FY 1998:	FY 1999:	

Installation Schedule: FAASV MATERIEL CHANGE (A2 Conversion) 1-93-05-4457 Date February 1997

	FY 1996 & Prior	FY 1997 1	2	3	4	FY 1998 1	2	3	4	FY 1999 1	2	3	4	FY 2000 1	2	3	4	FY 2001 1	2	3	4	Total
Inputs																						
FY 1996 & Prior	356	32	32	32	40	38	11															541
FY 1997																						
FY 1998																						
FY 1999																						
Total																						541
Outputs																						
FY 1996 & Prior	321	40	20	24	30	57	38	11														541
FY 1997																						
FY 1998																						
FY 1999																						
Total																						541

	FY 2000 1	2	3	4	FY 2001 1	2	3	4	FY 2002 1	2	3	4	FY 2003 1	2	3	4	FY 2004 1	2	3	4	FY 2005 1	2	3	4	Total
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: FAASV HALON REPLACEMENT 1-94-05-4477

MODELS OF SYSTEMS AFFECTED: FAASV M992A2.

DESCRIPTION / JUSTIFICATION:

References: DOD Directive 6050.0; DA Policy Letter 200.90-1; AMC Regulation 70-68; Montreal Protocol of 1986.
The previous references mandate the replacement of Halon charged fire suppression systems to prevent ozone depletion. This schedule is based on the premise that a replacement chemical will be identified no later than 1QFY 97. The Halon charged fire suppression system will be replaced with an alternate agent system.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

Examples	PLANNED	ACCOMPLISHED
Preliminary Design Review:	3QFY97	
Critical Design Review:	4QFY97	
Joint Government Contractor Test and Evaluation:	2QFY98	
IPR Production Decision	2QFY98	
TDP Available:	2QFY98	

INDIVIDUAL MODIFICATION — Date: February 1997

MODIFICATION TITLE (Cont): FAASV HALON REPLACEMENT 1-94-05-4477

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					36												849		885	
Installation Kits						0.3												6.1		6.4
Engineering Support				0.5		0.4												0.2		1.1
Data						0.3												0.1		0.4
Test		0.3		0.5		0.6														1.4
Other -						0.2												0.1		0.3
Installation of Hardware																				
FY 1996 & Prior Eqpt -- Kits																				
FY 1997 Eqpt -- Kits																				
FY 1998 Eqpt -- Kits							36	0.3											36	0.3
FY 1999 Eqpt -- Kits																	419	3.6	419	3.6
FY 2000 Eqpt -- kits																	430	3.2	430	3.2
FY 2001 Eqpt -- kits																				
FY 2002 Eqpt -- kits																				
FY 2003 Eqpt -- kits																				
(FY(TC) Eqpt (xx kits)																				
Total Installation Cost							36	0.3									849	6.8	885	7.1
Total Procurement Cost		0.3		1.0		1.8		0.3										13.3		16.7

METHOD OF IMPLEMENTATION: Contractor — ADMINISTRATIVE LEADTIME: 5 Months — PRODUCTION LEADTIME: 6 Months

Contract Dates: FY 1997: — FY 1998: FEB 98 — FY 1999:

Delivery Date: FY 1997: — FY 1998: AUG 98 — FY 1999:

Installation Schedule: FAASV HALON REPLACEMENT 1-94-05-4477 Date February 1997

	FY 1996 & Prior	FY 1997 1	2	3	4	FY 1998 1	2	3	4	FY 1999 1	2	3	4	FY 2000 1	2	3	4	FY 2001 1	2	3	4	Total
Inputs																						
FY 1996 & Prior																						
FY 1997																						
FY 1998							A		36													36
FY 1999																						
Outputs																						
FY 1996 & Prior																						
FY 1997																						
FY 1998										36												36
FY 1999																						

	FY 2000 1	2	3	4	FY 2001 1	2	3	4	FY 2002 1	2	3	4	FY 2003 1	2	3	4	FY 2004 1	2	3	4	FY 2005 1	2	3	4	Total
Inputs																									
FY 2000																									
FY 2001																									
FY 2002																									
FY 2003																									
Outputs																									
FY 2000																									
FY 2001																									
FY 2002																									
FY 2003																									

Remarks:

BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

APPROPRIATION / BUDGET ACTIVITY: PROCUREMENT OF WPNS & TRKD CMBT VEHS /Tracked Combat Vehicles

P-1 ITEM NOMENCLATURE: IMPROVED RECOVERY VEHICLE (M88 MOD) (GA0570)

	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003
QUANTITY	24	24	12	17	25	31	36	45
COST (In millions)	54.4	55.7	28.6	40.2	59.7	74.0	87.1	109.8

Description: The M88A2 Hercules is an armored, full-tracked, diesel-powered, recovery vehicle configured with an A-frame boom, two winches, and a spade. The boom has a 35 ton lift capacity and the main winch has a constant pull capacity of 70 tons. The hull is armored for protection against small arms fire, artillery fragments and anti-personnel mines. The vehicle mounts a .50 caliber machine gun for self-protection. The M88A2 HERCULES is capable of performing recovery, evacuation, and limited repair of the main battle tank.

JUSTIFICATION: The present 56 ton M88A1 is deficient in its ability to safely perform battlefield recovery of vehicles weighing 60 tons or more. The M88A1 cannot safely recover the Army's current main battle tank, the Abrams Tank, without using a second vehicle as a brake vehicle. The present lack of recovery capability has necessitated the development of an improved recovery vehicle to provide a towing capability for vehicles weighing up to 70 tons. The M88A2 HERCULES will provide the Army with this capability. The M88A2 HERCULES program strategy is to modify the existing M88 recovery vehicle chassis, upgrade the propulsion system to 1050 HP, add armor protection, improve winching to 70 tons, improve hoisting to 35 tons, and add a hydraulic assisted braking system.

Cost Analysis Exhibit (P-5)		A. APPN / BUDGET ACTIVITY TITLE/NO PROCUREMENT OF WPNS & TRKD CMBT VEHICLE Tracked Combat Vehicles			B. WEAPON IMPROVED RECOVERY VEHICLE (M88 MOD) (GAO570)			C. MANUFACTURER NAME United Defense LP York PA			D. DATE February 1997		
	ID	FY 96			FY97			FY98			FY99		
Cost Elements	CD	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost
		$OOO	Each	$OOO	$OOO	Each	$OOO	$OOO	Each	$OOO	$OOO	Each	$OOO
1. Vehicle Manufacturing - Contractor	B	45841	24	1910	45432	24	1893	22761	12	1897	33616	17	1977
2. Vehicle Manufacturing - GFE		1980	24	83	2040	24	85	1038	12	87	1496	17	88
3. Contract Engineering		1779			2016			2092			2239		
4. Engineering Change Orders		113			460			228			308		
5. Project Management Admin - Core		897			961			991			1010		
6. Project Management Admin - OGA		1149			1099			839			859		
7. Transportation		48			48			24			33		
8. Fielding		871			632			628			668		
9. Testing		1685			506								
10. Test Vehicle Refurb					2493								
TOTAL		**54363**			**55687**			**28601**			**40229**		
Weapon System Unit Cost		2265			2320			2383			2366		

BUDGET PROCUREMENT HISTORY AND PLANNING EXHIBIT (P-5A)

DATE: February 1997

B. APPROPRIATION / BUDGET ACTIVITY: Procurement of Weapons and Tracked Combat Vehicles

C. P-1 ITEM NOMENCLATURE: Improved Recovery Vehicle (M88 Mod) (GA0570)

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. Vehicle Manufacturing - Contractor										
FY 96	UDLP (1)	SS-FFP	TACOM	Apr-96	Jul-97	24	1910	YES		
FY 97	UDLP	SS-FFP	TACOM	Mar-97	Jul-98	24	1893	YES		
FY 98	UDLP	SS-FFP	TACOM	Mar-98	Jul-99	12	1897	YES		
FY 99	UDLP	SS-FFP	TACOM	Mar-99	Jul-00	16	1977	YES		
2. Vehicle Manufacturing - GFE										
FY96	Various	SS-FFP	Various				83	YES		
FY97	Various	SS-FFP	Various				85	YES		
FY98	Various	SS-FFP	Various				87	YES		
FY99	Various	SS-FFP	Various				88	YES		

REMARKS:

(1) United Defense Limited Partnership

FY97 (Vehicle Manufacturing, Contractor): Unit cost reduction from FY96 to FY97 due to manufacturing efficiencies as a result of learning after FY95 production break.

FY99 (Vehicle Manufacturing, Contractor): Increased unit cost in FY99 due to production break in FY98

FY 98 / 99 BUDGET PRODUCTION SCHEDULE

P-1 ITEM NOMENCLATURE: IMPROVED RECOVERY VEHICLE (M88 MOD) (GAO570)

DATE: February 1997

COST ELEMENTS	MFR	FY	SERV	PROC QTY Each	ACCEP. PRIOR TO 1 OCT	BAL DUE AS OF 1 OCT	FY 96 OCT	FY 96 NOV	FY 96 DEC	CY 96 JAN	CY 96 FEB	CY 96 MAR	CY 96 APR	CY 96 MAY	CY 96 JUN	CY 96 JUL	CY 96 AUG	CY 96 SEP	FY 97 OCT	FY 97 NOV	FY 97 DEC	CY 97 JAN	CY 97 FEB	CY 97 MAR	CY 97 APR	CY 97 MAY	CY 97 JUN	CY 97 JUL	CY 97 AUG	CY 97 SEP	LATER
1. Vehicle Manufacturing - Contract	1	95 & Pr	A	28	0	28				2	2			2	2	2	4	3	2	2	2	2	3							
	1	FY 96	A	24	0	24							A															2	2	2	18
	1	FY 97	A	24	0	24																		A							24
	1	FY 98	A	12	0	12																									12
	1	FY 99	A	17	0	17																									17
TOTAL				105		105				2	2			2	2	2	4	3	2	2	2	2	3				2	2	2	71

MFR	NAME / LOCATION	PRODUCTION RATES MIN.	1-8-5	MAX.	REACHED D +
	UDLP: York, PA	2	3	5	

MFR Number		ADMIN LEAD TIME Prior 1 Oct.	After 1 Oct.	MFR After 1 Oct.	TOTAL After 1 Oct.
	INITIAL				
	REORDER		7	15	22
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				

REMARKS

Production breaks due to quantities below minimum sustaining rate of 2 per month.

FY 98 / 99 BUDGET PRODUCTION SCHEDULE

P-1 ITEM NOMENCLATURE: IMPROVED RECOVERY VEHICLE (M88 MOD) (GAO570)

DATE: February 1997

COST ELEMENTS	MFR	FY	SERV	PROC QTY Each	ACCEP. PRIOR TO 1 OCT	BAL DUE AS OF 1 OCT	Fiscal Year 98 / Calendar Year 98												Fiscal Year 99 / Calendar Year 99									LATER
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1. Vehicle Manufacturing - Contract	1	95 & Pr	A	28	28																								
	1	FY 96	A	24	6	18	2	2	2	2	2	2	2	2	2														
	1	FY 97	A	24	0	24										2	2	2	2	2	2	2	2	2	2	2			
	1	FY 98	A	12	0	12						A															2	2	2	6
	1	FY 99	A	17	0	17																		A						17
TOTAL				105	34	71	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	23

MFR	NAME / LOCATION	PRODUCTION RATES MIN.	1-8-5	MAX.	REACHED D+
	UDLP: York, PA	2	3	5	

MFR Number		ADMIN LEAD TIME Prior 1 Oct.	After 1 Oct.	MFR After 1 Oct.	TOTAL After 1 Oct.
	INITIAL				
	REORDER		7	15	22
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				

REMARKS: No production break anticipated (Congressional plus-up)

FY 98 / 99 BUDGET PRODUCTION SCHEDULE

P-1 ITEM NOMENCLATURE: IMPROVED RECOVERY VEHICLE (M88 MOD) (GAO570)

DATE: February 1997

COST ELEMENTS	MFR	FY	SERV	PROC QTY Each	ACCEP. PRIOR TO 1 OCT	BAL DUE AS OF 1 OCT	Fiscal Year 00 / Calendar Year 00												Fiscal Year 01 / Calendar Year 01												LATER
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1. Vehicle Manufacturing - Contract	1	95 & Pr	A	28	28																									
	1	FY 96	A	24	24																									
	1	FY 97	A	24	24																									
	1	FY 98	A	12	6	6	2	2	2																					
	1	FY 99	A	17	0	17										2	2	2	2	2	2	2	2	1						
TOTAL				105	82	23	2	2	2							2	2	2	2	2	2	2	2	1						

MFR	NAME / LOCATION	PRODUCTION RATES MIN.	1-8-5	MAX.	REACHED D +
	UDLP: York, PA	2	3	5	

MFR Number		ADMIN LEAD TIME Prior 1 Oct.	After 1 Oct.	MFR After 1 Oct.	TOTAL After 1 Oct.
	INITIAL				
	REORDER		7	15	22
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				

REMARKS

Production breaks due to quantities below minimum sustaining rate of 2 per month.

CODE "B" ITEM DESCRIPTION

DATE	REPORT CONTROL SYMBOL
February 1997	DD-COMP(AR)1092

APPROPRIATION	ACTIVITY	P-1 ITEM NOMENCLATURE
PROCUREMENT OF WPNS & TRKD CMBT VEHS	ACTIVITY 1, TRKD COMBAT VEH	IMPROVED RECOVERY VEH (M88 MOD) (GA0570)

1. CURRENT DEVELOPMENT AND TEST STATUS

		SCHEDULE DATE		
		CURRENT (1)	LAST RPTD (2)	REASON FOR DELAY* (3)
Pre-Production Qual Test (PPQT)	ACTUAL	Aug-93	Aug-93	N/A
Limited User Test (ILUT)	ACTUAL	Jul-93	Jul-93	N/A
Production Qualification Test (PQT)	ACTUAL	Feb-96	Feb-96	NA
Initial Operation Test & Evaluation (IOT&E)	ACTUAL	Jul-96	Jun-96	Test Hardware Delivery Delayed

2. ESTIMATED DATE OF APPROVAL FOR SERVICE USE TC Standard 2Q97

3. EQUIPMENT ITEM(S) TO BE REPLACED

M88A2 Improved Recovery Vehicle replaces the M88A1 Recovery Vehicle

4. EXTENT OF IMPROVEMENT OVER ITEM(S) OF EQUIPMENT TO BE REPLACED

1. Increased safe tow weight from 56 to 70 tons. 2. Improved propulsion system from 750 HP to 1050 HP Engine. 3. Improved transmission to handle the IRV's increase towing capability.
4. Added hydraulic assisted braking system. 5. Improved armor protection. 6. Main winch has 70 ton constant pull capacity. 7. Added 3 ton auxiliary winch. 8 Upgraded hoist to 35 tons.

5. DEVELOPMENT CONTRACT INFORMATION

CONTRACTOR NAME (1)	PLANT LOCATION (2)	COMPONENT (3)	THROUGH 1996 (4)	1997 (5)	1998 (6)	1999 (7)	BEYOND BYs (8)
United Defense, LP	York, PA	PROTOTYPE	41.5	3.0			
Government Support			9.3				
TOTAL RDT&E FUNDING			50.8	3.0			

6. REMARKS

Results of PQT and IOTE indicate that the vehicle is performing favorably. The Reliability, Availability, and Maintainability (RAM) objective for the system is 210 Mean Miles Between Operational Mission Failures (MMBOMF); the system demonstrated 256 MMBOMF in testing. The system Mean Miles Between Hardware Failure goal is 375 miles; the system demonstrated 392 miles in testing.

* Reference entries on attachment to P-19 if additional space is required to adequately explain delay from previous date.

BUDGET ITEM JUSTIFICATION SHEET						DATE: February 1997		
APPROPRIATION / BUDGET ACTIVITY: PROCUREMENT OF WPNS & TRKD CMBT VEHS /Tracked Combat Vehicles				P-1 ITEM NOMENCLATURE: BREACHER SYSTEM (MOD) (GZ3200)				
	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003
QUANTITY	0	0	0	0	0	11	11	16
COST (In millions)	0.0	0.0	0.0	10.4	11.0	83.4	86.3	125.9

DESCRIPTION: The Grizzly (Breacher) will be developed around the M-1 Abrams tank chassis and will integrate a versatile/survivable full-width mine clearing blade with automatic depth control, a power driven excavating arm to reduce complex obstacles, and an armored commander's control station. The Grizzly will provide the Combat Engineer with significantly improved mission effectiveness and crew/vehicle survivability while clearing minefields and removing complex natural and man-made obstacles at the forward edge of the battlefield. The Grizzly will be capable of moving with, and be as survivable as, the force it is supporting. It will provide the maneuver force with the freedom required to successfully execute assigned ground combat mission requirements.

JUSTIFICATION: During Operation Desert Storm, it became evident that the Army presently has no one vehicle capable of performing an in-stride, complex linear obstacle breach. All existing counterobstacle and countermine systems are single purpose only, and lack the mobility, protection and agility of the current maneuver force. The Grizzly possesses a complex obstacle reducing capability, with mobility protection, and agility comparable to the M-1 Abrams Tank.

WTCV Cost Analysis		A. APPN / BUDGET ACTIVITY TITLE/NO PROCUREMENT OF WPNS & TRKD CMBT VEHS / 1 / Tracked Combat Vehicles			B. WEAPON BREACHER SYSTEM (MOD) (GZ3200)			C. MANUFACTURER NAME GDLS			D. DATE February 1997		
WTCV Cost Elements	ID CD	**FY96**			**FY97**			**FY98**			**FY99**		
		TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost
		$OOO	Each	$OOO	$OOO	Each	$OOO	$OOO	Each	$OOO	$OOO	Each	$OOO
1. Vehicle Manufacturing - Contractor													
2. Vehicle Manufacturing - ANAD													
3. Vehicle Manufacturing - GFE													
4. System Technical Support													
5. Engineering Change Orders													
6. Project Management Admin - Core													
7. Project Management Admin - OGA													
8. Sustaining Tooling - Contractor													
9. Sustaining Tooling - Anniston													
10. Initial Production Facilities											10444		
TOTAL											**10444**		

BUDGET PROCUREMENT HISTORY AND PLANNING EXHIBIT (P-5A)

DATE: February 1997

B. APPROPRIATION / BUDGET ACTIVITY: PROCUREMENT OF WPNS & TRKD CMBT VEHS / Tracked Combat Vehicles

C. P-1 ITEM NOMENCLATURE: BREACHER SYSTEM (MOD) (GZ3200)

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
10. Facilitization - FY99	UDLP: York, PA*	SS-FFP	TACOM	Jun-99	NA	NA	NA	No	No	

REMARKS: *United Defense Limited Partnership.

CODE "B" ITEM DESCRIPTION

DATE	REPORT CONTROL SYMBOL
February 1997	DD-COMP(AR)1092

APPROPRIATION	ACTIVITY	P-1 ITEM NOMENCLATURE
PROCUREMENT OF WPNS & TRKD CMBT VEHS	Tracked Combat Vehicles	BREACHER SYSTEM (MOD) (GZ3200)

1. CURRENT DEVELOPMENT AND TEST STATUS

		SCHEDULE DATE		
		CURRENT (1)	LAST RPTD (2)	REASON FOR DELAY* (3)
a. DEV TEST & EVAL (DT&E)	PLAN / ACTUAL	1Q96	1Q96	
b. INITIAL OPER TEST & EVAL (IOT&E)	PLAN / ACTUAL	2Q96	2Q96	
c. OPER TEST & EVAL (OT&E)	PLAN / ACTUAL	4Q02	2Q02	Delayed MS II /extended EMD design to mitigate risk.
d. AVAIL DATE OF TECH DATA PKG (TDP) OR PERFORMANCE SPECIFICATIONS		3Q99	2Q99	Extended EMD design time to mitigate technical risk.

2. ESTIMATED DATE OF APPROVAL FOR SERVICE USE TCLP-DEC 99, TC STANDARD-JUN 02

3. EQUIPMENT ITEM(S) TO BE REPLACED

NA All existing counterobstacle and countermine systems are single purpose only.

4. EXTENT OF IMPROVEMENT OVER ITEM(S) OF EQUIPMENT TO BE REPLACED

The Grizzly (Breacher) supports the Army requirement for a mine clearing capability comparable in mobility, protection, and agility to the maneuver force. The Grizzly integrates countermine and counterobstacle capabilities into a single, survivable system capable of breaching complex obstacles in-stride and creating a cleared lane for other combat vehicles to follow.

5. DEVELOPMENT CONTRACT INFORMATION

CONTRACTOR NAME (1)	PLANT LOCATION (2)	COMPONENT (3)	THROUGH 1996 (4)	1997 (5)	1998 (6)	1999 (7)	BEYOND BYs (8)
UDLP *	York, PA	Advance Development	61.4				
UDLP *	York, PA	Eng & Mfg Dev Prototype	5.8	29.5	38.8	39.1	92.5
Government Support		Advanced Development	11.1				
Government Support		Eng & Mfg Development	0.7	4.6	4.9	12.3	24.7
TOTAL RDT&E FUNDING			79.0	34.1	43.7	51.4	117.2

6. REMARKS

*United Defense Limited Partnership

* Reference entries on attachment to P-19 if additional space is required to adequately explain delay from previous date.

BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

APPROPRIATION / BUDGET ACTIVITY: PROCUREMENT OF WPNS & TRKD CMBT VEHS /Tracked Combat Vehicles

P-1 ITEM NOMENCLATURE: HEAVY ASSAULT BRIDGE (HAB) SYS (MOD) (GZ3250)

	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003
QUANTITY	2	10	7	9	13	15	17	17
COST (In millions)	14.6	51.3	42.2	52.0	71.2	90.1	111.5	122.5

DESCRIPTION: The Wolverine (Heavy Assault Bridge) is a 26 meter (79 feet) Military Load Class 70 bridge transported on a modified M1A2 SEP Abrams Tank chassis. The bridge is capable of spanning gaps up to 24 meters on both prepared and unprepared abutments and can be placed on a bearing surface over its entire length. It is launched under armor within five minutes and can be retrieved, from either end, in less than ten minutes. The Wolverine is operated by a crew of two soldiers and will be employed by Combat Engineer units in both offensive and defensive combined arms operations. Its mission is to provide gap crossing capability for heavy maneuver forces. It is planned to support the Abrams Tank System and the Bradley Fighting Vehicle and is compatible with these systems in mobility and survivability.

JUSTIFICATION: During Operation Desert Storm, it became evident that the current Army bridging system was deficient in gap spanning capability and required increased load carrying capability. The Wolverine will replace the Armored Vehicle Launched Bridge (AVLB) providing increased worldwide gap crossing capabilities, increased load capacity to support Military Load Class 70 vehicles and improved mobility, survivability, and logistics compatibility. The Wolverine enhances the Combined Arms Team's ability to move where it wants, multiplying its combat capabilities. First Unit Equipped will be in FY00 at a quantity of 12 vehicles.

WTCV Cost Analysis		A. APPN / BUDGET ACTIVITY TITLE/NO PROCUREMENT OF WPNS & TRKD CMBT VEHS / 1 / Tracked Combat Vehicles			B. WEAPON HEAVY ASSAULT BRIDGE (HAB) SYS (MOD) (GZ3250)			C. MANUFACTURER NAME GEN DYNAMICS LAND SYS			D. DATE February 1997		
WTCV Cost Elements	ID CD	**FY 96**			**FY 97**			**FY 98**			**FY 99**		
		TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost
		$OOO	Each	$OOO	$OOO	Each	$OOO	$OOO	Each	$OOO	$OOO	Each	$OOO
1. Vehicle Manufacturing - Contractors	B	10400	2	5200	38592	10	3859	27775	7	3968	36720	9	4080
2. Vehicle Manufacturing - ANAD		400	2	200	2240	10	224	1600	7	229	2100	9	233
3. Vehicle Manufacturing - GFE		2100	6	350	2028	6	338	2230	7	319	2910	9	323
4. Contract Engineering					4292			7550			6990		
5. Engineering Change Orders					1020			720			940		
6. Project Mgmt Admin - Core		747			710			730			750		
7. Project Mgmt Admin - OGA		964			1390			1350			1350		
8. Total Package Fielding					190			250			190		
9. Initial Production Facilities					860								
TOTAL PROGRAM COST		14611			51322			42205			51950		
Weapon System Unit Cost		7305			5132			6029			5772		

BUDGET PROCUREMENT HISTORY AND PLANNING EXHIBIT (P-5A)

DATE: February 1997

B. APPROPRIATION / BUDGET ACTIVITY: PROCUREMENT OF WPNS & TRKD CMBT VEHS / 1 / Tracked Combat Vehicles

C. P-1 ITEM NOMENCLATURE: HEAVY ASSAULT BRIDGE (HAB) SYS (MOD) (GZ3250)

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. Vehicle Manufacturing										
FY 96	General Dynamics Land Sys *	SS-CPFF	TACOM	Aug-96	Mar-99	2	5200	NO	YES	Apr-98
FY 96	Anniston Army Depot					2	200			
FY 96	Government Furnish Equipment					6	350			
FY 97	General Dynamics Land Sys *	SS-CPFF	TACOM	Dec-96	Apr-99	4	3859	NO	YES	Apr-98
FY 97	Anniston Army Depot	OPTION				4	224			
FY 97	General Dynamics Land Sys*	SS-FFP	TACOM	Jun-97	Oct-00	6	3859	NO	YES	Apr-98
FY 97	Anniston Army Depot	BOA				6	224			
FY 97	Government Furnish Equipment					6	338			
FY 98	General Dynamics Land Sys *	SS-FFP	TACOM	Dec-97	Feb-00	7	3968	NO	YES	Apr-98
FY 98	Anniston Army Depot	BOA				7	229			
FY 98	Government Furnish Equipment					7	319			
FY 99	General Dynamics Land Sys *	SS-FFP	TACOM	Nov-98	Sep-00	9	4080	NO	YES	Apr-98
FY 99	Anniston Army Depot	BOA				9	233			
FY 99	Government Furnish Equipment					9	323			

REMARKS: * General Dynamics Land Systems - Sterling Heights, MI

FY 96 / 97 BUDGET PRODUCTION SCHEDULE

P-1 ITEM NOMENCLATURE: HEAVY ASSAULT BRIDGE (HAB) SYS (MOD) (GZ3250)

DATE: February 1997

COST ELEMENTS	MFR	FY	SERV	PROC QTY Each	ACCEP. PRIOR TO 1 OCT	BAL DUE AS OF 1 OCT	Fiscal Year 96 / Calendar Year 96 OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	Fiscal Year 97 / Calendar Year 97 OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	LATER
Vehicle Manufacturing	1	FY96	A	2	0	2											A														2
	1	FY97	A	10	0	10													A								A				10
	1	FY98	A	7	0	7																									7
	1	FY99	A	9	0	9																									9
	1	FY00	A	13	0	13																									13
	1	FY01	A	15	0	15																									15
TOTAL				56		56																									56

MFR	NAME / LOCATION	PRODUCTION RATES MIN.	1-8-5	MAX.	REACHED D +
1	GENERAL DYNAMICS LAND SYSTEMS	N/A*	N/A*	N/A*	
	LIMA OH				
	*HAB vehicles will be produced on the same production				
	line as the M1A2 SEP vehicles.				

MFR Number		ADMIN LEAD TIME Prior 1 Oct.	After 1 Oct.	MFR After 1 Oct.	TOTAL After 1 Oct.
	INITIAL	0	9	30	39
	REORDER		9	27	36
	INITIAL		9	27	36
	REORDER				
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				

REMARKS

FY 96 / 97 BUDGET PRODUCTION SCHEDULE

P-1 ITEM NOMENCLATURE: HEAVY ASSAULT BRIDGE (HAB) SYS (MOD) (GZ3250)

DATE: February 1997

COST ELEMENTS	MFR	FY	SERV	PROC QTY Each	ACCEP. PRIOR TO 1 OCT	BAL DUE AS OF 1 OCT	Fiscal Year 98 / Calendar Year 98												Fiscal Year 99 / Calendar Year 99												LATER
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
Vehicle Manufacturing	1	FY96	A	2	0	2																		2							
	1	FY97	A	10	0	10																			1	1	2				6
	1	FY98	A	7	0	7			A																						7
	1	FY99	A	9	0	9														A											9
	1	FY00	A	13	0	13																									13
	1	FY01	A	15	0	15														1											15
TOTAL				56		56																		2	1	1	2				50

MFR	NAME / LOCATION	PRODUCTION RATES MIN.	PRODUCTION RATES 1-8-5	PRODUCTION RATES MAX.	REACHED D +
1	GENERAL DYNAMICS LAND SYSTEMS	N/A*	N/A*	N/A*	
	LIMA, OH				
	*HAB vehicles will be produced on the same production line as the M1A2 SEP vehicles.				

MFR Number		ADMIN LEAD TIME Prior 1 Oct.	ADMIN LEAD TIME After 1 Oct.	MFR After 1 Oct.	TOTAL After 1 Oct.
	INITIAL	7	2	24	26
	REORDER				
	INITIAL		9	21	30
	REORDER				
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				

REMARKS

FY 96 / 97 BUDGET PRODUCTION SCHEDULE

P-1 ITEM NOMENCLATURE: HEAVY ASSAULT BRIDGE (HAB) SYS (MOD) (GZ3250)

DATE: February 1997

COST ELEMENTS	MFR	FY	SERV	PROC QTY Each	ACCEP. PRIOR TO 1 OCT	BAL DUE AS OF 1 OCT	Fiscal Year 00 / Calendar Year 00												Fiscal Year 01 / Calendar Year 01										LATER
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
Vehicle Manufacturing	1	FY96	A	2	2																									
	1	FY97	A	10	4	6	1	1	2	2																				
	1	FY98	A	7	0	7					1	1	1	1	1	1	1													
	1	FY99	A	9	0	9												1	1	1	1	1	1	1	1	1				
	1	FY00	A	13	0	13		A																			1	1	1	1	9
	1	FY01	A	15	0	15															A										15
TOTAL				56	6	50	1	1	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	24

MFR	NAME / LOCATION	PRODUCTION RATES MIN.	1-8-5	MAX.	REACHED D +
1	GENERAL DYNAMICS LAND SYSTEMS	N/A*	N/A*	N/A*	
	LIMA, OH				
	*HAB vehicles will be produced on the same production line as the M1A2 SEP vehicles.				

MFR Number		ADMIN LEAD TIME Prior 1 Oct.	After 1 Oct.	MFR After 1 Oct.	TOTAL After 1 Oct.
	INITIAL	8	1	18	19
	REORDER				
	INITIAL		9	17	26
	REORDER				
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				

REMARKS

FY 96 / 97 BUDGET PRODUCTION SCHEDULE

P-1 ITEM NOMENCLATURE: HEAVY ASSAULT BRIDGE (HAB) SYS (MOD) (GZ3250)

DATE: February 1997

COST ELEMENTS	MFR	FY	SERV	PROC QTY Each	ACCEP. PRIOR TO 1 OCT	BAL DUE AS OF 1 OCT	Fiscal Year 02 / Calendar Year 02												Fiscal Year 03 / Calendar Year 03										LATER
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
Vehicle Manufacturing		FY96	A	2	2																									
		FY97	A	10	10																									
		FY98	A	7	7																									
		FY99	A	9	9																									
		FY00	A	13	4	9	1	1	1	1	1	1	1	1	1															
		FY01	A	15	0	15									1	1	1	1	1	1	1	1	1	2	2	2				
TOTAL				**56**	**32**	**24**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**2**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**2**	**2**	**2**				
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

MFR	NAME / LOCATION	PRODUCTION RATES MIN.	1-8-5	MAX.	REACHED D +
1	GENERAL DYNAMICS LAND SYSTEMS	N/A*	N/A*	N/A*	
	LIMA, OH				
	*HAB vehicles will be produced on the same production				
	line as the M1A2 SEP vehicles.				

MFR Number		ADMIN LEAD TIME Prior 1 Oct.	ADMIN LEAD TIME After 1 Oct.	MFR After 1 Oct.	TOTAL After 1 Oct.
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				

REMARKS

CODE "B" ITEM DESCRIPTION

DATE	REPORT CONTROL SYMBOL
February 1997	DD-COMP(AR)1092

APPROPRIATION	ACTIVITY	P-1 ITEM NOMENCLATURE
PROCUREMENT OF WPNS & TRKD CMBT VEHS	Tracked Combat Vehicles	HEAVY ASSAULT BRIDGE (HAB) SYS (MOD) (GZ3250)

1. CURRENT DEVELOPMENT AND TEST STATUS

		SCHEDULE DATE		
		CURRENT (1)	LAST RPTD (2)	REASON FOR DELAY* (3)
a. DEV TEST & EVAL (DT&E)	PLAN / ACTUAL	DEC91/DEC 92	Dec-92	DELAY IN FUNDING
b. PRE-PROD QUAL TEST (PPQT)	PLAN / ACTUAL	JUN 96/AUG 96	Aug-96	EXTENDED CONTRACTOR TEST
c. LOGISTICS DEMONSTRATION	PLAN / ACTUAL	JUN 96/JUN 96	Jun-96	
d. PRODUCTION VERIFICATION TEST (PVT)	PLAN / ACTUAL	Apr-99	Aug-98	MIGRATION TO M1A2 SEP CONFIGURATION
e. INITIAL OPER TEST & EVAL (IOT&E)	PLAN / ACTUAL	Aug-99	Jan-99	MIGRATION TO M1A2 SEP CONFIGURATION

2. ESTIMATED DATE OF APPROVAL FOR SERVICE USE TCLP - 2Q97, TC STANDARD - 4QFY00

3. EQUIPMENT ITEM(S) TO BE REPLACED

Armored Vehicle Launched Bridge (AVLB).

4. EXTENT OF IMPROVEMENT OVER ITEM(S) OF EQUIPMENT TO BE REPLACED

Military Load Class Improved from MLC 60 to MLC 70. Gap spanning capability improved from 17.4m(57') to 24m(79'). Provide mobility and protection comparable to the M1 Abrams Tanks.

