Index for AIRCRAFT PROCUREMENT, ARMY

Index for AIRCRAFT PROCUREMENT, ARMY

Appropriation: **AIRCRAFT**

Activity: 1. **AIRCRAFT**

LINE NO.	ITEM NOMENCLATURE	ID	(DOLS) FY 00 UNIT COST	(THOUSANDS OF DOLLARS) FY 98 QTY	FY 98 COST	FY 99 QTY	FY 99 COST	FY 00 QTY	FY 00 COST	FY 01 QTY	FY 01 COST
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	****FIXED WING****										
1	ARL (TIARA) (A11500)				39,334		13,095				
2	UTILITY F/W (MR) AIRCRAFT (A11300)			5	22,039	5	26,922				
3	GUARDRAIL COMMON SENSOR/ACS (TIARA) (A02005)	A			12,500		1,925				
					--------		--------		--------		--------
	SUB-ACTIVITY TOTAL				**73,873**		**41,942**				
	****ROTARY****										
4	UH-60 BLACKHAWK (MYP) (AA0005)		10,767,500	28	322,202	29	294,800	8	86,140	9	108,166
	LESS: ADVANCE PROCURMENT (PY)				-65,143		-23,219				-16,700
					-------		-------		-------		-------
					257,059		271,581		86,140		91,466
5	UH-60 BLACKHAWK (MYP) (AA0005) ADVANCE PROCUREMENT (CY)				23,219				16,700		13,902
					--------		--------		--------		--------
	SUB-ACTIVITY TOTAL				**280,278**		**271,581**		**102,840**		**105,368**
	ACTIVITY TOTAL				**354,151**		**313,523**		**102,840**		**105,368**

Appropriation: **AIRCRAFT**

Activity: 2. **MODIFICATION OF AIRCRAFT**

LINE NO.	ITEM NOMENCLATURE	ID	(DOLS) FY 00 UNIT COST	(THOUSANDS OF DOLLARS) FY 98 QTY	FY 98 COST	FY 99 QTY	FY 99 COST	FY 00 QTY	FY 00 COST	FY 01 QTY	FY 01 COST
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	****MODIFICATIONS OF AIRCRAFT****										
6	GUARDRAIL MODS (TIARA) (AZ2000)				14,321		35,773		18,863		8,279
7	ARL MODS (AZ2050)	A							5,828		4,598
8	AH1F MODS (AA0150)				431		511		432		426
9	AH-64 MODS (AA6605)	A			36,780		56,738		22,565		18,641
10	CH-47 CARGO HELICOPTER MODS (MYP) (AA0252)				60,273		80,942		70,738		34,665
11	CH-47 ICH (AA0254)										48,723
12	CH-47 ICH (AA0254) ADVANCE PROCUREMENT (CY)										34,161
13	UTILITY/CARGO AIRPLANE MODS (AA0270)				6,323		8,633		6,308		5,355
14	OH-58 MODS (AA0400)				718		90		468		465
15	AIRCRAFT LONG RANGE MODS (AA0560)				818		797		761		757
16	LONGBOW (AA6670)				490,971		604,175		771,219		737,017
	LESS: ADVANCE PROCURMENT (PY)				-30,440		-36,932		-41,683		-35,702
					460,531		567,243		729,536		701,315
17	LONGBOW (AA6670) ADVANCE PROCUREMENT (CY)				36,932		41,683		35,702		35,000
18	UH-1 MODS (AB0602)				2,567		3,778		4,380		4,327

Appropriation: **AIRCRAFT**

Activity: 2. **MODIFICATION OF AIRCRAFT**

LINE NO.	ITEM NOMENCLATURE	ID	(DOLS) FY 00 UNIT COST	(THOUSANDS OF DOLLARS) FY 98 QTY	FY 98 COST	FY 99 QTY	FY 99 COST	FY 00 QTY	FY 00 COST	FY 01 QTY	FY 01 COST
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
19	UH-60 MODS (AA0480)				28,731		21,595		12,087		15,141
20	KIOWA WARRIOR (AZ2200)				53,677		52,205		39,046		82,235
21	EH-60 QUICKFIX MODS (AB3000)				36,475				4,915		9,820
22	AIRBORNE AVIONICS (AA0700)				41,697		56,173		43,690		43,336
23	ASE MODS (SIRFC) (AA0720)				23,112		2,735		11,796		4,517
24	ASE MODS (ATIRCM) (AA0720)										705
25	GATM (AA0701)								7,090		5,792
26	MODIFICATIONS < $5.0M (AA0725)				1,676		1,655		2,586		2,579
	SUB-ACTIVITY TOTAL				**805,062**		**930,551**		**1,016,791**		**1,060,837**
	ACTIVITY TOTAL				**805,062**		**930,551**		**1,016,791**		**1,060,837**

Appropriation: **AIRCRAFT**

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

LINE NO.	ITEM NOMENCLATURE	ID	(DOLS) FY 00 UNIT COST	(THOUSANDS OF DOLLARS) FY 98 QTY	FY 98 COST	FY 99 QTY	FY 99 COST	FY 00 QTY	FY 00 COST	FY 01 QTY	FY 01 COST
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	****SPARES AND REPAIR PARTS****										
27	SPARE PARTS (AIR) (AA0950)				17,925		35,943		16,075		15,271
	SUB-ACTIVITY TOTAL				**17,925**		**35,943**		**16,075**		**15,271**
	ACTIVITY TOTAL				**17,925**		**35,943**		**16,075**		**15,271**

Appropriation: **AIRCRAFT**

Activity: 4. **SUPPORT EQUIPMENT AND FACILITIES

LINE NO.	ITEM NOMENCLATURE	ID	(DOLS) FY 00 UNIT COST	(THOUSANDS OF DOLLARS) FY 98 QTY	FY 98 COST	FY 99 QTY	FY 99 COST	FY 00 QTY	FY 00 COST	FY 01 QTY	FY 01 COST
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	****GROUND SUPPORT AVIONICS****										
28	AIRCRAFT SURVIVABILITY EQUIPMENT (AZ3504)				8,040		12,508		88		14,632
29	ASE INFRARED CM (AZ3507)									3	8,147
	SUB-ACTIVITY TOTAL				**8,040**		**12,508**		**88**		**22,779**
	****OTHER SUPPORT****										
30	AIRBORNE COMMAND & CONTROL (AA0710)										17,252
31	AVIONICS SUPPORT EQUIPMENT (AZ3000)				2,588		2,548				
32	TRAINING DEVICES (AZ3700)	A			12,745						
33	COMMON GROUND EQUIPMENT (AZ3100)				21,815		31,217		35,915		49,317
34	AIRCREW INTEGRATED SYSTEMS (AZ3110)				7,950		9,024		4,394		1,419
35	AIR TRAFFIC CONTROL (AA0050)				7,801		5,675		8,760		38,068
36	INDUSTRIAL FACILITIES (AZ3300)				1,963		1,489		1,462		1,440
37	AIRBORNE COMMUNICATIONS (AA0705)				45,248		41,790		43,563		
	SUB-ACTIVITY TOTAL				**100,110**		**91,743**		**94,094**		**107,496**
	ACTIVITY TOTAL				**108,150**		**104,251**		**94,182**		**130,275**
	APPROPRIATION TOTAL				**1,285,288**		**1,384,268**		**1,229,888**		**1,311,751**

Exhibit P-1M, Procurement Programs - Modification Summary

(TOA, Dollars in Millions)

System/Modification	1998 & Prior	1999	2000	2001	2002	2003	2004	2005	To Complete	Total Program
GUARDRAIL MODS (TIARA) (AZ2000)										
System 2 Block Upgrade	198.8	35.8	18.9							253.5
TIBS and TRIXS for GRCS	27.1									27.1
Mini-IPF				8.3	19.4	4.9	8.3	4.9		45.8
Total	**225.9**	**35.8**	**18.9**	**8.3**	**19.4**	**4.9**	**8.3**	**4.9**		**326.4**
ARL MODS (AZ2050)										
B-kits for WKSTS			1.6							1.6
Upgrade to IMINT Suite			2.6	4.6	0.5					7.7
Radar Improvements			1.6							1.6
Total			**5.8**	**4.6**	**0.5**					**10.9**
AH-64 MODS (AA6605)										
Backup Control System (BUCS)	11.5	9.4			3.6	5.4	12.9	6.2	3.4	52.4
Fuel Control Warning Panel	9.8	1.7	1.2							12.7
Embedded GPS / Inertial NAvigation System (EGI)	83.6	0.6								84.2
H-11 Bolt Replacement	5.6	0.9	0.7	0.7	0.7	0.7	0.8			10.1
Airframe Modifications	7.4	12.0	9.5	4.8	15.8	14.7	4.9	8.6	7.0	84.7
Alternate Laser Code	32.3	3.4								35.7
TADS/PNVS I/II upgrades	57.9	7.8								65.7
TADS/PNVS Upgrades	5.4	6.6	6.3	7.0	7.2	7.4	7.9	8.8	24.8	81.4
Apache Integrated Training Program Trainer Upgrade			4.0	4.1	4.4	6.5	2.3			21.3
Misc Mod less than $2.0M	258.0	14.3	0.9	2.0	4.0	3.6	4.4	4.0	35.9	327.1
ORT Conversion	17.2								27.9	45.1
Captive Boresight Harmonization Kit (CBHK) Upgrade	14.5									14.5
Total	**503.2**	**56.7**	**22.6**	**18.6**	**35.7**	**38.3**	**33.2**	**27.6**	**99.0**	**834.9**
CH-47 CARGO HELICOPTER MODS (MYP) (AA0252)										
Installation of Modification Kits Various	26.2	2.2	1.3	0.8						30.4
Improved Cross Shaft Adapters, Coupling & Bolts				1.1	0.2	0.2				1.6
Improved Battery					1.9	0.3	0.3			2.5

Exhibit P-1M, Procurement Programs - Modification Summary

(TOA, Dollars in Millions)

System/Modification	1998 & Prior	1999	2000	2001	2002	2003	2004	2005	To Complete	Total Program
Halon Replacement		1.7	0.8							2.4
Engine Filtration System					4.9	5.5	6.4	8.2	42.1	67.1
Extended Range Fuel System	7.1	5.3	6.0	0.2	10.9	14.3	18.1	12.9	0.2	75.0
Engine Upgrade to T55-GA-714A Configuration	91.0	71.7	62.6	32.6	120.9	152.4	185.4	187.8	251.6	1156.1
Total	**124.3**	**80.9**	**70.7**	**34.7**	**138.8**	**172.7**	**210.2**	**208.9**	**293.9**	**1335.1**
CH-47 ICH (AA0254)										
Improved Cargo Helicopter				48.7	115.6	136.0	231.4	238.4	1433.6	2203.7
Total				**48.7**	**115.6**	**136.0**	**231.4**	**238.4**	**1433.6**	**2203.7**
UTILITY/CARGO AIRPLANE MODS (AA0270)										
Avionics System Cockpit Upgrade	7.0	8.6	6.3	5.4	9.3	9.9	7.3	7.3	68.1	129.2
Total	**7.0**	**8.6**	**6.3**	**5.4**	**9.3**	**9.9**	**7.3**	**7.3**	**68.1**	**129.2**
LONGBOW (AA6670)										
Longbow Apache Mods	982.9	472.4	613.5	587.9	698.0	753.1	737.0	415.7	329.5	5590.0
Apache Longbow FCR	269.7	94.8	116.0	113.4	113.3	91.6	37.8	28.4	395.7	1260.7
Total	**1252.6**	**567.2**	**729.5**	**701.3**	**811.3**	**844.7**	**774.8**	**444.1**	**725.2**	**6850.7**
UH-60 MODS (AA0480)										
Ext Stores Sup Sys (ESSS) Aux Fuel Monitoring Sys (AFMS)	16.9	12.1	1.7	2.0						32.7
Halon Changeout	0.1	2.7								2.8
Battery/Power Light Relocate	0.3	1.8	5.5	10.0	2.8	1.4				21.8
NVG Lighting Lower Console	1.9	5.0	4.9	2.8	0.6					15.2
Engine Driveshaft Redesign				0.3	9.7	11.8				21.8
Refurbishment/Standardization	114.9									114.9
Single Channel Ground & Airborne Radio Sys (SINCGARS)	47.8									47.8
Modernization/Service Life Extension Program					46.5	75.6	59.4	61.3		242.8
UH-60Q Medivac	9.1				27.5	27.4	27.4	31.3		122.7
Fire Hawk	2.0									2.0
UH-60L Safety/Operational Modifications							13.0	13.0		26.0

Exhibit P-1M, Procurement Programs - Modification Summary

(TOA, Dollars in Millions)