5. DEVELOPMENT CONTRACT INFORMATION

CONTRACTOR NAME (1)	PLANT LOCATION (2)	COMPONENT (3)	THROUGH 1996 (4)	1997 (5)	1998 (6)	1999 (7)	BEYOND BYs (8)
Southwest Mobile Systems	St. Louis, MO	Eng & Mfg Dev Prototype	5.8				
Other Various Contracts	Various	Eng & Mfg Dev Prototype	0.9				
Gen Dynamics Land Systems	Sterling Height, MI	Eng & Mfg Dev Prototype	36.9	12.6	4.7	4.1	0.2
Government Support		Eng & Mfg Dev	10.1		7.3	6.1	
TOTAL RDT&E FUNDING			53.7	12.6	12.0	10.2	0.2

6. REMARKS

* Reference entries on attachment to P-19 if additional space is required to adequately explain delay from previous date.

BUDGET ITEM JUSTIFICATION SHEET				DATE: February 1997				
APPROPRIATION / BUDGET ACTIVITY: PROCUREMENT OF WPNS & TRKD CMBT VEHS /Tracked Combat Vehicles				P-1 ITEM NOMENCLATURE: M1 ABRAMS TANK (MOD) (GA0700)				
	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)	50.1	63.2	29.8	30.1	23.9	68.8	107.1	129.8

DESCRIPTION: The funds programmed in this budget line will provide for the procurement and application of modification kits for the Abrams series tank to improve lethality, survivability, safety and operations. Tank lethality will be improved by the Armament Enhancement Initiative (AEI). Tank survivability and safety improvements include Live Fire Category A (Manual Blaster, Driver's / Loader's Hatch Ballistic Rims, Turret Cable Ballistic Protection and Driver's / Loader's Hatch Latch); Live Fire Category B (Ammo Door Latch Mechanism, Smoke Generator Fuel Line and Improved Gunner's Station); Battlefield Override (BF/OR); Driver's Viewer Quick Release (DVQR); System Package (SEP) / 2nd Generation Forward Looking Infra - Red (Gen II FLIR): Driver's Hatch Interlock and Embedded Battle Command (EBC). Tank operational improvements include the Precision Lightweight GPS Receiver (PLGR); Pulse - Jet Air System (PJAS); Vehicle Intercommunications System (VIS): External Auxiliary Power Unit (EAPU) and the Mounted Water Ration Heater (MWRH). These P-Forms reflect the alignment of some Mods into Blocks with the expectation that reduced costs will result from concurrent application. Including the Live Fire Mods listed above which will be combined as Block G; more than 60 modifications have been so combined during the life of this program. Finally, there is the Presidentially directed Halon Replacement Program (Ozone Depleting Chemical Replacement).

BUDGET ITEM JUSTIFICATION SHEET	DATE: February 1997
APPROPRIATION / BUDGET ACTIVITY: PROCUREMENT OF WPNS & TRKD CMBT VEHS /Tracked Combat Vehicles	P-1 ITEM NOMENCLATURE: M1 ABRAMS TANK (MOD) (GA0700)

OSIP No. / Classification	Description / All PYs	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003
1-92-05-4411	Halon Replacement							
Environmental	7.4	1.5	4.1	6.8	7.3	7.2	7.5	6.6
TBD1	Drivers Hatch Interlock							
Safety	0.0	16.0	6.6	6.0	0.0	0.0	0.0	0.0
1-92-05-4412	Vehicle Intercommunications System (VIS)							
Legislative Compl	26.6	6.6	6.0	5.4	0.6	0.0	0.0	0.0
1-89-05-4226	Armament Enhancement Initiative (AEI)							
Operational	60.1	0.4	0.0	0.0	0.0	0.0	0.0	0.0
1-92-05-4417	Precision Lightweight GPS Receiver (PLGR)							
Manprint	6.7	1.2	1.6	1.6	1.6	0.4	0.0	0.0
1-89-05-4230	Live Fire Category A (LFCA)							
Deficiency Correct	14.4	5.8	3.7	3.7	4.0	3.9	4.1	1.8
1-89-05-4229	Battlefield Override (BF/OR)							
Operational	8.9	4.2	2.6	2.5	1.8	0.8	0.8	0.4
1-94-05-4481	Live Fire Category B (LFCB)							
Deficiency Correct	2.4	1.7	0.8	0.8	0.8	0.8	0.8	0.6
1-92-05-4427	Driver's Viewer Quick Release (DVQR)							
Safety	0.3	0.2	0.3	0.3	0.2	0.0	0.0	0.0
1-92-05-4475	Pulse Jet Air System (PJAS)							
Operational	18.2	9.5	1.8	3.0	3.6	6.3	6.9	7.0
1-92-05-4426	Mounted Water Ration Heater (MWRH)							
Manprint	1.9	0.2	0.2	0.0	0.0	0.0	0.0	0.0
N/A	Prior Year MOD Kit Applications							
Operational	65.0	2.4	0.0	0.0	0.0	0.0	0.0	0.0
1-96-05-4504	2nd Gen Forward Looking Infra-Red (2GFLIR)							
Operational	0.0	0.0	0.0	0.0	1.8	28.7	50.1	64.7
1-96-05-4505	System Enhancement Package (SEP)							
Operational	0.0	0.0	0.0	0.0	1.2	19.7	35.8	47.6
1-96-05-4516	Embedded Battle Command							
Operational	0.0	0.0	0.0	0.0	1.0	1.0	1.1	1.1

BUDGET ITEM JUSTIFICATION SHEET					DATE February 1997			
APPROPRIATION / BUDGET ACTIVITY PROCUREMENT OF WPNS & TRKD CMBT VEHS /Tracked Combat Vehicles				P-1 ITEM NOMENCLATURE M1 ABRAMS TANK (MOD) (GA0700)				
1-85-05-4057	External Auxiliary Power Unit (EAPU)							
Operational	0.0	11.0	2.1	0.0	0.0	0.0	0.0	0.0
TBD2	External Auxiliary Power Unit (EAPU) Upgrade							
Operational	0.0	2.5	0.0	0.0	0.0	0.0	0.0	0.0
Totals	211.9	63.2	29.8	30.1	23.9	68.8	107.1	129.8

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
No P3a Set for modification									
M1 ABRAMS TANK (MOD)									
GA0700									
Halon Replacement	0.0	0.0	0.0	2.7	2.9	2.9	3.0	3.0	14.5
Drivers Hatch Interlock	0.0	0.0	6.6	6.0	0.0	0.0	0.0	0.0	12.6
Vehicle Intercommunications System (VIS)	1.1	0.8	0.6	0.6	0.6	0.0	0.0	0.0	3.7
Armament Enhancement Initiative (AEI)	15.3	0.4	0.0	0.0	0.0	0.0	0.0	0.0	15.7
Precision Lightweight GPS Receiver (PLGR)	1.7	0.0	0.4	0.4	0.4	0.4	0.0	0.0	3.3
Live Fire Category A (LFCA)	5.5	4.6	2.5	2.5	2.7	2.6	2.7	1.8	24.9
Battlefield Override (BF/OR)	1.0	3.3	1.7	1.6	1.2	0.3	0.4	0.4	9.9
Live Fire Category B (LFCB)	1.6	1.5	0.6	0.6	0.7	0.7	0.7	0.6	7.0
Driver's Viewer Quick Release (DVQR)	0.1	0.1	0.2	0.2	0.2	0.0	0.0	0.0	0.8
Pulse Jet Air System (PJAS)	0.0	2.3	0.8	0.2	0.6	0.6	1.1	1.2	6.8
Mounted Water Ration Heater (MWRH)	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.4
Prior Year MOD Kit Applications	65.0	2.4	0.0	0.0	0.0	0.0	0.0	0.0	67.4
2nd Gen Forward Looking Infra-Red (2GFLIR)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
System Enhancement Package (SEP)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Embedded Battle Command	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
External Auxiliary Power Unit (EAPU)	0.0	0.0	2.1	0.0	0.0	0.0	0.0	0.0	2.1
External Auxiliary Power Unit (EAPU) Upgrade	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Totals	91.3	15.6	15.7	14.8	9.3	7.5	7.9	7.0	169.1

INDIVIDUAL MODIFICATION	Date	February 1997

MODIFICATION TITLE: Halon Replacement 1-92-05-4411

MODELS OF SYSTEMS AFFECTED: M1 = 0, IPM1 = 818, M1A1 = 4351 and M1A2 = 1079 TOTAL RQMT = 6248

DESCRIPTION / JUSTIFICATION:

This modification changes the engine compartment fire supression system in all Abrams tank variants. The retrofit involves the substitution of an, as yet, undetermined chemical for the halon currently used. This requirement was mandated by the 1988 Montreal Protocol in which 93 countries including the U.S.A. agreed to phase out Ozone Depleting Chemicals [ODC's] including the halon 1301 used in the Abrams Tank engine compartment [halon 1301 remains authorized for the crew compartment due to survivability concerns but engine compartment halon must be deleted]. See 1992 DOD directive 6050.9 which establishes policy of ODC's and DA letter 200 / 9 which implements that policy. The halon replacement modification is the implementation of a Presidential directive.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

	PLANNED	ACCOMPLISHED
Preliminary Design Review:	1Q93	1Q93
Critical Design Review:	1Q94	3Q94
Contractor Test and Evaluation:	2Q96	2Q96
Development Test and Evaluation:	3Q96	4Q96
Inital Operational Test and Evaluation:	2Q97	
IPR Production Decision	3Q97	
TDP Available:	4Q97	

INDIVIDUAL MODIFICATION — Date: February 1997

MODIFICATION TITLE (Cont): Halon Replacement 1-92-05-4411

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	0				1080		1080		1080		1080		1080		848				6248	
Installation Kits																				
Installation Kits Nonrecurring																				
Equipment						4.0		4.0		4.3		4.2		4.4		3.6				24.5
Equipment Nonrecurring																				
Engineering Change Orders																				
Engineering & Source Select		7.4		1.4																8.8
Training Equipment																				
Support Equipment																				
Other [In - House Support]				0.1		0.1		0.1		0.1		0.1		0.1						0.6
Interim Contractor Support																				
Installation of Hardware																				
FY 1996 & Prior Eqpt -- Kits																				
FY 1997 Eqpt -- Kits																				
FY 1998 Eqpt -- Kits 1080							1080	2.7											1080	2.7
FY 1999 Eqpt -- Kits 1080									1080	2.9									1080	2.9
FY 2000 Eqpt -- kits 1080											1080	2.9							1080	2.9
FY 2001 Eqpt -- kits 1080													1080	3.0					1080	3.0
FY 2002 Eqpt -- kits 1080															1080	3.0			1080	3.0
FY 2003 Eqpt -- kits 848																	848	2.4	848	2.4
(FY(TC) Eqpt (xx kits)																				
Total Installation Cost							1080	2.7	1080	2.9	1080	2.9	1080	3.0	1080	3.0	848	2.4	6248	16.9
Total Procurement Cost		7.4		1.5		4.1		6.8		7.3		7.2		7.5		6.6		2.4		50.8

METHOD OF IMPLEMENTATION: Contractor/Depot Teams ADMINISTRATIVE LEADTIME: 2 Months PRODUCTION LEADTIME: 3 Months

Contract Dates: FY 1997: FY 1998: JAN 98 FY 1999: JAN 99

Delivery Date: FY 1997: FY 1998: JUL 98 FY 1999: JUL 99

Installation Schedule: Halon Replacement 1-92-05-4411 Date February 1997

	FY 1996 & Prior	FY 1997 1	2	3	4	FY 1998 1	2	3	4	FY 1999 1	2	3	4	FY 2000 1	2	3	4	FY 2001 1	2	3	4	TC	Total
Inputs																							
FY 1996 & Prior																							
FY 1997																							
FY 1998									300	300	300	180											1080
FY 1999												120	300	300	300	60							1080
Outputs																							
FY 1996 & Prior																							
FY 1997																							
FY 1998										270	270	270	270										1080
FY 1999														270	270	270	270						1080

	FY 2000 1	2	3	4	FY 2001 1	2	3	4	FY 2002 1	2	3	4	FY 2003 1	2	3	4	FY 2004 1	2	3	4	FY 2005 1	2	3	4	Total
Inputs																									
FY 2000			260	300	300	220																			1080
FY 2001						80	300	300	300	100															1080
FY 2002										200	300	300	280												1080
FY 2003													20	300	300	228									848
Outputs																									
FY 2000					270	270	270	270																	1080
FY 2001									270	270	270	270													1080
FY 2002													270	270	270	270									1080
FY 2003																	270	270	270	38					848

Remarks:

6847ea represents the total Abrams tank fleet, all models.

INDIVIDUAL MODIFICATION	Date	February 1997

MODIFICATION TITLE: Drivers Hatch Interlock TBD1

MODELS OF SYSTEMS AFFECTED: M1 = 355; IPM1 = 892; M1A1 = 4351; M1A2 = 0 TOTAL RQMT = 5598

DESCRIPTION / JUSTIFICATION:

The Driver's Hatch Interlock (DHI) is a SAFETY Modification which provides an electronic interface between the Driver's Hatch and the Turret Drive (Rotation) controls. Its purpose is to proclude Turret rotation while the Driver's Hatch is open.
In the recent past there have been several accidents in the field where the driver has been injured or killed by inadvertently extending his head outside the hatch while the turret was being rotated. The DHI will assure that similar acclidents will not occur in the future. Without this funding, the potential exists for additional driver accidents or fatalities.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

Examples

	PLANNED	ACCOMPLISHED
Preliminary Design Review:	2Q96	2Q96
Critical Design Review:	3Q96	3Q96
Contractor Test and Evaluation:	N / A	N / A
Development Test and Evaluation:	4Q96	4Q96
Inital Operational Test and Evaluation:	N / A	N / A
IPR Production Decision	4Q96	4Q96
TDP Available:	1Q97	1Q97

INDIVIDUAL MODIFICATION																	Date	February 1997		
MODIFICATION TITLE (Cont):	Drivers Hatch Interlock TBD1																			
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			4758														1247		6005	
Installation Kits																				
Installation Kits Nonrecurring																				
Equipment				16.0														5.1		21.1
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 4758					2600	6.6	2158	6.0											4758	12.6
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 1247																	1247	4.1	1247	4.1
Total Installation Cost					2600	6.6	2158	6.0									1247	4.1	6005	16.7
Total Procurement Cost				16.0		6.6		6.0										9.2		37.8

METHOD OF IMPLEMENTATION: Enter Method Contr Inst. ADMINISTRATIVE LEADTIME: 2 Months PRODUCTION LEADTIME: 6 Months

Contract Dates:	FY 1997:	FEB 97	FY 1998:	FY 1999:	
Delivery Date:	FY 1997:	AUG 97	FY 1998:	FY 1999:	

Installation Schedule: Drivers Hatch Interlock TBD1

Date: February 1997

	FY 1996 & Prior	FY 1997 1	FY 1997 2	FY 1997 3	FY 1997 4	FY 1998 1	FY 1998 2	FY 1998 3	FY 1998 4	FY 1999 1	FY 1999 2	FY 1999 3	FY 1999 4	FY 2000 1	FY 2000 2	FY 2000 3	FY 2000 4	FY 2001 1	FY 2001 2	FY 2001 3	FY 2001 4	Total
Inputs																						
FY 1996 & Prior																						
FY 1997					700	700	700	700	700	700	558											4758
FY 1998																						
FY 1999																						
Outputs																						
FY 1996 & Prior																						
FY 1997						650	650	650	650	540	540	540	538									4758
FY 1998																						
FY 1999																						

	FY 2000 1	FY 2000 2	FY 2000 3	FY 2000 4	FY 2001 1	FY 2001 2	FY 2001 3	FY 2001 4	FY 2002 1	FY 2002 2	FY 2002 3	FY 2002 4	FY 2003 1	FY 2003 2	FY 2003 3	FY 2003 4	FY 2004 1	FY 2004 2	FY 2004 3	FY 2004 4	FY 2005 1	FY 2005 2	FY 2005 3	FY 2005 4	Total
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: Vehicle Intercommunications System (VIS) 1-92-05-4412

MODELS OF SYSTEMS AFFECTED: M1 = 0; IPM1 = 0; M1A1 = 4351; and M1A2 = 181 TOTAL RQMT = 4532

DESCRIPTION / JUSTIFICATION:

The Vehicle Intercommunications System [VIS] is an intercom for intercrew communications and a radio for tank to tank direct communications. It replaces the AN / VIC - 1 which is technologically obsolete, difficult to maintain and susceptible to electronic countermeasures. VIS is a State - of - the - Art replacement which has none of these drawbacks. This is a congressionally mandated program. Note that the milestones below are for USA CECOM, the "A" proponent for the VIS program. Current funding will cover retrofit of M1A2's produced prior to production cut - in and all M1A1's.

USER PRIORITY: 13

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

	PLANNED	ACCOMPLISHED
Preliminary Design Review:	N/A	N/A
Critical Design Review:	N/A	N/A
Contractor Test and Evaluation:	N/A	N/A
Development Test and Evaluation:	4Q92	2Q92
Inital Operational Test and Evaluation:	3Q94	4Q94
IPR Production Decision	4Q92	4Q92
TDP Available:	N/A	N/A

INDIVIDUAL MODIFICATION — Date: February 1997

MODIFICATION TITLE (Cont): Vehicle Intercommunications System (VIS) 1-92-05-4412

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	2568		655		655		654												4532	
Installation Kits																				
Installation Kits Nonrecurring																				
Equipment		22.9		5.7		5.4		4.8												38.8
Equipment Nonrecurring																				
Engineering Change Orders		0.2																		0.2
Testing		0.2																		0.2
Training Equipment																				
Support Equipment																				
Other [In - House Support]		1.7		0.1																1.8
Interim Contractor Support		0.5																		0.5
Installation of Hardware																				
FY 1996 & Prior Eqpt - 2568	1400	1.1	792	0.8	376	0.3													2568	2.2
FY 1997 Eqpt -- Kits 655					404	0.3	251	0.2											655	0.5
FY 1998 Eqpt -- Kits 655							529	0.4	126	0.1									655	0.5
FY 1999 Eqpt -- Kits 654									654	0.5									654	0.5
FY 2000 Eqpt -- kits																				
FY 2001 Eqpt -- kits																				
FY 2002 Eqpt -- kits																				
FY 2003 Eqpt -- kits																				
(FY(TC) Eqpt (xx kits)																				
Total Installation Cost	1400	1.1	792	0.8	780	0.6	780	0.6	780	0.6									4532	3.7
Total Procurement Cost		26.6		6.6		6.0		5.4		0.6										45.2

METHOD OF IMPLEMENTATION: Depot Field Team — ADMINISTRATIVE LEADTIME: 1 Months — PRODUCTION LEADTIME: 4 Months

Contract Dates: FY 1997: SEP 97 — FY 1998: SEP 98 — FY 1999: SEP 99

Delivery Date: FY 1997: JAN 98 — FY 1998: JAN 99 — FY 1999: JAN 00

Installation Schedule: Vehicle Intercommunications System (VIS) 1-92-05-4412 Date February 1997

	FY 1996 & Prior	FY 1997 1	2	3	4	FY 1998 1	2	3	4	FY 1999 1	2	3	4	FY 2000 1	2	3	4	FY 2001 1	2	3	4	Total
Inputs																						
FY 1996 & Prior	1860	200	200	200	108																	2568
FY 1997					92	200	200	163														655
FY 1998								37	200	200	200	18										655
FY 1999												182	200	200	72							654
Outputs																						
FY 1996 & Prior	1400	198	198	198	198	195	181															2568
FY 1997							14	195	195	195	56											655
FY 1998											139	195	195	126								655
FY 1999														69	195	195	195					654

	FY 2000 1	2	3	4	FY 2001 1	2	3	4	FY 2002 1	2	3	4	FY 2003 1	2	3	4	FY 2004 1	2	3	4	FY 2005 1	2	3	4	Total
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: Armament Enhancement Initiative (AEI) 1-89-05-4226

MODELS OF SYSTEMS AFFECTED: M1A1 Only (4351ea.)

DESCRIPTION / JUSTIFICATION:

The Armament Enhancement Initiative is a high priority program to improve the lethality of the Abrams Tank by improving the tank ammunition. This modification allows the 120mm equipped tank fleet to accept ammunition round upgrades through improvements to the fire control system via new ballistic solutions and reticle changes. The ammunition round upgrades will significantly improve kill probabilities for the fielded M1A1 fleet. Finally, this program includes the upgrade of the first 1629ea M1A1 gun mounts to the higher pressure AEI configuration [The balance of delivered gun mounts were supplied in this configuration for production].

USER PRIORITY : #1.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

	PLANNED	ACCOMPLISHED
Preliminary Design Review:	2Q91	3Q91
Critical Design Review:	3Q91	4Q91
Contractor Test and Evaluation:	3Q91	4Q91
Development Test and Evaluation:	N/A	N/A
Inital Operational Test and Evaluation:	4Q91	1Q92
IPR Production Decision	N/A	N/A
TDP Available:	2Q92	1Q92

INDIVIDUAL MODIFICATION																	Date	February 1997		
MODIFICATION TITLE (Cont):	Armament Enhancement Initiative (AEI) 1-89-05-4226																			
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	4351																		4351	
Installation Kits																				
Installation Kits Nonrecurring																				
Equipment		26.4																		26.4
Equipment Nonrecurring																				
Engineering Change Orders																				
In/House Support		3.2																		3.2
Training Equipment																				
Support Equipment																				
Other [Gun-Mount Rebuild]		15.2																		15.2
Interim Contractor Support																				
Installation of Hardware																				
FY 1996 & Prior Eqpt - 4351	4201	15.3	150	0.4															4351	15.7
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	4201	15.3	150	0.4															4351	15.7
Total Procurement Cost		60.1		0.4																60.5

METHOD OF IMPLEMENTATION: See Remarks ADMINISTRATIVE LEADTIME: 2 Months PRODUCTION LEADTIME: 3 Months

Contract Dates:	FY 1997:	FY 1998:	Feb-96	FY 1999:	
Delivery Date:	FY 1997:	FY 1998:	Nov-96	FY 1999:	

Installation Schedule: Armament Enhancement Initiative (AEI) 1-89-05-4226 Date February 1997

	FY 1996 & Prior	FY 1997 1	2	3	4	FY 1998 1	2	3	4	FY 1999 1	2	3	4	FY 2000 1	2	3	4	FY 2001 1	2	3	4	Total
Inputs																						
FY 1996 & Prior	4351																					4351
FY 1997																						
FY 1998																						
FY 1999																						
Outputs																						
FY 1996 & Prior	4201	40	40	40	30																	4351
FY 1997																						
FY 1998																						
FY 1999																						

	FY 2000 1	2	3	4	FY 2001 1	2	3	4	FY 2002 1	2	3	4	FY 2003 1	2	3	4	FY 2004 1	2	3	4	FY 2005 1	2	3	4	Total
Inputs																									
FY 2000																									
FY 2001																									
FY 2002																									
FY 2003																									
Outputs																									
FY 2000																									
FY 2001																									
FY 2002																									
FY 2003																									

Remarks:

IMPLEMENTATION: Gun mounts by RIA team, reticles by contractor team, application by depot team.

INDIVIDUAL MODIFICATION	Date	February 1997

MODIFICATION TITLE: Precision Lightweight GPS Receiver (PLGR) 1-92-05-4417

MODELS OF SYSTEMS AFFECTED: M1 = O ; IPM1 = 0 ; M1A1 = 4351 ; M1A2 = 0 TOTAL RQMT = 4351ea

DESCRIPTION / JUSTIFICATION:

The Precision Lightweight GPS Receiver [PLGR] is a self - contained unit which can collect and process GPS satellite signals and derive Position [To within 10 meters], Velocity and Time [PVT]. The funding shown is for the PLGR Installation Kit only; the PLGR units will be procured and provided to PM Abrams by PM GPS.

USER PRIORITY: 3

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

	PLANNED	ACCOMPLISHED
Preliminary Design Review:	2Q91	2Q91
Critical Design Review:	4Q91	4Q91
Contractor Test and Evaluation:	3Q93	3Q93
Development Test and Evaluation:	3Q93	3Q93
Inital Operational Test and Evaluation:	2Q94	2Q94
IPR Production Decision	4Q94	4Q94
TDP Available:	3Q96	

INDIVIDUAL MODIFICATION — Date: February 1997

MODIFICATION TITLE (Cont): Precision Lightweight GPS Receiver (PLGR) 1-92-05-4417

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	2383		500		500		500		468										4351	
Installation Kits		5.0		1.2		1.2		1.2		1.2										9.8
Installation Kits Nonrecurring																				
Equipment																				
Equipment Nonrecurring																				
Engineering Change Orders																				
Data																				
Training Equipment																				
Support Equipment																				
Other [In/House Support]																				
Interim Contractor Support																				
Installation of Hardware																				
FY 1996 & Prior Eqpt -- Kits	2383	1.7																	2383	1.7
FY 1997 Eqpt -- Kits					500	0.4													500	0.4
FY 1998 Eqpt -- Kits							500	0.4											500	0.4
FY 1999 Eqpt -- Kits									500	0.4									500	0.4
FY 2000 Eqpt -- Kits											468	0.4							468	0.4
FY 2001 Eqpt -- Kits																				
FY 2002 Eqpt -- Kits																				
FY 2003 Eqpt -- Kits																				
(FY(TC) Eqpt (xx kits)																				
Total Installation Cost	2383	1.7			500	0.4	500	0.4	500	0.4	468	0.4							4351	3.3
Total Procurement Cost		6.7		1.2		1.6		1.6		1.6		0.4								13.1

METHOD OF IMPLEMENTATION: Depot Field Team — ADMINISTRATIVE LEADTIME: 2 Months — PRODUCTION LEADTIME: 5 Months

Contract Dates:	FY 1997:	Mar-97	FY 1998:	Mar-98	FY 1999:	Mar-99
Delivery Date:	FY 1997:	Aug-97	FY 1998:	Aug-98	FY 1999:	Aug-99

Installation Schedule: Precision Lightweight GPS Receiver (PLGR) 1-92-05-4417 Date February 1997

	FY 1996 & Prior	FY 1997 1	2	3	4	FY 1998 1	2	3	4	FY 1999 1	2	3	4	FY 2000 1	2	3	4	FY 2001 1	2	3	4	Total
Inputs																						
FY 1996 & Prior	2383																					2383
FY 1997					80	150	150	120														500
FY 1998								30	150	150	150	20										500
FY 1999												130	150	150	70							500
Outputs																						
FY 1996 & Prior	2383																					2383
FY 1997																						
FY 1998						125	125	125	125													500
FY 1999										125	125	125	125									500

	FY 2000 1	2	3	4	FY 2001 1	2	3	4	FY 2002 1	2	3	4	FY 2003 1	2	3	4	FY 2004 1	2	3	4	FY 2005 1	2	3	4	Total
Inputs																									
FY 2000		80	150	150	88																				468
FY 2001																									
FY 2002																									
FY 2003																									
Outputs																									
FY 2000	125	125	125	125																					500
FY 2001					125	125	125	93																	468
FY 2002																									
FY 2003																									

Remarks:

INDIVIDUAL MODIFICATION	Date	February 1997

MODIFICATION TITLE: Live Fire Category A (LFCA) 1-89-05-4230

MODELS OF SYSTEMS AFFECTED: M1 = 0; IPM1 = 0; M1A1 = 4351; M1A2 = 0 TOTAL RQMT = 4351

DESCRIPTION / JUSTIFICATION:

Live Fire Category A consists of the following M1A1 Tank modifications: [1.] Independent Manual Blaster, [2.] Driver's / Loader's Hatch Ballistic Rims, [3.] AFES Wiring Harness Ballistic Protection and [4.] Driver's / Loader's Hatch Latch Mechanism. Each of these modifications corrects a deficiency relating to tank survivability found during Live - Fire testing. These modifications will be procured together and applied concurrently as a portion of Block G.

USER PRIORITIES: 2d, 2e, 4a, 4b

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

	PLANNED	ACCOMPLISHED
Preliminary Design Review:	2Q89	2Q89
Critical Design Review:	1Q91	1Q91
Contractor Test and Evaluation:	4Q91	4Q91
Development Test and Evaluation:	N/A	N/A
Inital Operational Test and Evaluation:	N/A	N/A
IPR Production Decision	2Q92	2Q92
TDP Available:	4Q92	4Q92

INDIVIDUAL MODIFICATION — Date: February 1997

MODIFICATION TITLE (Cont): Live Fire Category A (LFCA) 1-89-05-4230

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	2010		391		390		390		390		390		390						4351	
Installation Kits																				
Installation Kits Nonrecurring																				
Equipment		9.8		1.1		1.1		1.1		1.2		1.3		1.3						16.9
Equipment Nonrecurring																				
Engineering Change Orders																				
Data																				
Training Equipment																				
Support Equipment																				
Other [In / House Support]		0.1		0.1		0.1		0.1		0.1				0.1						0.6
Interim Contractor Support																				
Installation of Hardware																				
FY 1996 & Prior Eqpt - 2010	1400	4.5	610	3.6															2010	8.1
FY 1997 Eqpt -- 391			139	1.0	252	1.5													391	2.5
FY 1998 Eqpt -- 390					139	1.0	251	1.5											390	2.5
FY 1999 Eqpt -- 390							139	1.0	251	1.6									390	2.6
FY 2000 Eqpt -- 390									139	1.1	251	1.6							390	2.7
FY 2001 Eqpt - 390											139	1.0	251	1.6					390	2.6
FY 2002 Eqpt - 390													139	1.1	251	1.8			390	2.9
FY 2003 Eqpt -- kits																				
(FY(TC) Eqpt (xx kits)																				
Total Installation Cost	1400	5.5	749	4.6	391	2.5	390	2.5	390	2.7	390	2.6	390	2.7	251	1.8			4351	23.9
Total Procurement Cost		14.4		5.8		3.7		3.7		4.0		3.9		4.1		1.8				41.4

METHOD OF IMPLEMENTATION: Contractor Field Team — ADMINISTRATIVE LEADTIME: 2 Months — PRODUCTION LEADTIME: 5 Months

Contract Dates:	FY 1997: JAN 97	FY 1998: JUN 97	FY 1999: DEC 98
Delivery Date:	FY 1997: JUL 97	FY 1998: JAN 98	FY 1999: JUN 99

Installation Schedule: Live Fire Category A (LFCA) 1-89-05-4230 Date February 1997

	FY 1996 & Prior	FY 1997 1	2	3	4	FY 1998 1	2	3	4	FY 1999 1	2	3	4	FY 2000 1	2	3	4	FY 2001 1	2	3	4	Total
Inputs																						
FY 1996 & Prior	1510	175	175	150																		2010
FY 1997				25	175	100	91															391
FY 1998							9	100	100	100	81											390
FY 1999											19	100	100	100	71							390
Outputs																						
FY 1996 & Prior	1400	187	187	187	49																	2010
FY 1997					139	98	98	56														391
FY 1998								42	98	98	98	54										390
FY 1999												44	98	98	98	52						390

	FY 2000 1	2	3	4	FY 2001 1	2	3	4	FY 2002 1	2	3	4	FY 2003 1	2	3	4	FY 2004 1	2	3	4	FY 2005 1	2	3	4	Total
Inputs																									
FY 2000		29	100	100	100	61																			390
FY 2001						39	100	100	100	51															390
FY 2002										49	100	100	100	41											390
FY 2003																									
Outputs																									
FY 2000			46	98	98	98	50																		390
FY 2001							40	98	98	98	56														390
FY 2002											42	98	98	98	54										390
FY 2003																									

Remarks:

INDIVIDUAL MODIFICATION	Date	February 1997

MODIFICATION TITLE: Battlefield Override (BF/OR) 1-89-05-4229

MODELS OF SYSTEMS AFFECTED: M1 = 0; IPM1 = 0; M1A1 = 3850; and M1A2 = 407 TOTAL RQMT: 4257EA

DESCRIPTION / JUSTIFICATION:

Battlefield Override is a completely mechanical fuel, engine control, and transmission bypass requiring NO primary or back - up electrical system for operation. The purpose of Battlefield Override is to allow an Abrams Tank to extricate itself from the battlefield when normal fuel flow, engine control or transmission shifting have been lost through battle damage. It is designed for use in combat situations ONLY; has no peace - time recovery role and is based on the premise that crew / tank self recovery takes priority over potential engine or transmission damage resulting from uncontrolled operations. This modification will significantly improve crew / tank survivability in a combat environment.

USER PRIORITY - 3

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

	PLANNED	ACCOMPLISHED
Preliminary Design Review:	4Q91	4Q91
Critical Design Review:	1Q92	2Q92
Contractor Test and Evaluation:	2Q92	3Q92
Development Test and Evaluation:	1Q93	3Q93
Inital Operational Test and Evaluation:	N / A	N / A
IPR Production Decision	1Q93	3Q93
TDP Available:	3Q94	1Q95

INDIVIDUAL MODIFICATION — Date: February 1997

MODIFICATION TITLE (Cont): Battlefield Override (BF/OR) 1-89-05-4229

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	2435		333		333		333		333		333		332						4432	
Installation Kits																				
Installation Kits Nonrecurring																				
Equipment		6.6		0.9		0.9		0.9		0.6		0.5		0.4						10.8
Equipment Nonrecurring																				
Engineering Change Orders		1.1																		1.1
Engineering / Testing		0.2																		0.2
Training Equipment																				
Support Equipment																				
Other (Spares Kits)																				
Interim Contractor Support																				
Installation of Hardware																				
FY 1996 & Prior Eqpt - 2435	1422	1.0	667	3.3	333	1.7	13	0.1											2435	6.1
FY 1997 Eqpt -- Kits 333							320	1.5	13	0.1									333	1.6
FY 1998 Eqpt -- Kits 333									320	1.1	13	0.1							333	1.2
FY 1999 Eqpt -- Kits 333											320	0.2	13	0.1					333	0.3
FY 2000 Eqpt -- kits 333													320	0.3	13	0.1			333	0.4
FY 2001 Eqpt -- kits 333															320	0.3	13	0.1	333	0.4
FY 2002 Eqpt -- kits 332																	332	0.3	332	0.3
FY 2003 Eqpt -- kits																				
(FY(TC) Eqpt (xx kits)																				
Total Installation Cost	1422	1.0	667	3.3	333	1.7	333	1.6	333	1.2	333	0.3	333	0.4	333	0.4	345	0.4	4432	10.3
Total Procurement Cost		8.9		4.2		2.6		2.5		1.8		0.8		0.8		0.4		0.4		22.4

METHOD OF IMPLEMENTATION: Depot Field Team — ADMINISTRATIVE LEADTIME: 2 Months — PRODUCTION LEADTIME: 6 Months

Contract Dates:	FY 1997: MAY 97	FY 1998: MAY 98	FY 1999: MAY 99
Delivery Date:	FY 1997: NOV 97	FY 1998: NOV 98	FY 1999: NOV 99

Installation Schedule: Battlefield Override (BF/OR) 1-89-05-4229 Date February 1997

	FY 1996 & Prior	FY 1997 1	2	3	4	FY 1998 1	2	3	4	FY 1999 1	2	3	4	FY 2000 1	2	3	4	FY 2001 1	2	3	4	1	Total
Inputs																							
FY 1996 & Prior	1596	175	175	175	175	139																	2435
FY 1997						11	150	150	22														333
FY 1998									128	100	100	5											333
FY 1999												95	100	100	38								333
Outputs																							
FY 1996 & Prior	1422	167	167	167	166	84	83	83	83	13													2435
FY 1997										71	83	83	83	13									333
FY 1998														71	83	83	83	13					333
FY 1999																		71	83	83	83	13	333

	FY 2000 1	2	3	4	FY 2001 1	2	3	4	FY 2002 1	2	3	4	FY 2003 1	2	3	4	FY 2004 1	2	3	4	FY 2005 1	2	3	4	Total
Inputs																									
FY 2000		62	100	100	71																				333
FY 2001					29	100	100	100	4																333
FY 2002									96	100	100	36													332
FY 2003																									
Outputs																									
FY 2000					71	83	83	83	13																333
FY 2001									71	83	83	83	13												333
FY 2002													71	83	83	83	12								332
FY 2003																									

Remarks:

INDIVIDUAL MODIFICATION	Date	February 1997

MODIFICATION TITLE: Live Fire Category B (LFCB) 1-94-05-4481

MODELS OF SYSTEMS AFFECTED: M1 = 0 ; IPM1 = 0 ; M1A1 = 4351 ; M1A2 = 81 TOTAL RQMT = 4432ea

DESCRIPTION / JUSTIFICATION:

Live Fire Category B includes the following individual modifications: [1.] Improved Gunners Station, [2.] Smoke Generator Fuel Line and [3.] Turret Ammunition Door Locking Mechanism. Each of these modifications corrects a vehicle deficiency found during Live Fire Testing. These modifications will be procured and applied simultaneously as a portion of Block G.