System/Modification	1998 & Prior	1999	2000	2001	2002	2003	2004	2005	To Complete	Total Program
Total	**193.0**	**21.6**	**12.1**	**15.1**	**87.1**	**116.2**	**99.8**	**105.6**		**650.5**
KIOWA WARRIOR (AZ2200)										
Remanufacture	937.7	1.9								939.6
Retrofit	483.7	1.9								485.6
Halon Fire Extinguisher	1.8	0.5	0.4							2.7
Crew Station Mission Equipment Trainer (CSMET)	3.9	9.9	4.2	2.6					26.4	47.0
Safety Enhancement Program	118.1	38.0	34.4	79.6	121.1	43.6	31.5	32.2	9.5	508.0
Total	**1545.2**	**52.2**	**39.0**	**82.2**	**121.1**	**43.6**	**31.5**	**32.2**	**35.9**	**1982.9**
EH-60 QUICKFIX MODS (AB3000)										
T701C Helicopter Engines	34.8			0.3						35.1
Advanced EH-60 Quickfix Mods	88.7		4.9	9.5		99.7	119.5	113.5	Cont	435.8
Total	**123.5**		**4.9**	**9.8**		**99.7**	**119.5**	**113.5**		**470.9**
AIRBORNE AVIONICS (AA0700)										
Embedded GPS Inertial Navigation System (EGI)	34.5									34.5
Doppler GPS Navigation System (DGNS) (AN/ASN-128B)	57.8	18.9	15.4	2.7						94.8
Global Positioning System (GPS) [AN/ASN-149]	2.1									2.1
Improved Data Modem (IDM)	40.7	27.7	16.6	15.6	35.6	41.7	36.1	22.4	30.3	266.7
Aviation Mission Planning System	29.8	9.5	9.2	9.1	7.1					64.7
Embedded GPS Inertial Navigation System (EGI) PPI				11.9	10.5	5.3	10.6	11.0	4.4	53.7
Doppler GPS Navigation System (DGNS) (AN/ASN-128B) PPI			2.5	4.0	18.0	9.3	24.3	20.4	22.7	101.2
Total	**164.9**	**56.1**	**43.7**	**43.3**	**71.2**	**56.3**	**71.0**	**53.8**	**57.4**	**617.7**
ASE MODS (SIRFC) (AA0720)										
Laser Detecting Set AN/AVR-2A(V)/AH-64	8.9									8.9
AN/ALQ-211 Suite of Integrated Radio Frequency CMS	3.0	2.7	11.8	4.5	14.4	4.8	5.0	2.3		48.5
Advanced Threat Infrared Countermeasures (ATIRCM)	11.2									11.2
Total	**23.1**	**2.7**	**11.8**	**4.5**	**14.4**	**4.8**	**5.0**	**2.3**		**68.6**

Exhibit P-1M, Procurement Programs - Modification Summary

(TOA, Dollars in Millions)

System/Modification	1998 & Prior	1999	2000	2001	2002	2003	2004	2005	To Complete	Total Program
ASE MODS (ATIRCM) (AA0722)										
Advanced Threat Infrared Countermeasures (ATIRCM)				0.7	12.1	12.1	21.3	31.4	180.0	257.6
Total				**0.7**	**12.1**	**12.1**	**21.3**	**31.4**	**180.0**	**257.6**
GATM (AA0701)										
Global Air Traffic Management(GATM) - Fixed Wing			7.1	5.8	5.0	9.1	32.6	29.5	4.0	93.1
Global Air Traffic Management - Rotary Wing					15.0	14.2	38.3	6.5		74.0
Total			**7.1**	**5.8**	**20.0**	**23.3**	**70.9**	**36.0**	**4.0**	**167.1**
Grand Total	**4162.7**	**881.8**	**972.4**	**982.9**	**1456.5**	**1562.5**	**1684.2**	**1306.0**	**2897.1**	**15906.2**

Exhibit P-40, Budget Item Justification Sheet

Date: February 1999

Appropriation / Budget Activity/Serial No: AIRCRAFT PROCUREMENT / 1 / Aircraft

P-1 Item Nomenclature: ARL (TIARA) (A11500)

Program Elements for Code B Items:

Code:

Other Related Program Elements:

	Prior Years	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	To Complete	Total Prog
Proc Qty	6	2										8
Gross Cost	82.1	29.7	39.3	13.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	164.2
Less PY Adv Proc												
Plus CY Adv Proc												
Net Proc (P-1)	82.1	29.7	39.3	13.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	164.2
Initial Spares												
Total Proc Cost	82.1	29.7	39.3	13.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	164.2
Flyaway U/C												
Wpn Sys Proc U/C												

DESCRIPTION: The Airborne Reconnaissance Low (ARL) has evolved from two complementary tactical airborne systems ARL-I (Imagery Intelligence IMINT), an Electro-optic reconnaissance and surveillance system, and ARL-C (communications intelligence COMINT), system which provides real-time highly accurate radio intercept and location. The ARL program integrates the capabilities of ARL-I and ARL-C into a single system which satisfies the requirements identified by validated SOUTHCOM Statements of Need (SON). The merger of these programs minimizes the acquisition and operational costs, increases availability, and optimizes flexibility resulting from the integration of the electro-optic and Radio Frequency (RF) sensors into a unified system. The primary sensors will be a Signal Intelligence (SIGINT) with precision Direction Finding (DF) capability and IMINT electro-optics for target identification and classification and multimode capability including wide area search Moving Target Indicator (MTI) and Synthetic Aperture Radar (SAR). ARL provides near real-time tactical airborne SIGINT and near real time IMINT collection support to Joint Task Force (JTF) Commanders. ARL is a multi-echelon level, multi-INT (combined SIGINT and IMINT) system, designed for forward deployment/force projection in Operations Other Than War (OOTW) to mid intensity conflict environments. ARL also conducts daily JCS Sensitive Reconnaissance Operations, is rapidly self-deployable to support contingency operations, and is the airborne Reconnaissance Surveillance Target Acquisition (RSTA) platform of choice for various non-DOD government agencies such as DEA and FEMA. ARL is currently providing an indications and warnings capability to U.S. Armed Forces in Korea. A November 1995 Department of the Army (DA) Directed Requirement validated the USARPAC/PACOM SON requirement for six ARL-Ms with Electronic Intelligence (ELINT) and MTI/SAR.

JUSTIFICATION: Beginning in FY 00, all upgrades to ARL will be accomplished under the MOD-in-Service line, SSN AZ2050. There is no planned program in FY00 or FY01 for ARL under this SSN.

Exhibit P-5, Weapon Aircraft Cost Analysis		Appropriation/ Budget Activity/Serial No: AIRCRAFT PROCUREMENT / 1 / Aircraft			P-1 Line Item Nomenclature: ARL (TIARA) (A11500)			Weapon System Type:			Date: February 1999		
Aircraft	ID	**FY 98**			**FY 99**			**FY 00**			**FY 01**		
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
AIRCRAFT Flyaway Costs													
Airframes/CFE													
ARL-M Systems 4&5 B-Kits for WKSTS		26480	2	13240	6185								
Modify Airframe to ARL-M Config w/Sensors		4766	1	4766									
Upgrade to IMINT Suite (HW) - ARL-I					2903	1	2903						
Y2K Retrofit					1424								
Subtotal Flyaway Costs		**31246**			**10512**								
Non-Recurring Costs													
Tooling Equipment													
Other System Test													
Total Flyaway		**31246**			**10512**								
Support Cost													
Engineering Support		831			100								
Program Management (Admin Support)		3017			1048								
GFE		358											
Fielding					1185								
Peculiar Training Equipment													
Engineering Change Orders		1222											
Other (Testing/Spares)		2660			250								
Subtotal Support Cost		**8088**			**2583**								
Gross P-1 End Cost		39334			13095								
Less: Prior Year Adv Proc													
Net P-1 Full Funding Cost		39334			13095								
Plus: P-1 CY Adv Proc													
Other Non P-1 Costs													
Initial Spares													
Mods													
TOTAL		39334			13095								

Exhibit P-5a, Budget Procurement History and Planning

Date: February 1999

Appropriation / Budget Activity/Serial No:	Weapon System Type:	P-1 Line Item Nomenclature:
AIRCRAFT PROCUREMENT / 1 / Aircraft		ARL (TIARA) (A11500)

WBS Cost Elements: Fiscal Years	Contractor and Location	Contract Method and Type	Location of PCO	Award Date	Date of First Delivery	QTY Each	Unit Cost $OOO	Specs Avail Now?	Date Revsn Avail	RFP Issue Date
FY98										
ARL-M Systems 4 & 5 B-Kits for Workstations per aircraft/imagery sensors and high performance multimode radar	Cal Microwave, Belcamp, MD	C/FP	CECOM	Dec-97	May-99	2	13240	Yes	No	
Modify Airframes to ARL-M config w/sensors	Cal Microwave, Belcamp, MD	C/FP	CECOM	Feb-98	Feb-00	1	4766	Yes	No	
FY99										
Upgrade to IMINT Suite	Cal Microwave, Belcamp, MD	C/FP	CECOM	Feb-99	Feb-00	1	2903	Yes	No	

REMARKS: .

FY 00 / 01 BUDGET PRODUCTION SCHEDULE

P-1 Item Nomenclature: ARL (TIARA) (A11500)

Date: February 1999

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	
ARL -M Systems 4 & 5																															
Airframes with MTI/SAR	1	97	A	2		2																		1		1					

MFR	NAME / LOCATION	PRODUCTION RATES MIN.	1-8-5	MAX.	REACHED D +
1	California Microwave Belcamp,MD.	1	3	4	24

MFR Number		ADMIN LEAD TIME Prior 1 Oct.	ADMIN LEAD TIME After 1 Oct.	MFR After 1 Oct.	TOTAL After 1 Oct.	REMARKS
1	INITIAL	7	7	24	31	
	REORDER	4	2	22	24	
	INITIAL					
	REORDER					
	INITIAL					
	REORDER					
	INITIAL					
	REORDER					
	INITIAL					
	REORDER					

Exhibit P-40, Budget Item Justification Sheet

Date: February 1999

Appropriation / Budget Activity/Serial No: AIRCRAFT PROCUREMENT / 1 / Aircraft

P-1 Item Nomenclature: UTILITY F/W (MR) AIRCRAFT (A11300)

Program Elements for Code B Items:

Code:

Other Related Program Elements:

	Prior Years	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	To Complete	Total Prog
Proc Qty	7	5	5	5			2	2	2	2	5	35
Gross Cost	29.6	21.8	22.0	26.9	0.0	0.0	14.5	14.5	15.3	15.3	35.0	194.9
Less PY Adv Proc												
Plus CY Adv Proc												
Net Proc (P-1)	29.6	21.8	22.0	26.9	0.0	0.0	14.5	14.5	15.3	15.3	35.0	194.9
Initial Spares												
Total Proc Cost	29.6	21.8	22.0	26.9	0.0	0.0	14.5	14.5	15.3	15.3	35.0	194.9
Flyaway U/C												
Wpn Sys Proc U/C												

DESCRIPTION:
The Cessna UC-35A (Medium Range) aircraft is a fully integrated, two-pilot crew, 6-8 passenger capability, multi-engine system with worldwide self-deployability. It has advanced technology, while being a non-developmental, fixed wing aircraft system. The UC-35A aircraft is being fielded using the concept of Life Cycle Contractor Support.

JUSTIFICATION:
The FY 00 through FY 01 budget provides no funding for UC-35A procurement. The UC-35 is the number one procurement program for the Fixed Wing PMO investment strategy and the Army's Aviation Moderization Plan. This aircraft fills the void for the Army's medium range aircraft requirement. Total program requires thirty-five (35) aircraft.

Exhibit P-5, Weapon Aircraft Cost Analysis	Appropriation/ Budget Activity/Serial No: AIRCRAFT PROCUREMENT / 1 / Aircraft	P-1 Line Item Nomenclature: UTILITY F/W (MR) AIRCRAFT (A11300)	Weapon System Type:	Date: February 1999

Aircraft Cost Elements	ID CD	FY 98			FY 99			FY 00			FY 01		
		TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost
		$OOO	Each	$OOO	$OOO	Each	$OOO	$OOO	Each	$OOO	$OOO	Each	$OOO
AIRCRAFT Flyaway Costs													
Airframes / CFE		20754	5	4151	22780	5	4556						
Avionics		58			976								
A. GFE													
Other GFE													
Armament (FCR)													
ECO (All Flyaway Components)													
Other Costs (Halon)													
Subtotal Flyaway Costs		**20812**			**23756**								
Non-Recurring Costs													
Tooling Equipment													
Other System Test													
Total Flyaway		**20812**			**23756**								
Support Cost													
Engine (leftover A model)													
Airframe PGSE													
Engine PGSE													
Peculiar Training Equipment		96			249								
Publications Tech / Data		2			2								
Engineering Change Orders													
Other (specify) Net/ICS/Mtxsupt		1129			1426								
Subtotal Support Cost		**1227**			**1677**								
Gross P-1 End Cost		22039			25433								
Less: Prior Year Adv Proc													
Net P-1 Full Funding Cost		22039			25433								
Plus: P-1 CY Adv Proc													
Other Non P-1 Costs													
Initial Spares					1489								
Mods													
NOTE: Database incorrect at zero quantity for FY 99.													
TOTAL		**22039**			**26922**								

Exhibit P-40, Budget Item Justification Sheet

Date: February 1999

Appropriation / Budget Activity/Serial No: AIRCRAFT PROCUREMENT / 1 / Aircraft

P-1 Item Nomenclature: GUARDRAIL COMMON SENSOR/ACS (TIARA) (A02005)

Program Elements for Code B Items:

Code:

Other Related Program Elements:

	Prior Years	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	To Complete	Total Prog
Proc Qty												
Gross Cost	710.6	4.9	12.5	1.9	0.0	0.0	0.0	0.0	15.0	66.1	cont	cont
Less PY Adv Proc												
Plus CY Adv Proc												
Net Proc (P-1)	710.6	4.9	12.5	1.9	0.0	0.0	0.0	0.0	15.0	66.1	cont	cont
Initial Spares	117.6	11.3	0.8									129.7
Total Proc Cost	828.2	16.2	13.3	1.9	0.0	0.0	0.0	0.0	15.0	66.1	cont	cont
Flyaway U/C												
Wpn Sys Proc U/C												

DESCRIPTION: GUARDRAIL is an Airborne Signal intercept and emitter location system designed to provide commanders with critical battlefield information via a Commanders' Tactical Terminal (CTT) and other DoD tactical and fixed communication systems . The Army's GUARDRAIL/Common Sensor Systems (GRCS) will have a highly flexible architecture to allow deployment to support contingency operations.

The GUARDRAIL/Common Sensor System (GRCS) integrates the improved GUARDRAIL V for communications intelligence (COMINT), the Communications High Accuracy Airborne Location System (CHAALS/CHALS-X) for COMINT and precision emitter location, and the Advanced QUICKLOOK (AQL) for electronics intelligence (ELINT) and precision emitter location into a single signal intelligence (SIGINT) system. The airborne elements are integrated into the RC-12K/N/P aircraft. Ground processing is conducted in the Integrated processing facility (IPF) . Key performance requirements include a real-time COMINT and ELINT collection and high accuracy target location capability in communications and radar frequencies. The Interoperable Data Link (IDL)/Multi-Role Data Link (MRDL) connects the airborne elements and the ground processing element. Additional funding was provided in FY98 to integrate production CHAALS hardware into GRCS System 3 in Korea and to fund additional embedded training efforts.

The current GRCS capabilities will be merged with those of the Airborne Reconnaissance Low (ARL) into a single airborne system (the Aerial Comon Sensor (ACS) program) capable of providing a rapid response information dominance capability to land component commanders in the early 21st century.

JUSTIFICATION: There is no planned program in FY 00 or FY 01 for Guardrail. Funding in FY 2004 and beyond supports the ACS program.

Exhibit P-5, Weapon Aircraft Cost Analysis		Appropriation/ Budget Activity/Serial No: AIRCRAFT PROCUREMENT / 1 / Aircraft			P-1 Line Item Nomenclature: GUARDRAIL COMMON SENSOR/ACS (TIARA) (A02005)			Weapon System Type:			Date: February 1999		
Aircraft Cost Elements	ID CD	**FY 98**			**FY 99**			**FY 00**			**FY 01**		
		TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost
		$OOO	Each	$OOO	$OOO	Each	$OOO	$OOO	Each	$OOO	$OOO	Each	$OOO
AIRCRAFT Flyaway Costs													
Aircraft													
Aircraft Modifications													
SIGINT Payloads													
IMINT Payloads													
Data Links													
ECO's													
Subtotal Flyaway Costs													
Non-Recurring Costs													
Tooling Equipment													
Other System Test													
Total Flyaway													
Support Cost													
Government In -House/Program MGMT ADM		103											
Relay Facilities													
Test & Integration Facility		448											
Fielding/ICS		2535			1925								
Ground Processing Facilities													
Communications & Relay Equipment													
Payload Contractor Support													
CHAALS		2955											
Publications Tech/Data													
Engineering Change Orders													
Embedded Training		6459											
Training													
Subtotal Support Cost		**12500**			**1925**								
Gross P-1 End Cost		12500			1925								
Less: Prior Year Adv Proc													
Net P-1 Full Funding Cost		12500			1925								
Plus: P-1 CY Adv Proc													
Other Non P-1 Costs													
Initial Spares		770											
Mods													
TOTAL		13270			1925								

Exhibit P-40, Budget Item Justification Sheet

Date: February 1999

Appropriation / Budget Activity/Serial No: AIRCRAFT PROCUREMENT / 1 / Aircraft

P-1 Item Nomenclature: UH-60 BLACKHAWK (MYP) (AA0005)

Program Elements for Code B Items:

Code:

Other Related Program Elements:

	Prior Years	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	To Complete	Total Prog
Proc Qty	1418	34	28	29	8	9	11	20	4	20		1581
Gross Cost	7354.5	288.1	322.2	294.8	86.1	108.2	109.2	236.8	62.8	228.1	0.0	9090.8
Less PY Adv Proc	2210.4	72.8	65.1	23.2		16.7	13.9	30.3	8.2	32.5		2473.1
Plus CY Adv Proc	2283.2	65.1	23.2		16.7	13.9	30.3	8.2	32.5			2473.1
Net Proc (P-1)	7427.3	280.4	280.3	271.6	102.8	105.4	125.6	214.7	87.1	195.6	0.0	9090.8
Initial Spares	410.2	6.4	2.4	1.9								421.0
Total Proc Cost	7837.5	286.8	282.7	273.5	102.8	105.4	125.6	214.7	87.1	195.6	0.0	9511.8
Flyaway U/C	5.0	7.8	10.3	9.1	7.4	9.2	9.4	10.5	11.2	10.2		5.4
Wpn Sys Proc U/C	5.5	8.7	11.6	10.2	10.8	12.0	9.9	11.8	15.7	11.4		6.0

DESCRIPTION

The UH-60 BLACK HAWK is a twin engine, single rotor helicopter that is designed to support the Army's airmobility doctrine for employment of land forces into the 21st century. The BLACK HAWK is used in the performance of the Air Assault, General Support and Aeronautical Evacuation missions. It is designed to carry a crew of four and 11 combat-equipped troops or an external load up to 9,000 pounds. It performs the missions of transporting troops and equipment into combat, resupplying the troops while in combat, and performing the associated functions of aeromedical evacuation, repositioning of reserves, and command and control.

JUSTIFICATION

FY00 funds are required for the procurement of aircraft, continuation of fielding, and to provide for PMO operations, matrix support, and contractor engineering support for the procurement of aircraft. The BLACK HAWK budget is predicated on firm fixed prices on the FY97-01 Airframe multiyear contract. The FY00 unit cost is lower than other years due to the utililization of EH-60 engines, made available by program cancellation. Included in the FY99 PM Administration costs was the completion of the Utility Fleet study. This effort, along with further risk reduction efforts in FY00 and FY01, will lead to the initiation of the UH-60 Modernization Program in FY02.

Exhibit P-5, Weapon Aircraft Cost Analysis		Appropriation/ Budget Activity/Serial No: AIRCRAFT PROCUREMENT / 1 / Aircraft			P-1 Line Item Nomenclature: UH-60A (BLACK HAWK) (MYP) (A05002)			Weapon System Type:			Date: February 1999		
Aircraft Cost Elements	ID CD	**FY 98**			**FY 99**			**FY 00**			**FY 01**		
		TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost
		$OOO	Each	$OOO	$OOO	Each	$OOO	$OOO	Each	$OOO	$OOO	Each	$OOO
AIRCRAFT Flyaway Costs													
Airframes / CFE		176140	28	6291	188726	29	6508	57901	8	7238	72481	9	8053
Engines/Accessories		46017	84	548	33379	58	576	283			5062	8	633
Avionics													
A. GFE		11719			15831						3867		
Other GFE		5947			10369								
Armament													
ECO (All Flyaway Components)		2045						947			1087		
Other Costs (Mission Kits)		46447			15982								
Subtotal Flyaway Costs		**288315**			**264287**			**59131**			**82497**		
Non-Recurring Costs													
Tooling Equipment													
Other Nonrecurring		395											
Total Flyaway		**288710**			**264287**			**59131**			**82497**		
Support Cost													
Airframe PGSE													
Engine PGSE													
Peculiar Training Equipment		3000											
Publications Tech / Data		4487			6295			3385			4497		
Engineering Change Orders													
PM Administration		17068			19308			19688			17500		
Fielding		8937			4910			3936			3672		
Subtotal Support Cost		**33492**			**30513**			**27009**			**25669**		
Gross P-1 End Cost		322202			294800			86140			108166		
Less: Prior Year Adv Proc		65143			23219						16700		
Net P-1 Full Funding Cost		257059			271581			86140			91466		
Plus: P-1 CY Adv Proc		23219						16700			13902		
Other Non P-1 Costs													
Initial Spares		2396			1939								
UH-60 Mods		15146			17091			12087			15141		
Environmental Mods		4483			4504								
UH-60Q MEDEVAC		9102											
Light Utility Helicopter													
TOTAL		**311405**			**295115**			**114927**			**120509**		

FY 00 / 01 BUDGET PRODUCTION SCHEDULE

P-1 Item Nomenclature: UH-60A (BLACK HAWK) (MYP) (A05002)

Date: February 1999

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	
Airframes / CFE		FY97	A	34	30	4																		A							4
		FY 98	A	28	0	28			A			1	1	1	1	2	3	7	2	2	3	2	1	2							
		FY 99	A	29	0	29															6				1	2	1	2	2	2	13
		FY 00	A	8	0	8																									8
		FY 01	A	9	0	9																									9
		FY98	N	1	0	1																					A				1
		FY99	N	5	0	5																					A				5
		FY00	N	13	0	13																									13
		FY01	N	18	0	18																									18

	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	Sikorsky, Stratford, CT	18	60	96	

MFR Number			ADMIN LEAD TIME Prior 1 Oct.	After 1 Oct.	MFR After 1 Oct.	TOTAL After 1 Oct.
	INITIAL		8	3	6	9
	REORDER			3	6	9
	INITIAL					
	REORDER					
	INITIAL					
	REORDER					
	INITIAL					
	REORDER					
	INITIAL					
	REORDER					

REMARKS

Four aircraft procured with FY97 funding are scheduled to be delivered as UH-60Q/HH-60L MEDEVAC aircraft at a rate of one per month, starting in March of CY2000. Option for delivery of the first 6 aircraft of the FY99 buy awarded the month as delivery (Dec 98).
Navy aircraft will be modified to a CH-60 configuratioin with an ECP.
Airframe production leadtimes shown are based on the provision of advance procurement

FY 00 / 01 BUDGET PRODUCTION SCHEDULE

P-1 Item Nomenclature: UH-60A (BLACK HAWK) (MYP) (A05002)

Date: February 1999

COST ELEMENTS	MFR	FY	SERV	PROC QTY Each	ACCEP. PRIOR TO 1 OCT	BAL DUE AS OF 1 OCT	FY00 OCT	FY00 NOV	FY00 DEC	FY00 JAN	FY00 FEB	FY00 MAR	FY00 APR	FY00 MAY	FY00 JUN	FY00 JUL	FY00 AUG	FY00 SEP	FY01 OCT	FY01 NOV	FY01 DEC	FY01 JAN	FY01 FEB	FY01 MAR	FY01 APR	FY01 MAY	FY01 JUN	FY01 JUL	FY01 AUG	FY01 SEP	LATER
Airframes / CFE		FY97	A	34	30	4						1	1	1	1																
		FY 98	A	28	28																										
		FY 99	A	29	16	13	2	2	2	1	1					1	1	1	1	1											
		FY 00	A	8	0	8			A												1	1	1	1	1	1	1		1		
		FY 01	A	9	0	9															A									1	8
		FY98	N	1											1																
		FY99	N	5	0	5										1	2	1	1												
		FY00	N	13	0	13			A										1	1	2	1	2	1	2	1	2				
		FY01	N	18	0	18															A							1	2	1	14

MFR	NAME / LOCATION	PRODUCTION RATES MIN.	PRODUCTION RATES 1-8-5	PRODUCTION RATES MAX.	REACHED D +	MFR Number		ADMIN LEAD TIME Prior 1 Oct.	ADMIN LEAD TIME After 1 Oct.	MFR After 1 Oct.	TOTAL After 1 Oct.
							INITIAL	8	3	6	9
1	Sikorsky, Stratford, CT	18	60	96			REORDER		3	6	9
							INITIAL				
							REORDER				
							INITIAL				
							REORDER				
							INITIAL				
							REORDER				
							INITIAL				
							REORDER				

REMARKS

Four aircraft procured with FY97 funding are scheduled to be delivered as UH-60Q /HH-60L MEDEVAC aircraft at a of one per month starting in March of CY 2000. Option for first 6 aircraft of FY99 buy awarded in the month delivered (Dec 98. Navy aircraft are to be modified to the CH-60 configuration. Leadtimes shown assume provision of advance procurement

FY 00 / 01 BUDGET PRODUCTION SCHEDULE

P-1 Item Nomenclature: UH-60A (BLACK HAWK) (MYP) (A05002)