USER PRIORITY: 4c

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

	PLANNED	ACCOMPLISHED
Preliminary Design Review:	N / A	N / A
Critical Design Review:	4Q93	4Q93
Contractor Test and Evaluation:	N / A	N / A
Development Test and Evaluation:	1Q94	1Q94
Inital Operational Test and Evaluation:	N/A	N/A
IPR Production Decision	4Q93	4Q93
TDP Available:	2Q94	4Q94

INDIVIDUAL MODIFICATION																		Date	February 1997
MODIFICATION TITLE (Cont):	Live Fire Category B (LFCB) 1-94-05-4481																		
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	2010		404		404		404		404		404		402						4432	
Installation Kits																				
Installation Kits Nonrecurring																				
Equipment		0.7		0.2		0.2		0.2		0.1		0.1		0.1						1.6
Equipment Nonrecurring																				
Engineering Change Orders																				
Data																				
Training Equipment																				
Support Equipment																				
Other In / House Support		0.1																		0.1
Interim Contractor Support																				
Installation of Hardware																				
FY 1996 & Prior Eqpt - 2010	1058	1.6	952	1.5															2010	3.1
FY 1997 Eqpt -- Kits 404					404	0.6													404	0.6
FY 1998 Eqpt -- Kits 404							404	0.6											404	0.6
FY 1999 Eqpt -- Kits 404									404	0.7									404	0.7
FY 2000 Eqpt -- kits 404											404	0.7							404	0.7
FY 2001 Eqpt -- kits 404													404	0.7					404	0.7
FY 2002 Eqpt -- kits 402															402	0.6			402	0.6
FY 2003 Eqpt -- kits\\\																				
(FY(TC) Eqpt (xx kits)																				
Total Installation Cost	1058	1.6	952	1.5	404	0.6	404	0.6	404	0.7	404	0.7	404	0.7	402	0.6			4432	7.0
Total Procurement Cost		2.4		1.7		0.8		0.8		0.8		0.8		0.8		0.6				8.7

METHOD OF IMPLEMENTATION: Depot Field Teams ADMINISTRATIVE LEADTIME: 3 Months PRODUCTION LEADTIME: 5 Months

Contract Dates:	FY 1997:	JUL 97	' 1998:	JUL 98	FY 1999:	JUL 99
Delivery Date:	FY 1997:	DEC 97	FY 1998:	DEC 98	FY 1999:	DEC 99

Installation Schedule: Live Fire Category B (LFCB) 1-94-05-4481

Date: February 1997

	FY 1996 & Prior	FY 1997 1	FY 1997 2	FY 1997 3	FY 1997 4	FY 1998 1	FY 1998 2	FY 1998 3	FY 1998 4	FY 1999 1	FY 1999 2	FY 1999 3	FY 1999 4	FY 2000 1	FY 2000 2	FY 2000 3	FY 2000 4	FY 2001 1	FY 2001 2	FY 2001 3	FY 2001 4	Total
Inputs																						
FY 1996 & Prior	1410	150	150	150	150																	2010
FY 1997						110	110	110	74													404
FY 1998									36	110	110	110	38									404
FY 1999													72	110	110	110	2					404
Outputs																						
FY 1996 & Prior	1058	238	238	238	238																	2010
FY 1997						101	101	101	101													404
FY 1998										101	101	101	101									404
FY 1999														101	101	101	101					404

	FY 2000 1	FY 2000 2	FY 2000 3	FY 2000 4	FY 2001 1	FY 2001 2	FY 2001 3	FY 2001 4	FY 2002 1	FY 2002 2	FY 2002 3	FY 2002 4	FY 2003 1	FY 2003 2	FY 2003 3	FY 2003 4	FY 2004 1	FY 2004 2	FY 2004 3	FY 2004 4	FY 2005 1	FY 2005 2	FY 2005 3	FY 2005 4	Total
Inputs																									
FY 2000				108	110	110	76																		404
FY 2001							34	110	110	110	40														404
FY 2002											70	110	110	110	2										402
FY 2003																									
Outputs																									
FY 2000					101	101	101	101																	404
FY 2001									101	101	101	101													404
FY 2002													101	101	101	99									402
FY 2003																									

Remarks:

INDIVIDUAL MODIFICATION	Date	February 1997

MODIFICATION TITLE: Driver's Viewer Quick Release (DVQR) 1-92-05-4427

MODELS OF SYSTEMS AFFECTED: M1 = 0 ; IPM1 = 0 ; M1A1 = 4351 and M1A2 = 181 TOTAL RQMT = 4532ea

DESCRIPTION / JUSTIFICATION:

The Driver's Viewer Quick Release is a modification to the Driver's Night Viewer [DNV] Periscope Hatch Retainer. It provides a more positive locking feature which will preclude inadvertent release of the periscope from its operations position. Its main purpose is to prevent the DNV from falling into the driver's lap when it is moved out of the driver's way as he exits the vehicle precluding injury to the driver as well as damage to the periscope. Because of its potential importance in emergency driver egress this modification has a secondary safety designation. It is however, primarily an operational improvement.

USER PRIORITY: 4g

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

	PLANNED	ACCOMPLISHED
Preliminary Design Review:	N / A	N / A
Critical Design Review:	4Q93	4Q93
Contractor Test and Evaluation:	N / A	N / A
Development Test and Evaluation:	1Q94	1Q94
Inital Operational Test and Evaluation:	N / A	N / A
IPR Production Decision	4Q93	4Q93
TDP Available:	2Q94	3Q94

INDIVIDUAL MODIFICATION — Date: February 1997

MODIFICATION TITLE (Cont): Driver's Viewer Quick Release (DVQR) 1-92-05-4427

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	1505		1027		1000		1000												4532	
Installation Kits																				
Installation Kits Nonrecurring Equipment		0.2		0.1		0.1		0.1												0.5
Equipment Nonrecurring																				
Engineering Change Orders																				
Data																				
Training Equipment																				
Support Equipment																				
Other																				
Interim Contractor Support																				
Installation of Hardware																				
FY 1996 & Prior Eqpt - 1505	785	0.1	720	0.1															1505	0.2
FY 1997 Eqpt -- Kits 1027					1027	0.2													1027	0.2
FY 1998 Eqpt -- Kits 1000							1000	0.2											1000	0.2
FY 1999 Eqpt -- Kits 1000									1000	0.2									1000	0.2
FY 2000 Eqpt -- kits																				
FY 2001 Eqpt -- kits																				
FY 2002 Eqpt -- kits																				
FY 2003 Eqpt -- kits																				
(FY(TC) Eqpt (xx kits)																				
Total Installation Cost	785	0.1	720	0.1	1027	0.2	1000	0.2	1000	0.2									4532	0.8
Total Procurement Cost		0.3		0.2		0.3		0.3		0.2										1.3

METHOD OF IMPLEMENTATION: Depot Field Teams — ADMINISTRATIVE LEADTIME: 2 Months — PRODUCTION LEADTIME: 3 Months

Contract Dates:	FY 1997:	OCT 96	FY 1998:	OCT 97	FY 1999:	OCT 98
Delivery Date:	FY 1997:	DEC 96	FY 1998:	DEC 97	FY 1999:	DEC 98

Installation Schedule: Driver's Viewer Quick Release (DVQR) 1-92-05-4427 Date February 1997

	FY 1996 & Prior	FY 1997 1	2	3	4	FY 1998 1	2	3	4	FY 1999 1	2	3	4	FY 2000 1	2	3	4	FY 2001 1	2	3	4	Total
Inputs																						
FY 1996 & Prior	1505																					1505
FY 1997		250	250	250	250	27																1027
FY 1998						223	250	250	250	27												1000
FY 1999										223	250	250	250	27								1000
Outputs																						
FY 1996 & Prior	785	180	180	180	180																	1505
FY 1997						257	257	257	256													1027
FY 1998										250	250	250	250									1000
FY 1999														250	250	250	250					1000

	FY 2000 1	2	3	4	FY 2001 1	2	3	4	FY 2002 1	2	3	4	FY 2003 1	2	3	4	FY 2004 1	2	3	4	FY 2005 1	2	3	4	Total
Inputs																									
FY 2000																									
FY 2001																									
FY 2002																									
FY 2003																									
Outputs																									
FY 2000																									
FY 2001																									
FY 2002																									
FY 2003																									

Remarks:

** Less than $0.1M.

INDIVIDUAL MODIFICATION	Date	February 1997

MODIFICATION TITLE: Pulse Jet Air System (PJAS) 1-92-05-4475

MODELS OF SYSTEMS AFFECTED: M1 = 0 ; IPM1 = 0; M1A1 = 4351 ; and M1A2 = 228 TOTAL RQMT = 4579ea

DESCRIPTION / JUSTIFICATION:

The PJAS modification extends the time between required service to the air filtration system of Abrams tanks in a severe dust environment. The current system requires frequent servicing in such an environment which can introduce dust into the engine as the integrity of the clean air path is broken during servicing. PJAS will greatly reduce the frequency of such servicing, thus improving combat performance and reducing O&S costs. PJAS was identified as user priority Number One by Abrams Tank units involved in ODS (Operation Desert Storm).

USER PRIORITY: 5

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

	PLANNED	ACCOMPLISHED
Preliminary Design Review:	2Q92	2Q92
Critical Design Review:	3Q92	3Q92
Contractor Test and Evaluation:	3Q93	3Q93
Development Test and Evaluation:	3Q93	3Q93
Inital Operational Test and Evaluation:	4Q93	4Q93
IPR Production Decision	4Q93	4Q93
TDP Available:	2Q96	2Q96

INDIVIDUAL MODIFICATION — Date: February 1997

MODIFICATION TITLE (Cont): Pulse Jet Air System (PJAS) 1-92-05-4475

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	492		144		24		62		62		124		124		124		3423		4579	
Installation Kits																				
Installation Kits Nonrecurring																				
Equipment		12.4		7.1		1.0		2.8		3.0		5.7		5.8		5.8		213.8		257.4
Equipment Nonrecurring		0.8																		0.8
Engineering Change Orders		2.1																		2.1
Testing		1.6																		1.6
Training Equipment																				
Support Equipment																				
Other [In / House Spt]		1.3		0.1																1.4
Interim Contractor Support																				
Installation of Hardware																				
FY 1996 & Prior Eqpt - 492	1		277	2.3	100	0.8	24	0.2	62	0.6	28	0.2							492	4.1
FY 1997 Eqpt -- Kits 144											34	0.4	110	1.0					144	1.4
FY 1998 Eqpt -- Kits 24													14	0.1	10	0.1			24	0.2
FY 1999 Eqpt -- Kits 62															62	0.6			62	0.6
FY 2000 Eqpt -- kits 62															52	0.5	10	0.1	62	0.6
FY 2001 Eqpt -- kits 124																	124	1.2	124	1.2
FY 2002 Eqpt -- kits 124																	124	1.2	124	1.2
FY 2003 Eqpt -- kits 124																	124	1.2	124	1.2
(FY(TC) Eqpt (xx kits) 3423																	3423	42.4	3423	42.4
Total Installation Cost	1		277	2.3	100	0.8	24	0.2	62	0.6	62	0.6	124	1.1	124	1.2	3805	46.1	4579	52.9
Total Procurement Cost		18.2		9.5		1.8		3.0		3.6		6.3		6.9		7.0		259.9		316.2

METHOD OF IMPLEMENTATION: Contractor/Depot Field — ADMINISTRATIVE LEADTIME: 3 Months — PRODUCTION LEADTIME: 11 Months

Contract Dates: FY 1997: JUN 98 — FY 1998: JUN 98 — FY 1999: JUN 99

Delivery Date: FY 1997: MAY 99 — FY 1998: MAY 99 — FY 1999: MAY 99

Installation Schedule: Pulse Jet Air System (PJAS) 1-92-05-4475

Date: February 1997

	FY 1996 & Prior	FY 1997 1	2	3	4	FY 1998 1	2	3	4	FY 1999 1	2	3	4	FY 2000 1	2	3	4	FY 2001 1	2	3	4	TC	Total
Inputs																							
FY 1996 & Prior	66	50	50	50	50	35	35	35	35	35	35	16											492
FY 1997												26	36	36	36	10							144
FY 1998																24							24
FY 1999																2	36	24					62
Outputs																							
FY 1996 & Prior	1	70	70	70	67	16	16	16	16	15	15	15	15	16	16	15	15	16	12				492
FY 1997																			4	15	15	110	144
FY 1998																						24	24
FY 1999																						62	62

	FY 2000 1	2	3	4	FY 2001 1	2	3	4	FY 2002 1	2	3	4	FY 2003 1	2	3	4	FY 2004 1	2	3	4	TC	Total
Inputs																						
FY 2000																					62	62
FY 2001																					124	124
FY 2002																					124	124
FY 2003																					124	124
																					3423	3423
Outputs																						
FY 2000																					62	62
FY 2001																					124	124
FY 2002																					124	124
FY 2003																					3547 *	3547

Remarks: * Includes FY04 & out "To Complete" Quantity.

INDIVIDUAL MODIFICATION	Date	February 1997

MODIFICATION TITLE: Mounted Water Ration Heater (MWRH) 1-92-05-4426

MODELS OF SYSTEMS AFFECTED: M1 = 0 ; IPM1 = 0 ; M1A1 = 1501 and M1A2 = 1079 TOTAL RQMT = 2580ea

DESCRIPTION / JUSTIFICATION:

The purpose of the Mounted Water Ration Heater [MWRH] is to provide the Abrams Tank crew with the internal capability to heat water and rations during extended field operations without having to exit from the protection of the vehicle.

NOTE: ATCOM / PM SOLDIER have procured the MWRH. Abrams Tank funds listed here - in are for the integration kit and installation only.

USER PRIORITY: ap10

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

	PLANNED	ACCOMPLISHED
Preliminary Design Review:	4Q92	4Q92
Critical Design Review:	1Q93	1Q93
Contractor Test and Evaluation:	1Q93	1Q93
Development Test and Evaluation:	3Q93	3Q93
Inital Operational Test and Evaluation:	3Q93	3Q93
IPR Production Decision	2Q95	4Q95
TDP Available:	3Q96	3Q96

INDIVIDUAL MODIFICATION — Date: February 1997

MODIFICATION TITLE (Cont): Mounted Water Ration Heater (MWRH) 1-92-05-4426

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	1501																1079		2580	
Installation Kits		1.8																1.5		3.3
Installation Kits Nonrecurring																				
Equipment																				
Equipment Nonrecurring																				
Engineering Change Orders																				
Data																				
Training Equipment																				
Support Equipment																				
Other [In / House Support]		0.1																		0.1
Interim Contractor Support																				
Installation of Hardware																				
FY 1996 & Prior Eqpt - 1501	0		750	0.2	751	0.2													1501	0.4
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) 1079																	1079	0.3	1079	0.3
Total Installation Cost			750	0.2	751	0.2											1079	0.3	2580	0.7
Total Procurement Cost		1.9		0.2		0.2												1.8		4.1

METHOD OF IMPLEMENTATION: Unit Maint./Depot Team — ADMINISTRATIVE LEADTIME: 3 Months — PRODUCTION LEADTIME: 3 Months

Contract Dates: FY 1997: FY 1998: FY 1999:

Delivery Date: FY 1997: FY 1998: FY 1999:

Installation Schedule: Mounted Water Ration Heater (MWRH) 1-92-05-4426 Date February 1997

	FY 1996 & Prior	FY 1997 1	2	3	4	FY 1998 1	2	3	4	FY 1999 1	2	3	4	FY 2000 1	2	3	4	FY 2001 1	2	3	4	Total
Inputs																						
FY 1996 & Prior	17	210	210	210	210	210	210	210	14													1501
FY 1997																						
FY 1998																						
FY 1999																						
Outputs																						
FY 1996 & Prior		188	188	187	187	188	188	188	187													1501
FY 1997																						
FY 1998																						
FY 1999																						

	FY 2000 1	2	3	4	FY 2001 1	2	3	4	FY 2002 1	2	3	4	FY 2003 1	2	3	4	FY 2004 1	2	3	4	FY 2005 1	2	3	4	Total
Inputs																									
FY 2000																									
FY 2001																									
FY 2002																									
FY 2003																									
Outputs																									
FY 2000																									
FY 2001																									
FY 2002																									
FY 2003																									

Remarks:

Installation Less Than $0.1M.

INDIVIDUAL MODIFICATION	Date	February 1997

MODIFICATION TITLE: Prior Year MOD Kit Applications N/A

MODELS OF SYSTEMS AFFECTED: M1 = 355 ; IPM1 = 892; M1A1 = 4351 and M1A2 = 1079 TOTAL RQMT = 6847ea

DESCRIPTION / JUSTIFICATION:

Continuing effort to install / apply modification kits procured during or before FY90. This effort was previously budgeted and executed within O&MA [P7M].

USER PRIORITY: ap1 through ap24 [Less ap2, ap7, ap8, ap10 and ap 12]

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

	PLANNED	ACCOMPLISHED
Preliminary Design Review:	N / A	N / A
Critical Design Review:	N / A	N / A
Contractor Test and Evaluation:	N / A	N / A
Development Test and Evaluation:	N / A	N / A
Inital 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): Prior Year MOD Kit Applications N/A

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	6847																		6847	
Installation Kits																				
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 - 6847	6408	65.0	439	2.4															6847	67.4
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	6408	65.0	439	2.4															6847	67.4
Total Procurement Cost		65.0		2.4																67.4

METHOD OF IMPLEMENTATION: Depot Teams — ADMINISTRATIVE LEADTIME: N/A Months — PRODUCTION LEADTIME: N/A Months

Contract Dates: FY 1997: FY 1998: FY 1999:

Delivery Date: FY 1997: FY 1998: FY 1999:

Installation Schedule: Prior Year MOD Kit Applications N/A

Date: February 1997

	FY 1996 & Prior	FY 1997 1	FY 1997 2	FY 1997 3	FY 1997 4	FY 1998 1	FY 1998 2	FY 1998 3	FY 1998 4	FY 1999 1	FY 1999 2	FY 1999 3	FY 1999 4	FY 2000 1	FY 2000 2	FY 2000 3	FY 2000 4	FY 2001 1	FY 2001 2	FY 2001 3	FY 2001 4	Total
Inputs																						
FY 1996 & Prior	6847																					6847
FY 1997																						
FY 1998																						
FY 1999																						
Outputs																						
FY 1996 & Prior	6408	147	146	146																		6847
FY 1997																						
FY 1998																						
FY 1999																						

	FY 2000 1	FY 2000 2	FY 2000 3	FY 2000 4	FY 2001 1	FY 2001 2	FY 2001 3	FY 2001 4	FY 2002 1	FY 2002 2	FY 2002 3	FY 2002 4	FY 2003 1	FY 2003 2	FY 2003 3	FY 2003 4	FY 2004 1	FY 2004 2	FY 2004 3	FY 2004 4	FY 2005 1	FY 2005 2	FY 2005 3	FY 2005 4	Total
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: 2nd Gen Forward Looking Infra-Red (2GFLIR) 1-96-05-4504

MODELS OF SYSTEMS AFFECTED: M1 = 0 ; IPM1 = 0 ; M1A1 = 0 ; M1A2 = 617

DESCRIPTION / JUSTIFICATION:

2nd Generation Forward Looking Infra - red [2G FLIR] is a component based improvement to the M1A2 Commander's Independent Thermal Viewer [CITV] and Thermal Imaging System [TIS] which is designed to significantly increase the capabilities of these sub - systems. The new capabilities will greatly improve the tank crew's ability to detect, recognize and identify potential targets during the day, night or through smoke, fog or other battlefield obscurants.

USER PRIORITY # 3

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

Examples	PLANNED	ACCOMPLISHED
Preliminary Design Review:		
Critical Design Review:		
Contractor Test and Evaluation:		
Development Test and Evaluation:		
Inital Operational Test and Evaluation:		
IPR Production Decision		
TDP Available:		

INDIVIDUAL MODIFICATION — Date: February 1997

MODIFICATION TITLE (Cont): 2nd Gen Forward Looking Infra-Red (2GFLIR) 1-96-05-4504

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									2		36		64		85		430		617	
Installation Kits																				
Installation Kits Nonrecurring																				
Equipment										1.8		28.7		50.1		64.7		324.4		469.7
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 -- 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										1.8		28.7		50.1		64.7		324.4		469.7

METHOD OF IMPLEMENTATION

ADMINISTRATIVE LEADTIME: 4 Months

PRODUCTION LEADTIME: 10 Months

Contract Dates:	FY 1997:	FY 1998:	FY 1999:
Delivery Date:	FY 1997:	FY 1998:	FY 1999:

Installation Schedule: 2nd Gen Forward Looking Infra-Red (2GFLIR) 1-96-05-4504 Date February 1997

	FY 1996 & Prior	FY 1997 1	2	3	4	FY 1998 1	2	3	4	FY 1999 1	2	3	4	FY 2000 1	2	3	4	FY 2001 1	2	3	4	Total
Inputs																						
FY 1996 & Prior																						
FY 1997																						
FY 1998																						
FY 1999																						
Outputs																						
FY 1996 & Prior																						
FY 1997																						
FY 1998																						
FY 1999																						

	FY 2000 1	2	3	4	FY 2001 1	2	3	4	FY 2002 1	2	3	4	FY 2003 1	2	3	4	FY 2004 1	2	3	4	TC		Total
Inputs																							
FY 2000							2																2
FY 2001								4	6	10	10	6											36
FY 2002												8	18	18	18	2							64
FY 2003																16	28	28	28		415		515
Outputs																							
FY 2000							1	1															2
FY 2001									9	9	9	9											36
FY 2002													16	16	16	16							64
FY 2003																	25	25	25	25	415	*	515

Remarks: * Includes FY05 & Out qty's

INDIVIDUAL MODIFICATION	Date	February 1997

MODIFICATION TITLE: System Enhancement Package (SEP) 1-96-05-4505

MODELS OF SYSTEMS AFFECTED: M1 = 0 ; IPM1 = 0 ; M1A1 = 0 ; M1A2 = 617

DESCRIPTION / JUSTIFICATION:

The System Enhancemetn Package [SEP] consists of M1A2 Hardware & Software changes which support the US Army's Digitization of the Battlefield effort. This effort upgrades the M1A2 electronics with improved processors, increased memory and Software partitioning necessary for the M1A2 to operate in the Army's common operating environment. The upgrade also provides the future growth without significant changes to the vehicle architecture allowing for insertion of technology forecast to mature through 2003. These changes are designed to be exportable to other Abrams platforms, meet Army requirements for joint interoperability with Combined Arms Command and Control Systems and maximize compatibility / commonality with other Ground Combat Systems.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

Examples

	PLANNED	ACCOMPLISHED
Preliminary Design Review:	3Q96	3Q96
Critical Design Review:	1Q97	1Q97
Contractor Test and Evaluation:	2Q97	
Development Test and Evaluation:	4Q97	
Inital Operational Test and Evaluation:	2Q98	
IPR Production Decision	3Q98	
TDP Available:	4Q98	

INDIVIDUAL MODIFICATION																		Date	February 1997	
MODIFICATION TITLE (Cont):	System Enhancement Package (SEP) 1-96-05-4505																			
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									2		36		64		85		430		617	
Installation Kits																				
Installation Kits Nonrecurring																				
Equipment										1.2		19.7		35.8		47.6		254.1		358.4
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																				
Total Procurement Cost										1.2		19.7		35.8		47.6		254.1		358.4

METHOD OF IMPLEMENTATION: Prime Contractor will Install ADMINISTRATIVE LEADTIME: 6 Months PRODUCTION LEADTIME: 10 Months

Contract Dates: FY 1997: FY 1998: FY 1999:

Delivery Date: FY 1997: FY 1998: FY 1999:

Installation Schedule: System Enhancement Package (SEP) 1-96-05-4505 Date February 1997

	FY 1996 & Prior	FY 1997 1	2	3	4	FY 1998 1	2	3	4	FY 1999 1	2	3	4	FY 2000 1	2	3	4	FY 2001 1	2	3	4	Total
Inputs																						
FY 1996 & Prior																						
FY 1997																						
FY 1998																						
FY 1999																						
Outputs																						
FY 1996 & Prior																						
FY 1997																						
FY 1998																						
FY 1999																						

	FY 2000 1	2	3	4	FY 2001 1	2	3	4	FY 2002 1	2	3	4	FY 2003 1	2	3	4	FY 2004 1	2	3	4	TC	Total
Inputs																						
FY 2000							2															2
FY 2001								4	6	10	10	6										36
FY 2002												8	18	18	18	2						64
FY 2003																16	28	28	28		415	515
Outputs																						
FY 2000							1	1														2
FY 2001									9	9	9	9										36
FY 2002													16	16	16	16						64
FY 2003																	25	25	25	25	415 *	515

Remarks: * Includes FY05 & Out qty's

INDIVIDUAL MODIFICATION	Date	February 1997

MODIFICATION TITLE: Embedded Battle Command 1-96-05-4516

MODELS OF SYSTEMS AFFECTED: M1 = 0 ; IPM1 = 0 ; M1A1 = 0 ; M1A2 = 1079

DESCRIPTION / JUSTIFICATION:

Embedded Battle Command [EBC] is a part of Horizontal Battlefield Digitization [HBD]. It is an annual software "Drop" into each fielded M1A2 tank. There is no hardware associated with this modification. The purpose of HBD is to assure that all M1A2's have Up - to - Date and identical computer sfoftware with the latest State - of - the - Art changes installed on a regular basis.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

Examples	PLANNED	ACCOMPLISHED
Preliminary Design Review:	2Q97	
Critical Design Review:	3Q97	
Contractor Test and Evaluation:	4Q97	
Development Test and Evaluation:	2Q98	
Inital Operational Test and Evaluation:	3Q98	
IPR Production Decision	4Q98	
TDP Available:	2Q99	

INDIVIDUAL MODIFICATION — Date: February 1997

MODIFICATION TITLE (Cont): Embedded Battle Command 1-96-05-4516

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																				
Equipment Nonrecurring																				
Engineering Change Orders																				
Data [Software Only]										1.0		1.0		1.1		1.1		5.8		10.0
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																				
Total Procurement Cost										1.0		1.0		1.1		1.1		5.8		10.0

METHOD OF IMPLEMENTATION: Field Service Rep Install.. ADMINISTRATIVE LEADTIME: 1 Months PRODUCTION LEADTIME: 8 Months

Contract Dates: FY 1997: FY 1998: FY 1999:

Delivery Date: FY 1997: FY 1998: FY 1999:

Installation Schedule: Embedded Battle Command 1-96-05-4516 Date February 1997

	FY 1996 & Prior	FY 1997 1	2	3	4	FY 1998 1	2	3	4	FY 1999 1	2	3	4	FY 2000 1	2	3	4	FY 2001 1	2	3	4	Total
Inputs																						
FY 1996 & Prior																						
FY 1997																						
FY 1998																						
FY 1999																						
Outputs																						
FY 1996 & Prior																						
FY 1997																						
FY 1998																						
FY 1999																						

	FY 2000 1	2	3	4	FY 2001 1	2	3	4	FY 2002 1	2	3	4	FY 2003 1	2	3	4	FY 2004 1	2	3	4	FY 2005 1	2	3	4	Total
Inputs																									
FY 2000																									
FY 2001																									
FY 2002																									
FY 2003																									
Outputs																									
FY 2000																									
FY 2001																									
FY 2002																									
FY 2003																									

Remarks: There is no Delivery or Installation schedule in the normal sense of the terms. Every Fielded M1A2 will have its computers "upgraded" every year.

INDIVIDUAL MODIFICATION	Date	February 1997

MODIFICATION TITLE: External Auxiliary Power Unit (EAPU) 1-85-05-4057

MODELS OF SYSTEMS AFFECTED: M1 = 0 ea., IPM1 = 0 ea., M1A1 = 1500 ea., M1A2 = 0 ea., Total = 1500 ea.

DESCRIPTION / JUSTIFICATION:

The current use of the Abrams Tank during stationary Tank night defensive positions, or Silent Watch Mode requires frequent, long duration idling of the AGT-1500 main vehicle engine in order that electricity be available. This modification will provide power for electrical requirements at greatly reduced fuel usage, and without main engine wear. The External Auxiliary Power Unit (EAPU) continuously delivers 2 KW of power at 28 Volts DC. It will be mounted in the left side of the turret bustle rack and will be fully integrated with the tank electrical system. The EAPU has its own fuel supply and can provide power for 10 to 12 hours on one tank-full of diesel fuel.

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 *	
Inital Operational Test and Evaluation:	N / A *	
IPR Production Decision	N / A *	
TDP Available:	N / A *	

* Re - Buy of an item last procured in FY92

INDIVIDUAL MODIFICATION																	Date	February 1997		
MODIFICATION TITLE (Cont):	External Auxiliary Power Unit (EAPU) 1-85-05-4057																			
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			336														1164		1500	
Installation Kits																				
Installation Kits Nonrecurring																				
Equipment				11.0														44.4		55.4
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 336					336	2.1													336	2.1
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) 1164																	1164	8.6	1164	8.6
Total Installation Cost					336	2.1											1164	8.6	1500	10.7
Total Procurement Cost				11.0		2.1												53.0		66.1

METHOD OF IMPLEMENTATION Contractor / Depot Teams ADMINISTRATIVE LEADTIME: 4 Months PRODUCTION LEADTIME: 6 Months

Contract Dates:	FY 1997:	JUL 97	FY 1998:	FY 1999:	
Delivery Date:	FY 1997:	JAN 98	FY 1998:	FY 1999:	

Installation Schedule: External Auxiliary Power Unit (EAPU) 1-85-05-4057 Date February 1997

	FY 1996 & Prior	FY 1997 1	2	3	4	FY 1998 1	2	3	4	FY 1999 1	2	3	4	FY 2000 1	2	3	4	FY 2001 1	2	3	4	Total
Inputs																						
FY 1996 & Prior																						
FY 1997							120	120	96													336
FY 1998																						
FY 1999																						
Outputs																						
FY 1996 & Prior																						
FY 1997							110	112	114													336
FY 1998																						
FY 1999																						

	FY 2000 1	2	3	4	FY 2001 1	2	3	4	FY 2002 1	2	3	4	FY 2003 1	2	3	4	FY 2004 1	2	3	4	FY 2005 1	2	3	4	Total
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: External Auxiliary Power Unit (EAPU) Upgrade TBD2

MODELS OF SYSTEMS AFFECTED: M1 = 0 ; IPM1 = 0 ; M1A1 = 1500 ; M1A2 = 0

DESCRIPTION / JUSTIFICATION:

This modification is the Upgrade of 1500ea External Auxiliary Power Units (EAPU's) originally procurred / fielded in FY91 / 93. The upgrade will replace the 12 volt Starter with a 24 volt starter; add an improved voltage regulator; add a NATO receptacle and remove the 24 volt Battery. These changes will increase the reliability and durability of the existing EAPU's.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

Examples	PLANNED	ACCOMPLISHED
Preliminary Design Review:	3Q95	3Q95
Critical Design Review:	1Q96	1Q96
Contractor Test and Evaluation:	2Q96	2Q96
Development Test and Evaluation:	N / A	N / A
Inital Operational Test and Evaluation:	4Q96	4Q96
IPR Production Decision	4Q96	4Q96
TDP Available:	2Q97	

INDIVIDUAL MODIFICATION — Date: February 1997

MODIFICATION TITLE (Cont): External Auxiliary Power Unit (EAPU) Upgrade TBD2

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																				
Equipment Nonrecurring																				
Engineering Change Orders																				
Data																				
Training Equipment																				
Support Equipment																				
Upgrade existing Modification			1500	2.5															1500	2.5
Interim Contractor Support																				
Installation of Hardware																				
FY 1996 & Prior Eqpt -- Kits																				
FY 1997 Eqpt -- Kits 1500					1500	**													1500	
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					1500														1500	
Total Procurement Cost				2.5																2.5

METHOD OF IMPLEMENTATION: Contractor Installation — ADMINISTRATIVE LEADTIME: 2 Months — PRODUCTION LEADTIME: 10 Months

Contract Dates: FY 1997: JUN 97 — FY 1998: — FY 1999:

Delivery Date: FY 1997: APR 98 — FY 1998: — FY 1999:

Installation Schedule: External Auxiliary Power Unit (EAPU) Upgrade TBD2 Date February 1997

	FY 1996 & Prior	FY 1997 1	2	3	4	FY 1998 1	2	3	4	FY 1999 1	2	3	4	FY 2000 1	2	3	4	FY 2001 1	2	3	4	Total
Inputs																						
FY 1996 & Prior																						
FY 1997								1500														1500
FY 1998																						
FY 1999																						
Outputs																						
FY 1996 & Prior									1500													1500
FY 1997																						
FY 1998																						
FY 1999																						

	FY 2000 1	2	3	4	FY 2001 1	2	3	4	FY 2002 1	2	3	4	FY 2003 1	2	3	4	FY 2004 1	2	3	4	FY 2005 1	2	3	4	Total
Inputs																									
FY 2000																									
FY 2001																									
FY 2002																									
FY 2003																									
Outputs																									
FY 2000																									
FY 2001																									
FY 2002																									
FY 2003																									

Remarks: ** PRIME CONTRACTOR WILL UPGRADE EACH EAPU ON SITE. HARDWARE FOR THIS EFFORT IS READILY AVAILABLE.

BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

APPROPRIATION / BUDGET ACTIVITY: PROCUREMENT OF WPNS & TRKD CMBT VEHS /Tracked Combat Vehicles

P-1 ITEM NOMENCLATURE: ABRAMS UPGRADE PROGRAM (GA0750)

	Prior Years	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Program
QUANTITY	206	100	120	120	120	120	92	30	30	60	998
COST (in millions)	790.1	267.9	204.8	328.6	420.3	402.3	346.8	164.3	268.0	452.7	3645.8
Initial Spares (in millions)	4.3	16.0	9.3	13.9	10.1	10.3	11.3	18.8	19.1	35.0	148.2
Total (in millions)	794.4	284.0	214.1	342.6	430.4	412.6	358.1	183.1	287.0	487.7	3794.0
Unit Cost (in millions)	3.9	2.8	1.8	2.9	3.6	3.4	3.9	6.1	9.6	8.1	3.8

DESCRIPTION: The Abrams Tank Upgrade Program supports the Department of Army vision for the future. The Upgrade Program will reconfigure M1 Tanks to the M1A2 configuration making it a more survivable and lethal tank. This includes the Commander's Independent Thermal Viewer (CITV), Improved Commander's Weapon Station (ICWS), Position Navigation (POS/NAV) equipment, Radio Interface Unit (RIU), Core Architecture, D.U. Armor, 120mm Gun, and Nuclear, Biological and Chemical (NBC) protection. In FY98 2nd Generation Forward Looking Infrared (FLIR) and vehicle core electronic upgrades will be cut into production.

JUSTIFICATION: The Upgrade Program will modernize the U.S. Army's armor force to enhance the combat effectiveness of the Abrams Tank Fleet and maintain the key elements of the tank industrial base.

PROGRAM SUMMARY

	FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	TO COMPLETE	TOTAL PROG
Weapon Sys Cost	449.687	502.004	587.714	686.521	673.007	615.190	322.816	395.974	620.767	4853.680
Less Adv Proc PY	181.773	297.218	259.086	266.228	270.691	268.407	158.481	128.017	168.081	1997.982
Cur Year Prog	267.914	204.786	328.628	420.293	402.316	346.783	164.335	267.957	452.686	2855.698
Plus Adv Cur Year	297.218	259.086	266.228	270.691	268.407	158.481	128.017	89.310	78.771	1816.209
Total Cur Year	565.132	463.872	594.856	690.984	670.723	505.264	292.352	357.267	531.457	4671.907

WTCV Cost Analysis		A. APPN / BUDGET ACTIVITY TITLE/NO PROCUREMENT OF WPNS & TRKD CMBT VEHS / 1 / Tracked Combat Vehicles			B. WEAPON ABRAMS UPGRADE PROGRAM (GA0750)			C. MANUFACTURER NAME General Dynamics Land System (GDLS)			D. DATE February 1997		
WTCV Cost Elements	ID CD	**FY 96**			**FY 97**			**FY 98**			**FY 99**		
		TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost
		$OOO	Each	$OOO	$OOO	Each	$OOO	$OOO	Each	$OOO	$OOO	Each	$OOO
1. Basic Vehicle	A	215534	100	2155	290478	120	2421	296947	120	2475	323581	120	2697
2. Armor		29335	80	367	35227	122	289	39292	121	325	40185	120	335
3. H/TEU		5850	200	29	7170	240	30	6921	220	31			
4. Engine (DECU)		2333	100	23	2520	120	21	2586	120	22	2654	120	22
5. Transmissions		25017	100	250	31183	120	260	31996	120	267	32840	120	274
6. Final Drives		1382	200	7	1494	240	6	1533	240	6	1573	240	7
7. Fire Control		32696	100	327	39302	120	328	36970	120	308	1579	120	13
8. Track		3338	15600		5696	18720		5845	18720		5999	18720	
9. Road Wheels		919	3200		1421	3840		1458	3840		1496	3840	
10. Gun Mounts		2086	50	42	2057	60	34	2111	60	35	2167	60	36
11. Gun		11701	100	117	11429	120	95	11726	120	98	12036	120	100
12. Drivers Night Viewer		540	100	5	648	120	5	665	120	6	682	120	6
13. Basic Issue Items		752	100	8	804	120	7	821	120	7	838	120	7
14. MILSTRIPS / RIK		499	100	5	612	120	5	625	120	5	639	120	5
15. VIS		570	60	10	1058	120	9	1085	120	9	1114	120	9
16. Special Tools / Test Sets		4671			5715			5835			5959		
17. Contract Engineering		83732			34393			43379			60420		
18. Project Management Admin		2401			2448			2499			2552		
19. MATRIX Support		3830			3906			3987			4071		
20. Auxiliary Services		819			835			852			870		
21. Engineering Support		5646			5757			5878			6002		
22. Quality Support		1184			1207			1233			1259		
23. Testing		3931			4008			4092			4179		
24. First Destination Transportation		504			617			630			643		
25. Total Package Fielding		10417			12019			12271			12533		
26. II Gen FLIR (A Kit) FPDT02								16586	10	1659	58958	120	491
27. II Gen FLIR (B Kit) FPDT01								20041	20	1002	71238	240	297
28. STS C2 FPTA								1059			1050		
29. ANAD								28791			29404		
Weapon Sys Cost		449687	100	4497	502004	120	4183	587714	120	4898	686521	120	5721
Less Adv Proc PY		181773			297218			259086			266228		
Cur Year Prog		267914			204786			328628			420293		
Plus Adv Cur Yr		297218			259086			266228			270691		
Tot Cur Year		565132			463872			594856			690984		

BUDGET PROCUREMENT HISTORY AND PLANNING EXHIBIT (P-5A)

DATE: February 1997

B. APPROPRIATION / BUDGET ACTIVITY: PROCUREMENT OF WPNS & TRKD CMBT VEHS / 1 / Tracked Combat Vehicles

C. P-1 ITEM NOMENCLATURE: ABRAMS UPGRADE PROGRAM (GA0750)

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. Basic Vehicle										
FY 96	GDLS / 1	SS/FFP/M5(1)	TACOM-Warren	Jul-96	Oct-96	100	2155	Yes	No	
FY 97	GDLS / 1	SS/FFP/M5(2)	TACOM-Warren	Dec-96	Aug-97	120	2421	Yes	No	
FY 98	GDLS / 1	SS/FFP/M-5(3)	TACOM-Warren	Mar-98	Aug-98	120	2475	Yes	No	
FY 99	GDLS / 1	SS/FFP/M-5(4)	TACOM-Warren	Mar-99	Aug-99	120	2697	Yes	No	
2. Armor /2										
FY 96	LITCO /4	SS/CPFF	DOE /3	Mar-95	Apr-96	80	367	N/A	N/A	
FY 97	LITCO /4	SS/CPFF	DOE /3	Mar-96	Feb-97	122	289	N/A	N/A	
FY 98	LITCO/4	SS/CPFF	DOE /3	Dec-96	Feb-98	121	325	N/A	N/A	
FY 99	LITCO/4	SS/CPFF	DOE /3	Mar-98	Feb-99	120	335	N/A	N/A	
3. Hull/Turret Electronic Unit										
FY 96	GDLS/1	SS/FFP	TACOM-Warren/5	Apr-95	Apr-96	200	29	Yes	No	
FY 97	GDLS/1	C/FFP	TACOM-ACALA/6	May-96	Feb-97	240	30	Yes	No	
FY 98	GDLS/1	OPTION	TACOM-ACALA/6	Mar-97	Feb-98	220	31	Yes	No	
4. Engine (DECU)										
FY 96	AlliedSignal/7	SS/FFP	TACOM-Warren	Feb-95	Apr-96	100	23	Yes	No	
FY 97	AlliedSignal/7	OPTION	TACOM-Warren	Mar-96	Feb-97	120	21	Yes	No	
FY 98	AlliedSignal/7	SS/FFP	TACOM-Warren	Mar-97	Feb-98	120	22	Yes	No	
FY 99	AlliedSignal/7	OPTION	TACOM-Warren	Mar-98	Feb-99	120	22	Yes	No	

REMARKS:

1. General Dynamics Land System, Warren, MI
2. Armor production leads tank production
3. Department of Energy
4. Lockheed Idaho Technologies Company, Idaho Falls, Idaho
5. Awarded to GDLS as part of the Long Lead Material Contract.
6. Awarded to GDLS on a separate competitive contract.
7. AlliedSignal/Control & Accessories, Tucson, AZ

BUDGET PROCUREMENT HISTORY AND PLANNING EXHIBIT (P-5A)

DATE: February 1997

B. APPROPRIATION / BUDGET ACTIVITY: PROCUREMENT OF WPNS & TRKD CMBT VEHS / 1 / Tracked Combat Vehicles

C. P-1 ITEM NOMENCLATURE: ABRAMS UPGRADE PROGRAM (GA0750)

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
5. Transmissions										
FY 96	Allison Trans/1	OPTION	TACOM-Warren	Apr-95	Apr-96	100	250	Yes	No	
FY 97	Allison Trans/1	OPTION	TACOM-Warren	Dec-95	Feb-97	120	260	Yes	No	
FY 98	Allison Trans/1	SS/FFP/CP	TACOM-Warren	Feb-97	Feb-98	120	267	Yes	No	
FY 99	Allison Trans/1	OPTION	TACOM-Warren	Dec-97	Feb-99	120	274	Yes	No	
6. Final Drives										
FY 96	TACOM NICP	Requisition	TACOM-Warren	Mar-95	Apr-96	200	7	Yes	No	
FY 97	Loc Perf/2	C/FFP	TACOM-Warren	Nov-95	Feb-97	240	6	Yes	No	
FY 98	Loc Perf/2	OPTION	TACOM-Warren	Mar-97	Feb-98	240	6	Yes	No	
FY 99	Loc Perf/2	OPTION	TACOM-Warren	Mar-98	Feb-99	240	7	Yes	No	
7. Fire Control/3										
FY 96	Hughes/Various	Various	TACOM-ACALA	Various	Apr-96	100	327	Yes	No	
FY 97	Hughes/Various	Various	TACOM-ACALA	Various	Feb-97	120	308	Yes	No	
FY 98	Hughes/Various	Various	TACOM-ACALA	Various	Feb-98	120	13	Yes	No	
FY 99	Hughes/Various	Various	TACOM-ACALA	Various	Feb-99	120	13	Yes	No	
8. Track										
FY 96	Goodyear Tire & Rubber/4	C/FFP	TACOM-Warren	Feb-96	Apr-96	15600		Yes	No	
FY 97	Goodyear Tire & Rubber/4	OPTION	TACOM-Warren	Mar-96	Feb-97	18720		Yes	No	
FY 98	TBD	C/FFP	TACOM-Warren	Nov-96	Feb-98	18720		Yes	No	
FY 99	TBD	OPTION	TACOM-Warren	Mar-98	Feb-99	18720		Yes	No	

REMARKS:

1. Allison Transmission Div, GM Corp, Indianapolis, IN
2. Loc Performance, Inc, Plymouth, MI
3. Hughes Aircraft, El Segundo, CA
4. Goodyear Tire & Rubber Co., Akron, OH

BUDGET PROCUREMENT HISTORY AND PLANNING EXHIBIT (P-5A)

DATE: February 1997

B. APPROPRIATION / BUDGET ACTIVITY: PROCUREMENT OF WPNS & TRKD CMBT VEHS / 1 / Tracked Combat Vehicles

C. P-1 ITEM NOMENCLATURE: ABRAMS UPGRADE PROGRAM (GA0750)

LINE ITEM / FISCAL YEAR	CONTRACTOR AND LOCATION	CONTRACT METHOD AND TYPE	CONTRACTED BY	AWARD DATE	DATE OF FIRST DELIVERY	QTY Each	UNIT COST $OOO	SPECS AVAIL NOW	SPEC REV REQ'D	IF YES W/A
9. Road Wheels										
FY 96	B&C Corp/1	Requirement Cntr/FFP	TACOM-Warren	Dec-95	Apr-96	3200		Yes	No	
FY 97	B&C Corp/1	Requirement Cntr/FFP	TACOM-Warren	Mar-96	Feb-97	3840		Yes	No	
FY 98	B&C Corp/1	Requirement Cntr/FFP	TACOM-Warren	Dec-96	Feb-98	3840		Yes	No	
FY 99	B&C Corp/1	Requirement Cntr/FFP	TACOM-Warren	Mar-98	Feb-99	3840		Yes	No	
10. Gun Mounts/2										
FY 96	RIA	WR	RIA	Jun-95	Apr-96	50	42	Yes	No	
FY 97	RIA	WR	RIA	Mar-96	Feb-97	60	34	Yes	No	
FY 98	RIA	WR	RIA	Mar-97	Feb-98	60	35	Yes	No	
FY 99	RIA	WR	RIA	Mar-98	Feb-99	60	36	Yes	No	
11. Gun										
FY 96	Watervliet	WR	Watervliet	Mar-95	Apr-96	100	117	Yes	No	
FY 97	Watervliet	WR	Watervliet	Apr-96	Feb-97	120	95	Yes	No	
FY 98	Watervliet	WR	Watervliet	Mar-97	Feb-98	120	98	Yes	No	
FY 99	Watervliet	WR	Watervliet	Mar-98	Feb-99	120	100	Yes	No	
12. Drivers Night Viewer										
FY 96	CECOM NICP	Requisition	CECOM	Jul-95	Apr-96	100	5	Yes	No	
FY 97	CECOM NICP	Requisition	CECOM	Jun-96	Feb-97	120	5	Yes	No	
FY 98	TBD	TBD	CECOM	Jul-97	Feb-98	120	6	Yes	No	
FY 99	TBD	TBD	CECOM	Jul-98	Feb-99	120	6	Yes	No	

REMARKS:

1. B&C Corp, Barberton, OH
2. RIA, Rock Island Arsenal, Rock Island, IL produces 50% of gun mounts. The remainder are procured with the GDLS contract.

BUDGET PROCUREMENT HISTORY AND PLANNING EXHIBIT (P-5A)

DATE: February 1997

B. APPROPRIATION / BUDGET ACTIVITY: PROCUREMENT OF WPNS & TRKD CMBT VEHS / 1 / Tracked Combat Vehicles

C. P-1 ITEM NOMENCLATURE: ABRAMS UPGRADE PROGRAM (GA0750)

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
13. Basic Issue Items										
FY 96	TACOM-ACALA	WR	TACOM-ACALA	May-95	Apr-96	100	8	Yes	No	
FY 97	TACOM-ACALA	WR	TACOM-ACALA	May-96	Feb-96	120	7	Yes	No	
FY 98	TACOM-ACALA	WR	TACOM-ACALA	May-97	Feb-96	120	7	Yes	No	
FY 99	TACOM-ACALA	WR	TACOM-ACALA	May-98	Feb-96	120	7	Yes	No	
14. MILSTRIPS/RIK										
FY 96	N/A	REQN/WR	TACOM-ACALA/CECOM	Various	Apr-96	100	5	Yes	No	
FY 97	N/A	REQN/WR	TACOM-ACALA/CECOM	Various	Feb-97	120	5	Yes	No	
FY 98	N/A	REQN/WR	TACOM-ACALA/CECOM	Various	Feb-98	120	5	Yes	No	
FY 99	N/A	REQN/WR	TACOM-ACALA/CECOM	Various	Feb-99	120	5	Yes	No	
15. VIS/1										
FY 96/3	Grumman /2	C/FFP/Option	CECOM	Dec-95	Apr-96	60	10	Yes	No	
FY 97	Grumman /2	C/FFP/Option	CECOM	May-96	Feb-97	120	9	Yes	No	
FY 98	Grumman/2	C/FFP/Option	CECOM	Apr-97	Feb-98	120	9	Yes	No	
FY 99	Grumman/2	C/FFP/Option	CECOM	Apr-98	Feb-99	120	9	Yes	No	
26. II Gen FLIR (A Kit) FPDT02										
FY 98	TBD	TBD	TBD	Feb-97	Feb-99	10	1659	Yes	Yes	Apr-97
FY 99	TBD	TBD	TBD	Oct-97	Apr-99	120	491	Yes	Yes	Apr-97

REMARKS:

1. VIS, Vehicular Intercommunication System.
2. Grumman Aerospace Corp, Bethpage, NY
3. 40 VIS Components were previously procured in Phase I

BUDGET PROCUREMENT HISTORY AND PLANNING EXHIBIT (P-5A)

DATE: February 1997

B. APPROPRIATION / BUDGET ACTIVITY: PROCUREMENT OF WPNS & TRKD CMBT VEHS / 1 / Tracked Combat Vehicles

C. P-1 ITEM NOMENCLATURE: ABRAMS UPGRADE PROGRAM (GA0750)

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
27. II Gen FLIR (B Kit) FPDT01										
FY 98	TBD	TBD	TBD	Feb-97	Feb-99	20	1002	Yes	Yes	Apr-97
FY 99	TBD	TBD	TBD	Oct-97	Apr-99	240	297	Yes	Yes	Apr-97

REMARKS:

FY 96 / 99 BUDGET PRODUCTION SCHEDULE

P-1 ITEM NOMENCLATURE: ABRAMS UPGRADE PROGRAM (GA0750)

DATE: February 1997

COST ELEMENTS	MFR	FY	SERV	PROC QTY Each	ACCEP. PRIOR TO 1 OCT	BAL DUE AS OF 1 OCT	Fiscal Year 96												Fiscal Year 97										LATER
							Calendar Year 96												Calendar Year 97										
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1. Basic Vehicle	1	95 & Pr	A	206	95	111	10	9	8	9	9	9	9	10	9	10	10	9												
	1	FY 96	A	100	0	100										A			11	9	8	11	11	11	11	11	11	6			
	1	FY 97	A	120	0	120															A							10	10	100
	1	FY 98	A	120	0	120																								120
	1	FY 99	A	120	0	120																								120
2. GOE - M1A1	1	93 & Pr	FMS	100	0	100	7	8	6	9	8	9	8	9	4	4	10	9	9											
	1	93 & Pr	FMS	32	0	32													1	9	6	9	7							
	1	93 & Pr	FMS	31	0	31																		4	4	4	4	4	4	4	3
3. Kuwait - M1A2	1	93 & Pr	FMS	218	161	57	13	12	9	12	11																			
TOTAL				**1047**	**256**	**791**	**30**	**29**	**23**	**30**	**28**	**18**	**17**	**19**	**13**	**14**	**20**	**18**	**21**	**18**	**14**	**20**	**18**	**15**	**15**	**15**	**15**	**10**	**14**	**14**	**343**
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

MFR	NAME / LOCATION	PRODUCTION RATES MIN.	1-8-5	MAX.	REACHED D+
1	LIMA ARMY TANK PLANT, LIMA, OH	43	43	75	22

MFR Number		ADMIN LEAD TIME Prior 1 Oct.	After 1 Oct.	MFR After 1 Oct.	TOTAL After 1 Oct.
	INITIAL	0	3	14	17
	REORDER	0	3	14	17
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				

REMARKS

LATP is the only facility in the United States capable of producing tanks.

FMS represents coproduction with Egypt for kits and M1A2 tanks for Kuwaiit (218).

FY 96 / 99 BUDGET PRODUCTION SCHEDULE

P-1 ITEM NOMENCLATURE: ABRAMS UPGRADE PROGRAM (GA0750)

DATE: February 1997

COST ELEMENTS	MFR	FY	SERV	PROC QTY Each	ACCEP. PRIOR TO 1 OCT	BAL DUE AS OF 1 OCT	Fiscal Year 98 / Calendar Year 98												Fiscal Year 99 / Calendar Year 99									LATER
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1. Basic Vehicle	1	95 & Pr	A	206	206																									
	1	FY 96	A	100	100																									
	1	FY 97	A	120	20	100	11	9	8	11	11	11	11	11	11	6														
	1	FY 98	A	120	0	120						A					10	10	11	9	8	10	11	12	11	11	11	6			
	1	FY 99	A	120	0	120															A								11	10	99
2. GOE - M1A1	1	93 & Pr	FMS	31	28	3	3																							
TOTAL				697	354	343	14	9	8	11	11	11	11	11	11	6	10	10	11	9	8	10	11	12	11	11	11	6	11	10	99

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP

MFR	NAME / LOCATION	PRODUCTION RATES MIN.	1-8-5	MAX.	REACHED D +
1	GDLS / 1				

MFR Number		ADMIN LEAD TIME Prior 1 Oct.	After 1 Oct.	MFR After 1 Oct.	TOTAL After 1 Oct.
	INITIAL				
	REOREDER				
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				

REMARKS

FY 96 / 99 BUDGET PRODUCTION SCHEDULE

P-1 ITEM NOMENCLATURE: ABRAMS UPGRADE PROGRAM (GA0750)

DATE: February 1997

COST ELEMENTS	MFR	FY	SERV	PROC QTY Each	ACCEP. PRIOR TO 1 OCT	BAL DUE AS OF 1 OCT	Fiscal Year 00 / Calendar Year 00												Fiscal Year 01 / Calendar Year 01										LATER
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1. Basic Vehicle	1	95 & Pr	A	206	206																									
	1	FY 96	A	100	100																									
	1	FY 97	A	120	120																									
	1	FY 98	A	120	120																									
	1	FY 99	A	120	21	99	10	10	7	10	11	12	10	12	12	5														
TOTAL				666	567	99	10	10	7	10	11	12	10	12	12	5														

MFR	NAME / LOCATION	PRODUCTION RATES MIN.	1-8-5	MAX.	REACHED D +
1	GDLS / 1				

MFR Number		ADMIN LEAD TIME Prior 1 Oct.	After 1 Oct.	MFR After 1 Oct.	TOTAL After 1 Oct.
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				

REMARKS

BUDGET ITEM JUSTIFICATION SHEET						DATE February 1997		
APPROPRIATION / BUDGET ACTIVITY PROCUREMENT OF WPNS & TRKD CMBT VEHS /Tracked Combat Vehicles				P-1 ITEM NOMENCLATURE ABRAMS UPGRADE PROGRAM (Adv Proc) (GA0750)				
	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003
QUANTITY								
COST (In millions)	297.2	259.1	266.2	270.7	268.4	158.5	128.0	89.3

DESCRIPTION: Advance procurement for long lead materials to support procurement for the Abrams Upgrade Program.

JUSTIFICATION: Without advance procurement funds, procurement of components, assemblies and raw materials to support procurement, long lead time would not be possible and would cause a break in production.

WEAPON SYSTEM ADVANCE PROCUREMENT EXHIBIT (P-10)
(PROCUREMENT OF ADVANCE DESIGN AND MATIERIAL)

(TOA, Dollars in Thousands)

BUDGET YEAR 1 FOR FISCAL YEAR PROGRAM: 1998

DATE: February 1997

Weapon System Type (Model/Series No.)	FIRST SYSTEM AWARD DATE	FIRST SYSTEM COMPLETION DATE	INTERVAL BETWEEN SYSTEM COMPLETIONS *(MONTHS)*
ABRAMS UPGRADE PROGRAM	MAR 99	AUG 99	

Advance Procurement / Advance Funding Items	Quantity	Date Contract Award Planned / Required	Delivery Date of First Equipment Required	Production Lead Time in Months (Adm / Prod) - Total	Unit Cost	Total Cost
1. Basic Vehicle	120	Various	Aug-99 *	18 Mo **	966	115976
2. Armor	121	Mar-98	Feb-99	16 Mo	83	10049
3. H/TEU						
4. Engine (DECU)	120	Mar-98	Feb-99	16 Mo	22	2621
5. Transmissions	120	Dec-97	Feb-99	20 Mo	270	32433
6. Final Drives	240	Mar-98	Feb-99	16 Mo	6	1554
7. Fire Control	120	Various	Feb-99	16 Mo	13	1559
8. Track	18720	Mar-98	Feb-99	16 Mo		5925
9. Road Wheels	3840	Mar-98	Feb-99	16 Mo		1477
10. Gun Mounts	60	Mar-98	Feb-99	16 Mo	36	2140
11. Gun	120	Mar-98	Feb-99	16 Mo	99	11887
12. Drivers Night Viewer	120	Jul-98	Feb-99	13 Mo	6	674
13. Basic Issue Items	120	May-98	Feb-99	4 Mo	7	828
14. MILSTRIPS / RIK	120	Various	Feb-99	14 Mo	5	631
15. VIS	120	Apr-98	Feb-99	15 Mo	9	1100
26. II Gen FLIR (A Kits)	120	Oct-97	Feb-99	22 Mo	292	35038
27. II Gen FLIR (B Kits)	240	Oct-97	Feb-99	22 Mo	176	42336
TOTAL:						266228

NARRATIVE DESCRIPTION

* Delivery is required 6 months prior to tank delivery

** Production Lead Time includes the 6 months requirement for components prior to tank delivery

PLT excludes First Article Test (FAT) or other special test requirements for new producers or other factors.

ALT is based on current long term contracts. ALT increase with new starts/new contractors/new contracts.

WEAPON SYSTEM ADVANCE PROCUREMENT EXHIBIT (P-10)
(PROCUREMENT OF ADVANCE DESIGN AND MATIERIAL)

(TOA, Dollars in Thousands)

BUDGET YEAR 2 FOR FISCAL YEAR PROGRAM: 1999

DATE: February 1997

Weapon System Type (Model/Series No.)	FIRST SYSTEM AWARD DATE	FIRST SYSTEM COMPLETION DATE	INTERVAL BETWEEN SYSTEM COMPLETIONS *(MONTHS)*
ABRAMS UPGRADE PROGRAM	MAR 00	AUG 00	

Advance Procurement / Advance Funding Items	Quantity	Date Contract Award Planned / Required	Delivery Date of First Equipment Required	Production Lead Time in Months (Adm / Prod) - Total	Unit Cost	Total Cost
1. Basic Vehicle	120	Various	Aug-00 *	18 Mo **	1367	164006
2. Armor	120	Mar-99	Feb-00	16 Mo	85	10229
3. H/TEU						
4. Engine (DECU)	120	Mar-99	Feb-00	16 Mo	22	2678
5. Transmissions	120	Dec-98	Feb-00	20 Mo	276	33133
6. Final Drives	240	Mar-99	Feb-00	16 Mo	7	1587
7. Fire Control	120	Various	Feb-00	16 Mo	13	1594
8. Track	18720	Mar-99	Feb-00	16 Mo		6052
9. Roadwheels	3840	Mar-99	Feb-00	16 Mo		1509
10. Gun Mounts	60	Mar-99	Feb-00	16 Mo	36	2186
11. Gun	120	Mar-99	Feb-00	16 Mo	101	12143
12. Drivers Night Viewer	120	Jul-99	Feb-00	13 Mo	6	689
13. Basic Issue Items	120	May-99	Feb-00	15 Mo	7	841
14. MILSTRIPS / RIK	120	Various	Feb-00	14 Mo	5	642
15. VIS	120	Apr-99	Feb-00	14 Mo	9	1124
26. II Gen FLIR (A Kits) FPDT	120	Oct-98	Feb-00	22 Mo	122	14616
27. II Gen FLIR (B Kits) FPDT	240	Oct-98	Feb-00	22 Mo	74	17662
TOTAL:						270691

NARRATIVE DESCRIPTION

* Delivery is required 6 months prior to tank delivery

** Production Lead Time includes the 6 months requirement for components prior to tank delivery.

PLT excludes First Article Test (FAT) or other special test requirements for new producers or other factors.

ALT is based on current long term contracts. ALT increase with new starts/new contractors/new contracts.

WEAPON SYSTEM ADVANCE PROCUREMENT EXHIBIT (P-10a)
(COMPARISON OF REQUEST TO EXECUTION)

(TOA, Dollars in Thousands)

PRIOR YEAR FOR FISCAL YEAR PROGRAM: 1996

DATE: February 1997

Weapon System Type (Model/Series No.)	FIRST SYSTEM AWARD DATE	FIRST SYSTEM COMPLETION DATE	INTERVAL BETWEEN SYSTEM COMPLETIONS *(MONTHS)*
ABRAMS UPGRADE PROGRAM	DEC 96	Aug 97	

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. Basic Vehicle	120	Various/Various	Aug-97 *	18 Mo **	189546	185528
2. Armor	120	Mar 96/Mar96	Feb-97	16 Mo	7914	7940
3. H/TEU	240	May 96/May 96	Feb-97	15 Mo	7152	7152
4. Engine (DECU)	120	Mar 96/Mar 96	Feb-97	16 Mo	2514	2514
5. Transmissions	120	Dec 95/Various	Feb-97	20 Mo	25921	
6. Final Drives	240	Mar 96/Nov 95	Feb-97	16 Mo	1490	1488
7. Fire Control	120	Various/Various	Feb-97	16 Mo	39204	
8. Track	18720	Mar 96/Mar 96	Feb-97	16 Mo	5682	5682
9. Road Wheels	3840	Mar 96/Mar 96	Feb-97	16 Mo	1417	1417
10. Gun Mounts	60	Mar 96/Mar 96	Feb-97	16 Mo	2052	2052
11. Gun	120	Apr 96/Apr 96	Feb-97	15 Mo	11400	11400
12. Drivers Night Viewer	120	Apr 96/Jun 96	Feb-97	15 Mo	646	646
13. Basic Issue Items	120	Mar 96/May 96	Feb-97	16 Mo	804	804
14. MILSTRIPS/RIK	Various	Various/Various	Feb-97	14 Mo	421	
15. VIS	120	Apr 96/May 96	Feb-97	15 Mo	1055	1055
TOTAL:					297218	227678

NARRATIVE DESCRIPTION

* Delivery is required 6 months prior to tank delivery

** Production Lead Time includes the 6 months requirement for components prior to tank delivery.

PLT excludes First Article Test (FAT) or other special test requirements for new producers or other factors.

ALT is based on current long term contracts. ALT increase with new starts/new contractors/new contracts.

WEAPON SYSTEM ADVANCE PROCUREMENT EXHIBIT (P-10a)
(COMPARISON OF REQUEST TO EXECUTION)

(TOA, Dollars In Thousands)

CURRENT YEAR FOR FISCAL YEAR PROGRAM: 1997

DATE: February 1997

Weapon System Type (Model/Series No.)	FIRST SYSTEM AWARD DATE	FIRST SYSTEM COMPLETION DATE	INTERVAL BETWEEN SYSTEM COMPLETIONS *(MONTHS)*
ABRAMS UPGRADE PROGRAM	MAR98	Aug 98	

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. Basic Vehicle	120	Various	Aug-98	18 Mo	127697	
2. Armor	122	Mar 97/Dec 96	Feb-98	16 Mo	9826	9310
3. H/TEU	220	Mar-97	Feb-98	16 Mo	6870	
4. Engine (DECU)	120	Mar-97	Feb-98	16 Mo	2567	
5. Transmissions	120	Feb-97	Feb-98	17 Mo	31757	
6. Final Drives	240	Mar-97	Feb-98	16 Mo	1522	
7. Fire Control	Various	Various	Feb-98	16 Mo	36693	
8. Track	18720	Mar 97/Nov 96	Feb-98	16 Mo	5801	5682
9. Road Wheels	3840	Mar 97/Dec 96	Feb-98	16 Mo	1447	1417
10. Gun Mounts	60	Mar-97	Feb-98	16 Mo	2095	
11. Gun	120	Mar-97	Feb-98	16 Mo	11639	
12. Drivers Night Viewer	120	Jul-97	Feb-98	13 Mo	660	
13. Basic Issue Items	120	May-97	Feb-98	14 Mo	815	
14. MILSTRIPS / RIK	Various	Various	Feb-98	14 Mo	620	
15. VIS	120	Apr-97	Feb-98	15 Mo	1077	
26. II Gen FLIR (A Kits) FPDT	10	Feb-97	Feb-98	22 Mo	8151	
27. II Gen FLIR (B Kits) FPDT	20	Feb-97	Feb-98	22 Mo	9849	
TOTAL:					259086	16409

NARRATIVE DESCRIPTION

* Delivery is required 6 months prior to tank delivery

** Production Lead Time includes the 6 months requirement for components prior to tank delivery.

PLT excludes First Article Test (FAT) or other special test requirements for new producers or tther factors.

ALT is based on current long term contracts. ALT increase with new starts/new contractors/new contracts.

BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

APPROPRIATION / BUDGET ACTIVITY	P-1 ITEM NOMENCLATURE
PROCUREMENT OF WPNS & TRKD CMBT VEHS /Tracked Combat Vehicles	MODIFICATIONS LESS THAN $2.0M (TCV-WTCV) (GA0925)

	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)	0.6	1.0	1.0	0.0	0.0	0.0	0.0	0.0

DESCRIPTION: This funding provides for the procurement of hardware kits, their application, and fielding support costs for modification with costs of $2.0M or less for Weapons & Tracked Combat Vehicles.

JUSTIFICATION:

WATER/RATION HEATER: Provides mounting provisions and hardware for an electrically operated water heater/cooking unit in the M113 Family of Vehicles. The unit supplies hot water for drinks, reconstitution of rations, bathing and washing, and can be used to boil or fry foods. Increases crew comfort and morale thus improving soldier effectiveness and lengthening the time the soldier can stay in the field.