Date: February 1999

COST ELEMENTS	MFR	FY	SERV	PROC QTY Each	ACCEP. PRIOR TO 1 OCT	BAL DUE AS OF 1 OCT	Fiscal Year 02												Fiscal Year 03												LATER
										Calendar Year 02												Calendar Year 03									
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
Airframes / CFE		FY97	A	34	34																										
		FY 98	A	28	28																										
		FY 99	A	29	29																										
		FY 00	A	8	8																										
		FY 01	A	9	1	8	1	1		1	1	1	1	1	1																
		FY98	N	1	1																										
		FY99	N	5	5																										
		FY00	N	13	13																										
		FY01	N	18	4	14	2	1	2	1	2	1	2	1	2																

MFR	NAME / LOCATION	PRODUCTION RATES MIN.	PRODUCTION RATES 1-8-5	PRODUCTION RATES MAX.	REACHED D +	MFR Number		ADMIN LEAD TIME Prior 1 Oct.	ADMIN LEAD TIME After 1 Oct.	MFR After 1 Oct.	TOTAL After 1 Oct.	REMARKS
							INITIAL	8	3	6	9	
1	Sikorsky, Stratford, CT	18	60	96			REORDER		3	6	9	
							INITIAL					
							REORDER					
							INITIAL					
							REORDER					
							INITIAL					
							REORDER					
							INITIAL					
							REORDER					

Exhibit P-5a, Budget Procurement History and Planning

Date: February 1999

Appropriation / Budget Activity/Serial No:	Weapon System Type:	P-1 Line Item Nomenclature:
AIRCRAFT PROCUREMENT / 1 / Aircraft		UH-60A (BLACK HAWK) (MYP) (A05002)

WBS Cost Elements: Fiscal Years	Contractor and Location	Contract Method and Type	Location of PCO	Award Date	Date of First Delivery	QTY Each	Unit Cost $OOO	Specs Avail Now?	Date Revsn Avail	RFP Issue Date
Airframes / CFE										
FY97	Sikorsky, Stratford CT	SSM/FP	AMCOM	Mar-99	Mar-00	4	3712	Yes	No	
FY 98 (Base Price)	Sikorsky, Stratford CT	SSM/FP	AMCOM	Dec-97	Mar-98	18	6738	Yes	No	
FY98 (Option)	Sikorsky, Stratford CT	SSM/FP	AMCOM	Feb-98	Jul-98	10	5486	Yes	No	
FY99 (Option)	Sikorsky, Stratford CT	SSM/FP	AMCOM	Dec-98	Dec-98	6	5465	Yes	No	
FY 99 (FY99 Base Price)	Sikorsky, Stratford CT	SSM/FP	AMCOM	Dec-98	May-99	12	7048	Yes	No	
FY 99 (Option)	Sikorsky, Stratford CT	SSM/FP	AMCOM	Dec-98	Jul-99	11	5873	Yes	No	
FY00 (Base Price)	Sikorsky, Stratford CT	SSM/FP	AMCOM	Dec-99	Dec-00	4	8323	Yes	No	
FY00(Option)	Sikorsky, Stratford CT	SSM/FP	AMCOM	Dec-99	Jan-01	4	6153	Yes	No	
FY 01(Option)	Sikorsky, Stratford CT	SSM/FP	AMCOM	Dec-00	Sep-01	9	8053	Yes	No	
Engines/Accessories										
FY 97 for FY98	General Electric, Lynn MA	SS/FP	ATCOM	Sep-97	Mar-98	36	584	Yes	No	
FY 98 Contract)	General Electric, Lynn MA	SS/FP	AMCOM	Feb-98	Nov-98	20	578	Yes	No	
FY98 (EH-60)	General Electric, Lynn MA	SS/FP	AMCOM	Mar-99	Mar-99	28	480	Yes	No	
FY98 for FY99	General Electric, Lynn MA	SS/FP	AMCOM	Dec-97	Apr-99	16	603	Yes	No	
FY99 (Contract)	General Electric, Lynn MA	SS/FP	AMCOM	Dec-98	Mar-99	34	585	Yes	No	
FY99 (EH-60)	General Electric, Lynn MA	SS/FP	AMCOM	Mar-99	Mar-99	8	480	Yes	No	
FY 00 (SPM)	General Electric, Lynn MA	SS/FP	AMCOM	Dec-99	N/A	N/A	N/A	Yes	No	
FY00 for FY01	General Electric, Lynn MA	SS/FP	AMCOM	Dec-99	Feb-01	8	633	Yes	No	

REMARKS: Unit costs are based on the P5, which includes hardware cost and the associated contractor system project management. When both base quantities and option quantities are procured in the same year, the SPM is added to the base quantity price. All 34 of the FY97 aircraft have been completed, but four of these aircraft are to be delivered in the UH-60Q MEDEVAC configuration (per Congressional direction). The cost shown is the estimated amount to procure the MEDEVAC variants. Aircraft option prices exercised in FY98 are for a Congressional Plus Up. Options exercised in FY99 are for an Army Plus Up of 10 aircraft and a Congressional Plus Up of 7 aircraft. FY00 and FY01 base requirements were previously planned for procurement by the Navy. Current plans are for the Army to buy the base requirement, with these quantities reverting to the appropriate option price, once a base quantity of 18 has been procured. Current plans are to procure 36 engines (already in GFE stores at Sikorsky) from the previously cancelledAdvanced Quick Fix Program to help satisfy outyear hardware requirements (all FY00 requirements, 8 for the FY99 requirement, and 10 for the FY01 requirement). This acquisition strategy significantly reduces the engine unit costs shown on the P5 in those years.

Exhibit P-43, Simulator and Training Device Justification

Date: February 1999

Appropriation / Budget Activity/Serial No.	P-1 Item Nomenclature	Other Related Program Elements:	IOC Date:
AIRCRAFT PROCUREMENT / 1 / Aircraft	UH-60 BLACKHAWK (MYP) (AA0005)		

Training Device by Type	Site	Delivery Date	Ready for Training Date	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005
CIST	Ft. Eustis	Nov-99	Dec-99	3000							
AFCS	Ft. Eustis	Feb-98	Mar-01								

Note: Automatic Flight Control System (AFCS) cost is included as part of the Command Instrument System Trainer (CIST).

The CIST provides an authentic representation of the operational functions and responses on the Command Instrument System on the UH-60 BLACK HAWK aircraft. It consists of an Instructor/Operator (I/O) station with 6 computer student stations capable of training 12 students.

The AFCS demonstrates and identifies maintenance tasks for the Automatic Flight Control System. Physical description is the same as the CIST.

Exhibit P-40, Budget Item Justification Sheet

Date: February 1999

Appropriation / Budget Activity/Serial No: AIRCRAFT PROCUREMENT / 1 / Aircraft

P-1 Item Nomenclature: UH-60 BLACKHAWK (MYP) (ADV PROC) (AA0005)

Program Elements for Code B Items:

Code:

Other Related Program Elements:

	Prior Years	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	To Complete	Total Prog
Proc Qty												
Gross Cost	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Less PY Adv Proc												
Plus CY Adv Proc	2283.2	65.1	23.2	0.0	16.7	13.9	30.3	8.2	32.5	0.0		2473.1
Net Proc (P-1)	2283.2	65.1	23.2	0.0	16.7	13.9	30.3	8.2	32.5	0.0	0.0	2473.1
Initial Spares												
Total Proc Cost	2283.2	65.1	23.2	0.0	16.7	13.9	30.3	8.2	32.5	0.0	0.0	2473.1
Flyaway U/C												
Wpn Sys Proc U/C												

DESCRIPTION:

The Advance Procurement for the UH-60 BLACK HAWK contains funding for the airframe and engine contracts as well as for funding for Government Furnished Equipment (GFE) to support UH-60 aircraft and mission kit production. GFE includes such items as the Auxiliary Power Unit (APU), Hover Infrared Suppressor Subsystem (HIRSS), Crew Seats, and other miscellaneous equipment.

JUSTIFICATION:

Advance Procurement requested in FY98, FY00, and FY01 is for termination liability on the base and option aircraft planned for procurement on the FY97-01 multiservice multiyear contract, as well as for the procurement of GFE items, including the T700-GE-701C engine, the Auxiliary Power Unit (APU), Crew Seats, and the Hover Infrared Suppressor Subsystem (HIRSS). The Prime Contractor has waived the requirement for Advance Procurement funding in FY99 only.

Advance Procurement Requirements Analysis-Funding (P-10A)

First System Award Date:

First System Completion Date:

Date: February 1999

Appropriation / Budget Activity/Serial No: AIRCRAFT PROCUREMENT / 1 / Aircraft

P-1 Line Item Nomenclature / Weapon System: UH-60 BLACKHAWK (MYP) (ADV PROC) (AA0005)

($ in Millions)

	PLT (mos)	When Rqd (mos)	Pr Yrs	1997	1998	1999	2000	2001	2002	2003	2004	2005	To Comp	Total
End Item Quantity:			1,418	34	28	29	8	9	11	20	4	20		1,581
CFE Airframe	18	6	1406.8	40.0	12.3	0.0	13.1	5.0	12.6	4.6	14.1			1508.5
Engines	14	3	621.9	20.8	9.4	0.0	3.6	6.1	12.4	2.5	12.9			689.6
Avionics	Var	3	124.3											124.3
Auxiliary Power Unit	15	3	40.6	1.3	1.0	0.0	0.0	0.8	1.6	0.3	1.6			47.2
Armored Crew Seat	12	3	19.7	1.4	0.0	0.0	0.0	1.3	2.4	0.5	2.5			27.8
Hover Infrared Suppressor	14	3	28.1	0.8			0.0	0.7	1.3	0.3	1.4			32.6
Elastomeric Bearings	10	3	1.3	0.2										1.5
Other	Var	Var	40.5	0.6	0.5									41.6
Total Advance Procurement			2283.2	65.1	23.2		16.7	13.9	30.3	8.2	32.5			2473.1

Description:Leadtime shown is manufacturing (production) leadtime. CFE airframe is termination liability of long lead as well as economic order quantities. Engine, avionics, APU, crew seats HIRSS, and elastomeric bearings are items that are fully funded in advance.Other cost is for mission kits and concurrent support of fully funded items.

Advance Procurement Requirements Analysis-Budget Justification (P-10B)

Date: February 1999

Appropriation / Budget Activity/Serial No: AIRCRAFT PROCUREMENT / 1 / Aircraft

P-1 Line Item Nomenclature / Weapon System: UH-60 BLACKHAWK (MYP) (ADV PROC) (AA0005)

($ in Millions)

	PLT (mos)	Quantity Per Assembly	Unit Cost	2000 Qty	2000 Contract Forecast Date	2000 Total Cost Request	2001 Qty	2001 Contract Forecast Date	2001 Total Cost Request
UH-60L BLACK HAWK									
Airframe	18	1	1.458/.452	9	Dec 99	13.1	11	Dec 00	5.0
Engine	14	2	.597/.606	6	Dec 99	3.6	10	Dec 00	6.1
Auxiliary Power Unit	15	1	NA/.077				11	Apr 01	0.8
Crew Seats	12	2	NA/.059				22	Apr 01	1.3
Hover Infrared Suppressor	14	1 Kit	NA/.064				11	Apr 01	0.7
Total Advance Procurement						16.7			13.9

Description: Airframe cost in FY2000 is for termination liability on the current multiyear contract for both long lead (LLT) and Economic Order Quantity (EOQ) items. FY2001 airframe funds are for termination liability for the first year of an anticipated follow-on multiyear contract for LLT only, pending approval of MYC contract commencing in FY 2002. Engine requirements are being procured on an existing Indefinite Delivery, Indefinite Quantity (IDIQ) contract with currently priced options on deliveries through CY2000--additional option prices are planned for negotiation. Other GFE items are fully funded items on contracts which have yet to be definitized.

Advance Procurement Requirements Analysis-Present Value Analysis (P-10C)

Date: February 1999

Appropriation / Budget Activity/Serial No: AIRCRAFT PROCUREMENT / 1 / Aircraft

P-1 Line Item Nomenclature / Weapon System: UH-60 BLACKHAWK (MYP) (ADV PROC) (AA0005)

($ in Millions)

	Pr Yrs	1997	1998	1999	2000	2001	2002	2003	2004	2005	To Comp	Total
Proposal w/o AP												
Then Year Cost	10	59	162	263	285	210	144	162	157	162	205	1819
Constant Year Cost	11	62	167	267	285	206	140	154	146	147	181	1766
Present Value	11	59	153	236	243	170	111	118	108	105	123	1437
AP Proposal												
Then Year Cost	10	59	159	254	272	199	137	155	151	155	197	1748
Constant Year Cost	11	62	164	258	272	196	133	147	140	141	173	1697
Present Value	11	59	150	228	232	161	106	113	104	101	117	1382
AP Savings (Difference)												
Then Year Cost			-3	-9	-13	-11	-7	-7	-6	-7	-8	-71
Constant Year Cost			-3	-9	-13	-10	-7	-7	-6	-6	-8	-69
Present Value			-3	-8	-11	-9	-5	-5	-4	-4	-6	-55

Remarks: Costs shown are total program outlays. The AP proposal represents the cost associated with the FY97-01 airframe multiyear contract and an anticipated multiyear contract commencing in FY 2001. Proposal without AP is the estimated cost for airframe single year contracts from FY 1997 through FY 2005.