BUDGET ITEM JUSTIFICATION SHEET	DATE: February 1997
APPROPRIATION / BUDGET ACTIVITY: PROCUREMENT OF WPNS & TRKD CMBT VEHS /Tracked Combat Vehicles	P-1 ITEM NOMENCLATURE: MODIFICATIONS LESS THAN $2.0M (TCV-WTCV) (GA0925)

OSIP No.	Description							
Classification	All PYs	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003
1-94-05-4473	Water/Ration Heater							
Legislative Comp	0.6	1.0	1.0	0.0	0.0	0.0	0.0	0.0
Totals	0.6	1.0	1.0	0.0	0.0	0.0	0.0	0.0

MODIFICATION INSTALLATION SUMMAR

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
MODIFICATIONS LESS THAN $2.0M (TCV-WTCV)									
GA0925									
Water/Ration Heater	0.0	0.6	0.5	0.0	0.0	0.0	0.0	0.0	1.1
Totals	0.0	0.6	0.5	0.0	0.0	0.0	0.0	0.0	1.1

INDIVIDUAL MODIFICATION	Date	February 1997

MODIFICATION TITLE: Water/Ration Heater 1-94-05-4473

MODELS OF SYSTEMS AFFECTED: M113A3, M548A3, M577A3, M58, M1064A3, M1068A3

DESCRIPTION / JUSTIFICATION:

WATER/RATION HEATER: Provides mounting provisions and hardware for an electrically operated water heater/cooking unit in the M113 Family of Vehicles. The unit supplies hot water for drinks, reconstitution of rations, bathing and washing, and can be used to boil or fry foods. Increases crew comfort and morale thus improving soldier effectiveness and lengthening the time the soldier can stay in the field.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

	PLANNED	ACCOMPLISHED
Preliminary Design Review:		N/A
Critical Design Review:		N/A
Contractor Test and Evaluation:		N/A
IPR Production Decision		N/A
TDP Available:		Mar-95

INDIVIDUAL MODIFICATION																		Date	February 1997		
MODIFICATION TITLE (Cont):	Water/Ration Heater 1-94-05-4473																				
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	579	0.6	412	0.4	432	0.5													1423	1.5	
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			579	0.6															579	0.6	
FY 1997 Eqpt -- Kits					412	0.4													412	0.4	
FY 1998 Eqpt -- Kits					108	0.1											324	0.4	432	0.5	
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			579	0.6	520	0.5											324	0.4	1423	1.5	
Total Procurement Cost		0.6		1.0		1.0												0.4		3.0	

METHOD OF IMPLEMENTATION: Depot/Depot Teams ADMINISTRATIVE LEADTIME: 3 Months PRODUCTION LEADTIME: 7 Months

Contract Dates:	FY 1997:	Jan 97	FY 1998:	Nov 97	FY 1999:	
Delivery Date:	FY 1997:	Jul 97	FY 1998:	Jul 98	FY 1999:	

Installation Schedule: Water/Ration Heater 1-94-05-4473

Date: February 1997

	FY 1996 & Prior	FY 1997 1	FY 1997 2	FY 1997 3	FY 1997 4	FY 1998 1	FY 1998 2	FY 1998 3	FY 1998 4	FY 1999 1	FY 1999 2	FY 1999 3	FY 1999 4	FY 2000 1	FY 2000 2	FY 2000 3	FY 2000 4	FY 2001 1	FY 2001 2	FY 2001 3	FY 2001 4	Total
Inputs																						
FY 1996 & Prior			193	193	193																	579
FY 1997						138	137	137														412
FY 1998									108	324												432
FY 1999																						
Outputs																						
FY 1996 & Prior			193	193	193																	579
FY 1997						138	137	137														412
FY 1998									108	324												432
FY 1999																						

	FY 2000 1	FY 2000 2	FY 2000 3	FY 2000 4	FY 2001 1	FY 2001 2	FY 2001 3	FY 2001 4	FY 2002 1	FY 2002 2	FY 2002 3	FY 2002 4	FY 2003 1	FY 2003 2	FY 2003 3	FY 2003 4	FY 2004 1	FY 2004 2	FY 2004 3	FY 2004 4	FY 2005 1	FY 2005 2	FY 2005 3	FY 2005 4	Total
Inputs																									
FY 2000																									
FY 2001																									
FY 2002																									
FY 2003																									
Outputs																									
FY 2000																									
FY 2001																									
FY 2002																									
FY 2003																									

Remarks:

BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

APPROPRIATION / BUDGET ACTIVITY: PROCUREMENT OF WPNS & TRKD CMBT VEHS /Tracked Combat Vehicles

P-1 ITEM NOMENCLATURE: ITEMS LESS THAN $2.0M (TCV-WTCV) (GL3100)

	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)	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2

DESCRIPTION: Provides for procurement/assembly of full tracked vehicle organizational maintenance tool/shop sets. This equipment has multi-applications and is essential for effective maintenance on all tracked vehicles.

JUSTIFICATION: Required to provide organizational maintenance personnel with equipment essential to maintain full tracked vehicles in an acceptable state of readiness. Funding of this program will establish and maintain the operational capability of the Bradley Fighting Vehicle, M1 Tank, etc.

WTCV Cost Analysis			A. APPN / BUDGET ACTIVITY TITLE/NO PROCUREMENT OF WPNS & TRKD CMBT VEHS / 1 / Tracked Combat Vehicles			B. WEAPON ITEMS LESS THAN $2.0M (TCV-WTCV) (GL 3100)			C. MANUFACTURER NAME Rock Island Arsenal			D. DATE February 1997		
WTCV Cost Elements		ID CD	FY 96			FY 97			FY 98			FY 99		
			TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost
			$OOO	Each	$OOO	$OOO	Each	$OOO	$OOO	Each	$OOO	$OOO	Each	$OOO
1. Shop Equip, Contact Repair Shop, Light Vhl Mtd	G314	A	18	2	9							9	1	9
2. Shop Set, Contact and Emergency Repair, FM	G352	A	30	3	10	33	3	11	44	4	11	33	3	11
3. Tool Set, Full Tracked Vehicle, Org Maint, Sup 2	G649	A	99	9	11	108	9	12	95	8	12	95	8	12
TOTAL			**147**			**141**			**139**			**137**		

BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

APPROPRIATION / BUDGET ACTIVITY	P-1 ITEM NOMENCLATURE
PROCUREMENT OF WPNS & TRKD CMBT VEHS /Tracked Combat Vehicles	PRODUCTION BASE SUPPORT (TCV-WTCV) (GA0050)

	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)	5.3	9.3	8.9	9.2	9.4	9.9	10.7	10.7

DESCRIPTION: This program provides for Provision of Industrial Facilities (PIF). Funds are used to establish, modernize, expand or replace facilities owned by the Army. It provides Production Support, Equipment Replacement (PSR) and Modernization (MOD) to Government owned equipment, real property used in production and production testing of Weapons and Tracked Combat Vehicles. This program also provides funding for the Layaway of Industrial Facilities (LIF) for preservation of equipment and portions of plants which are no longer required for active production and Environmental (Env) restoration to comply with Occupational Safety Health Act (OSHA)for the Environmental Protection Agency (EPA).

JUSTIFICATION: The FY98 and FY99 request supports major rehabilitation of industrial plant equipment at various facilities, in acquiring components and spare parts for the M-1 and the M-1 Upgrade Program. Contractor plants supported are Lima Army Tank Plant and Scranton Facility.

	FY 1996	FY 1997	FY 1998	FY 1999
PIF	3.443	8.959	8.585	8.800
LIF	0.432	0.360	0.357	0.350
ENV	1.448			
TOTAL	5.323	9.319	8.942	9.150

Production Support and Facilities Projects			DATE February 1997			
APPROPRIATION / BUDGET ACTIVITY PROCUREMENT OF WPNS & TRKD CMBT VEHS /Tracked Combat Vehicles			P-1 ITEM NOMENCLATURE PRODUCTION BASE SUPPORT (TCV-WTCV) (GA0050)			
PROJECT NO.	TYPE	NAME / LOCATION	FY 1996	FY 1997	FY 1998	FY 1999
49X3002	PSR - Omnibus Design		0.394	0.170	0.125	0.150
Provides funding for design of construction and equipment projects in support of the Army Tank Program.						
49X4281	LIF - Layaway/Redistribution	Various Government & Contractor Facilities	0.432	0.360	0.357	0.350
Provides for plant clearance and restoration of those areas no longer required for active production. Provides packing, crating, handling and transportation (PCH&T) of Government-owned equipment which is being retained for future production at a location other than where the equipment is currently being used.						
49X6037	PSR - Production Support for Lima Army Tank Plant (LATP)		2.299	4.427	2.500	2.600
Provides for construction and non-routine maintenance of real property facilities, correction of safety deficiencies, and replacement or rehabilitation of production equipment. The funding will also replace deteriorating carbon steel duct work in the small parts paint booth with stainless steel.						
49X6040	PSR - Equipment Replacement & Rehabilitation at & M1 Production Facilities		0.750	4.362	5.960	6.050
Supports production of the Abrams Tank System through replacement and rehabilitation of Government owned equipment at various contractor plants, Lima Army Tank Plant and Scranton Facility.						

Production Support and Facilities Projects

DATE: February 1997

APPROPRIATION / BUDGET ACTIVITY: PROCUREMENT OF WPNS & TRKD CMBT VEHS /Tracked Combat Vehicles

P-1 ITEM NOMENCLATURE: PRODUCTION BASE SUPPORT (TCV-WTCV) (GA0050)

PROJECT NO.	TYPE	NAME / LOCATION	FY 1996	FY 1997	FY 1998	FY 1999
19X8173	PSR - Annual Support and Environmental Restoration		1.448			
	E Stratford Army Engine Plant					

Provides for correction of OSHA/EPA deficiencies and minimum facility projects in support of tank engine production. The Stratford plant manufactures the AGT 1500 engine for the ABRAMS tank.

BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

APPROPRIATION / BUDGET ACTIVITY: PROCUREMENT OF WPNS & TRKD CMBT VEHS /Weapons and Other Combat Vehicles

P-1 ITEM NOMENCLATURE: ARMOR MACHINE GUN, 7.62MM (G13000)

	Prior Years	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Program
QUANTITY	0	0	2,034	0	673	1,856	1,875	0	0	2,768	9206
COST (in millions)	0.0	0.0	20.0	0.0	7.0	19.2	19.8	0.0	0.0	29.4	95.4
Initial Spares (in millions)											
Total (in millions)	0.0	0.0	20.0	0.0	7.0	19.2	19.8	0.0	0.0	29.4	95.4
Unit Cost (in millions)	0.000	0.000	0.010	0.000	0.010	0.010	0.011	0.000	0.000	0.011	0.010

DESCRIPTION: The M240B Machine Gun is a ground version of the M240 Machine Gun, the 7.62mm Medium Machine Gun class weapon designed as a coaxial/pintle-mounted weapon for tanks and light armored vehicles. The M240B is an air cooled, link-belt fed, gas operated weapon. The weapon features fixed head space, which permits rapid changing of the barrels. The principle difference between the M240 and the M240B is the addition of a flash suppressor, front sight, carrying handle for the barrel, buttstock, pistol grip, bipod, heat shield and rear sight assembly. The M240B Machine Gun may also be tripod-mounted and used in conjuction with a traversing and elevating mechanism and a flex mount pintle.

JUSTIFICATION: The M240B Medium Machine Gun is an infantry version of the M240 Armored Machine Gun intended to replace the M60 Series Machine Gun in light infantry, mechanized infantry, and combat engineer units. The US Army has identified a need to upgrade its current inventory of 7.62mm Medium Machine Guns in order to provide the dismounted infantryman a more reliable, accurate, and lethal medium machine gun to suppress and destroy enemy personnel, lightly armored vehicles, and fortified positions.

This P-form only reflects the quantity bought under the Armor Machine Gun budget line. The total Army Procurement Objective of 10,406 M240B model 7.62mm medium machine guns includes 1,200 weapons procured in FY1996 on GZ1300 (Medium Machine Gun Mod) and 9,206 weapons procured on G130000.

WTCV Cost Analysis		A. APPN / BUDGET ACTIVITY TITLE/NO PROCUREMENT OF WPNS & TRKD CMBT VEHS / 2 / Weapons and Other Combat Vehicles			B. WEAPON ARMOR MACHINE GUN, 7.62MM (G13000)			C. MANUFACTURER NAME FN Manufacturing, Inc.			D. DATE February 1997		
WTCV Cost Elements	ID CD	**FY 96**			**FY 97**			**FY 98**			**FY 99**		
		TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost
		$OOO	Each	$OOO	$OOO	Each	$OOO	$OOO	Each	$OOO	$OOO	Each	$OOO
1. Hardware (Incls Flex Mount & Blank Firing Device)					18910	2034	9				6518	673	10
2. Engineering Support - In House Support					324						122		
3. Quality Assurance (ARDEC)					63						22		
4. Engineering Studies					305						100		
5. Testing (TECOM)					120						120		
6. Fielding					259						85		
TOTAL					**19981**						**6967**		

BUDGET PROCUREMENT HISTORY AND PLANNING EXHIBIT (P-5A)

DATE: February 1997

B. APPROPRIATION / BUDGET ACTIVITY: PROCUREMENT OF WPNS & TRKD CMBT VEHS / 2 / Weapons and Other Combat Vehicles

C. P-1 ITEM NOMENCLATURE: ARMOR MACHINE GUN, 7.62MM (G13000)

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
Hardware (Incls Flex Mount & Blank Firing Device)										
FY 97	FN Manufacturing, Inc., Columbia, SC	SS/FFP	ACALA	Aug-97	Aug-98	2034	9	No	Yes	Sep-96
FY 99	FN Manufacturing, Inc., Columbia, SC	SS/FFP M-3(1)	ACALA	Apr-99	Apr-00	673	10	Yes	No	

REMARKS:

FY 98 / 99 BUDGET PRODUCTION SCHEDULE

P-1 ITEM NOMENCLATURE: ARMOR MACHINE GUN, 7.62MM (G13000)

DATE: February 1997

COST ELEMENTS	MFR	FY	SERV	PROC QTY Each	ACCEP. PRIOR TO 1 OCT	BAL DUE AS OF 1 OCT	Fiscal Year 96 / Calendar Year 96 OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	Fiscal Year 97 / Calendar Year 97 OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	LATER
Hardware																															
	1	FY 97	A	2034	0	2034																							A		2034
	1	FY 99	A	673	0	673																									673
TOTAL				2707		2707																									2707

MFR	NAME / LOCATION	PRODUCTION RATES MIN.	1-8-5	MAX.	REACHED D +
1	FN Manufacturing, Inc., Columbia, SC	90	200	350	10

MFR Number		ADMIN LEAD TIME Prior 1 Oct.	After 1 Oct.	MFR After 1 Oct.	TOTAL After 1 Oct.
1	INITIAL	7	10	12	22
	REORDER	7	6	8	14
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				

REMARKS

FY99 is the lst year of a planned 3-yr multiyear procurement (FY99-01). FY97 delivery period extended to avoid break in production between FY97 and FY99 buys.

FY 98 / 99 BUDGET PRODUCTION SCHEDULE

P-1 ITEM NOMENCLATURE: ARMOR MACHINE GUN, 7.62MM (G13000)

DATE: February 1997

COST ELEMENTS	MFR	FY	SERV	PROC QTY Each	ACCEP. PRIOR TO 1 OCT	BAL DUE AS OF 1 OCT	Fiscal Year 98 / Calendar Year 98												Fiscal Year 99 / Calendar Year 99										LATER
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
Hardware																														
	1	FY 97	A	2034	0	2034											100	100	100	100	100	100	100	100	100	100	100	100	100	100	634
	1	FY 99	A	673	0	673																			A						673
TOTAL				2707		2707											100	100	100	100	100	100	100	100	100	100	100	100	100	100	1307

MFR	NAME / LOCATION	PRODUCTION RATES MIN.	1-8-5	MAX.	REACHED D +
1	FN Manufacturing, Inc., Columbia, SC	90	200	350	10

MFR Number		ADMIN LEAD TIME Prior 1 Oct.	After 1 Oct.	MFR After 1 Oct.	TOTAL After 1 Oct.
1	INITIAL	7	10	12	22
	REORDER	7	6	8	14
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				

REMARKS

FY99 is the lst year of a planned 3-yr multiyear procurement (FY99-01). FY97 delivery period extended to avoid break in production between FY97 and FY99 buys.

FY 98 / 99 BUDGET PRODUCTION SCHEDULE

P-1 ITEM NOMENCLATURE: ARMOR MACHINE GUN, 7.62MM (G13000)

DATE: February 1997

COST ELEMENTS	MFR	FY	SERV	PROC QTY Each	ACCEP. PRIOR TO 1 OCT	BAL DUE AS OF 1 OCT	Fiscal Year 00 / Calendar Year 00												Fiscal Year 01 / Calendar Year 01										LATER
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
Hardware																														
	1	FY 97	A	2034	1400	634	100	100	100	100	100	100	34																	
	1	FY 99	A	673	0	673							66	100	100	100	100	150	57											
TOTAL				**2707**	**1400**	**1307**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**150**	**57**											

MFR	NAME / LOCATION	PRODUCTION RATES MIN.	1-8-5	MAX.	REACHED D +
1	FN Manufacturing, Inc., Columbia, SC	90	200	350	10

MFR Number		ADMIN LEAD TIME Prior 1 Oct.	After 1 Oct.	MFR After 1 Oct.	TOTAL After 1 Oct.
1	INITIAL	7	10	12	22
	REORDER	7	6	8	14
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				

REMARKS

FY99 is the lst year of a planned 3-yr multiyear procurement (FY99-01). FY97 delivery period extended to avoid break in production between FY97 and FY99 buys.

BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

APPROPRIATION / BUDGET ACTIVITY: PROCUREMENT OF WPNS & TRKD CMBT VEHS /Weapons and Other Combat Vehicles

P-1 ITEM NOMENCLATURE: MACHINE GUN, 5.56MM (SAW) (G12900)

	Prior Years	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Program
QUANTITY	56707	9430	3802	406	1570					7993	79908
COST (in millions)	139.0	27.6	12.1	5.6	4.9	0.0	0.0	0.0	0.0	23.0	212.2
Initial Spares (in millions)											
Total (in millions)	139.0	27.6	12.1	5.6	4.9					23.0	212.2
Unit Cost (in millions)	0.0	0.0	0.0	0.0	0.0					0.0	0.0

DESCRIPTION: The Squad Automatic Weapon (SAW) is a lightweight (22 pounds with 200 rounds of ammunition), 5.56mm, one-man operated weapon capable of delivering a sustained volume of automatic, accurate, and lethal fire at ranges of up to 800 meters. The Army configuration was changed Oct 89 to include a spare barrel, additional heat shield and barrel bag.

JUSTIFICATION: The sustained fire capability and increased range are urgently needed throughout infantry rifle squads in order to enhance their survivability. This lightweight, highly mobile machine gun will be used by infantry, light infantry, airborne infantry, mechanized infantry and elements of the air cavalry units, as well as non-infantry units. This procurement profile will equip selected elements of the above mentioned units on a priority basis.

WTCV Cost Analysis		A. APPN / BUDGET ACTIVITY TITLE/NO PROCUREMENT OF WPNS & TRKD CMBT VEHS / 2 / Weapons and Other Combat Vehicles			B. WEAPON MACHINE GUN, 5.56MM (SAW) (G12900)			C. MANUFACTURER NAME FN Mfg. Co.			D. DATE February 1997		
WTCV Cost Elements	ID CD	**FY 96**			**FY 97**			**FY 98**			**FY 99**		
		TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost
		$OOO	Each	$OOO	$OOO	Each	$OOO	$OOO	Each	$OOO	$OOO	Each	$OOO
1. Hardware	A	24817	9430	3	10006	3802	3	1068	406	3	4317	1570	3
2. GFM		626											
3. Engineering Support - In House Support		54			50			445			200		
4. Quality Assurance (ARDEC)		40			106			89			35		
5. Testing (TECOM)		115			150						115		
6. Engineering Change Proposal (ECP's)					444			70			25		
7. ILS		65			65			60			50		
8. Fielding		1801			1236			3837			145		
9. TDP Maintenance		58											
10. Storage					35								
11. Refurbishment		4											
12. Modified Work Order		5											
TOTAL		**27585**			**12092**			**5569**			**4887**		

BUDGET PROCUREMENT HISTORY AND PLANNING EXHIBIT (P-5A)

DATE: February 1997

B. APPROPRIATION / BUDGET ACTIVITY: PROCUREMENT OF WPNS & TRKD CMBT VEHS / 2 / Weapons and Other Combat Vehicles

C. P-1 ITEM NOMENCLATURE: MACHINE GUN, 5.56MM (SAW) (G12900)

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
Hardware										
FY 96	FN Mfg. Co., Inc., Columbia, SC	SS/FFP M-3(1)	ACALA	Jul-96	Jan-97	9430	3	Yes	No	
FY 97	FN Mfg. Co., Inc., Columbia, SC	SS/FFP M-3(2)	ACALA	Dec-96	Sep-98	3802	3	Yes	No	
FY 98	FN Mfg. Co., Inc., Columbia, SC	SS/FFP M-3(3)	ACALA	Jan-98	Jun-99	406	3	Yes	No	
FY 99	FN Mfg. Co., Inc., Columbia, SC	SS/FFP	ACALA	Jan-99	Jul-99	1570	3	Yes	No	

REMARKS:

FY 96 / 97 BUDGET PRODUCTION SCHEDULE

P-1 ITEM NOMENCLATURE: MACHINE GUN, 5.56MM (SAW) (G12900)

DATE: February 1997

COST ELEMENTS	MFR	FY	SERV	PROC QTY Each	ACCEP. PRIOR TO 1 OCT	BAL DUE AS OF 1 OCT	Fiscal Year 96 / Calendar Year 96												Fiscal Year 97 / Calendar Year 97									LATER
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
Hardware	1	95 & Pr	A	47.6	35.2	12.4	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.40									
	2	95 & Pr	A	9.1	9.1	0.0																								
	1	95 & Pr	MC	2.5	2.5	0.0																								
	1	95 & Pr	AF	2.5	2.5	0.0																								
	1	95 & Pr	SDAF	0.5	0.5	0.0																								
	1	95 & Pr	FMS	0.2	0.2	0.0																								
	1	FY 96	A	9.4	0.0	9.4										A						0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	5.35
	1	FY 97	A	3.8	0.0	3.8															A										3.80
	1	FY 98	A	0.4	0.0	0.4																									0.40
	1	FY 99	A	1.6	0.0	1.6																									1.60
TOTAL				77.6	50.0	27.6	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.85	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	11.15
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

MFR	NAME / LOCATION	PRODUCTION RATES MIN.	1-8-5	MAX.	REACHED D+
1	FN Mfg. Co., Inc., Columbia, SC	0.4	1.2	2.4	18.0
2	Fabrique Nationale Nouveau, Herstal, Belgium		(one time buy)		

MFR Number		ADMIN LEAD TIME Prior 1 Oct.	After 1 Oct.	MFR After 1 Oct.	TOTAL After 1 Oct.
1	INITIAL	7	6	6	12
	REORDER	7	6	4	10
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				

REMARKS

Monthly deliveries for FY96 are reduced to allow for constant deliveries for a multi-year acquisition, which includes low requirements in the out years.

FY 96 / 97 BUDGET PRODUCTION SCHEDULE

P-1 ITEM NOMENCLATURE: MACHINE GUN, 5.56MM (SAW) (G12900)

DATE: February 1997

COST ELEMENTS	MFR	FY	SERV	PROC QTY Each	ACCEP. PRIOR TO 1 OCT	BAL DUE AS OF 1 OCT	Fiscal Year 98 / Calendar Year 98												Fiscal Year 99 / Calendar Year 99									LATER
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
Hardware	1	95 & Pr	A	47.6	47.6	0.0																								
	2	95 & Pr	A	9.1	9.1	0.0																								
	1	95 & Pr	MC	2.5	2.5	0.0																								
	1	95 & Pr	AF	2.5	2.5	0.0																								
	1	95 & Pr	SDAF	0.5	0.5	0.0																								
	1	95 & Pr	FMS	0.2	0.2	0.0																								
	1	FY 96	A	9.4	4.1	5.4	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.40												
	1	FY 97	A	3.8	0.0	3.8												0.02	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.18				
	1	FY 98	A	0.4	0.0	0.4				A																	0.27	0.13			
	1	FY 99	A	1.6	0.0	1.6																A						0.32	0.45	0.45	0.38
TOTAL				**77.6**	**66.5**	**11.2**	**0.45**	**0.45**	**0.45**	**0.45**	**0.45**	**0.45**	**0.45**	**0.45**	**0.45**	**0.45**	**0.45**	**0.42**	**0.45**	**0.45**	**0.45**	**0.45**	**0.45**	**0.45**	**0.45**	**0.45**	**0.45**	**0.45**	**0.45**	**0.45**	**0.38**

MFR	NAME / LOCATION	PRODUCTION RATES MIN.	1-8-5	MAX.	REACHED D +
1	FN Mfg. Co., Inc., Columbia, SC	0.4	1.2	2.4	18.0
2	Fabrique Nationale Nouveau, Herstal, Belgium		(one time buy)		

MFR Number		ADMIN LEAD TIME Prior 1 Oct.	After 1 Oct.	MFR After 1 Oct.	TOTAL After 1 Oct.
1	INITIAL	7	6	6	12
	REORDER	7	6	4	10
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				

REMARKS

Monthly deliveries for FY96 are reduced to allow for constant deliveries for a multi-year acquisition, which includes low requirements in the out years.

FY 96 / 97 BUDGET PRODUCTION SCHEDULE

P-1 ITEM NOMENCLATURE: MACHINE GUN, 5.56MM (SAW) (G12900)

DATE: February 1997

COST ELEMENTS	MFR	FY	SERV	PROC QTY Each	ACCEP. PRIOR TO 1 OCT	BAL DUE AS OF 1 OCT	Fiscal Year 00 / Calendar Year 00												Fiscal Year 01 / Calendar Year 01										LATER
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
Hardware	1	95 & Pr	A	47.6	47.6	0.0																								
	2	95 & Pr	A	9.1	9.1	0.0																								
	1	95 & Pr	MC	2.5	2.5	0.0																								
	1	95 & Pr	AF	2.5	2.5	0.0																								
	1	95 & Pr	SDAF	0.5	0.5	0.0																								
	1	95 & Pr	FMS	0.2	0.2	0.0																								
	1	FY 96	A	9.4	9.4	0.0																								
	1	FY 97	A	3.8	3.8	0.0																								
	1	FY 98	A	0.4	0.4	0.0																								
	1	FY 99	A	1.6	1.2	0.4	0.38																							
TOTAL				77.6	77.2	0.4	0.38	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

MFR	NAME / LOCATION	PRODUCTION RATES MIN.	1-8-5	MAX.	REACHED D+
1	FN Mfg. Co., Inc., Columbia, SC	0.4	1.2	2.4	18.0
2	Fabrique Nationale Nouveau, Herstal, Belgium		(one time buy)		

MFR Number		ADMIN LEAD TIME Prior 1 Oct.	After 1 Oct.	MFR After 1 Oct.	TOTAL After 1 Oct.
1	INITIAL	7	6	6	12
	REORDER	7	6	4	10
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				

REMARKS

Monthly deliveries for FY96 are reduced to allow for constant deliveries for a multi-year acquisition, which includes low requirements in the out years.

BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

APPROPRIATION / BUDGET ACTIVITY: PROCUREMENT OF WPNS & TRKD CMBT VEHS /Weapons and Other Combat Vehicles

P-1 ITEM NOMENCLATURE: GRENADE LAUNCHER, AUTO, 40MM, MK19-3 (G13400)

	Prior Years	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Program
QUANTITY	11766	1500	2150		720	1067	783	1124	1595	986	21691
COST (in millions)	181.7	32.8	33.2	0.0	13.1	19.9	14.9	21.9	31.8	17.7	367.0
Initial Spares (in millions)											
Total (in millions)	181.7	32.8	33.2		13.1	19.9	14.9	21.9	31.8	17.7	367.0
Unit Cost (in millions)	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0

DESCRIPTION: The MK19, Mod 3 is a self-powered, air-cooled, blowback, 40mm automatic grenade launcher capable of a cyclic rate of 325-375 rounds per minute. It will engage point targets up to 1,500 meters and provide suppressive fire up to 2,200 meters. Component items for this system include the 40mm asssembly group 1 and the MK64 mount.

JUSTIFICATION: The weapon will be mounted on the High Mobility Multi-Purpose Wheeled Vehicle (HMMWV), the Armored Personnel Carrier family of vehicles and the M88A1 Recovery Vehicle. During static defensive operations, it will be ground employed utilizing the M3 Tripod Mount. It will replace select M2 cal .50 and M60 7.62mm machine guns in mechanized, light infantry, engineer, military police, and other combat support and combat service support units. Procurement will help reduce critical supply position for high-priority equipment readiness code (ERC) A shortages in Europe, Korea, and CONUS requirements. The MK175 Pedestal Mount is being incorporated on the MK64 Mount to improve the accuracy and dispersion of the MK19-3 when used on the HMMWV application.

WTCV Cost Analysis	A. APPN / BUDGET ACTIVITY TITLE/NO	B. WEAPON	C. MANUFACTURER NAME	D. DATE
	PROCUREMENT OF WPNS & TRKD CMBT VEHS / 2 / Weapons and Other Combat Vehicles	GRENADE LAUNCHER, AUTO, 40MM, MK19-3 (G13400)		February 1997

WTCV Cost Elements	ID CD	FY 96			FY 97			FY 98			FY 99		
		TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost
		$OOO	Each	$OOO	$OOO	Each	$OOO	$OOO	Each	$OOO	$OOO	Each	$OOO
1. Hardware		20079	1500	13	4282	320	13				10339	720	14
					22459	1564	14						
					3820	266	14						
2. Round Removal Tool (GFM)		249			252						88		
3. Engineering Support In House		1785			1190						1036		
4. Quality Assurance (ARDEC)		45			41						5		
5. Integrated Logistic Support		108			50						1360		
6. Engineering Change Proposal		1012			505								
7. Testing (TECOM)		315			324								
8. Fielding		516			245						247		
9. M175 Material Change (Application Costs)		15											
10. MK19 Claim		8688											
TOTAL		**32812**			**33168**						**13075**		

BUDGET PROCUREMENT HISTORY AND PLANNING EXHIBIT (P-5A)

DATE: February 1997

B. APPROPRIATION / BUDGET ACTIVITY: PROCUREMENT OF WPNS & TRKD CMBT VEHS / 2 / Weapons and Other Combat Vehicles

C. P-1 ITEM NOMENCLATURE: GRENADE LAUNCHER, AUTO, 40MM, MK19-3 (G13400)

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
Hardware										
FY96	SACO Defense, Saco, Maine	SS/FFP M-2(1)	ACALA	Jul-96	May-97	1500	14	Yes	No	
FY97	SACO Defense, Saco, Maine	SS/FFP M-2(2)	ACALA	Nov-96	May-98	320	13	Yes	No	
	SACO Defense, Saco, Maine	Option	ACALA	Jun-97	Jul-98	1564	14	Yes	No	
	SACO Defense, Saco, Maine	SS/FFP M-3(1)	ACALA	Jul-97	Oct-00	266	14	Yes	No	
FY99	SACO Defense, Saco, Maine	SS/FFP M-3(2)	ACALA	Dec-98	Mar-00	720	14	Yes	No	

REMARKS:

FY 96 / 97 BUDGET PRODUCTION SCHEDULE

P-1 ITEM NOMENCLATURE: GRENADE LAUNCHER, AUTO, 40MM, MK19-3 (G13400)

DATE: February 1997

COST ELEMENTS	MFR	FY	SERV	PROC QTY Each	ACCEP. PRIOR TO 1 OCT	BAL DUE AS OF 1 OCT	FY96 OCT	FY96 NOV	FY96 DEC	FY96 JAN	FY96 FEB	FY96 MAR	FY96 APR	FY96 MAY	FY96 JUN	FY96 JUL	FY96 AUG	FY96 SEP	FY97 OCT	FY97 NOV	FY97 DEC	FY97 JAN	FY97 FEB	FY97 MAR	FY97 APR	FY97 MAY	FY97 JUN	FY97 JUL	FY97 AUG	FY97 SEP	LATER
							Fiscal Year 96												Fiscal Year 97												
							Calendar Year 96												Calendar Year 97												
Hardware	1	95 & Pr	A	11766	8629	3137	180	180	180	180	180	55	180	180	180	180	180	180	180	180	180	180	180	77							
	1	95 & Pr	AR	125	125																										
	1	95 & Pr	MC	3963	3963																										
	1	95 & Pr	N	785	783	2																		2							
	1	95 & Pr	AF	918	918																										
	1	95 & Pr	FMS	577	179	398														1				101	180	117					
	1	95 & Pr	OTH	414	414																										
	1	FY 96	A	1500	0	1500										A										23	140	140	140	140	917
	1	FY 96	AR	125	0	125										A															125
	1	FY 96	FMS	9	0	9										A															9
	1	FY 97	A	320	0	320														A											320
	1	FY 97	A	1564	0	1564																					A				1564
	1	FY 97	A	266	0	266																						A			266
	1	FY 97	AR	200	0	200																						A			200
	1	FY 97	FMS	2	0	2																						A			2
	1	FY 99	A	720	0	720																									720
TOTAL				23254	15011	8243	180	180	180	180	180	55	180	180	180	180	180	180	180	180	180	180	180	180	180	140	140	140	140	140	4123

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
	FY96												FY97												

MFR	NAME / LOCATION	PRODUCTION RATES MIN.	1-8-5	MAX.	REACHED D+
1	SACO Defense, Saco, Maine	100	200	300	9

MFR Number			ADMIN LEAD TIME Prior 1 Oct.	After 1 Oct.	MFR After 1 Oct.	TOTAL After 1 Oct.
1	INITIAL		10	6	24	30
	REORDER		10	3	12	15
	INITIAL					
	REORDER					
	INITIAL					
	REORDER					
	INITIAL					
	REORDER					
	INITIAL					
	REORDER					

REMARKS

FY 96 / 97 BUDGET PRODUCTION SCHEDULE

P-1 ITEM NOMENCLATURE: GRENADE LAUNCHER, AUTO, 40MM, MK19-3 (G13400)

DATE: February 1997

COST ELEMENTS	MFR	FY	SERV	PROC QTY Each	ACCEP. PRIOR TO 1 OCT	BAL DUE AS OF 1 OCT	Fiscal Year 98 / Calendar Year 98												Fiscal Year 99 / Calendar Year 99										LATER
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
Hardware	1	95 & Pr	A	11766	11766																									
	1	95 & Pr	AR	125	125																									
	1	95 & Pr	MC	3963	3963																									
	1	95 & Pr	N	785	785																									
	1	95 & Pr	AF	918	918																									
	1	95 & Pr	FMS	577	577																									
	1	95 & Pr	OTH	414	414																									
	1	FY 96	A	1500	583	917	140	140	140	140	140	140	77																	
	1	FY 96	AR	125	0	125							63	62																
	1	FY 96	FMS	9	0	9								9																
	1	FY 97	A	320	0	320								69	140	111														
	1	FY 97	A	1564	0	1564										9	120	120	120	120	120	100	100	100	100	100	100	100	100	100	55
	1	FY 97	A	266	0	266																								266
	1	FY 97	AR	200	0	200																								200
	1	FY 97	FMS	2	0	2																								2
	1	FY 99	A	720	0	720															A									720
TOTAL				23254	19131	4123	140	140	140	140	140	140	140	140	140	120	120	120	120	120	120	100	100	100	100	100	100	100	100	100	813
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

MFR	NAME / LOCATION	PRODUCTION RATES MIN.	1-8-5	MAX.	REACHED D +
1	SACO Defense, Saco, Maine	100	200	300	9

MFR Number		ADMIN LEAD TIME Prior 1 Oct.	After 1 Oct.	MFR After 1 Oct.	TOTAL After 1 Oct.
1	INITIAL	10	6	24	30
	REORDER	10	3	12	15
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				

REMARKS

FY 96 / 97 BUDGET PRODUCTION SCHEDULE

P-1 ITEM NOMENCLATURE: GRENADE LAUNCHER, AUTO, 40MM, MK19-3 (G13400)

DATE: February 1997

COST ELEMENTS	MFR	FY	SERV	PROC QTY Each	ACCEP. PRIOR TO 1 OCT	BAL DUE AS OF 1 OCT	Fiscal Year 00 / Calendar Year 00												Fiscal Year 01 / Calendar Year 01												LATER
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
Hardware	1	95 & Pr	A	11766	11766																									
	1	95 & Pr	AR	125	125																									
	1	95 & Pr	MC	3963	3963																									
	1	95 & Pr	N	785	785																									
	1	95 & Pr	AF	918	918																									
	1	95 & Pr	FMS	577	577																									
	1	95 & Pr	OTH	414	414																									
	1	FY 96	A	1500	1500																									
	1	FY 96	AR	125	125																									
	1	FY 96	FMS	9	9																									
	1	FY 97	A	320	320																									
	1	FY 97	A	1564	1509	55	55																							
	1	FY 97	A	266	0	266	43	100	100	23																				
	1	FY 97	AR	200	0	200				77	100	23																		
	1	FY 97	FMS	2	0	2	2																							
	1	FY 99	A	720	0	720						77	100	100	100	100	100	100	43											
TOTAL				**23254**	**22011**	**1243**	100	100	100	100	100	100	100	100	100	100	100	100	43											0.0
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

MFR	NAME / LOCATION	PRODUCTION RATES MIN.	1-8-5	MAX.	REACHED D+
1	SACO Defense, Saco, Maine	100	200	300	9

MFR Number			ADMIN LEAD TIME Prior 1 Oct.	After 1 Oct.	MFR After 1 Oct.	TOTAL After 1 Oct.
1	INITIAL		10	6	24	30
	REORDER		10	3	12	15
	INITIAL					
	REORDER					
	INITIAL					
	REORDER					
	INITIAL					
	REORDER					
	INITIAL					
	REORDER					

REMARKS

BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

APPROPRIATION / BUDGET ACTIVITY: PROCUREMENT OF WPNS & TRKD CMBT VEHS /Weapons and Other Combat Vehicles

P-1 ITEM NOMENCLATURE: M16 RIFLE (G14900)

	Prior Years	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Program
QUANTITY	510841	31056	15583	11297	21077	23767	19890	0	0	176639	810150
COST (in millions)	234.2	13.1	6.5	5.1	9.2	10.2	10.1	0.0	0.0	140.9	429.3
Initial Spares (in millions)											
Total (in millions)	234.2	13.1	6.5	5.1	9.2	10.2	10.1	0.0	0.0	140.9	429.3
Unit Cost (in millions)	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.001	0.001

DESCRIPTION: The M16A2 Rifle, 5.56mm, is a gas operated, air cooled, magazine fed, selective rate shoulder fired weapon. It is fed by a 30 round aluminum magazine and is designed for use as the primary infantry weapon. The M16A2 is an improved version the M16A1 Rifle. Improvements include: strengthened plastic handguard, rifle stock and pistol grip to increase durability of the weapon, interchangeable handguard halves, muzzle brake compensator which reduces the raise or jump of the muzzle when fired, a burst control device limiting the automatic fire to a mixlmum of three rounds per trigger pull, and adjustable rear sight and square front sight post for a more distinct sight picture, a brass deflector to prevent hot brass cartridge casings from hitting left-handed shooters, and a stronger barrel reinforced with additional metal and a change in the twist ratio of the bore to accommodate NATO standard 5.56mm ammunition. The maximum effective range of the M16A2 has increased from 460 to 550 meters.