Advance Procurement Requirements Analysis-Execution (P-10D)

Date: February 1999

Appropriation / Budget Activity/Serial No: AIRCRAFT PROCUREMENT / 1 / Aircraft

P-1 Line Item Nomenclature / Weapon System: UH-60 BLACKHAWK (MYP) (ADV PROC) (AA0005)

($ in Millions)

		1998					1999					2000		2001	
	PLT (mos)	Qty	Contract Forecast Date	Actual Contract Date	Total Cost Request	Actual Contract Cost	Qty	Contract Forecast Date	Actual Contract Date	Total Cost Request	Actual Contract Cost	Qty	Contract Forecast Date	Qty	Contract Forecast Date
UH-60L BLACK HAWK															
Airframe	18	12	Dec-97	Dec-97	12.3	12.3						9	Dec-99	11	Dec-00
Engine	14	12	Dec-97	Dec-97	6.7	9.4						6	Dec-99	10	Dec-00
Auxiliary Power Unit	15	12	Dec-97	Apr-98	1.0	1.0								11	Apr-01
Crew Seats	12	24	Dec-97		0.5									22	Apr-01
Hover Suppresspr	14	12	May-98		0.8									11	Apr-01
Elastomeric Bearings	10	12	Dec-97		0.2										
Avionics	Var	12	Various		3.0										
Other	N/A	N/A	Dec-97	Jan-98	0.5	0.5									
Total Advance Procurement					25.0	23.2									

Description:Source of estimated dollars and award dates for FY 1998 is the FY98 President's Budget. Engine quantity procured was four greater than had been projected. Avionics and Elastomeric Bearings are now being requisitioned from the supply system. Other cost is planned for procurement out of the Buy line.

Advance Procurement Requirements Analysis-Obligations/Expenditures (P-10E)

Date: February 1999

Appropriation / Budget Activity/Serial No: AIRCRAFT PROCUREMENT / 1 / Aircraft

P-1 Line Item Nomenclature / Weapon System: UH-60 BLACKHAWK (MYP) (ADV PROC) (AA0005)

($ in Millions)

	Total Program	FY 98 1997 Oct	Nov	Dec	1998 Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total Obl/Exp (Cum)	Ending Balance (Cum)
FY 98															
Obl Plan	24.4			23.5			.9							24.4	
Actual	23.2			21.7	.5			1.0						23.2	
Exp Plan															
Actual															
FY 99															
Obl Plan															
Actual															
Exp Plan															
Actual															
FY 00															
Obl Plan	16.7														16.7
FY 01															
Obl Plan	13.9														13.9

Narrative: Expenditure plans are not utilized.

Advance Procurement Requirements Analysis-Obligations/Expenditures (P-10E)

Date: February 1999

Appropriation / Budget Activity/Serial No: AIRCRAFT PROCUREMENT / 1 / Aircraft

P-1 Line Item Nomenclature / Weapon System: UH-60 BLACKHAWK (MYP) (ADV PROC) (AA0005)

($ in Millions)

	Starting Balance	FY 99 1998 Oct	Nov	Dec	1999 Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total Obl/Exp (Cum)	Ending Balance (Cum)
FY 98															
Obl Plan															
Actual															
Exp Plan															
Actual															
FY 99															
Obl Plan															
Actual															
Exp Plan															
Actual															
FY 00															
Obl Plan	16.7														16.7
FY 01															
Obl Plan	13.9														13.9

Narrative:

Advance Procurement Requirements Analysis-Obligations/Expenditures (P-10E)

Date: February 1999

Appropriation / Budget Activity/Serial No: AIRCRAFT PROCUREMENT / 1 / Aircraft

P-1 Line Item Nomenclature / Weapon System: UH-60 BLACKHAWK (MYP) (ADV PROC) (AA0005)

($ in Millions)

	Starting Balance	FY 00 1999 Oct	Nov	Dec	2000 Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total Obl/Exp (Cum)	Ending Balance (Cum)
FY 98															
Obl Plan															
Actual															
Exp Plan															
Actual															
FY 99															
Obl Plan															
Actual															
Exp Plan															
Actual															
FY 00															
Obl Plan	16.7			16.7										16.7	
FY 01															
Obl Plan	13.9														13.9

Narrative:

Advance Procurement Requirements Analysis-Obligations/Expenditures (P-10E)

Date: February 1999

Appropriation / Budget Activity/Serial No: AIRCRAFT PROCUREMENT / 1 / Aircraft

P-1 Line Item Nomenclature / Weapon System: UH-60 BLACKHAWK (MYP) (ADV PROC) (AA0005)

($ in Millions)

	Starting Balance	FY 01 2000 Oct	Nov	Dec	2001 Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total Obl/Exp (Cum)	Ending Balance (Cum)
FY 98															
Obl Plan															
Actual															
Exp Plan															
Actual															
FY 99															
Obl Plan															
Actual															
Exp Plan															
Actual															
FY 00															
Obl Plan															
FY 01															
Obl Plan	13.9			11.1				2.8						13.9	

Narrative:

Exhibit P-40, Budget Item Justification Sheet											Date: February 1999	
Appropriation / Budget Activity/Serial No: AIRCRAFT PROCUREMENT / 2 / Modification of Aircraft								P-1 Item Nomenclature: GUARDRAIL MODS (TIARA) (AZ2000)				
Program Elements for Code B Items:				Code:	Other Related Program Elements:							
	Prior Years	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	To Complete	Total Prog
Proc Qty												
Gross Cost	559.4	30.3	14.3	35.8	18.9	8.3	19.4	4.9	8.3	4.9	0.0	704.5
Less PY Adv Proc												
Plus CY Adv Proc												
Net Proc (P-1)	559.4	30.3	14.3	35.8	18.9	8.3	19.4	4.9	8.3	4.9	0.0	704.5
Initial Spares	0.4	5.7	3.2	6.8	5.8			5.9		2.9		30.7
Total Proc Cost	559.8	36.0	17.5	42.6	24.7	8.3	19.4	10.8	8.3	7.8	0.0	735.2
Flyaway U/C												
Wpn Sys Proc U/C												

DESCRIPTION: Guardrail is an Airborne signal intercept and emitter location system designed to provide tactical commanders with critical battlefield information via a Joint Tactical Terminal (JTT) and other DoD tactical and fixed communications systems. The Army's GUARDRAIL /Common Sensor system (GRCS) will have a highly flexible architecture to allow rapid deployment to support contingency operations.

The GRCS integrates the Improved GUARDRAIL V for communications intelligence (COMINT), the Communications High Accuracy Airborne Location System (CHAALS/CHALS-X) for COMINT and precision emitter location, and the Advanced QUICKLOOK (AQL) for electronics intelligence (ELINT) and precision emitter location into a single signal intelligence (SIGINT) system. The airborne elements are integrated into the RC-12K/N/P/Q aircraft. Ground processing is conducted in the Integrated Processing Facility (IPF). Key performance requirements include a real- time COMINT and ELINT collection and high accuracy target location capability in communications and radar frequencies. The Interoperable Data Link (IDL)/Multi-Role Data Link (MRDL) connects the airborne elements and the ground processing element. A satellite remote relay will provide rapid deployment capability .

JUSTIFICATION: FY 00 funds continue GRCS System 2 Block Upgrades to System 2 production contract to provide an advanced tactical SIGINT architecture and Direct Air to Satellite Relay (DASR) . DASR allows the contingency corps to be deployed on worldwide missions with little to no airlift support and reduced forwardly deployed personnel. FY00 also funds the installation and fielding of System 2. FY01 funds procure a datalink antenna/receiver subsystem for existing trailer-based Integrated Processing Facilities (IPFs). This system will migrate to HMMWV-based mini-IPF in FY03.

Exhibit P-40M Budget Item Justification Sheet

Date: February 1999

Appropriation / Budget Activity/Serial No.: AIRCRAFT PROCUREMENT / 2 / Modification of Aircraft

P-1 Item Nomenclature: GUARDRAIL MODS (TIARA) (AZ2000)

Program Elements for Code B Items:

Code:

Other Related Program Elements:

Description		Fiscal Years									
OSIP NO.	Classification	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	TC	Total
System 2 Block Upgrade											
1-96-666-6666	Operational	198.8	35.8	18.9	0.0	0.0	0.0	0.0	0.0	0.0	253.5
TIBS and TRIXS for GRCS											
1-96-777-7777	Operational	27.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	27.1
Mini-IPF											
1-00-111-1111	Operational	0.0	0.0	0.0	8.3	19.4	4.9	8.3	4.9	0.0	45.8
Totals		225.9	35.8	18.9	8.3	19.4	4.9	8.3	4.9	0.0	326.4

INDIVIDUAL MODIFICATION Date February 1999

MODIFICATION TITLE: System 2 Block Upgrade 1-96-666-6666

MODELS OF SYSTEMS AFFECTED: GUARDRAIL/Common Sensor System to RC-12 P/Q

DESCRIPTION / JUSTIFICATION:

The GUARDRAIL/Common Sensor System to Block Upgrade is a modification to the System 2 Production Contract. It provides the required outyear efforts in support of the basic GR/CS System 2 program and major ECPs to include Advanced Tactical SIGINT Architecture (ATSA), Advanced Situations Analysis and Reporting Tools (ASART) and Direct Air to Satellite Relay (DASR) . The ECPs were awarded with prior year funds and included installation costs. These funds are the annualized costs required to support these efforts. These annualized costs include contractor and government engineering, interim contractor support, training, testing, fielding, and program management. There are no hardware quantity procurements planned.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

	Planned	Accomplished
IPF Upgrade Award;	1QFY93	1QFY93
DASR Contract Awards;	2QFY94	4QFY94
ASART Contract Award;	4QFY94	4QFY94
System Fielding;	2QFY00	
Field Testing	3QFY00	

Installation Schedule:

	Pr Yr	FY 1999				FY 2000				FY 2001				FY 2002				FY 2003			
	Totals	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Inputs																					
Outputs																					

	FY 2004				FY 2005				FY 2006				FY 2007				To	Totals
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Complete	
Inputs																		
Outputs																		

METHOD OF IMPLEMENTATION: ADMINISTRATIVE LEADTIME: N/A PRODUCTION LEADTIME: N/A

Contract Dates:	FY 1999	FY 2000	FY 2001
Delivery Date:	FY 1999	FY 2000	FY 2001

INDIVIDUAL MODIFICATION — Date: February 1999

MODIFICATION TITLE (Cont): System 2 Block Upgrade 1-96-666-6666

FINANCIAL PLAN: ($ in Millions)

	FY 1998 and Prior		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		FY 2004		FY 2005		TC		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																				
PROCUREMENT																				
Kit Quantity																				
Installation Kits																				
Installation Kits, Nonrecurring				21.0		1.7														22.7
Equipment		99.1																		99.1
Equipment, Nonrecurring		46.5																		46.5
Engineering Change Orders		2.5																		2.5
GFE/Aircraft Support		10.5		3.4		6.7														20.6
Training/Fielding		1.2		1.5		4.8														7.5
Support Equipment		1.9		0.4																2.3
Other		3.6																		3.6
Interim Contractor Support		1.0		2.9		2.4														6.3
Testing		7.0		1.7																8.7
Gov In House/Prg Mgmt ADM		11.5		2.3		1.5														15.3
Contractor Engineering		14.0		2.6		1.8														18.4
Installation of Hardware																				
FY 1998 & Prior Eqpt -- Kits																				
FY 1999 Eqpt -- Kits																				
FY 2000 Eqpt -- Kits																				
FY 2001 Eqpt -- Kits																				
FY 2002 Eqpt -- kits																				
FY 2003 Eqpt -- kits																				
FY 2004 Eqpt -- kits																				
FY 2005 Eqpt -- kits																				
TC Equip-Kits																				
Total Installment																				
Total Procurement Cost		198.8		35.8		18.9														253.5

INDIVIDUAL MODIFICATION Date February 1999

MODIFICATION TITLE: TIBS and TRIXS for GRCS 1-96-777-7777

MODELS OF SYSTEMS AFFECTED:

DESCRIPTION / JUSTIFICATION:

This modification provides a Tactical Information Broadcast Service (TIBS) capability for GR/CS Systems 3, 4, and 1 and provides Tactical Reconnaissance Intelligence Exchange System (TRIXS) capability for all GR/CS systems. TIBS will be integrated into the 3 IPFs allowing the IPFs to become TIBS producers. The TRIXS capability will allow broadcast and receive on both the collateral and SI networks for GRCS Systems 1, 3, and 4. The TRIXS capability will be accomplished by using CECOM 's Intelligence and Information Warfare Directorate (I2WD) as the system integrator. The hardware will be integrated into a shelterized HMMWV which will then be fielded to the existing GRCS Systems .