JUSTIFICATION: The M16A2 Rifle Program for FY98/99 provides additional rifles for fielding against the Force Modernization requirement for pure fleeting the field with the M16A2 Rifle. Without additional M16A2 Rifles, a logistic problem associated with different ammunition requirements for the M16A1 vs M16A2 is perpetuated. Funding also supports the M16 Rifle Industrial Base.

This P-Form only reflects the Qty bought under the M16 Rifle Line. The total Army Procurement Objective of 925,450 M16A2 rifles includes 115,300 weapons purchased on GZ2800 (M16 Rifle Mods) and 810,150 weapons procured on G14900.

WTCV Cost Analysis		A. APPN / BUDGET ACTIVITY TITLE/NO PROCUREMENT OF WPNS & TRKD CMBT VEHS / 2 / Weapons and Other Combat Vehicles			B. WEAPON M16 RIFLE (G14900)			C. MANUFACTURER NAME FN Mfg. Co.			D. DATE February 1997		
WTCV Cost Elements	ID CD	**FY 96**			**FY 97**			**FY 98**			**FY 99**		
		TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost
		$OOO	Each	$	$OOO	Each	$	$OOO	Each	$	$OOO	Each	$
1. Rifle (Includes Slings and Magazines)	A	12354	31056	398	4109 616 1480	10320 1548 3715	398 398 398	4499	11297	398	8392	21077	398
2. Engineering Support - In House Support		343						409			415		
3. Engineering Change Proposals		125			83			40			64		
4. Quality Assurance (ARDEC)		47			45			46			48		
5. Integrated Logistics Support		65			65			65			65		
6. Testing (TECOM)					130						138		
7. Fielding		133			18			30			30		
TOTAL		**13067**			**6546**			**5089**			**9152**		

BUDGET PROCUREMENT HISTORY AND PLANNING EXHIBIT (P-5A)

DATE: February 1997

B. APPROPRIATION / BUDGET ACTIVITY: PROCUREMENT OF WPNS & TRKD CMBT VEHS / 2 / Weapons and Other Combat Vehicles

C. P-1 ITEM NOMENCLATURE: M16 RIFLE (G14900)

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
1. Rifle (Includes Slings and Magazines)										
FY 96	FN Mfg. Co., Inc., Columbia, SC	C/FFP M-5(1)	ACALA	Aug-96	Jan-97	31056	398	Yes	No	
FY97	FN Mfg. Co., Inc., Columbia, SC	C/FFP M-5(2)	ACALA	Nov-96	Dec-98	10320	398	Yes	No	
	FN Mfg. Co., Inc., Columbia, SC	Option	ACALA	Nov-96	Jul-99	1548	398	Yes	No	
	TBS	C/FFP	ACALA	Jul-97	Nov-97	3715	398	Yes	No	
FY 98	FN Mfg. Co., Inc., Columbia, SC	C/FFP M-5(3)	ACALA	Jan-98	Aug-99	11297	398	Yes	No	
FY 99	FN Mfg. Co., Inc., Columbia, SC	C/FFP M-5(4)	ACALA	Jan-99	Apr-00	21077	398	Yes	No	

REMARKS:

FY 98 / 99 BUDGET PRODUCTION SCHEDULE

P-1 ITEM NOMENCLATURE: M16 RIFLE (G14900)

DATE: February 1997

COST ELEMENTS	MFR	FY	SERV	PROC QTY x1000	ACCEP. PRIOR TO 1 OCT	BAL DUE AS OF 1 OCT	FY 96 OCT	FY 96 NOV	FY 96 DEC	FY 96 JAN	FY 96 FEB	FY 96 MAR	FY 96 APR	FY 96 MAY	FY 96 JUN	FY 96 JUL	FY 96 AUG	FY 96 SEP	FY 97 OCT	FY 97 NOV	FY 97 DEC	FY 97 JAN	FY 97 FEB	FY 97 MAR	FY 97 APR	FY 97 MAY	FY 97 JUN	FY 97 JUL	FY 97 AUG	FY 97 SEP	LATER
							Fiscal Year 96												Fiscal Year 97												
							Calendar Year 96												Calendar Year 97												
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
Hardware	1	95 & Pr	A	498.90	482.40	16.50	2.00	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.00													
	2	95 & Pr	A	12.00	12.00																									
	1	95 & Pr	MC	26.10	26.10																									
	1	95 & Pr	N	7.40	7.40																									
	2	95 & Pr	N	8.60	8.60																									
	1	95 & Pr	AF	29.00	29.00																									
	1	95 & Pr	SDAF	20.00	20.00																									
	1	FY 96	A	31.00		31.00											A					0.40	1.00	1.50	1.50	1.50	1.50	1.50	1.50	22.30
	1	FY 96	FMS	3.10		3.10											A													3.10
	1	FY 97	A	10.30		10.30														A										10.30
	1	FY 97	A	1.50		1.50														A										1.50
	3	FY 97	A	3.70		3.70																						A		3.70
	1	FY 98	A	11.30		11.30																								11.30
	1	FY 99	A	21.10		21.10																								21.10
TOTAL				684.0	585.5	98.5	2.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.0					0.4	1.0	1.5	1.5	1.5	1.5	1.5	1.5	73.3

MFR	NAME / LOCATION	PRODUCTION RATES MIN.	1-8-5	MAX.	REACHED D +
1	FN Mfg. Co., Inc., Columbia, SC	1	8	17	18
2	Colt's Mfg Co., Inc., Hartford, CT	1	4	10	18
3	TBS				

MFR Number		ADMIN LEAD TIME Prior 1 Oct.	After 1 Oct.	MFR After 1 Oct.	TOTAL After 1 Oct.
1	INITIAL	5	3	4	7
	REORDER	5	3	4	7
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				

REMARKS

The break in production between Sep 96 and Dec 96 is due to a change in acquisition strategy from single year to multi-year procurement. A quantity of 3,517 weapons (FY97 funds) are to be awarded competitively between Colt's and FNMI (RSB) because there is no remaining option available through the second year of the current multi-year contract.

FY 98 / 99 BUDGET PRODUCTION SCHEDULE

P-1 ITEM NOMENCLATURE: M16 RIFLE (G14900)

DATE: February 1997

COST ELEMENTS	MFR	FY	SERV	PROC QTY x1000	ACCEP. PRIOR TO 1 OCT	BAL DUE AS OF 1 OCT	FY 98 OCT	FY 98 NOV	FY 98 DEC	CY 98 JAN	CY 98 FEB	CY 98 MAR	CY 98 APR	CY 98 MAY	CY 98 JUN	CY 98 JUL	CY 98 AUG	CY 98 SEP	FY 99 OCT	FY 99 NOV	FY 99 DEC	CY 99 JAN	CY 99 FEB	CY 99 MAR	CY 99 APR	CY 99 MAY	CY 99 JUN	CY 99 JUL	CY 99 AUG	CY 99 SEP	LATER
Hardware	1	95 & Pr	A	498.9	498.9																									
	2	95 & Pr	A	12.0	12.0																									
	1	95 & Pr	MC	26.1	26.1																									
	1	95 & Pr	N	7.4	7.4																									
	2	95 & Pr	N	8.6	8.6																									
	1	95 & Pr	AF	29.0	29.0																									
	1	95 & Pr	SDAF	20.0	20.0																									
	1	FY 96	A	31.0	8.7	22.3	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.2		0.2	1.5	1.5	1.2										
	1	FY 96	FMS	3.1		3.1										0.3	1.5	1.3													
	1	FY 97	A	10.3		10.3															0.3	1.5	1.5	1.5	1.5	1.5	1.5	1.0			
	1	FY 97	A	1.5		1.5																						0.4	1.1		
	3	FY 97	A	3.7		3.7		0.8	0.8	0.8	0.8	0.5																			
	1	FY 98	A	11.3		11.3				A																			0.4	1.5	9.4
	1	FY 99	A	21.1		21.1																A									21.1
TOTAL				684.0	610.7	73.3	1.5	2.3	2.3	2.3	2.3	2.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.4	1.5	1.5	30.5

MFR	NAME / LOCATION	PRODUCTION RATES MIN.	1-8-5	MAX.	REACHED D +
1	FN Mfg. Co., Inc., Columbia, SC	1	8	17	18
2	Colt's Mfg Co., Inc., Hartford, CT	1	4	10	18
3	TBS				

MFR Number		ADMIN LEAD TIME Prior 1 Oct.	After 1 Oct.	MFR After 1 Oct.	TOTAL After 1 Oct.
1	INITIAL	7	5	4	9
	REORDER	7	5	4	9
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				

REMARKS

The break in production between Sep 96 and Dec 96 is due to a change in acquisition strategy from single year to multi-year procurement. A quantity of 3,517 weapons (FY97 funds) are to be awarded competitively between Colt's and FNMI (RSB) because there is no remaining option available through the second year of the current multi-year contract.

FY 98 / 99 BUDGET PRODUCTION SCHEDULE

P-1 ITEM NOMENCLATURE: M16 RIFLE (G14900)

DATE: February 1997

COST ELEMENTS	MFR	FY	SERV	PROC QTY x1000	ACCEP. PRIOR TO 1 OCT	BAL DUE AS OF 1 OCT	Fiscal Year 00 / Calendar Year 00												Fiscal Year 01 / Calendar Year 01										LATER
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
Hardware	1	95 & Pr	A	498.9	498.9																									
	2	95 & Pr	A	12.0	12.0																									
	1	95 & Pr	MC	26.1	26.1																									
	1	95 & Pr	N	7.4	7.4																									
	2	95 & Pr	N	8.6	8.6																									
	1	95 & Pr	AF	29.0	29.0																									
	1	95 & Pr	SDAF	20.0	20.0																									
	1	FY 96	A	31.0	31.0																									
	1	FY 96	FMS	3.1	3.1																									
	1	FY 97	A	10.3	10.3																									
	1	FY 97	A	1.5	1.5																									
	3	FY 97	A	3.7	3.7																									
	1	FY 98	A	11.3	1.9	9.4	1.5	1.5	1.5	1.5	1.5	1.5	0.4																	
	1	FY 99	A	21.1		21.1							1.1	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	0.5			
TOTAL				**684.0**	**653.5**	**30.5**	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	0.5			
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

MFR	NAME / LOCATION	PRODUCTION RATES MIN.	1-8-5	MAX.	REACHED D+
1	FN Mfg. Co., Inc., Columbia, SC	1	8	17	18
2	Colt's Mfg Co., Inc., Hartford, CT	1	4	10	18
3	TBS				

MFR Number		ADMIN LEAD TIME Prior 1 Oct.	After 1 Oct.	MFR After 1 Oct.	TOTAL After 1 Oct.
1	INITIAL	7	5	4	9
	REORDER	7	5	4	9
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				

REMARKS

The break in production between Sep 96 and Dec 96 is due to a change in acquisition strategy from single year to multi-year procurement. A quantity of 3,517 weapons (FY97 funds) are to be awarded competitively between Colt's and FNMI (RSB) because there is no remaining option available through the second year of the current multi-year contract.

BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

APPROPRIATION / BUDGET ACTIVITY: PROCUREMENT OF WPNS & TRKD CMBT VEHS /Weapons and Other Combat Vehicles

P-1 ITEM NOMENCLATURE: 5.56 CARBINE M4 (G14904)

	Prior Years	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	To Complete	Total Program
QUANTITY	57474	9785	10603	7484	15352	8477	8016			2751	119942
COST (in millions)	31.8	6.3	6.5	5.1	9.6	5.6	5.6	0.0	0.0	1.9	72.4
Initial Spares (in millions)											
Total (in millions)	31.8	6.3	6.5	5.1	9.6	5.6	5.6				72.4
Unit Cost (in millions)	0.0	0.0	0.0	0.0	0.0	0.0	0.0				0.0

DESCRIPTION: The M4 Carbine is a 5.56mm gas-operated, air-cooled, magazine-fed, selective-rate, shoulder-fired weapon. It is fed by a 30-round magazine and will replace all M3A1 WWII era .45 cal Submachine guns, and selective M16 series rifles and M9 pistols. It provides the individual soldier operating in close quarters the capability to engage targets at extended ranges with accurate lethal fire. Although more compact and featuring a collapsible stock, it achieves over 85% commonality with the M16A2 rifle. The effective range is 500 meters.

JUSTIFICATION: The M4 Carbine will provide soldiers with a compact, light-weight weapon that can provide better self protection and additional firepower in close quarters. The FY98/99 program will allow for the uninterrupted fielding of the M4 Carbine to Army units. Procurement is necessary to achieve the Army Acquisition Objective (AAO) for the M4 Carbine.

WTCV Cost Analysis		A. APPN / BUDGET ACTIVITY TITLE/NO PROCUREMENT OF WPNS & TRKD CMBT VEHS / 2 / Weapons and Other Combat Vehicles			B. WEAPON 5.56 CARBINE M4 (G14904)			C. MANUFACTURER NAME TBS			D. DATE February 1997		
WTCV Cost Elements	ID CD	**FY 96**			**FY 97**			**FY 98**			**FY 99**		
		TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost
		$OOO	Each	$OOO	$OOO	Each	$OOO	$OOO	Each	$OOO	$OOO	Each	$OOO
1. Hardware M4 Carbine w/Sling Magazine & Blank Firing Attachment	A	5161	9785	1	5902	10603	1	4166	7484	1	8545	15352	1
2. Engineering Support - In House Support		400						425			375		
3. Engineering Change Proprosals (ECP's)		59			46			105			92		
4. Quality Assurance (ARDEC)		75			75			75			75		
5. ILS		65						65			65		
6. Engineering Studies		220											
7. Comparison Test (TECOM)					175								
8. Fielding		312			348			253			416		
TOTAL		**6292**			**6546**			**5089**			**9568**		

BUDGET PROCUREMENT HISTORY AND PLANNING EXHIBIT (P-5A)

DATE: February 1997

B. APPROPRIATION / BUDGET ACTIVITY: PROCUREMENT OF WPNS & TRKD CMBT VEHS / 2 / Weapons and Other Combat Vehicles

C. P-1 ITEM NOMENCLATURE: 5.56 CARBINE M4 (G14904)

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
Hardware										
FY 96	Colt's Mfg Co., Inc., Hartford, CT	SS/FFP	ACALA	Sep-96	Mar-98	9785	1	Yes	No	
FY 97	TBS	C/FFP M-4(1)	ACALA	Jun-97	Nov-98	10603	1	Yes	No	
FY 98	TBS	C/FFP M-4(2)	ACALA	Jan-98	Aug-99	7484	1	Yes	No	
FY 99	TBS	C/FFP M-4(3)	ACALA	Jan-99	Feb-00	15352	1	Yes	No	

REMARKS:

FY 96 / 97 BUDGET PRODUCTION SCHEDULE

P-1 ITEM NOMENCLATURE: 5.56 CARBINE M4 (G14904)

DATE: February 1997

COST ELEMENTS	MFR	FY	SERV	PROC QTY Each	ACCEP. PRIOR TO 1 OCT	BAL DUE AS OF 1 OCT	Fiscal Year 96 / Calendar Year 96 OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	Fiscal Year 97 / Calendar Year 97 OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	LATER
Hardware	1	95 & Pr	A	57.5	7.1	50.4		2.0			1.0	1.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	4.0	2.5	4.0	4.0	4.0	3.0	0.4	2.0	2.0	2.0	2.0	2.5
	1	95 & Pr	N	0.9	0.9	0.0																									
	1	95 & Pr	SDAF	0.5	0.5	0.0																									
	1	95 & Pr	FMS	0.2	0.0	0.2																									0.2
	1	FY 96	A	9.8	0.0	9.8												A													9.8
	1	FY 96	N	1.8	0.0	1.8												A								1.8					
	1	FY 96	OTH	1.5	0.0	1.5												A			1.5										
	1	FY 96	OTH	1.0	0.0	1.0																A			1.0						
	2	FY 97	A	10.6	0.0	10.6																					A				10.6
	1	FY 97	N	1.8	0.0	1.8																	A			1.8					
	2	FY 98	A	7.5	0.0	7.5																									7.5
	2	FY 99	A	15.4	0.0	15.4																									15.4
TOTAL				108.5	8.5	100.0	0.0	2.0	0.0	0.0	1.0	1.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	2.0	2.0	2.0	2.0	46.0

MFR	NAME / LOCATION	PRODUCTION RATES MIN.	1-8-5	MAX.	REACHED D +
1	Colt's Mfg Co., Inc., Hartford, CT	1	2	8	18
2	TBS				

MFR Number		ADMIN LEAD TIME Prior 1 Oct.	After 1 Oct.	MFR After 1 Oct.	TOTAL After 1 Oct.
1	INITIAL	7	6	6	12
	REORDER	7	6	4	10
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				

REMARKS

FY 96 / 97 BUDGET PRODUCTION SCHEDULE

P-1 ITEM NOMENCLATURE: 5.56 CARBINE M4 (G14904)

DATE: February 1997

COST ELEMENTS	MFR	FY	SERV	PROC QTY Each	ACCEP. PRIOR TO 1 OCT	BAL DUE AS OF 1 OCT	Fiscal Year 98 / Calendar Year 98												Fiscal Year 99 / Calendar Year 99										LATER
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
Hardware	1	95 & Pr	A	57.5	55.0	2.5	2.0	0.5																						
	1	95 & Pr	N	0.9	0.9	0.0																								
	1	95 & Pr	SDAF	0.5	0.5	0.0																								
	1	95 & Pr	FMS	0.2	0.0	0.2		0.2																						
	1	FY 96	A	9.8	0.0	9.8						1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	0.2										
	1	FY 96	N	1.8	1.8	0.0																								
	1	FY 96	OTH	1.5	1.5	0.0																								
	1	FY 96	OTH	1.0	1.0	0.0																								
	2	FY 97	A	10.6	0.0	10.6														1.0	1.2	1.2	1.2	1.2	1.2	1.2	1.2			
	2	FY 97	N	1.8	1.8	0.0																								
	2	FY 98	A	7.5	0.0	7.5				A																		1.2	1.2	5.1
	2	FY 99	A	15.4	0.0	15.4																A								15.4
TOTAL				108.5	62.5	46.0	2.0	0.7	0.0	0.0	0.0	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	20.5

MFR	NAME / LOCATION	PRODUCTION RATES MIN.	1-8-5	MAX.	REACHED D +
1	Colt's Mfg Co., Inc., Hartford, CT	1	2	8	18
2	TBS				

MFR Number		ADMIN LEAD TIME Prior 1 Oct.	After 1 Oct.	MFR After 1 Oct.	TOTAL After 1 Oct.
1	INITIAL	7	6	6	12
	REORDER	7	6	4	10
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				

REMARKS

FY 96 / 97 BUDGET PRODUCTION SCHEDULE

P-1 ITEM NOMENCLATURE: 5.56 CARBINE M4 (G14904)

DATE: February 1997

COST ELEMENTS	MFR	FY	SERV	PROC QTY Each	ACCEP. PRIOR TO 1 OCT	BAL DUE AS OF 1 OCT	Fiscal Year 00 / Calendar Year 00												Fiscal Year 01 / Calendar Year 01										LATER
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
Hardware	1	95 & Pr	A	57.5	57.5	0.0																								
	1	95 & Pr	N	0.9	0.9	0.0																								
	1	95 & Pr	SDAF	0.5	0.5	0.0																								
	1	95 & Pr	FMS	0.2	0.2	0.0																								
	1	FY 96	A	9.8	9.8	0.0																								
	1	FY 96	N	1.8	1.8	0.0																								
	1	FY 96	OTH	1.5	1.5	0.0																								
	1	FY 96	OTH	1.0	1.0	0.0																								
	2	FY 97	A	10.6	10.6	0.0																								
	2	FY 97	N	1.8	1.8	0.0																								
	2	FY 98	A	7.5	2.4	5.1	1.2	1.2	1.2	1.2	0.3																			
	2	FY 99	A	15.4	0.0	15.4					0.9	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	0.1							
TOTAL				108.5	88.0	20.5	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

MFR	NAME / LOCATION	PRODUCTION RATES MIN.	1-8-5	MAX.	REACHED D+
1	Colt's Mfg Co., Inc., Hartford, CT	1	2	8	18
2	TBS				

MFR Number		ADMIN LEAD TIME Prior 1 Oct.	After 1 Oct.	MFR After 1 Oct.	TOTAL After 1 Oct.
1	INITIAL	7	6	6	12
	REORDER	7	6	4	10
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				

REMARKS

BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

APPROPRIATION / BUDGET ACTIVITY: PROCUREMENT OF WPNS & TRKD CMBT VEHS /Weapons and Other Combat Vehicles

P-1 ITEM NOMENCLATURE: M4 CARBINE MODS (GB3007)

	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)	0.9	2.1	2.2	5.3	5.6	0.0	0.0	0.0

DESCRIPTION: The M4 Carbine Modification Program provides a close combat optic, a modular weapon suite and an improved buttstock for the M4 Carbine and also provides the capability for firing the M203 Grenade Launcher (GL) with the M4 Carbine.

JUSTIFICATION: The close combat optic allows the soldier to fire a weapon with both eyes open allowing greater awareness of events happening in close proximity and improves hit probability in daylight, low light level, wet weather and other adverse conditions. The modular weapon system is a key component of Land Warrior Lethality and allows the combat commander to custom configure weapons based upon the mission . The improved buttstock provides the rifleman an ergonomically optimized buttstock for the M4 Carbine.

BUDGET ITEM JUSTIFICATION SHEET	DATE
	February 1997
APPROPRIATION / BUDGET ACTIVITY	P-1 ITEM NOMENCLATURE
PROCUREMENT OF WPNS & TRKD CMBT VEHS /Weapons and Other Combat Vehicles	M4 CARBINE MODS (GB3007)

OSIP No.	Description							
Classification	All PYs	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003
TBD1	Close Combat Optics (M4 Carbine)							
OPERATIONAL	0.9	1.4	1.1	2.6	5.6	0.0	0.0	0.0
TBD2	M203 for M4 Carbine							
Operational	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0
TBD3	Modular Weapon System (M4 Carbine)							
Operational	0.0	0.4	0.4	1.1	0.0	0.0	0.0	0.0
TBD4	M4 Improved Buttstock							
Operational	0.0	0.0	0.7	1.6	0.0	0.0	0.0	0.0
Totals	0.9	2.1	2.2	5.3	5.6	0.0	0.0	0.0

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
No P3a Set for modification *									
M4 CARBINE MODS									
GB3007									
Close Combat Optics (M4 Carbine)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
M203 for M4 Carbine	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Modular Weapon System (M4 Carbine)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
M4 Improved Buttstock	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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: Close Combat Optics (M4 Carbine) TBD1

MODELS OF SYSTEMS AFFECTED: M4 Carbine, XM68 Sight Reflex, XM195 Sight Mount

DESCRIPTION / JUSTIFICATION:

The XM68 Sight will be installed on the M4 Carbine with XM195 Mount. The close combat optic allows the soldier to fire a weapon with both eyes open allowing greater awareness of events happening in close proximity. The close combat optic gives the soldier greater hit probability in daylight, low light level, wet weather and other adverse conditions.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

	PLANNED	ACCOMPLISHED
Development/Operational Test		1/2Q96
Type Classification		4Q96
Production Contract Award		4Q96
First Production Hardware Delivered		1Q97
First Unit Equipped	3Q97	

INDIVIDUAL MODIFICATION — Date: February 1997

MODIFICATION TITLE (Cont): Close Combat Optics (M4 Carbine) TBD1

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		1.469																		1.469
PROCUREMENT																				
Quantity	3020		4744		3284		8730		19636								10133		49547	
Installation Kits																				
Installation Kits Nonrecurring																				
Equipment		0.755		1.186		0.903		2.401		5.400								2.800		13.445
Equipment Nonrecurring																				
Engineering Support		0.075		0.140		0.139		0.138		0.115								0.110		0.717
Testing		0.050		0.050		0.050		0.050		0.050								0.050		0.300
Integrated Logistical Support		0.010		0.020		0.020		0.020		0.020								0.020		0.110
Fielding		0.010		0.020		0.020		0.020		0.020								0.020		0.110
Other																				
Interim Contractor Support																				
Installation of Hardware																				
FY 1996 & Prior Eqpt -- Kits			3020																3020	
FY 1997 Eqpt -- Kits			752		3992														4744	
FY 1998 Eqpt -- Kits					3284														3284	
FY 1999 Eqpt -- Kits							8730												8730	
FY 2000 Eqpt -- kits									19636										19636	
FY 2001 Eqpt -- kits																				
FY 2002 Eqpt -- kits																				
FY 2003 Eqpt -- kits																				
(FY(TC) Eqpt (xx kits)																	10133		10133	
Total Installation Cost			3772		7276		8730		19636								10133		49547	
Total Procurement Cost		0.900		1.416		1.132		2.629		5.605								3.000		14.682

METHOD OF IMPLEMENTATION: Unit Application — ADMINISTRATIVE LEADTIME: 1 Months — PRODUCTION LEADTIME: 5 Months

Contract Dates:	Aug-96	FY 1997:	FY 1998:	FY 1999:	
Delivery Date:	Dec-96	FY 1997:	FY 1998:	FY 1999:	

Installation Schedule: Close Combat Optics (M4 Carbine) TBD1 Date February 1997

	FY 1996 & Prior	FY 1997 1	2	3	4	FY 1998 1	2	3	4	FY 1999 1	2	3	4	FY 2000 1	2	3	4	FY 2001 1	2	3	4	Total
Inputs																						
FY 1996 & Prior																						
FY 1997																						
FY 1998																						
FY 1999																						
Outputs																						
FY 1996 & Prior																						
FY 1997																						
FY 1998																						
FY 1999																						

	FY 2000 1	2	3	4	FY 2001 1	2	3	4	FY 2002 1	2	3	4	FY 2003 1	2	3	4	FY 2004 1	2	3	4	FY 2005 1	2	3	4	Total
Inputs																									
FY 2000																									
FY 2001																									
FY 2002																									
FY 2003																									
Outputs																									
FY 2000																									
FY 2001																									
FY 2002																									
FY 2003																									

Remarks: The installation schedule is not required for this modification.

INDIVIDUAL MODIFICATION	Date	February 1997

MODIFICATION TITLE: M203 for M4 Carbine TBD2

MODELS OF SYSTEMS AFFECTED: M4 Carbine, M4A1

DESCRIPTION / JUSTIFICATION:

The Army units assigned the M4 Carbine will obtain the capability to fire the M203 Grenade Launcher (GL) with the M4 Carbine.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

	PLANNED	ACCOMPLISHED
Developmental/Operational Tests		1Q97
Type Classification/Milestone III	2Q97	
Production Contract Award	3Q97	
First Production Hardware Delivered	4Q97	
First Unit Equipped	4Q97	

INDIVIDUAL MODIFICATION																	Date	February 1997		
MODIFICATION TITLE (Cont):	M203 for M4 Carbine TBD2																			
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		0.631																		0.631
PROCUREMENT																				
Quantity			1942																1942	
Installation Kits																				
Installation Kits Nonrecurring																				
Equipment				0.160																0.160
Equipment Nonrecurring																				
Engineering Support				0.070																0.070
Testing																				
Integrated Logistical Support				0.040																0.040
Fielding				0.030																0.030
Other																				
Interim Contractor Support																				
Installation of Hardware																				
FY 1996 & Prior Eqpt -- Kits																				
FY 1997 Eqpt -- Kits			1500		442														1942	
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			1500		442														1942	
Total Procurement Cost				0.300																0.300

METHOD OF IMPLEMENTATION: Unit Application ADMINISTRATIVE LEADTIME: 9 Months PRODUCTION LEADTIME: 4 Months

Contract Dates:	FY 1997:	Apr-97	FY 1998:		FY 1999:	
Delivery Date:	FY 1997:	Jul-97	FY 1998:		FY 1999:	

Installation Schedule: M203 for M4 Carbine TBD2

Date: February 1997

	FY 1996 & Prior	FY 1997 1	FY 1997 2	FY 1997 3	FY 1997 4	FY 1998 1	FY 1998 2	FY 1998 3	FY 1998 4	FY 1999 1	FY 1999 2	FY 1999 3	FY 1999 4	FY 2000 1	FY 2000 2	FY 2000 3	FY 2000 4	FY 2001 1	FY 2001 2	FY 2001 3	FY 2001 4	Total
Inputs																						
FY 1996 & Prior																						
FY 1997																						
FY 1998																						
FY 1999																						
Outputs																						
FY 1996 & Prior																						
FY 1997																						
FY 1998																						
FY 1999																						

	FY 2000 1	FY 2000 2	FY 2000 3	FY 2000 4	FY 2001 1	FY 2001 2	FY 2001 3	FY 2001 4	FY 2002 1	FY 2002 2	FY 2002 3	FY 2002 4	FY 2003 1	FY 2003 2	FY 2003 3	FY 2003 4	FY 2004 1	FY 2004 2	FY 2004 3	FY 2004 4	FY 2005 1	FY 2005 2	FY 2005 3	FY 2005 4	Total
Inputs																									
FY 2000																									
FY 2001																									
FY 2002																									
FY 2003																									
Outputs																									
FY 2000																									
FY 2001																									
FY 2002																									
FY 2003																									

Remarks: The installation schedule is not required for this modification.

INDIVIDUAL MODIFICATION	Date	February 1997

MODIFICATION TITLE: Modular Weapon System (M4 Carbine) TBD3

MODELS OF SYSTEMS AFFECTED: Carbine, 5.56 M4

DESCRIPTION / JUSTIFICATION:

The modular weapon is a no tool, field expedient applied system of mounting rails/methods to allow the custom configuration of M4 Carbines with ancillary items such as optics, night sights, IR laser pointers, the grenade launcher, back-up sights, etc., based upon mission requirements.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

	PLANNED	ACCOMPLISHED
Developmental/Operational Tests		3/4Q95
Milestone III Production Decision	2Q97	
Production Contract Award	3Q97	
First Production Hardware Delivered	3Q98	
First Unit Equipped	4Q98	

INDIVIDUAL MODIFICATION — Date: February 1997

MODIFICATION TITLE (Cont): Modular Weapon System (M4 Carbine) TBD3

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		1.158																		1.158
PROCUREMENT																				
Quantity			1000		953		3066										14981		20000	
Installation Kits																				
Installation Kits Nonrecurring																				
Equipment				0.280		0.276		0.886										4.400		5.842
Equipment Nonrecurring																				
Engineering Support				0.058		0.050		0.075										0.150		0.333
Testing				0.020																0.020
Integrated Logistical Support				0.015		0.011		0.030										0.025		0.081
Fielding				0.025		0.033		0.098										0.280		0.436
Other																				
Interim Contractor Support																				
Installation of Hardware																				
FY 1996 & Prior Eqpt -- Kits																				
FY 1997 Eqpt -- Kits					1000														1000	
FY 1998 Eqpt -- Kits					953														953	
FY 1999 Eqpt -- Kits							3066												3066	
FY 2000 Eqpt -- kits																				
FY 2001 Eqpt -- kits																				
FY 2002 Eqpt -- kits																				
FY 2003 Eqpt -- kits																				
(FY(TC) Eqpt (xx kits)																	14981		14981	
Total Installation Cost					1953		3066										14981		20000	
Total Procurement Cost				0.398		0.370		1.089										4.855		6.712

METHOD OF IMPLEMENTATION: Unit Application — ADMINISTRATIVE LEADTIME: 6 Months — PRODUCTION LEADTIME: 12 Months

Contract Dates: FY 1997: May-97 — FY 1998: — FY 1999:

Delivery Date: FY 1997: Apr-98 — FY 1998: — FY 1999:

Installation Schedule: Modular Weapon System (M4 Carbine) TBD3 Date February 1997

	FY 1996 & Prior	FY 1997 1	2	3	4	FY 1998 1	2	3	4	FY 1999 1	2	3	4	FY 2000 1	2	3	4	FY 2001 1	2	3	4	Total
Inputs																						
FY 1996 & Prior																						
FY 1997																						
FY 1998																						
FY 1999																						
Outputs																						
FY 1996 & Prior																						
FY 1997																						
FY 1998																						
FY 1999																						

	FY 2000 1	2	3	4	FY 2001 1	2	3	4	FY 2002 1	2	3	4	FY 2003 1	2	3	4	FY 2004 1	2	3	4	FY 2005 1	2	3	4	Total
Inputs																									
FY 2000																									
FY 2001																									
FY 2002																									
FY 2003																									
Outputs																									
FY 2000																									
FY 2001																									
FY 2002																									
FY 2003																									

Remarks: The installation schedule is not required for this modification.

INDIVIDUAL MODIFICATION	Date	February 1997

MODIFICATION TITLE: M4 Improved Buttstock TBD4

MODELS OF SYSTEMS AFFECTED: M4 Carbine, M4A1

DESCRIPTION / JUSTIFICATION:

The M4 Improved Buttstock provides the rifleman with features for obtaining the proper shooting form; stock/shoulder weld and stock/cheek weld.

This program provides the rifleman with an ergonomically optimized buttstock for the M4 Carbine.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

	PLANNED	ACCOMPLISHED
Milestone III	3Q97	
Engineering Change Proposal	1Q98	
First Production Hardware Delivered	3Q98	
First Unit Equipped/Materiel Work Order	4Q98	

INDIVIDUAL MODIFICATION																	Date	February 1997		
MODIFICATION TITLE (Cont):	M4 Improved Buttstock TBD4																			
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		0.377																		0.377
PROCUREMENT																				
Quantity					10,000		37,300												47,300	
Installation Kits																				
Installation Kits Nonrecurring																				
Equipment						0.400		1.500												1.900
Equipment Nonrecurring																				
Engineering Support						0.150		0.100												0.250
Testing																				
Integrated Logistical Support						0.100														0.100
Fielding																				
Other																				
Interim Contractor Support																				
Installation of Hardware																				
FY 1996 & Prior Eqpt -- Kits																				
FY 1997 Eqpt -- Kits																				
FY 1998 Eqpt -- Kits					10,000														10,000	
FY 1999 Eqpt -- Kits							37,300												37,300	
FY 2000 Eqpt -- kits																				
FY 2001 Eqpt -- kits																				
FY 2002 Eqpt -- kits																				
FY 2003 Eqpt -- kits																				
(FY(TC) Eqpt (xx kits)																				
Total Installation Cost					10,000		37,300												47,300	
Total Procurement Cost						0.650		1.600												2.250

METHOD OF IMPLEMENTATION: Unit Application ADMINISTRATIVE LEADTIME: 1 Months PRODUCTION LEADTIME: 7 Months

Contract Dates:	FY 1997:	FY 1998:	Oct-97	FY 1999:
Delivery Date:	FY 1997:	FY 1998:	Apr-98	FY 1999:

Installation Schedule: M4 Improved Buttstock TBD4

Date: February 1997

	FY 1996 & Prior	FY 1997 1	2	3	4	FY 1998 1	2	3	4	FY 1999 1	2	3	4	FY 2000 1	2	3	4	FY 2001 1	2	3	4	Total
Inputs																						
FY 1996 & Prior																						
FY 1997																						
FY 1998																						
FY 1999																						
Outputs																						
FY 1996 & Prior																						
FY 1997																						
FY 1998																						
FY 1999																						

	FY 2000 1	2	3	4	FY 2001 1	2	3	4	FY 2002 1	2	3	4	FY 2003 1	2	3	4	FY 2004 1	2	3	4	FY 2005 1	2	3	4	Total
Inputs																									
FY 2000																									
FY 2001																									
FY 2002																									
FY 2003																									
Outputs																									
FY 2000																									
FY 2001																									
FY 2002																									
FY 2003																									

Remarks: The installation schedule is not required for this modification.

BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

APPROPRIATION / BUDGET ACTIVITY: PROCUREMENT OF WPNS & TRKD CMBT VEHS /Weapons and Other Combat Vehicles

P-1 ITEM NOMENCLATURE: MEDIUM MACHINE GUNS (MODS) (GZ1300)

	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)	6.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0

DESCRIPTION: The M240B, 7.62mm Machine Gun is the ground mounted version of the basic M240 Armor Machine Gun. An initial procurement will utilize government owned M240 assets converted to M240B ground mounted machine guns. The conversion requires the installation of a buttstock, front and rear sights, bipod legs, a barrel change handle, heatshield, replacement of the top feed cover, the pistol grip with trigger mechanism and charging handle. Also minor machining of the operating rod is required. Extensive operational and technical testing has demonstrated exceptionally high reliability for this weapon system.

JUSTIFICATION: The US Army established a requirement for an 7.62mm medium machine gun with improved reliability. Following extensive competitive technical and operational testing of the M240B and an improved M60 model machine gun, the Army selected the M240B to satisfy its 7.62mm medium gun requirement.

BUDGET ITEM JUSTIFICATION SHEET		DATE: February 1997
APPROPRIATION / BUDGET ACTIVITY: PROCUREMENT OF WPNS & TRKD CMBT VEHS /Weapons and Other Combat Vehicles	P-1 ITEM NOMENCLATURE: MEDIUM MACHINE GUNS (MODS) (GZ1300)	

OSIP No.	Description							
Classification	All PYs	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003
TBD1	Medium Machine Gun Upgrade Kits							
Operational	6.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Totals	6.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0

MODIFICATION INSTALLATION SUMMAR

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
No P3a Set for modification									
MEDIUM MACHINE GUNS (MODS)									
GZ1300									
Medium Machine Gun Upgrade Kits	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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: Medium Machine Gun Upgrade Kits TBD1

MODELS OF SYSTEMS AFFECTED: M240, 7.62mm Machine Gun
M122 Tripod

DESCRIPTION / JUSTIFICATION:

DESCRIPTION: The M240B, 7.62mm Machine Gun is the ground mounted version of the basic M240 Armor Machine Gun. An initial procurement will utilize government-owned M240 assets converted to ground mounted machine guns. The conversion requires the installation of a buttstock, front and rear sights, bipod legs, a barrel change handle, heatshield, replacement of the top feed cover, the pistol grip with trigger mechanism and charging handle. Also minor machining of the operating rod is required. Extensive operational and technical testing has demonstrated exceptionally high reliability for this weapon system.

JUSTIFICATION: The US Army established a requirement for an 7.62mm medium machine gun with improved reliability. Following extensive competitive technical and operational testing of the M240B and an improved M60 model machine gun, the Army selected the M240B to satisfy its 7.62mm medium gun requirement.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

	PLANNED	ACCOMPLISHED
Development Test and Evaluation		4Q95
Initial Operational Test and Evaluation		3Q95
Type Classification		3Q96
Production Contract Award		3Q96
First Production Hardware Delivered	2Q97	
First Unit Equipped	4Q97	

INDIVIDUAL MODIFICATION																	Date	February 1997		
MODIFICATION TITLE (Cont):	Medium Machine Gun Upgrade Kits TBD1																			
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		1.902																		1.902
PROCUREMENT																				
Kit Quantity	1200																		1200	
Installation Kits																				
Installation Kits Nonrecurring																				
Equipment		4.725																		4.725
Equipment Nonrecurring																				
Engineering Support		0.350																		0.350
Testing		0.250																		0.250
Integrated Logistic Support		0.050																		0.050
Fielding		0.326																		0.326
Other - Engineering Studies		0.591																		0.591
Interim Contractor Support																				
Installation of Hardware																				
FY 1996 & Prior Eqpt -- Kits			1200																1200	
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			1200																1200	
Total Procurement Cost		6.292																		6.292

METHOD OF IMPLEMENTATION: Contractor ADMINISTRATIVE LEADTIME: 6 Months PRODUCTION LEADTIME: 9 Months

Contract Dates:	May-96	FY 1997:	FY 1998:	FY 1999:
Delivery Date:	Jan-97	FY 1997:	FY 1998:	FY 1999:

Installation Schedule: Medium Machine Gun Upgrade Kits TBD1 Date February 1997

	FY 1996 & Prior	FY 1997 1	FY 1997 2	FY 1997 3	FY 1997 4	FY 1998 1	FY 1998 2	FY 1998 3	FY 1998 4	FY 1999 1	FY 1999 2	FY 1999 3	FY 1999 4	FY 2000 1	FY 2000 2	FY 2000 3	FY 2000 4	FY 2001 1	FY 2001 2	FY 2001 3	FY 2001 4	Total
Inputs																						
FY 1996 & Prior	1200																					1200
FY 1997																						
FY 1998																						
FY 1999																						
Outputs																						
FY 1996 & Prior			600	600																		1200
FY 1997																						
FY 1998																						
FY 1999																						

	FY 2000 1	FY 2000 2	FY 2000 3	FY 2000 4	FY 2001 1	FY 2001 2	FY 2001 3	FY 2001 4	FY 2002 1	FY 2002 2	FY 2002 3	FY 2002 4	FY 2003 1	FY 2003 2	FY 2003 3	FY 2003 4	FY 2004 1	FY 2004 2	FY 2004 3	FY 2004 4	FY 2005 1	FY 2005 2	FY 2005 3	FY 2005 4	Total
Inputs																									
FY 2000																									
FY 2001																									
FY 2002																									
FY 2003																									
Outputs																									
FY 2000																									
FY 2001																									
FY 2002																									
FY 2003																									

Remarks:

CODE "B" ITEM DESCRIPTION

DATE	REPORT CONTROL SYMBOL
February 1997	DD-COMP(AR)1092

APPROPRIATION	ACTIVITY	P-1 ITEM NOMENCLATURE
PROCUREMENT OF WPNS & TRKD CMBT VEHS	Weapons and Other Combat Vehicles	MEDIUM MACHINE GUNS (MODS) (GZ1300)

1. CURRENT DEVELOPMENT AND TEST STATUS

		SCHEDULE DATE		
		CURRENT (1)	LAST RPTD (2)	REASON FOR DELAY* (3)
a. DEV TEST & EVAL (DT&E)	PLAN / ACTUAL	Aug-95		
b. INITIAL OPER TEST & EVAL (IOT&E)	PLAN / ACTUAL	May-95		
c. OPER TEST & EVAL (OT&E)	PLAN / ACTUAL	N/A		
d. AVAIL DATE OF TECH DATA PKG (TDP) OR PERFORMANCE SPECIFICATIONS				

2. ESTIMATED DATE OF APPROVAL FOR SERVICE USE 3Q96

3. EQUIPMENT ITEM(S) TO BE REPLACED

M60, 7.62mm Machine Gun in certain ground mounted roles

4. EXTENT OF IMPROVEMENT OVER ITEM(S) OF EQUIPMENT TO BE REPLACED

Reliability increase of 100% minimum with a goal of 300%

5. DEVELOPMENT CONTRACT INFORMATION

CONTRACTOR NAME (1)	PLANT LOCATION (2)	COMPONENT (3)	THROUGH 1996 (4)	1997 (5)	1998 (6)	1999 (7)	BEYOND BYs (8)
FABRIQUE NATIONAL	Columbia, SC	M240 Machine Gun Upgrade	0.130				
SACO Defense Inc.	Saco, Me	M60 Machine Gun Upgrade	0.260				
TOTAL RDT&E FUNDING			0.390	0.000	0.000	0.000	0.000

6. REMARKS

* Reference entries on attachment to P-19 if additional space is required to adequately explain delay from previous date.

BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

APPROPRIATION / BUDGET ACTIVITY: PROCUREMENT OF WPNS & TRKD CMBT VEHS /Weapons and Other Combat Vehicles

P-1 ITEM NOMENCLATURE: M119 MODIFICATIONS (GC0401)

	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)	0.0	0.0	5.0	5.0	5.0	5.0	5.0	5.0

DESCRIPTION: Light Artillery System Improvement Plan (LASIP) for the 105mm, M119A1 Light, Towed Howitzer

JUSTIFICATION: The 105mm M119A1 Light, Towed Howitzer was selected as the weapon of choice for the light forces because it was a nondevelopmental item (NDI) with growth potential. Now that 413 M119A1 howitzers have been fielded, it is time to realize that growth potential. The Light Artillery System Improvement Plan (LASIP) initiates this process by correcting known deficiencies, improving reliability, availability and maintainability (RAM), and providing solutions to requests for minor operational enhancements. The LASIP was developed by the M119A1 Howitzer Improvement Team (HIT), chartered specifically to respond to improvements requested by field artillery units, the U.S. Army Field Artillery School (USAFAS) and the U.S. Army Training and Doctrine Command (TRADOC).

BUDGET ITEM JUSTIFICATION SHEET	DATE: February 1997
APPROPRIATION / BUDGET ACTIVITY: PROCUREMENT OF WPNS & TRKD CMBT VEHS /Weapons and Other Combat Vehicles	P-1 ITEM NOMENCLATURE: M119 MODIFICATIONS (GC0401)

OSIP No.	Description							
Classification	All PYs	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003
TBD1	Block 1 Upgrade							
Operational	0.0	0.0	5.0	5.0	5.0	0.2	0.0	0.0
TBD2	Block 2 Upgrade							
Operational	0.0	0.0	0.0	0.0	0.0	4.8	5.0	5.0
Totals	0.0	0.0	5.0	5.0	5.0	5.0	5.0	5.0

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
No P3a Set for modification *									
M119 MODIFICATIONS									
GC0401									
Block 1 Upgrade	0.0	0.0	0.0	0.7	0.2	0.2	0.0	0.0	1.1
Block 2 Upgrade	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.3	0.7
Totals	0.0	0.0	0.0	0.7	0.2	0.2	0.4	0.3	1.9

INDIVIDUAL MODIFICATION	Date	February 1997

MODIFICATION TITLE: Block 1 Upgrade TBD1

MODELS OF SYSTEMS AFFECTED: Howitzer, Light Towed, 105mm M119A1 (Mod)

DESCRIPTION / JUSTIFICATION:

Retrofit Low Temp Recuperator 1-90-05-7875; The seals function only to temperature of -25F not the -50F. Improve Indirect Fire control; Upgrade M187 1-94-05-7911; The M119A1 indirect fire control system fails approximately 14 times more often than other hardware fire control systems when Operational Mode Profile (OMP) is factored in. Upgrade Cam Follower Arm; Preventing damage to the cam follower will improve reliability, availability and maintainability while reducing Operating and Support costs (OSCR). Improve Firing Stays; The design and mounting clearances for the clevis pins on the rear firing stays of the firing platform make it very difficult to attach the stays to the trail during emplacement. Improve Traveling Stays; The design and mounting clearances for the clevis pins on the traveling stays make it very difficult to attach the stays to the trail when preparing for towing Redesign Rammer/Extractor Tool; The rammer/extractor tool currently issued was "borrowed" from the M102 Howitzer which required the base of the primed cartridge be forcefully struck by a hard rubber plunger.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

	PLANNED	ACCOMPLISHED
Validate Materiel change (MC)		3Q90
Critical Design Review:		3Q91
Complete testing of Prototype		3Q92
Release Technical Data Package (TDP)		1Q93
Award Contract for Modification (MOD) Kits	2Q98	
Deliver First Mod Kit	1Q99	
First Unit Equipped (FUE)	2Q99	
Deliver Last Mod Kit	2Q01	
Last Unit Equipped	3Q01	

INDIVIDUAL MODIFICATION																	Date	February 1997	
MODIFICATION TITLE (Cont):	Block 1 Upgrade TBD1																		
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					140		140		145										425	
Installation Kits																				
Installation Kits Nonrecurring																				
Equipment						4.2		3.4		3.9										11.5
Equipment Nonrecurring						0.0		0.0		0.0										0.0
Engineering Change Orders						0.2		0.1		0.0										0.3
Engineer Support						0.3		0.5		0.5										1.3
Other						0.2		0.3		0.3										0.8
Testing						0.0				0.0										0.1
Fielding						0.0		0.0		0.0										0.0
Interim Contractor Support																				
Installation of Hardware																				
FY 1996 & Prior Eqpt -- Kits																				
FY 1997 Eqpt -- Kits																				
FY 1998 Eqpt -- Kits							140	0.7											140	0.7
FY 1999 Eqpt -- Kits							22	0.0	118	0.2									140	0.2
FY 2000 Eqpt -- kits									44	0.1	101	0.2							145	0.2
FY 2001 Eqpt -- kits																				
FY 2002 Eqpt -- kits																				
FY 2003 Eqpt -- kits																				
(FY(TC) Eqpt (xx kits)																				
Total Installation Cost							162	0.7	162	0.2	101	0.2							425	1.1
Total Procurement Cost						5.0		5.0		5.0		0.2								15.1

METHOD OF IMPLEMENTATION: Unit Application ADMINISTRATIVE LEADTIME: 6 Months PRODUCTION LEADTIME: 6 Months

Contract Dates:	FY 1997:	Multiple	FY 1998:	Multiple	FY 1999:	Multiple
Delivery Date:	FY 1997:	Multiple	FY 1998:	Multiple	FY 1999:	Multiple

Installation Schedule: Block 1 Upgrade TBD1 Date February 1997

	FY 1996 & Prior	FY 1997 1	2	3	4	FY 1998 1	2	3	4	FY 1999 1	2	3	4	FY 2000 1	2	3	4	FY 2001 1	2	3	4	Total
Inputs																						
FY 1996 & Prior																						
FY 1997																						
FY 1998										35	35	35	35									140
FY 1999													22	30	30	30	28					140
Outputs																						
FY 1996 & Prior																						
FY 1997																						
FY 1998											35	35	35	35								140
FY 1999														22	30	30	30	28				140

	FY 2000 1	2	3	4	FY 2001 1	2	3	4	FY 2002 1	2	3	4	FY 2003 1	2	3	4	FY 2004 1	2	3	4	FY 2005 1	2	3	4	Total
Inputs																									
FY 2000			22	22	50	51																			145
FY 2001																									
FY 2002																									
FY 2003																									
Outputs																									
FY 2000				22	22	50	51																		145
FY 2001																									
FY 2002																									
FY 2003																									

Remarks:

Multiple contract and delivery dates indicated on page 4 are the result of unknown multiple contractors at this time.
When contractors are chosen and delivery dates are set, P-Forms will be updated as needed.

INDIVIDUAL MODIFICATION	Date	February 1997

MODIFICATION TITLE: Block 2 Upgrade TBD2

MODELS OF SYSTEMS AFFECTED: Howitzer Light Towed, 105mm, M119A1 (Mod)

DESCRIPTION / JUSTIFICATION:

Improve Adjustable connecting Rod;The current design suffers from water entrapment which leads to corrosion and binding of the spring. Modify Brake system; The system required a special production run by the British manufacturer. The brakes also use asbestos brake linings and require a collar to lock out the lunette when backing up. Upgrade Elevating Handwheel; It is the limiting factor in the system's departure angle during cross country movement and is highly susceptible to damage during tactical operations. Modify firing Platform; The position makes deployment of the howitzer difficult, as the firing platform must be disengaged from its stowage brackets, lifted manually from the trail, carried completely clear of the trail and placed on the ground before the howitzer can be rolled into its firing position. Add Trail Lifting Handles;
Due to limited clearance, the user has requested trail lifting handles to design. Improve Direct Fire Scope; Improving the direct fire scope will provide night capability. Improved accuracy and internal boresighting.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

	PLANNED	ACCOMPLISHED
Validate Materiel Change (MC)		3Q94
Critical Design Review:	1Q98	
Complete testing of Prototype	2Q98	
Release Technical Data Package (TDP)	4Q98	
Award Contract for Modification (MOD) Kits	1Q99	
Deliver First Mod Kit	1Q02	
First Unit Equipped (FUE)	2Q02	
Deliver Last Mod Kit	2Q04	
Last Unit Equipped	3Q04	

INDIVIDUAL MODIFICATION																		Date	February 1997		
MODIFICATION TITLE (Cont):	Block 2 Upgrade TBD2																				
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											140		140		145				425	
Installation Kits																				
Installation Kits Nonrecurring																				
Equipment												3.9		3.8		3.6				11.3
Equipment Nonrecurring												0.1		0.0		0.0				0.2
Engineering Change Orders												0.1		0.1		0.2				0.3
Engineering Support												0.4		0.5		0.8				1.7
Other												0.2		0.2		0.1				0.5
Testing												0.0		0.0		0.0				0.0
Fielding												0.0		0.0		0.0				0.0
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													140	0.3					140	0.3
FY 2002 Eqpt -- kits													22	0.0	118	0.2			140	0.3
FY 2003 Eqpt -- kits															44	0.1	101	0.3	145	0.4
(FY(TC) Eqpt (xx kits)																				
Total Installation Cost													162	0.4	162	0.3	101	0.3	425	1.0
Total Procurement Cost												4.8		5.0		5.0		0.3		15.0

METHOD OF IMPLEMENTATION: Unit Application ADMINISTRATIVE LEADTIME: 6 Months PRODUCTION LEADTIME: 6 Months

Contract Dates:	FY 1997:	Multiple	FY 1998:	Multiple	FY 1999:	Multiple
Delivery Date:	FY 1997:	Multiple	FY 1998:	Multiple	FY 1999:	Multiple

Installation Schedule: Block 2 Upgrade TBD2

Date: February 1997

	FY 1996 & Prior	FY 1997 1	FY 1997 2	FY 1997 3	FY 1997 4	FY 1998 1	FY 1998 2	FY 1998 3	FY 1998 4	FY 1999 1	FY 1999 2	FY 1999 3	FY 1999 4	FY 2000 1	FY 2000 2	FY 2000 3	FY 2000 4	FY 2001 1	FY 2001 2	FY 2001 3	FY 2001 4	Total
Inputs																						
FY 1996 & Prior																						
FY 1997																						
FY 1998																						
FY 1999																						
Outputs																						
FY 1996 & Prior																						
FY 1997																						
FY 1998																						
FY 1999																						

	FY 2000 1	FY 2000 2	FY 2000 3	FY 2000 4	FY 2001 1	FY 2001 2	FY 2001 3	FY 2001 4	FY 2002 1	FY 2002 2	FY 2002 3	FY 2002 4	FY 2003 1	FY 2003 2	FY 2003 3	FY 2003 4	FY 2004 1	FY 2004 2	FY 2004 3	FY 2004 4	FY 2005 1	FY 2005 2	FY 2005 3	FY 2005 4	Total
Inputs																									
FY 2000																									
FY 2001									35	35	35	35													140
FY 2002												22	30	30	30	28									140
FY 2003															22	22	50	51							145
Outputs																									
FY 2000																									
FY 2001										35	35	35	35												140
FY 2002													22	30	30	30	28								140
FY 2003																22	22	50	51						145

Remarks:

Multiple contract and delivery dates indicated on page 7 are the result of unknown multiple contractors at this time.
When contractors are chosen and delivery dates are set, P-Forms will be updated as needed.

BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

APPROPRIATION / BUDGET ACTIVITY: PROCUREMENT OF WPNS & TRKD CMBT VEHS /Weapons and Other Combat Vehicles

P-1 ITEM NOMENCLATURE: M16 RIFLE MODS (GZ2800)

	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)	2.8	5.5	7.6	7.1	0.0	0.0	0.0	0.0

DESCRIPTION: The M16 family of rifles is a gas operated, magazine fed, selective rate and shoulder fired weapon. It is fed by a 30 round aluminum magazine. The M16 Rifle Modifications Program provides a close combat optic and a modular weapon system suite for the M16A2 Rifle. The modular weapon allows the custom configuration of the M16 rifles with accessories and smaller items. i.e. optics, night sights, laser pointers, based on mission requirements.

JUSTIFICATION: The close combat optic allows the soldier to fire a weapon with both eyes open allowing greater awareness of events happening in close proximity and improves hit probability in daylight, low light level, wet weather and other adverse conditions. The modular weapon system is a key component of Land Warrior Lethality and allows the combat commander to custom configure weapons based upon the mission.

BUDGET ITEM JUSTIFICATION SHEET	DATE: February 1997
APPROPRIATION / BUDGET ACTIVITY: PROCUREMENT OF WPNS & TRKD CMBT VEHS /Weapons and Other Combat Vehicles	P-1 ITEM NOMENCLATURE: M16 RIFLE MODS (GZ2800)

OSIP No.	Description							
Classification	All PYs	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003
TBD1	Close Combat Optics M16							
Operational	2.8	2.0	3.4	2.3	0.0	0.0	0.0	0.0
TBD2	Modular Weapon System							
Operational	0.0	3.5	4.2	4.7	0.0	0.0	0.0	0.0
TBD3	M16A1 to M16A2 Conversion							
Operational	35.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Totals	38.1	5.5	7.6	7.1	0.0	0.0	0.0	0.0

MODIFICATION INSTALLATION SUMMAR

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
No P3a Set for modification *									
M16 RIFLE MODS									
GZ2800									
Close Combat Optics M16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Modular Weapon System	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
M16A1 to M16A2 Conversion	10.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.0
Totals	10.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.0

INDIVIDUAL MODIFICATION	Date	February 1997

MODIFICATION TITLE: Close Combat Optics M16 TBD1

MODELS OF SYSTEMS AFFECTED: M16A2 Rifle, XM68 Sight Reflex, XM196 Sight Mount

DESCRIPTION / JUSTIFICATION:

The XM68 Sight will be installed on the M16A2 Rifle with the XM196 Mount.

The Close Combat Optic allows the soldier to fire his weapon with both eyes open allowing greater awareness of events happening in close proximity to the soldier and improves hit probability in daylight, low light level, wet weather and other adverse conditions.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

	PLANNED	ACCOMPLISHED
Development/Operational Test		1/2Q96
Type Classification		4Q96
Production Contract Award		4Q96
First Production Hardware Delivered		1Q97
First Unit Equipped	3Q97	

INDIVIDUAL MODIFICATION																		Date	February 1997
MODIFICATION TITLE (Cont):	Close Combat Optics M16 TBD1																		
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		1.469																		1.469
PROCUREMENT																				
Quantity	8,964		7,264		11,520		7,705												35,453	
Installation Kits																				
Installation Kits Nonrecurring																				
Equipment		2.241		1.816		3.168		2.119												9.344
Equipment Nonrecurring																				
Engineering Change Orders																				
Engineering Support		0.300		0.140		0.132		0.139												0.711
Testing		0.150		0.050		0.050		0.050												0.300
Integrated Logistical Support		0.030		0.020		0.020		0.020												0.090
Fielding		0.030		0.020		0.020		0.020												0.090
Interim Contractor Support																				
Installation of Hardware																				
FY 1996 & Prior Eqpt -- Kits			8,964																8,964	
FY 1997 Eqpt -- Kits			7,264																7,264	
FY 1998 Eqpt -- Kits					11,520														11,520	
FY 1999 Eqpt -- Kits							7,705												7,705	
FY 2000 Eqpt -- kits																				
FY 2001 Eqpt -- kits																				
FY 2002 Eqpt -- kits																				
FY 2003 Eqpt -- kits																				
(FY(TC) Eqpt (xx kits)																				
Total Installation Cost			16,228		11,520		7,705												35,453	
Total Procurement Cost		2.751		2.046		3.390		2.348												10.535

METHOD OF IMPLEMENTATION: Unit Application ADMINISTRATIVE LEADTIME: 1 Months PRODUCTION LEADTIME: 5 Months

Contract Dates:	Aug-96	FY 1997:	FY 1998:	FY 1999:
Delivery Date:	Dec-96	FY 1997:	FY 1998:	FY 1999:

Installation Schedule: Close Combat Optics M16 TBD1 Date February 1997

	FY 1996 & Prior	FY 1997 1	2	3	4	FY 1998 1	2	3	4	FY 1999 1	2	3	4	FY 2000 1	2	3	4	FY 2001 1	2	3	4	Total
Inputs																						
FY 1996 & Prior																						
FY 1997																						
FY 1998																						
FY 1999																						
Outputs																						
FY 1996 & Prior																						
FY 1997																						
FY 1998																						
FY 1999																						

	FY 2000 1	2	3	4	FY 2001 1	2	3	4	FY 2002 1	2	3	4	FY 2003 1	2	3	4	FY 2004 1	2	3	4	FY 2005 1	2	3	4	Total
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: Modular Weapon System TBD2

MODELS OF SYSTEMS AFFECTED: Rifle, 5.56mm M16A2

DESCRIPTION / JUSTIFICATION:

The modular weapon is a system of mounting rails/methods that allows the custom configuration of M16 Rifles with accessories and ancillary items such as optics, night sights, IR laser pointer, the grenade launcher, back-up sights, etc., based upon mission requirements in the field, without tools.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

	PLANNED	ACCOMPLISHED
Developmental/Operational Tests		3/4Q95
Milestone III Production Decision	2Q97	
Production Contract Award	3Q97	
First Production Hardware Delivered	3Q98	
First Unit Equipped	4Q98	

MODIFICATION TITLE (Cont): Modular Weapon System TBD2

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		1.158																		1.158
PROCUREMENT																				
Quantity			6,300		8,113		9,333										9,254		33,000	
Installation Kits																				
Installation Kits Nonrecurring																				
Equipment				2.749		3.673		4.242										4.200		14.864
Equipment Nonrecurring																				
Engineering Support				0.333		0.210		0.235										0.250		1.028
Testing				0.130																0.130
Integrated Logistical Support				0.070		0.075		0.075										0.025		0.245
Fielding				0.198		0.255		0.180										0.172		0.805
Other																				
Interim Contractor Support																				
Installation of Hardware																				
FY 1996 & Prior Eqpt -- Kits																				
FY 1997 Eqpt -- Kits					6,300														6,300	
FY 1998 Eqpt -- Kits							8,113												8,113	
FY 1999 Eqpt -- Kits									9,333										9,333	
FY 2000 Eqpt -- kits																				
FY 2001 Eqpt -- kits																				
FY 2002 Eqpt -- kits																				
FY 2003 Eqpt -- kits																				
(FY(TC) Eqpt (xx kits)																	9,254		9,254	
Total Installation Cost					6,300		8,113		9,333								9,254		33,000	
Total Procurement Cost				3.480		4.213		4.732										4.647		17.072

METHOD OF IMPLEMENTATION: Unit Application ADMINISTRATIVE LEADTIME: 6 Months PRODUCTION LEADTIME: 12 Months

Contract Dates:	FY 1997:	Mav-97	FY 1998:	FY 1999:	
Delivery Date:	FY 1997:	Apr-98	FY 1998:	FY 1999:	

Installation Schedule: Modular Weapon System TBD2 Date February 1997

	FY 1996 & Prior	FY 1997 1	FY 1997 2	FY 1997 3	FY 1997 4	FY 1998 1	FY 1998 2	FY 1998 3	FY 1998 4	FY 1999 1	FY 1999 2	FY 1999 3	FY 1999 4	FY 2000 1	FY 2000 2	FY 2000 3	FY 2000 4	FY 2001 1	FY 2001 2	FY 2001 3	FY 2001 4	Total
Inputs																						
FY 1996 & Prior																						
FY 1997																						
FY 1998																						
FY 1999																						
Outputs																						
FY 1996 & Prior																						
FY 1997																						
FY 1998																						
FY 1999																						

	FY 2000 1	FY 2000 2	FY 2000 3	FY 2000 4	FY 2001 1	FY 2001 2	FY 2001 3	FY 2001 4	FY 2002 1	FY 2002 2	FY 2002 3	FY 2002 4	FY 2003 1	FY 2003 2	FY 2003 3	FY 2003 4	FY 2004 1	FY 2004 2	FY 2004 3	FY 2004 4	FY 2005 1	FY 2005 2	FY 2005 3	FY 2005 4	Total
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: M16A1 to M16A2 Conversion TBD3

MODELS OF SYSTEMS AFFECTED: Rifle 5.56mm M16A1 to M16A's

DESCRIPTION / JUSTIFICATION:

This conversion of M16A1 Rifles to the M16A2 version will: accelerate fielding of the M16A2 Rifle, serve as a second source of M16A2 Rifles to supplement receipts from new rifle contractors, reduce storage costs of M16A1 Rifles displaced by newly fielded M16A2s and reduce the need for retaining two ammunition types in the field for two rifle types. FY95 funds are for installation costs. Modification kits are being delivered from prior year contracts.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

	PLANNED	ACCOMPLISHED
Development/Operational Test	N/A	
Type Classification	N/A	
First Production Hardware Delivered		2Q92
Last Production Hardware Delivered	2Q97	

INDIVIDUAL MODIFICATION																	Date	February 1997		
MODIFICATION TITLE (Cont):	M16A1 to M16A2 Conversion TBD3																			
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	115,300																		115,300	
Installation Kits																				
Installation Kits Nonrecurring																				
Equipment		25.329																		25.329
Equipment Nonrecurring																				
Engineering Change Orders																				
Data																				
Training Equipment																				
Support Equipment																				
Other																				
Interim Contractor Support																				
Installation of Hardware																				
FY 1996 & Prior Eqpt -- Kits	109,300	9.987	6,000																115,300	9.987
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	109,300	9.987	6,000																115,300	9.987
Total Procurement Cost		35.316																		35.316

METHOD OF IMPLEMENTATION: Depot Installation ADMINISTRATIVE LEADTIME: Months PRODUCTION LEADTIME: Months

Contract Dates: FY 1997: FY 1998: FY 1999:

Delivery Date: FY 1997: FY 1998: FY 1999:

Installation Schedule: M16A1 to M16A2 Conversion TBD3 Date February 1997

	FY 1996 & Prior	FY 1997 1	FY 1997 2	FY 1997 3	FY 1997 4	FY 1998 1	FY 1998 2	FY 1998 3	FY 1998 4	FY 1999 1	FY 1999 2	FY 1999 3	FY 1999 4	FY 2000 1	FY 2000 2	FY 2000 3	FY 2000 4	FY 2001 1	FY 2001 2	FY 2001 3	FY 2001 4	Total
Inputs																						
FY 1996 & Prior	109300	4000	2000																			115300
FY 1997																						
FY 1998																						
FY 1999																						
Outputs																						
FY 1996 & Prior	109300	4000	2000																			115300
FY 1997																						
FY 1998																						
FY 1999																						

	FY 2000 1	FY 2000 2	FY 2000 3	FY 2000 4	FY 2001 1	FY 2001 2	FY 2001 3	FY 2001 4	FY 2002 1	FY 2002 2	FY 2002 3	FY 2002 4	FY 2003 1	FY 2003 2	FY 2003 3	FY 2003 4	FY 2004 1	FY 2004 2	FY 2004 3	FY 2004 4	FY 2005 1	FY 2005 2	FY 2005 3	FY 2005 4	Total
Inputs																									
FY 2000																									
FY 2001																									
FY 2002																									
FY 2003																									
Outputs																									
FY 2000																									
FY 2001																									
FY 2002																									
FY 2003																									

Remarks:

BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

APPROPRIATION / BUDGET ACTIVITY: PROCUREMENT OF WPNS & TRKD CMBT VEHS /Weapons and Other Combat Vehicles

P-1 ITEM NOMENCLATURE: MODIFICATIONS LESS THAN $2.0M (WOCV-WTCV (GC0925)

	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)	1.3	1.4	1.4	1.4	1.3	1.3	1.4	1.4

DESCRIPTION: Provides for modification of Weapons and Other Combat Vehicles with a cost less than $2.0 Million.