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

	Planned	Accomplished		Planned	Accomplished
TIBS Contract Award:	3QFY96	4QFY96	TIBS Preliminary Acceptance:	3QFY98	4QFY98
TRIXS Contract Award:	2QFY98	2QFY98	TRIXS Preliminary Acceptance:	2QFY99	
TIBS System Req't Review:	1QFY97	1QFY97	TIBS Final Acceptance Test:	3QFY99	
TRIXS System Req't Review:	2QFY98	2QFY98	TRIXS Final Acceptance Test:	4QFY99	
TIBS/TRIXS Qtr Reviews:	Quarterly				

Installation Schedule:

	Pr Yr	FY 1999				FY 2000				FY 2001				FY 2002				FY 2003			
	Totals	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Inputs	6																				
Outputs				2	4																

	FY 2004				FY 2005				FY 2006				FY 2007				To	Totals
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Complete	
Inputs																		6
Outputs																		6

METHOD OF IMPLEMENTATION: ADMINISTRATIVE LEADTIME: N/A PRODUCTION LEADTIME: N/A

Contract Dates:	FY 1999	FY 2000	FY 2001
Delivery Date:	FY 1999	FY 2000	FY 2001

INDIVIDUAL MODIFICATION — Date: February 1999

MODIFICATION TITLE (Cont): TIBS and TRIXS for GRCS 1-96-777-7777

FINANCIAL PLAN: ($ in Millions)

	FY 1998 and Prior		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		FY 2004		FY 2005		TC		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																				
PROCUREMENT																				
Kit Quantity																				
Installation Kits	3	2.8																	3	2.8
Installation Kits, Nonrecurring		1.3																		1.3
Equipment	3	5.9																	3	5.9
Equipment, Nonrecurring		12.4																		12.4
Engineering Change Orders																				
Data		1.6																		1.6
Training Equipment																				
Support Equipment																				
Other		1.0																		1.0
Interim Contractor Support																				
Installation of Hardware																				
FY 1998 & Prior Eqpt -- Kits	6	2.1																	6	2.1
FY 1999 Eqpt -- Kits																				
FY 2000 Eqpt -- Kits																				
FY 2001 Eqpt -- Kits																				
FY 2002 Eqpt -- kits																				
FY 2003 Eqpt -- kits																				
FY 2004 Eqpt -- kits																				
FY 2005 Eqpt -- kits																				
TC Equip-Kits																				
Total Installment	6	2.1																	6	2.1
Total Procurement Cost		27.1																		27.1

INDIVIDUAL MODIFICATION Date February 1999

MODIFICATION TITLE: Mini-IPF 1-00-111-1111

MODELS OF SYSTEMS AFFECTED: GUARDRAIL/Common Sensor System 3 & 4

DESCRIPTION / JUSTIFICATION:

This modification provides for two (2) miniaturized Integrated Processing Facilities (Mini-IPF) to replace two of the current IPFs which are comprised of four (40) forty foot vans. The Mini-IPFs support increased flexibility in deployment, reduce transportation requirements, and field a current and supportable baseline. The FY01 funds procure a datalink antenna/transceiver subsystem and the audio management system that will be used to replace the existing units. The FY02 funds will replace the SIGINT processing equipment of the larger legacy mainframe components in the current system. Remainder of the hardware necessary to modify an IPF to the mini-IPF configuration will be procured in FY02. FY03 funds will complete final integration, testing and fielding of the Mini-IPF. This is a three phase Mini-IPF migration strategy. Each phase is severable, but supports the mini-IPF migration strategy.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

	Planned	Accomplished		Planned	Accomplished		Planned	Accomplished		Planned	Accomplished
	Data Link Module			Audio Distr Module			Full Mini-IPF 1			Mini-IPF 2	
Award:	1QFY01		Award:	1QFY01		Award	1QFY02		Award:	1QFY04	
Integ&Test:	3QFY01		Integ&Test:	3QFY02		Integ&Test	4QFY02		Integ&Test:	2QFY05	
Field:	4QFY01		Field:	4QFY02		Field:	4QFY03		Field:	4QFY05	

Installation Schedule:

	Pr Yr	FY 1999				FY 2000				FY 2001				FY 2002				FY 2003			
	Totals	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Inputs																					
Outputs																					

	FY 2004				FY 2005				FY 2006				FY 2007				To	Totals
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Complete	
Inputs																		
Outputs																		

METHOD OF IMPLEMENTATION: ADMINISTRATIVE LEADTIME: TBD PRODUCTION LEADTIME: TBD

Contract Dates:	FY 1999	FY 2000	FY 2001
Delivery Date:	FY 1999	FY 2000	FY 2001

INDIVIDUAL MODIFICATION — Date: February 1999

MODIFICATION TITLE (Cont): Mini-IPF 1-00-111-1111

FINANCIAL PLAN: ($ in Millions)

	FY 1998 and Prior		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		FY 2004		FY 2005		TC		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																				
PROCUREMENT																				
Kit Quantity																				
Installation Kits																				
Installation Kits, Nonrecurring																				
Equipment								4.9		7.5				4.3						16.7
Equipment, Nonrecurring										3.1										3.1
Engineering Change Orders										0.5										0.5
Data/Documentation								0.1		1.0		0.3		0.1						1.5
Training												0.6				0.4				1.0
Support Equipment/GFE								0.2		1.5		0.2		0.4						2.3
Other/Accredidation										0.3										0.3
Interim Contractor Support										2.2		1.8		1.0		2.0				7.0
Gov't In-H/Pgm Mgmt ADM								0.6		1.2		0.5		0.6		0.6				3.5
Contractor Engineering								0.6		0.9		0.5		0.4		0.5				2.9
Fielding								0.4				0.7				0.7				1.8
Testing								0.2		0.9		0.3		0.3		0.7				2.4
Shelter Facilitization /Mod								1.3		0.3				1.2						2.8
Installation of Hardware																				
FY 1998 & Prior Eqpt -- Kits																				
FY 1999 Eqpt -- Kits																				
FY 2000 Eqpt -- Kits																				
FY 2001 Eqpt -- Kits																				
FY 2002 Eqpt -- kits																				
FY 2003 Eqpt -- kits																				
FY 2004 Eqpt -- kits																				
FY 2005 Eqpt -- kits																				
TC Equip-Kits																				
Total Installment																				
Total Procurement Cost								8.3		19.4		4.9		8.3		4.9				45.8

Exhibit P-40, Budget Item Justification Sheet											Date: February 1999	
Appropriation / Budget Activity/Serial No: AIRCRAFT PROCUREMENT / 2 / Modification of Aircraft						P-1 Item Nomenclature: ARL MODS (AZ2050)						
Program Elements for Code B Items:				Code:	Other Related Program Elements:							
	Prior Years	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	To Complete	Total Prog
Proc Qty												
Gross Cost	0.0	0.0	0.0	0.0	5.8	4.6	0.5	0.0	0.0	0.0	0.0	10.9
Less PY Adv Proc												
Plus CY Adv Proc												
Net Proc (P-1)	0.0	0.0	0.0	0.0	5.8	4.6	0.5	0.0	0.0	0.0	0.0	10.9
Initial Spares												
Total Proc Cost	0.0	0.0	0.0	0.0	5.8	4.6	0.5	0.0	0.0	0.0	0.0	10.9
Flyaway U/C												
Wpn Sys Proc U/C												

DESCRIPTION: The Airborne Reconnaissance Low (ARL) has evolved from two complementary tactical airborne systems ARL-I (Imagery Intelligence IMINT), an elecro optic reconnaissance and surveillance system, and ARL-C (communications intelligence COMINT), system which provides real-time highly accurate radio intercept and location. The ARL program integrates the capabilities of ARL-I and ARL-C into a single system which satisfies the requirements identified by validated SOUTHCOM Statements of Need (SON). The merger of these programs minimizes the acquisition and operational costs,increases availability,and optimizes flexibility resulting from the integration of the electro-optic and Radio Frequency (RF) sensors into a unified system. The primary sensors will be a Signal Intelligence (SIGINT) with precision Direction Finding (DF) capability and IMINT electro-optics for target identification and classification and multimode capability including wide area search Moving Target Indicator (MTI) and Synthetic Aperture Radar (SAR). ARL provides near real-time tactical airborne SIGINT and near real time IMINT collection support to Joint Task Force (JTF) Commanders. ARL is a multi-echelon level, multi-INT (combined SIGINT and IMINT) system, designed for forward deployment/force projection in Operations Other Than War (OOTW) to mid intensity conflict environments. ARL also conducts daily JCS Sensitive Reconnaissance Operations, is rapidly self-deployable to support contingency operations, and is the airborne Reconnaissance Surveillance Target Acquisition (RSTA) platform of choice for various non-DOD government agencies such as DEA and FEMA. ARL is currently providing an indications and warnings capability to U.S. Armed Forces in Korea. A November 1995 Department of the Army (DA) Directed Requirement validated the USARPAC/PACOM SON requirement for six ARL-Ms with Electronic Intelligence (ELINT) and MTI/SAR.

JUSTIFICATION: FY00 funds will cover the integration of the Superhawk COMINT system on ARL M4, upgrade of two ARL with 2nd Generation FLIR, and implementation of a block improvement to the MTI/SAR radar to improve MTI performance and increase SAR resolution. FY 01 funds will provide for further software retrofits and improvements to existing IMINT suites.

Exhibit P-40M Budget Item Justification Sheet										Date: February 1999	
Appropriation / Budget Activity/Serial No.: AIRCRAFT PROCUREMENT / 2 / Modification of Aircraft						P-1 Item Nomenclature: ARL MODS (AZ2050)					
Program Elements for Code B Items			Code	Other Related Program Elements							
Description		Fiscal Years									
OSIP NO.	Classification	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	TC	Total
B-kits for WKSTS											
1-00-111-1111	Operational	0.0	0.0	1.6	0.0	0.0	0.0	0.0	0.0	0.0	1.6
Upgrade to IMINT Suite											
1-00-222-2222	Operational	0.0	0.0	2.6	4.6	0.5	0.0	0.0	0.0	0.0	7.7
Radar Improvements											
1-00-333-3333	Operational	0.0	0.0	1.6	0.0	0.0	0.0	0.0	0.0	0.0	1.6
Totals		0.0	0.0	5.8	4.6	0.5	0.0	0.0	0.0	0.0	10.9

INDIVIDUAL MODIFICATION Date February 1999

MODIFICATION TITLE: B-kits for WKSTS 1-00-111-1111

MODELS OF SYSTEMS AFFECTED: ARL M

DESCRIPTION / JUSTIFICATION:

Hardware was procured in FY 99 under ARL (TIARA), A11500. The ARL system will be upgraded to allow full Electronic Support Measures (ESM) capability for ARL M4. This will result in workstation hardware and software improvements to allow complete integration of the Superhawk ESM sensor suite. FY 00 funds the execution of the contract option for the installation of these efforts.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

	Planned	Accomplished
Contract Award	1QFY00	
System Status Review	1QFY00	
System Acceptance Test	3QFY00	
System Fielding;	4QFY00	

Installation Schedule:

	Pr Yr	FY 1999				FY 2000				FY 2001				FY 2002				FY 2003			
	Totals	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Inputs						1															
Outputs									1												

	FY 2004				FY 2005				FY 2006				FY 2007				To	Totals
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Complete	
Inputs																		1
Outputs																		1

METHOD OF IMPLEMENTATION: ADMINISTRATIVE LEADTIME: N/A PRODUCTION LEADTIME: N/A

Contract Dates:	FY 1999	FY 2000	Oct 99	FY 2001
Delivery Date:	FY 1999	FY 2000	Jun 00	FY 2001

INDIVIDUAL MODIFICATION — Date: February 1999

MODIFICATION TITLE (Cont): B-kits for WKSTS 1-00-111-1111

FINANCIAL PLAN: ($ in Millions)

	FY 1998 and Prior		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		FY 2004		FY 2005		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																				
GFE/Aircraft Support																				
Training/Fielding																				
Support Equipment																				
Other																				
Interim Contractor Support																				
Testing																				
Gov In House/Prg Mgmt ADM						0.1														0.1
Contractor Engineering																				
Installation of Hardware																				
FY 1998 & Prior Eqpt -- Kits					1	1.5													1	1.5
FY 1999 Eqpt -- Kits																				
FY 2000 Eqpt -- Kits																				
FY 2001 Eqpt -- Kits																				
FY 2002 Eqpt -- kits																				
FY 2003 Eqpt -- kits																				
FY 2004 Eqpt -- kits																				
FY 2005 Eqpt -- kits																				
TC Equip-Kits																				
Total Installment					1	1.5													1	1.5
Total Procurement Cost						1.6														1.6

INDIVIDUAL MODIFICATION Date February 1999

MODIFICATION TITLE: Upgrade to IMINT Suite 1-00-222-2222

MODELS OF SYSTEMS AFFECTED: ARL-M

DESCRIPTION / JUSTIFICATION:

This modification provides for upgrades and improvements to the Imagery Intelligence (IMINT) suites of each of the ARL-M aircraft. These improvements will allow ARL to more effectively meet its imagery collection requirements established by both CINC SOUTHCOM and CINC PACOM. Improvements consist of both hardware and software modifications. In addition, special application sensors (Foliage Penetration (FOPEN) and Hyperspectral Imagery (HSI) will be integrated and tested to support the SOUTHCOM theater of operations.