JUSTIFICATION: Funds will provide machine gun optic sights for the 5.56mm M249 Light Machine Gun and 7.62mm Medium Machine Guns. The optic sight will allow the soldier to identify and engage targets more effectively than the existing iron sighting system.

BUDGET ITEM JUSTIFICATION SHEET	DATE
	February 1997
APPROPRIATION / BUDGET ACTIVITY	P-1 ITEM NOMENCLATURE
PROCUREMENT OF WPNS & TRKD CMBT VEHS /Weapons and Other Combat Vehicles	MODIFICATIONS LESS THAN $2.0M (WOCV-WTCV (GC0925)

OSIP No.	Description							
Classification	All PYs	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003
TBD1	M198 Howitzer System Improvement							
Operational	13.8	0.6	0.0	0.0	0.0	0.0	0.0	0.0
TBD2	Machine Gun Optics							
Operational	0.0	0.8	1.4	1.4	1.3	1.3	0.0	0.0
Totals	13.8	1.4	1.4	1.4	1.3	1.3	0.0	0.0

MODIFICATION INSTALLATION SUMMAR

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
No P3a Set for modification *									
MODIFICATIONS LESS THAN $2.0M (WOCV-WTCV)									
GC0925									
M198 Howitzer System Improvement	2.4	0.6	0.0	0.0	0.0	0.0	0.0	0.0	3.0
Machine Gun Optics	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Totals	2.4	0.6	0.0	0.0	0.0	0.0	0.0	0.0	3.0

INDIVIDUAL MODIFICATION | Date: February 1997

MODIFICATION TITLE: M198 Howitzer System Improvement TBD1

MODELS OF SYSTEMS AFFECTED: M198 Howitzer, Medium Towed

DESCRIPTION / JUSTIFICATION:

The purpose of the Materiel Change (MC) is to improve the reliability of the M198 System, improve the brake system, reduce operator fatigue, improve the retention of hardware and improve equilibrator adjustment. The areas of improvement were a result of M198 fielded system review. Improvements in ram, handling maneuverability, durability of parts, a reduction in operator fatigue and increased users satisfaction is expected.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

	PLANNED	ACCOMPLISHED
MC Project Initiated		2Q86
Test Initiated		1Q88
Independent Evaluation Completed		1Q88
IPR/Production Decision		3Q88
Production Contract Awarded		1Q89
First Production Hardware Delivered		3Q91
MFA/MWOFP Negotiated		3Q91
First Kit Applied		3Q91
Last Kit Applied	1Q98	
Collective Evaluation Completed	4Q98	

INDIVIDUAL MODIFICATION																		Date	February 1997	
MODIFICATION TITLE (Cont):	M198 Howitzer System Improvement TBD1																			
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	739																		739	
Installation Kits																				
Installation Kits Nonrecurring																				
Equipment																				
Equipment Nonrecurring		9.755																		9.755
Engineering Change Orders		1.616																		1.616
Data																				
Training Equipment																				
Support Equipment																				
Fielding		0.071																		0.071
Interim Contractor Support																				
Installation of Hardware																				
FY 1996 & Prior Eqpt -- Kits	673	2.388	66	0.627															739	3.015
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	673	2.388	66	0.627															739	3.015
Total Procurement Cost		13.830		0.627																14.457

METHOD OF IMPLEMENTATION: Depot ADMINISTRATIVE LEADTIME: Months PRODUCTION LEADTIME: Months

Contract Dates: FY 1997: FY 1998: FY 1999:

Delivery Date: FY 1997: FY 1998: FY 1999:

Installation Schedule: M198 Howitzer System Improvement TBD1 Date February 1997

	FY 1996 & Prior	FY 1997 1	2	3	4	FY 1998 1	2	3	4	FY 1999 1	2	3	4	FY 2000 1	2	3	4	FY 2001 1	2	3	4	Total
Inputs																						
FY 1996 & Prior	673	17	17	18	14																	739
FY 1997																						
FY 1998																						
FY 1999																						
Outputs																						
FY 1996 & Prior	673	4	10	17	18	17																739
FY 1997																						
FY 1998																						
FY 1999																						

	FY 2000 1	2	3	4	FY 2001 1	2	3	4	FY 2002 1	2	3	4	FY 2003 1	2	3	4	FY 2004 1	2	3	4	FY 2005 1	2	3	4	Total
Inputs																									
FY 2000																									
FY 2001																									
FY 2002																									
FY 2003																									
Outputs																									
FY 2000																									
FY 2001																									
FY 2002																									
FY 2003																									

Remarks:

Application schedule adjustment is a result of transfer of function from Letterkenny Army Depot (LEAD) to Anniston Army Depot (ANAD) and resultant learning curve.

INDIVIDUAL MODIFICATION	Date	February 1997

MODIFICATION TITLE: Machine Gun Optics TBD2

MODELS OF SYSTEMS AFFECTED: M249 Squad Automatic Weapon; M60 Machine Guns

DESCRIPTION / JUSTIFICATION:

The Machine Gun Optic Program provides an optic (telescopic) sight for the 5.56mm M249 Light Machine Gun and 7.62mm Medium Machine Guns. The optic sight will allow the soldier to identify and engage targets more effectively than the existing iron sighting system.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

	PLANNED	ACCOMPLISHED
Development/Operational Tests	2Q97	
Type Classification	4Q97	
Production Contract Award	4Q97	
First Production Hardware Delivered	1Q98	
First Unit Equipped	2Q98	

INDIVIDUAL MODIFICATION — Date: February 1997

MODIFICATION TITLE (Cont): Machine Gun Optics TBD2

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		2.758																		2.758
PROCUREMENT																				
Quantity			876		1807		1790		1579		1563						3385		11000	
Installation Kits																				
Installation Kits Nonrecurring																				
Equipment				0.577		1.173		1.163		1.027		1.017						2.758		7.715
Equipment Nonrecurring																		0.250		0.250
Engineering Support				0.114		0.143		0.143		0.143		0.144						0.050		0.737
Testing				0.075		0.050		0.050		0.050		0.050						0.020		0.295
Integrated Logistical Support				0.017		0.020		0.019		0.020		0.020						0.020		0.116
Fielding				0.017		0.020		0.020		0.020		0.020								0.097
Other																				
Interim Contractor Support																				
Installation of Hardware																				
FY 1996 & Prior Eqpt -- Kits																				
FY 1997 Eqpt -- Kits			876																876	
FY 1998 Eqpt -- Kits					1807														1807	
FY 1999 Eqpt -- Kits							1790												1790	
FY 2000 Eqpt -- kits									1579										1579	
FY 2001 Eqpt -- kits											1563								1563	
FY 2002 Eqpt -- kits																				
FY 2003 Eqpt -- kits																				
(FY(TC) Eqpt (xx kits)																	3385		3385	
Total Installation Cost			876		1807		1790		1579		1563						3385		11000	
Total Procurement Cost				0.800		1.406		1.395		1.260		1.251						3.098		9.210

METHOD OF IMPLEMENTATION: Unit Application — ADMINISTRATIVE LEADTIME: 1 Months — PRODUCTION LEADTIME: 4 Months

Contract Dates: FY 1997: Sep-97 FY 1998: FY 1999:

Delivery Date: FY 1997: Dec-97 FY 1998: FY 1999:

Installation Schedule: Machine Gun Optics TBD2 Date February 1997

	FY 1996 & Prior	FY 1997 1	2	3	4	FY 1998 1	2	3	4	FY 1999 1	2	3	4	FY 2000 1	2	3	4	FY 2001 1	2	3	4	Total
Inputs																						
FY 1996 & Prior																						
FY 1997																						
FY 1998																						
FY 1999																						
Outputs																						
FY 1996 & Prior																						
FY 1997																						
FY 1998																						
FY 1999																						

	FY 2000 1	2	3	4	FY 2001 1	2	3	4	FY 2002 1	2	3	4	FY 2003 1	2	3	4	FY 2004 1	2	3	4	FY 2005 1	2	3	4	Total
Inputs																									
FY 2000																									
FY 2001																									
FY 2002																									
FY 2003																									
Outputs																									
FY 2000																									
FY 2001																									
FY 2002																									
FY 2003																									

Remarks: An installation schedule is not required for this modification.

BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

APPROPRIATION / BUDGET ACTIVITY: PROCUREMENT OF WPNS & TRKD CMBT VEHS /Weapons and Other Combat Vehicles

P-1 ITEM NOMENCLATURE: ITEMS LESS THAN $2.0M (WOCV-WTCV) (GL3200)

	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003
QUANTITY	0	0	0		0	0	0	0
COST (in millions)	1.1	1.8	1.2	1.2	1.3	1.3	1.4	1.4

DESCRIPTION: Provides for procurement and assembly of tool/shop sets, small arms, and gun mounts. The items are needed by maintenance personnel to maintain weapons and combat vehicles, and by Active Army, National Guard, Reserve and ROTC units to perform combat and training missions. The tool/shop equipment has multi-applications and is essential to all levels of weapon and combat vehicle maintenance.

JUSTIFICATION: Required to achieve and sustain required levels of readiness to units providing maintenance support to all small arms (M16,9mm Pistol, 7.62 Machine Gun, etc.), artillery (M102,M119,M198 Howitzers, etc.), air defense (Vulcan, PIVAD, etc.) special weapons, and fire control (Tanks, etc.) organizations. Small Arms Weapons and mounts are required to support AAO shortages, field replacements and training requirements.

WTCV Cost Analysis			A. APPN / BUDGET ACTIVITY TITLE/NO: PROCUREMENT OF WPNS & TRKD CMBT VEHS / 2 / Weapons and Other Combat Vehicles			B. WEAPON: ITEMS LESS THAN $2.0M (WOCV-WTCV) (GL3200)			C. MANUFACTURER NAME: Various			D. DATE: February 1997		
WTCV Cost Elements		ID CD	FY 96			FY 97			FY 98			FY 99		
			TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost
			$OOO	Each	$OOO	$OOO	Each	$OOO	$OOO	Each	$OOO	$OOO	Each	$OOO
1. Tool Set, Field ORD Supply or Depot CO	G422	A							45	5	9	40	4	10
2. Shot Gun, 12 Gage	G124	A	120	525		99	420		99	410		100	400	
3. Tool Set, Ammo DS/GS Ordnance Ammo	G419	A							92	4	23	72	3	24
4. Shop Equip, Small Arms Repair, Shelter Mtd	G337	A	107	4	27	404	11	37	444	12	37	456	12	38
5. Shop Equip, Artillery Maint, FM Set N	G348	A				76	5	15	76	5	15	80	5	16
6. Tool Set, Instrument and Fire Control, FM	G371	A	73	5	15	70	5	14	135	10	14	143	10	14
7. Shop Set, Small Arms, Field Maint, PCS Set D	G385	A	145	2	73	111	2	56	224	4	56	228	4	57
8. Tool Kit, Electronic Maint	F072	A							12	3	4	8	2	4
9. Tool Kit, Electronic Maint	F073	A							10	10	1	5	5	1
10. Shop Set, Small Arms FM, Basic	G723	A							78	6	13	70	5	14
11. MK 19 Trainer (Stand Alone)	PEND	A				1007	22	46						
12. XM144 Telescope		A	668											
TOTAL			**1113**			**1767**			**1215**			**1202**		

BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

APPROPRIATION / BUDGET ACTIVITY: PROCUREMENT OF WPNS & TRKD CMBT VEHS /Weapons and Other Combat Vehicles

P-1 ITEM NOMENCLATURE: PRODUCTION BASE SUPPORT (WOCV-WTCV) (GC0050)

	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)	5.9	4.3	6.2	6.5	6.4	6.3	6.8	6.9

Description: This program provides for Provision of Industrial Facilities (PIF). Funds are used to establish modernize, expand and replace facilities owned by the Army and provide Production Support and Equipment Replacement (PSR) and Modernization (MOD) to Government owned equipment used in production, production testing of Weapons and Tracked Combat Vehicles. Also provides funding for the Layaway of Industrial Facilities (LIF) for preservation of equipment and portions of plants which are no longer required for active production.

Justification: The FY98 and FY99 request includes essential funding for replacement of equipment & instrumentation in production test facilities at Aberdeen, Yuma Proving Grounds, and White Sands Missile Range (WSMR). Funding also supports layaway of industrial equipment which is excess to production requirements at Rock Island and Watervliet Arsenals.

	FY 1996	FY 1997	FY 1998	FY 1999
PIF	3.215	1.478	3.473	3.594
LIF	2.640	2.833	2.722	2.946
TOTALS	5.855	4.311	6.195	6.540

Production Support and Facilities Projects

DATE: February 1997

APPROPRIATION / BUDGET ACTIVITY: PROCUREMENT OF WPNS & TRKD CMBT VEHS /Weapons and Other Combat Vehicles

P-1 ITEM NOMENCLATURE: PRODUCTION BASE SUPPORT (WOCV-WTCV) (GC0050)

PROJECT NO.	TYPE	NAME / LOCATION	FY 1996	FY 1997	FY 1998	FY 1999
09X5263	MOD	Combat Systems Testing Activity (CSTA) Aberdeen Proving Ground	1.360	0.600	1.470	1.613
Provides funds to replace, modernize and upgrade equipment and instrumentation used in production testing of WTCV, such as the M981 Fire Support Vehicle, M1 Tank, M2/M3 Bradley Fighting Vehicle, 105MM and 120MM cannons. Upgrading will be performed on automotive performance Test Equipment, vehicle dynamics, high speed imaging, interior exterior ballistics support instrumentation, and toxic fumes instrumentation.						
09X5268	MOD	Yuma Proving Grounds	1.214	0.600	1.464	1.450
Provides funds to replace, modernize and upgrade equipment and instrumentation used in production testing of WTCV. The funding will also provide telemetry data collection interfaces, Weapons firing instrumentation, and video instrumentation enhancements.						
09X5269	PSR	White Sands Missile Range	0.641	0.278	0.539	0.531
Provides funds to replace, modernize and upgrade the test and evaluation mission for production testing at WSMR. The equipment/instrumentation includes: the Linear Accelerator (LINAC) which simulates high-intensity gamma spikes of a nuclear weapon detonation, equipment used to support electromagnetic radiation effects testing, and equipment to monitor the air activity at facilities where materiel is against a radiation source.						

Production Support and Facilities Projects

DATE: February 1997

APPROPRIATION / BUDGET ACTIVITY: PROCUREMENT OF WPNS & TRKD CMBT VEHS /Weapons and Other Combat Vehicles

P-1 ITEM NOMENCLATURE: PRODUCTION BASE SUPPORT (WOCV-WTCV) (GC0050)

PROJECT NO.	TYPE	NAME / LOCATION	FY 1996	FY 1997	FY 1998	FY 1999
69X7667	LIF	Omnibus Layaway and Redistribution of Government-Owned Equipment, Rock Island & Watervliet Arsenals	2.640	2.833	2.722	2.946

Provides funds for preservation of equipment and portions of plants which are no longer required for active production, but must be retained for future use. Also provides for plant clearance and preparation of equipment to be excessed.

BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

APPROPRIATION / BUDGET ACTIVITY: PROCUREMENT OF WPNS & TRKD CMBT VEHS /Weapons and Other Combat Vehicles

P-1 ITEM NOMENCLATURE: INDUSTRIAL PREPAREDNESS (GC0075)

	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)	5.3	5.1	5.8	5.7	6.2	6.1	6.6	6.6

DESCRIPTION: This program provides funding to retain, protect, and maintain laidaway reserve industrial plants and equipment. Costs include grounds, utilities, fire and guard protection. Also includes funding for condition assessments of laidaway facilities and costs to rehabilitate equipment to useable condition.

JUSTIFICATION: The FY98 and FY99 request supports equipment and facilities at Rock Island & Watervliet Arsenals. Funds also support some of the retention, maintenance and the cost for guard protection at the M-1 facilities which are not being utilized at the Detroit Arsenal Tank Plant.

A summary listing of projects is attached.

Production Support and Facilities Projects

DATE: February 1997

APPROPRIATION / BUDGET ACTIVITY: PROCUREMENT OF WPNS & TRKD CMBT VEHS /Weapons and Other Combat Vehicles

P-1 ITEM NOMENCLATURE: INDUSTRIAL PREPAREDNESS (GC0075)

PROJECT NO.	TYPE	NAME / LOCATION	FY 1996	FY 1997	FY 1998	FY 1999
G9X2100		Plant Equipment Storage, Seneca Army Depot	1.049	0.115		
Provides for storage and maintenance of equipment which is being retained at Seneca to meet future production requirements. It also provides for depot personnel who perform condition assessment reviews of equipment stored at Seneca and other Government and contractor storage sites.						
49X4290		Retention & Maintenance - Facilities TACOM, Rock Island & Watervliet Arsenals.	2.182	2.200	2.879	2.856
Provides for storage of equipment for future production. Also provides funding to maintain grounds, buildings and provide fire/guard protection for inactive portions of tracked vehicle production facilities.						
69X7670		Retention & Maintenance Plants and Equipment Watervliet & Rock Island Arsenals.	2.052	2.771	2.879	2.857
Provides for overhead costs attributed to laidaway portions of the arsenals. Also funds storage and maintenance costs of equipment which has been laidaway for future production.						

BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

APPROPRIATION / BUDGET ACTIVITY: PROCUREMENT OF WPNS & TRKD CMBT VEHS /Weapons and Other Combat Vehicles

P-1 ITEM NOMENCLATURE: SMALL ARMS (SOLDIER ENH PROG) (GC0076)

	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)	2.4	5.8	4.2	5.6	6.5	6.9	2.5	2.0

DESCRIPTION: This program provides small arms equipment for the soldier, a HMMWV Mount, Dual Mount and a Boresight for Aiming and Thermal Systems. The HMMWV Mount provides the soldier with a pedestal and a mount for firing the M249 Squad Automatic Weapon (SAW) and M60 Machine Gun from the M998 HMMWV and a mount for firing the M249 from the M1025/1026 HMMWV. The Dual Mount can be used in both the vehicular (M1025/1026 HMMWV) and ground mount application for the MK19 Grenade Machine Gun (GMG) and M2 Heavy Barrel Machine Gun. The Boresight Aiming & Thermal System provides the soldier with a small arms muzzle boresight with capabilities to boresight visible day, night image intensifiers and forward looking infrared fire control sighting systems and infrared laser aiming devices.

JUSTIFICATION: Certain applications of the M998 HMMWV require that weapons be displayed and be available quickly for enemy confrontation. The field has devised several non-standard and possibly unsafe methods of mounting weapons on the M998. This program will provide a standard, supportable weapon mount. Military Police and certain infantry units currently mount the M60 Machine Gun on the M1025/1026. As the M60 is replaced by the M249 Machine Gun the need to mount the M249 on the M1025/1026 HMMWV arises. The Dual Mount will be fielded to scout platoons enabling them to install or switch weapons quickly in the event one vehicle goes down. Additionally the system corrects the shortcomings of the current MK64 system allowing for bold and accurate traverse and elevation, further range (elevation) for the MK19, recoil attention of the M2 Machine Gun and capability for range card preparation. The U.S. Army will now have the capability to boresight forward looking infrared and image intensifier laser aiming devices.

WTCV Cost Analysis		A. APPN / BUDGET ACTIVITY TITLE/NO PROCUREMENT OF WPNS & TRKD CMBT VEHS / 2 / Weapons and Other Combat Vehicles			B. WEAPON SMALL ARMS (SOLDIER ENH PROG) (GC0076)			C. MANUFACTURER NAME			D. DATE February 1997		
WTCV Cost Elements	ID CD	FY 96			FY 97			FY 98			FY 99		
		TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost
		$OOO	Each	$	$OOO	Each	$	$OOO	Each	$	$OOO	Each	$
1. Hardware													
MK93 MOD 1 DUAL MOUNT		1.600	776	2.062	1.600	866	1.848						
HMMWV M249 Mount M998 (Quantity)		0.197	120	1.642	1.254	660	1.900	1.362	660	2.063			
M1025/1026 (Quantity)		0.036	80	0.445	0.660	1320	0.500	0.717	1320	0.543	0.720	1320	0.545
Boresight for Aiming & Thermal Sights											3.000	3000	1.000
2. ESIP													
Dual Mount		0.225			0.275								
HMMWV M249 Mount		0.117			0.398			0.450			0.250		
Boresight for Aiming & Thermal Sights											0.402		
3. Testing													
Dual Mount		0.050											
HMMWV M249 Mount					0.450			0.550			0.350		
Boresight for Aiming & Thermal Sights											0.010		
4. Integrated Logistics Support													
Dual Mount		0.025			0.050								
HMMWV M249 Mount		0.047			0.153			0.189			0.100		
Materiel Release/Engineering Studies		0.053			0.794			0.680			0.366		
Boresight for Aiming & Thermal Sights											0.075		
5. Fielding													
Dual Mount					0.075								
HMMWV M249 Mount					0.130			0.230			0.100		
Boresight for Aiming & Thermal Sights											0.225		
TOTAL		**2.350**			**5.839**			**4.178**			**5.598**		

BUDGET PROCUREMENT HISTORY AND PLANNING EXHIBIT (P-5A)

DATE: February 1997

B. APPROPRIATION / BUDGET ACTIVITY: PROCUREMENT OF WPNS & TRKD CMBT VEHS / 2 / Weapons and Other Combat Vehicles

C. P-1 ITEM NOMENCLATURE: SMALL ARMS (SOLDIER ENH PROG) (GC0076)

LINE ITEM / FISCAL YEAR	CONTRACTOR AND LOCATION	CONTRACT METHOD AND TYPE	CONTRACTED BY	AWARD DATE	DATE OF FIRST DELIVERY	QTY Each	UNIT COST $OOO	SPECS AVAIL NOW	SPEC REV REQ'D	IF YES W/A
DUAL MOUNT/FY96	Fraser Maunfacturing Corp	C/FFP	ACALA	May-96	May-97	776	2827	Yes	Yes	Aug-95
DUAL MOUNT/FY97	Fraser Maunfacturing Corp	C/FFP	ACALA	Apr-97	Jan-98	866	2827			
HMMWV M249 MOUNT/FY96	Ramo Manufacture Inc.	C/FFP	ARDEC							
M6 Pedestal	Nashville, Tn			Jul-96	Apr-97	120	1200	Yes	No	
M197 Mount	Nautic-All	C/FFP	ARDEC	Aug-96	Mar-97	200	445			
HMMWV M249 MOUNT/FY97	Ramo Manufacture Inc.	C/FFP	ARDEC							
M6 Pedestal	Nashville, Tn			May-97	Nov-97	660	1400			
M197 Mount	Nautic-All	C/FFP	ARDEC	May-97	Nov-97	1980	500			
HMMWV M249 MOUNT/FY98	Ramo Manufacture Inc.	C/FFP	ARDEC							
M6 Pedestal	Nashville, Tn			Jan-98	Jul-98	660	2063			
M197 Mount	Nautic-All	C/FFP	ARDEC	Jan-98	Jul-98	1980	543			
HMMWV M249 MOUNT/FY99	Ramo Manufacture Inc.	C/FFP	ARDEC							
M6 Pedestal	Nashville, Tn			Jan-99	Jul-99	0				
M197 Mount	Nautic-All	C/FFP	ARDEC	Jan-99	Jul-99	1320	545			
M998 HMMWV requires 1 M6 Pedestal and 1 M197 Mount M1025/1026 HMMWV requires 1 M197 Mount										

REMARKS:

BUDGET PROCUREMENT HISTORY AND PLANNING EXHIBIT (P-5A)

DATE: February 1997

B. APPROPRIATION / BUDGET ACTIVITY: PROCUREMENT OF WPNS & TRKD CMBT VEHS / 2 / Weapons and Other Combat Vehicles

C. P-1 ITEM NOMENCLATURE: SMALL ARMS (SOLDIER ENH PROG) (GC0076)

LINE ITEM / FISCAL YEAR	CONTRACTOR AND LOCATION	CONTRACT METHOD AND TYPE	CONTRACTED BY	AWARD DATE	DATE OF FIRST DELIVERY	QTY Each	UNIT COST $OOO	SPECS AVAIL NOW	SPEC REV REQ'D	IF YES W/A
BORESIGHT for AIMING and THERMAL SYSTEMS (BATS)/FY99	TBS	C/FFP	TBS	Aug-99	May-00	3000	1000	No	No	

REMARKS:

BUDGET ITEM JUSTIFICATION SHEET

DATE: February 1997

APPROPRIATION / BUDGET ACTIVITY	P-1 ITEM NOMENCLATURE
PROCUREMENT OF WPNS & TRKD CMBT VEHS /Spares and Repair Parts	SPARES AND REPAIR PARTS (WTCV) (GE0150)

	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)	25.3	20.3	20.6	14.4	14.8	15.2	28.7	29.6

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 reparable (DLRs) secondary items from the Supply Management, Army (SMA) revolving fund (formally Army Stock 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
GE0161 M1A2	16.0	9.3	13.9	10.1
GE0163 BFVS	5.2	9.3	.3	1.5
GE0167 M109	2.4	1.4	3.7	
GE0171 IRV	1.6	.3	.8	1.1
GEO173 C2V			.9	.9
GEO177 HAB			.9	.9
Total Initial Issue	25.3	20.3	20.6	14.4
Total Replenishment and War Reserve				
Totals	25.3	20.3	20.6	14.4

PROCUREMENT OF WEAPONS AND TRACKED COMBAT VEHICLES, ARMY

APPROPRIATION LANGUAGE

For construction, procurement, production, and modification of weapons and tracked combat vehicles, equipment; including ordnance, spare parts, and accessories therefore; specialized equipment and training devices; expansion of public and private plants, and the land necessary therefore, 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; $1,065,707 lin fiscal year 1998 to remain available for obligation until September 30, 2000 and $1,475,106 in fiscal year 1999 to remain available for obligation until September 30, 2001.

COMPARISON OF FY 1997 PROGRAM REQUIREMENTS AS REFLECTED IN THE FY 1997 BUDGET WITH THE FY1997 PROGRAM REQUIREMENTS AS SHOWN IN THE FY 1998/1999 BUDGET
SUMMARY OF REQUIREMENTS (In Millions of Dollars)

Appropriation Procurement of Weapons and Tracked, Combat Vehicles, Army	FY 1997 Requirements Per FY1997 Budget	FY 1997 Requirements Per FY1998/1999 Budget	Increase or (Decrease)
Activity 1 - Tracked Combat Vehicles	1,028	1,344	316
Activity 2 - Weapons & Other Combat Vehicles	54	104	50
Activity 3 - Spares and Repair Parts	20	20	0
Reimbursable Program	179	179	0
	1,281	1,647	366

EXPLANATION BY ACTIVITY

Activity 1 - Tracked Combat Vehicles. The increase resulted from Congressional adjustments to Bradley Base Sustainment (+$100.6), FAASV (+$29.8), Carrier Mods (+$20), Bradley Mods (+$35.5), Howitzer 155mm (+$31.2), FAASV Pip to Fleet (+$9.1), Improved Recovery Vehicle (+$27.1), M1 Abrams Mods (+13.0), and Armored Earthmover (+$51.0) as well as adjustments for Sections 8037 and 8138 of the FY1997 Appropriations Act (-$1.7).

Activity 2 - Weapons and Other Combat Vehicles. The increase resulted from Congressional adjustments to Machine Gun, 556mm (+$1.0), MK19-3 Grenade Launcher (+$28.0), Med Machine Gun (+$20.0), M16 Rifle (+$1.0), and Carbine M4 (+$1.0) as well as pro rata adjustments for Section 8138 of the FY 1997 Appropriations Act (-0.0).

Activity 3 - Spares and Repair Parts. Not applicable.

Reimbursable Program. Not applicable.

COMPARISON OF FY 1997 PROGRAM REQUIREMENTS AS REFLECTED IN THE FY 1998/1999 BUDGET WITH THE FY1998 PROGRAM REQUIREMENTS AS SHOWN IN THE FY 1998/1999 BUDGET
SUMMARY OF REQUIREMENTS (In Millions of Dollars)

Appropriation Procurement of Weapons and Tracked Combat Vehicles, Army	FY 1997 Requirements Per FY1998/1999 Budget	FY 1998 Requirements Per FY1998/1999 Budget	Increase or (Decrease)
Activity 1 - Tracked Combat Vehicles	1,344	996	(348)
Activity 2 - Weapons and Other Combat Vehicles	104	49	(55)
Activity 3 - Spares and Repair Parts	20	21	1
Reimbursable Program	179	146	(33)
	1,647	1,212	(435)

EXPLANATION BY ACTIVITY

Activity 1 - Tracked Combat Vehicles. The decrease is associated with (1) the congressional adjustments (-$317.2) in FY 1997 (depicted on the preceeding page), (2) one-time funding in FY 1997 for the Life-of-Type buy for the Cummins engine (-$30.0), (3) end of production funding for the Paladin and FAASV (-$109.0), (4) LRIP funding for the Bradley Fire Support Team vehicle BFIST (-$14.0) and increased funding in the Abrams Upgrade program for production cut-in for SEP, II Generation FLIR, and transfer of OMA resources for the workload at Anniston Army Depot that supports the Upgrade program.

Activity 2 - Weapons and Other Combat Vehicles. The decrease is associated with the congressional adjustments in FY 1997 (-$51.0), other minor program reductions (-$9.0), and initiation of the M119 Howitzer modification program (+$5.0).

Activity 3 - Spares and Repair Parts. Not applicable.

Reimbursable Program. The decrease is a result of an expected decrease in the amount of projected FMS sales.

COMPARISON OF FY 1998 PROGRAM REQUIREMENTS AS REFLECTED IN THE FY 1998/1999 BUDGET WITH THE FY1999 PROGRAM REQUIREMENTS AS SHOWN IN THE FY 1998/1999 BUDGET
SUMMARY OF REQUIREMENTS (In Millions of Dollars)

Appropriation Procurement of Weapons and Tracked Combat Vehicles, Army	FY 1998 Requirements Per FY1998/1999 Budget	FY 1999 Requirements Per FY1998/1999 Budget	Increase or (Decrease)
Activity 1 - Tracked Combat Vehicles	996	1,379	383
Activity 2 - Weapons and Other Combat Vehicles	49	81	32
Activity 3 - Spares and Repair Parts	21	14	(7)
Reimbursable Program	146	128	(18)
	1,212	1,602	390

EXPLANATION BY ACTIVITY

Activity 1 - Tracked Combat Vehicles. The increase is the result of a ramp-up of production quantities for the Command and Control Vehicle ($32.0) and the Bradley Base sustainment ($217.0); and a ramp in production in the Abrams Upgrade Program for the System Enhancement Program (SEP) ($99.0); as well as programmatic increase in the Carrier modification program ($14.0), the Improved Recovery Vehicle ($12.0), and the Heavy Assault Bridge ($10.0).

Activity 2 - Weapons and Other Combat Vehicles. The increase is associated with increased procurement quantities for the M16 Rifle ($4.1), the MK19-3 Grenade Launcher ($13.1), the Armor Machine Gun ($7.0), the M4 Carbine ($4.5), and modifications for the Carbine ($3.2).

Activity 3 - Spares and Repair Parts. The decrease is associated with a reduced requirement for Abrams and Paladin Initial spares.

Reimbursable Program. The decrease is associated with a reduction in anticipated FMS cases.