In FY00 two ARL aircraft (M1 & M2) will have their IMINT suites upgraded to incorporate a 2nd Generation FLIR and improved Daylight Imaging System (DIS). ARL-M & M2 will then share the B kit upgrade with the ARL-M 3. All are currently operational in Korea. This will bring them up to the same IMINT baseline found on the more recently built ARL aircraft (M4 & M5). FY01 will consist of further software retrofits and improvements to the existing IMINT suites.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

	Planned	Accomplished	Planned	Accomplished
Contract Award	1QFY00		1QFY01	
System Status Review	1QFY00		1QFY01	
System Acceptance Test	2QFY01		3QFY01	
System Fielding	3QFY01		4QFY01	

Installation Schedule:

	Pr Yr	FY 1999				FY 2000				FY 2001				FY 2002				FY 2003			
	Totals	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Inputs							2														
Outputs											2										

	FY 2004				FY 2005				FY 2006				FY 2007				To	Totals
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Complete	
Inputs																		2
Outputs																		2

METHOD OF IMPLEMENTATION: ADMINISTRATIVE LEADTIME: 8 months PRODUCTION LEADTIME: 15 months

Contract Dates:	FY 1999	FY 2000	Oct 99	FY 2001	Oct 00
Delivery Date:	FY 1999	FY 2000	Jan 01	FY 2001	Jun 01

INDIVIDUAL MODIFICATION — Date: February 1999

MODIFICATION TITLE (Cont): Upgrade to IMINT Suite 1-00-222-2222

FINANCIAL PLAN: ($ in Millions)

	FY 1998 and Prior		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		FY 2004		FY 2005		TC		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																				
PROCUREMENT																				
Kit Quantity																				
Installation Kits																				
Installation Kits, Nonrecurring																				
Equipment					2	2.2													2	2.2
Equipment, Nonrecurring																				
Software Modifications								4.3		0.4										4.7
Data																				
Training Equipment																				
Support Equipment																				
Other																				
Interim Contractor Support																				
Gov't In-H/ Pgm Mgmt ADM						0.1		0.1		0.1										0.3
Contractor Engineering						0.1		0.2												0.3
Installation of Hardware																				
FY 1998 & Prior Eqpt -- Kits																				
FY 1999 Eqpt -- Kits																				
FY 2000 Eqpt -- Kits					2	0.2													2	0.2
FY 2001 Eqpt -- Kits																				
FY 2002 Eqpt -- kits																				
FY 2003 Eqpt -- kits																				
FY 2004 Eqpt -- kits																				
FY 2005 Eqpt -- kits																				
TC Equip-Kits																				
Total Installment					2	0.2													2	0.2
Total Procurement Cost						2.6		4.6		0.5										7.7

INDIVIDUAL MODIFICATION Date February 1999

MODIFICATION TITLE: Radar Improvements 1-00-333-3333

MODELS OF SYSTEMS AFFECTED: ARL-M

DESCRIPTION / JUSTIFICATION:

This modification provides for software improvements to the Moving Target Indicator (MTI)/Synthetic Aperture Radar (SAR) sensor. Specific improvements include increased SAR image resolution, additional radar modes of operation, improved MTI probability of detection.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

	Planned	Accomplished
Contract Award	1QFY00	
System Status Review	1QFY00	
System Acceptance Test	3QFY00	
System Fielding;	4QFY00	

Installation Schedule:

	Pr Yr	FY 1999				FY 2000				FY 2001				FY 2002				FY 2003			
	Totals	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Inputs																					
Outputs																					

	FY 2004				FY 2005				FY 2006				FY 2007				To	Totals
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Complete	
Inputs																		
Outputs																		

METHOD OF IMPLEMENTATION: ADMINISTRATIVE LEADTIME: N/A PRODUCTION LEADTIME: N/A

Contract Dates:	FY 1999	FY 2000	Oct 99	FY 2001
Delivery Date:	FY 1999	FY 2000	Jun 00	FY 2001

INDIVIDUAL MODIFICATION — Date: February 1999

MODIFICATION TITLE (Cont): Radar Improvements 1-00-333-3333

FINANCIAL PLAN: ($ in Millions)

	FY 1998 and Prior		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		FY 2004		FY 2005		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																				
Software Modifications						1.5														1.5
Data																				
Training Equipment																				
Support Equipment/GFE																				
Other																				
Interim Contractor Support																				
Testing																				
Gov't In-H/ Pgm Mgmt ADM						0.1														0.1
Contractor Engineering																				
Fielding																				
Installation of Hardware																				
FY 1998 & Prior Eqpt -- Kits																				
FY 1999 Eqpt -- Kits																				
FY 2000 Eqpt -- Kits																				
FY 2001 Eqpt -- Kits																				
FY 2002 Eqpt -- kits																				
FY 2003 Eqpt -- kits																				
FY 2004 Eqpt -- kits																				
FY 2005 Eqpt -- kits																				
TC Equip-Kits																				
Total Installment																				
Total Procurement Cost						1.6														1.6

Exhibit P-40, Budget Item Justification Sheet

Date: February 1999

Appropriation / Budget Activity/Serial No: AIRCRAFT PROCUREMENT / 2 / Modification of Aircraft

P-1 Item Nomenclature: AH1F MODS (AA0150)

Program Elements for Code B Items:

Code:

Other Related Program Elements:

	Prior Years	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	To Complete	Total Prog
Proc Qty												
Gross Cost	1314.3	1.1	0.4	0.5	0.4	0.4	0.5	0.5	0.5	0.5	31.1	1350.3
Less PY Adv Proc												
Plus CY Adv Proc												
Net Proc (P-1)	1314.3	1.1	0.4	0.5	0.4	0.4	0.5	0.5	0.5	0.5	31.1	1350.3
Initial Spares	92.3											92.3
Total Proc Cost	1406.6	1.1	0.4	0.5	0.4	0.4	0.5	0.5	0.5	0.5	31.1	1442.6
Flyaway U/C												
Wpn Sys Proc U/C												

DESCRIPTION: The AH-1 is a single-engine, tandem seated helicopter with a maximum gross weight of 10,000 pounds and a T53L703 1800 SHP engine. The armament system consists of the M65 TOW Missile System, 20mm gun and Hydra-70 rockets.

JUSTIFICATION: FY00 & 01 funds will be utilized to continue rewire of AH-1 fleet. Rewire improves RAM, lowers O&S cost and enhances safe operation. All modifications are complete except Rewire. AH-1F fleet will be 402 aircraft through FY15. Funding is also required for safety and sustainment modifications, in addition to operational improvement modifications required to meet mission requirements through the year 2015. DOD regulation mandates that AMCOM provide sustainment support for the Cobra fleet for all branches of the service.

Exhibit P-40, Budget Item Justification Sheet	Date: February 1999
Appropriation / Budget Activity/Serial No: AIRCRAFT PROCUREMENT / 2 / Modification of Aircraft	P-1 Item Nomenclature: AH-64 MODS (AA6605)
Program Elements for Code B Items:	Code: / Other Related Program Elements:

	Prior Years	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	To Complete	Total Prog
Proc Qty												
Gross Cost	419.3	47.1	36.8	56.7	22.6	18.6	35.7	38.3	33.2	27.6	99.0	834.9
Less PY Adv Proc												
Plus CY Adv Proc												
Net Proc (P-1)	419.3	47.1	36.8	56.7	22.6	18.6	35.7	38.3	33.2	27.6	99.0	834.9
Initial Spares												
Total Proc Cost	419.3	47.1	36.8	56.7	22.6	18.6	35.7	38.3	33.2	27.6	99.0	834.9
Flyaway U/C												
Wpn Sys Proc U/C												

DESCRIPTION: The AH-64 is a single main rotor, twin engine, tandem seat attack helicopter armed with HELLFIRE antitank missiles, 2.75 inch rockets, and 30MM gun. The AH-64 is capable of defeating armor in day, night, and adverse weather. The Target Acquisition Designation Sight (TADS) is housed in a turret on the nose of the AH-64 and consists of a TV, Forward Looking Infrared (FLIR), Direct View Optics, Laser Designator/ Rangefinder and Spot Tracker. The Pilot Night Vision Sensor (PNVS) is a FLIR which allows Nap-of-Earth operations at night by the pilot independent of the co-pilot/gunner's FLIR.

JUSTIFICATION: As the Army's primary Attack Helicopter, the AH-64 has been integrated in maneuver and fire plans of the combined arms team and will have the primary mission of destroying high value targets. The firepower, speed and agility of the AH-64 will provide a versatility to the combined arms team not otherwise available. Modifications are based on fleetwide reliability, availability, and maintainability (RAM) improvements and limited operational enhancements identified as a result of lessons learned during Operation Desert Storm. Funding for FY00 and FY01 buys the following modifications:

a. Fuel Control Warning Panel
b. H-11 Bolt Replacement
c. Airframe Modifications
d. TADS/PNVS Upgrades
e. Apache Integrated Training Program Trainer Upgrade

Exhibit P-40M Budget Item Justification Sheet											Date: February 1999
Appropriation / Budget Activity/Serial No.: AIRCRAFT PROCUREMENT / 2 / Modification of Aircraft					P-1 Item Nomenclature: AH-64 MODS (AA6605)						
Program Elements for Code B Items			Code		Other Related Program Elements						
Description		Fiscal Years									
OSIP NO.	Classification	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	TC	Total
Backup Control System (BUCS)											
1-86-01-2025	Unclassified	11.5	9.4	0.0	0.0	3.6	5.4	12.9	6.2	3.4	52.4
Fuel Control Warning Panel											
1-89-01-2063	Unclassified	9.8	1.7	1.2	0.0	0.0	0.0	0.0	0.0	0.0	12.7
Embedded GPS / Inertial NAvigation System (EGI)											
1-92-01-2072	Unclassified	83.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	84.2
H-11 Bolt Replacement											
1-92-01-2035	Safety	5.6	0.9	0.7	0.7	0.7	0.7	0.8	0.0	0.0	10.1
Airframe Modifications											
1-95-01-2007	Op/Log	7.4	12.0	9.5	4.8	15.8	14.7	4.9	8.6	7.0	84.7
Alternate Laser Code											
1-92-01-2033	Unclassified	32.3	3.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	35.7
TADS/PNVS I/II upgrades											
1-94-01-2004	Unclassified	57.9	7.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	65.7
TADS/PNVS Upgrades											
1-94-01-2005	Unclassified	5.4	6.6	6.3	7.0	7.2	7.4	7.9	8.8	24.8	81.4
Apache Integrated Training Program Trainer Upgrade											
NA	Unclassified	0.0	0.0	4.0	4.1	4.4	6.5	2.3	0.0	0.0	21.3
Misc Mod less than $2.0M (No P3a Set)											
NA	Unclassified	258.0	14.3	0.9	2.0	4.0	3.6	4.4	4.0	35.9	327.1
ORT Conversion (No P3a Set)											
NA	Unclassified	17.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	27.9	45.1
Captive Boresight Harmonization Kit (CBHK) Upgrade (No P3a Set)											
NA	Unclassified	14.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.5

Exhibit P-40M Budget Item Justification Sheet

Date: February 1999

Appropriation / Budget Activity/Serial No.	P-1 Item Nomenclature
AIRCRAFT PROCUREMENT / 2 / Modification of Aircraft	AH-64 MODS (AA6605)

Program Elements for Code B Items	Code	Other Related Program Elements

Description		Fiscal Years									
OSIP NO.	Classification	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	TC	Total
Totals		503.2	56.7	22.6	18.6	35.7	38.3	33.2	27.6	99.0	834.9

INDIVIDUAL MODIFICATION Date February 1999

MODIFICATION TITLE: Backup Control System (BUCS) 1-86-01-2025

MODELS OF SYSTEMS AFFECTED: AH-64 Apache

DESCRIPTION / JUSTIFICATION:

Operational requirement. This modification is required to bring all AH-64 Apache aircraft to a BUCS active configuration. This modification includes a redesign of BUCS. The redesign will be accomplished as part of the Longbow remanufacture line beginning with Lot II incorporation. Lot I aircraft will be retrofitted. A total of 158 aircraft will be modified under the A model program through FY 01. An additional 218 aircraft will be retrofitted to a BUCS active configuration FY 02-07. This quantity represents those A model Apaches that will not be remanufactured to the Longbow configuration. Installation costs are included in contract and are not broken out separately.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

Contract award was 30 Sep 97 for Lots 2-5 and retrofit of Lot 1 aircraft. First delivery of Lot 2 aircraft was Mar 98.

Installation Schedule:

	Pr Yr	FY 1999				FY 2000				FY 2001				FY 2002				FY 2003			
	Totals	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Inputs	84	12	12	14	15	15	6							6	6	7	7	9	9	10	10
Outputs	45	10	11	11	11	13	14	14	14	14	1			6	6	7	7	9	9	10	10

	FY 2004				FY 2005				FY 2006				FY 2007				To	Totals
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Complete	
Inputs	22	22	23	23	10	10	11	11					5	5	6	6		376
Outputs	22	22	23	23	10	10	11	11					5	5	6	6		376

METHOD OF IMPLEMENTATION: ADMINISTRATIVE LEADTIME: 2 Months PRODUCTION LEADTIME: 11 Months

Contract Dates:	FY 1999	Dec 98	FY 2000	FY 2001	
Delivery Date:	FY 1999	Nov 99	FY 2000	FY 2001	

INDIVIDUAL MODIFICATION — Date: February 1999

MODIFICATION TITLE (Cont): Backup Control System (BUCS) 1-86-01-2025

FINANCIAL PLAN: ($ in Millions)

	FY 1998 and Prior		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		FY 2004		FY 2005		TC		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																				
PROCUREMENT																				
Kit Quantity	24								26		38		90		42		22		242	
Installation Kits		2.0								3.6		5.4		12.9		6.2		3.4		33.5
Installation Kits, Nonrecurring																				
Equipment	68	2.9	66	4.6															134	7.5
Equipment, Nonrecurring		4.7		2.9																7.6
Engineering Change Orders																				
Data																				
Training Equipment																				
Support Equipment																				
Other				1.3																1.3
PM Matrix Support		1.9		0.6																2.5
Installation of Hardware																				
FY 1998 & Prior Eqpt -- Kits	45		43		4														92	
FY 1999 Eqpt -- Kits					51		15												66	
FY 2000 Eqpt -- Kits																				
FY 2001 Eqpt -- Kits																				
FY 2002 Eqpt -- kits									26										26	
FY 2003 Eqpt -- kits											38								38	
FY 2004 Eqpt -- kits													90						90	
FY 2005 Eqpt -- kits															42				42	
TC Equip 22 Kits																	22		22	
Total Installment	45		43		55		15		26		38		90		42		22		376	
Total Procurement Cost		11.5		9.4						3.6		5.4		12.9		6.2		3.4		52.4

INDIVIDUAL MODIFICATION Date February 1999

MODIFICATION TITLE: Fuel Control Warning Panel 1-89-01-2063

MODELS OF SYSTEMS AFFECTED: AH-64 Apache

DESCRIPTION / JUSTIFICATION:

Operational/safety. Modification to provide tactile discrimination of the fuel cross-feed on both the pilot and copilot/gunner panels and provide added annunciation on the pilot and copilot/gunner caution warning panel to indicate valve operation for fuel cross-feed and fuel transfer. This modification provides opposite cockpit awareness of fuel control mode and override status.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

Contract award was Aug 94. Date of first delivery was Apr 96.

Installation Schedule:

	Pr Yr	FY 1999				FY 2000				FY 2001				FY 2002				FY 2003			
	Totals	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Inputs	440	46	46	46	47	47	47	39													
Outputs	440	46	46	46	47	47	47	39													

	FY 2004				FY 2005				FY 2006				FY 2007				To	Totals
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Complete	
Inputs																		758
Outputs																		758

METHOD OF IMPLEMENTATION: ADMINISTRATIVE LEADTIME: 12 Months PRODUCTION LEADTIME: 20 Months

Contract Dates:	FY 1999	FY 2000	FY 2001
Delivery Date:	FY 1999	FY 2000	FY 2001

INDIVIDUAL MODIFICATION — Date: February 1999

MODIFICATION TITLE (Cont): Fuel Control Warning Panel 1-89-01-2063

FINANCIAL PLAN: ($ in Millions)

	FY 1998 and Prior		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		FY 2004		FY 2005		TC		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																				
PROCUREMENT																				
Kit Quantity	758	4.9																	758	4.9
Installation Kits		0.4																		0.4
Installation Kits, Nonrecurring																				
Equipment																				
Equipment, Nonrecurring																				
Engineering Change Orders																				
Data																				
Training Equipment																				
Support Equipment																				
Other																				
PM Matrix Support		0.8		0.1																0.9
Installation of Hardware																				
FY 1998 & Prior Eqpt -- Kits	440	3.7	185	1.6	133	1.2													758	6.5
FY 1999 Eqpt -- Kits																				
FY 2000 Eqpt -- Kits																				
FY 2001 Eqpt -- Kits																				
FY 2002 Eqpt -- kits																				
FY 2003 Eqpt -- kits																				
FY 2004 Eqpt -- kits																				
FY 2005 Eqpt -- kits																				
TC Equip-Kits																				
Total Installment	440	3.7	185	1.6	133	1.2													758	6.5
Total Procurement Cost		9.8		1.7		1.2														12.7

INDIVIDUAL MODIFICATION Date February 1999

MODIFICATION TITLE: Embedded GPS / Inertial NAvigation System (EGI) 1-92-01-2072

MODELS OF SYSTEMS AFFECTED: AH-64 Apache

DESCRIPTION / JUSTIFICATION:

Operational/Desert Storm. This modification integrates an embedded Global Positioning System in an Inertial Navigation System box (EGI) into the AH-64A Apache. This Joint Service program provides a significant increase in accuracy for the navigation and fire control systems. This EGI is identical to the one being installed on the Longbow.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

.Contract awarded Apr 95. First delivery was May 96. First installation was Jul 96, MWO verification Apr 96.

Installation Schedule:

	Pr Yr	FY 1999				FY 2000				FY 2001				FY 2002				FY 2003			
	Totals	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Inputs	474	26																			
Outputs	474	26																			

	FY 2004				FY 2005				FY 2006				FY 2007				To	Totals
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Complete	
Inputs																		500
Outputs																		500

METHOD OF IMPLEMENTATION: ADMINISTRATIVE LEADTIME: 24 Months PRODUCTION LEADTIME: 13 Months

Contract Dates:	FY 1999	FY 2000	FY 2001
Delivery Date:	FY 1999	FY 2000	FY 2001

INDIVIDUAL MODIFICATION — Date: February 1999

MODIFICATION TITLE (Cont): Embedded GPS / Inertial NAvigation System (EGI) 1-92-01-2072

FINANCIAL PLAN: ($ in Millions)

	FY 1998 and Prior		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		FY 2004		FY 2005		TC		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																				
PROCUREMENT																				
Kit Quantity	500	3.3																	500	3.3
Installation Kits																				
Installation Kits, Nonrecurring																				
Equipment	500	34.0																	500	34.0
Equipment, Nonrecurring		10.7																		10.7
Engineering Change Orders																				
Data		3.2																		3.2
Training Equipment		2.1																		2.1
Support Equipment		4.3																		4.3
Other		11.6																		11.6
PM Matrix Support		5.1		0.1																5.2
Installation of Hardware																				
FY 1998 & Prior Eqpt -- Kits	474	9.3	26	0.5															500	9.8
FY 1999 Eqpt -- Kits																				
FY 2000 Eqpt -- Kits																				
FY 2001 Eqpt -- Kits																				
FY 2002 Eqpt -- kits																				
FY 2003 Eqpt -- kits																				
FY 2004 Eqpt -- kits																				
FY 2005 Eqpt -- kits																				
TC Equip-Kits																				
Total Installment	474	9.3	26	0.5															500	9.8
Total Procurement Cost		83.6		0.6																84.2

INDIVIDUAL MODIFICATION Date February 1999

MODIFICATION TITLE: H-11 Bolt Replacement 1-92-01-2035

MODELS OF SYSTEMS AFFECTED: AH-64 Apache

DESCRIPTION / JUSTIFICATION:

Safety improvement. This modification addresses Federal Aviation Administration (FAA) advisory that H-11 hardware is subject to a higher than normal failure rate due to stress corrosion cracking and could potentially result in a safety problem. FAA recommended replacement of the H-11 hardware with acceptable substitutes such as Inconel. A total of 387 A model aircraft will be modified under this program. Balance of fleet will be modified during Longbow remanufacture.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

Hardware Contract awarded May 95. Date of first installation was Aug 96.

Installation Schedule:

	Pr Yr	FY 1999				FY 2000				FY 2001				FY 2002				FY 2003			
	Totals	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Inputs	83	21	21	22	22	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11
Outputs	83	21	21	22	22	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11

	FY 2004				FY 2005				FY 2006				FY 2007				To	Totals
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Complete	
Inputs	11	11	10	10														387
Outputs	11	11	10	10														387

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

Contract Dates:	FY 1999	FY 2000	FY 2001
Delivery Date:	FY 1999	FY 2000	FY 2001

INDIVIDUAL MODIFICATION — Date: February 1999

MODIFICATION TITLE (Cont): H-11 Bolt Replacement 1-92-01-2035

FINANCIAL PLAN: ($ in Millions)

	FY 1998 and Prior		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		FY 2004		FY 2005		TC		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																				
PROCUREMENT																				
Kit Quantity	748																		748	
Installation Kits		3.4																		3.4
Installation Kits, Nonrecurring		0.3																		0.3
Equipment																				
Equipment, Nonrecurring																				
Engineering Change Orders																				
Data																				
Training Equipment																				
Support Equipment		1.1																		1.1
Other																				
PM Matrix Support		0.2		0.1																0.3
Installation of Hardware																				
FY 1998 & Prior Eqpt -- Kits	83	0.6	86	0.8	44	0.7	44	0.7	44	0.7	44	0.7	42	0.8					387	5.0
FY 1999 Eqpt -- Kits																				
FY 2000 Eqpt -- Kits																				
FY 2001 Eqpt -- Kits																				
FY 2002 Eqpt -- kits																				
FY 2003 Eqpt -- kits																				
FY 2004 Eqpt -- kits																				
FY 2005 Eqpt -- kits																				
TC Equip-Kits																				
Total Installment	83	0.6	86	0.8	44	0.7	44	0.7	44	0.7	44	0.7	42	0.8					387	5.0
Total Procurement Cost		5.6		0.9		0.7		0.7		0.7		0.7		0.8						10.1

INDIVIDUAL MODIFICATION Date February 1999

MODIFICATION TITLE: Airframe Modifications 1-95-01-2007

MODELS OF SYSTEMS AFFECTED: AH-64 Apache

DESCRIPTION / JUSTIFICATION:

Operational and logistical improvement. This modification provides for strengthening airframe components to withstand higher loading. Funding addresses three primary areas plus several additional areas susceptible to cracking. Specific modifications include slot closure, a single piece 530 and 547 frame, and elastomeric mounts. There will be 474 AH-64A aircraft retrofitted, and 66 Longbow aircraft in FY 99. In addition starting in FY 02, 218 AH-64A aircraft that will not be remanufactured into Longbows, will be retrofitted with additional airframe modifications to include spider mount, wing pylon upgrade, FS176 upgrade, and T/R blade leading edge protection. Installation costs included in the contract and are not broken out separately.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

Contract was awarded Nov 96 for ECP 1315 for retrofitting 474 AH-64A Apaches, and 66 Longbow aircraft in FY 99. An additional 218 AH-64A Apaches that are not being remanufactured to Longbow configuration will be retrofitted with additional airframe modifications starting in FY 02.

Installation Schedule:

	Pr Yr	FY 1999				FY 2000				FY 2001				FY 2002				FY 2003			
	Totals	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Inputs	31	13	25	25	25	39	27	25	25	31	32	36	36	30	30	30	31	29	29	26	24
Outputs	31	10	10	10	10	32	37	40	40	46	32	32	32	17	21	25	30	30	31	32	32

	FY 2004				FY 2005				FY 2006				FY 2007				To	Totals
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Complete	
Inputs	22	23	23	24	12	12	12	12	12	7								758
Outputs	27	29	29	26	12	11	10	10	12	12								758

METHOD OF IMPLEMENTATION: ADMINISTRATIVE LEADTIME: 2 Months PRODUCTION LEADTIME: 11 Months

Contract Dates:	FY 1999	Dec98	FY 2000	FY 2001	
Delivery Date:	FY 1999	Nov99	FY 2000	FY 2001	

INDIVIDUAL MODIFICATION — Date: February 1999

MODIFICATION TITLE (Cont): Airframe Modifications 1-95-01-2007

FINANCIAL PLAN: ($ in Millions)

	FY 1998 and Prior		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		FY 2004		FY 2005		TC		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																				
PROCUREMENT																				
Kit Quantity	71	6.1	98	7.3	127	9.5	53	4.8	127	15.8	124	14.7	25	4.9	43	8.6	24	7.0	692	78.7
Installation Kits																				
Installation Kits, Nonrecurring																				
Equipment			66	3.9															66	3.9
Equipment, Nonrecurring																				
Engineering Change Orders																				
Data																				
Training Equipment																				
Support Equipment																				
Other																				
PM Matrix Support		1.3		0.8																2.1
Installation of Hardware																				
FY 1998 & Prior Eqpt -- Kits	31		40																71	
FY 1999 Eqpt -- Kits					149		15												164	
FY 2000 Eqpt -- Kits							127												127	
FY 2001 Eqpt -- Kits									53										53	
FY 2002 Eqpt -- kits									40		87								127	
FY 2003 Eqpt -- kits											38		86						124	
FY 2004 Eqpt -- kits													25						25	
FY 2005 Eqpt -- kits															43				43	
TC Equip 24 Kits																	24		24	
Total Installment	31		40		149		142		93		125		111		43		24		758	
Total Procurement Cost		7.4		12.0		9.5		4.8		15.8		14.7		4.9		8.6		7.0		84.7

INDIVIDUAL MODIFICATION Date February 1999

MODIFICATION TITLE: Alternate Laser Code 1-92-01-2033

MODELS OF SYSTEMS AFFECTED: AH-64A Apache

DESCRIPTION / JUSTIFICATION:

Operational improvement. This modification provides optimum laser targeting capability for the Hellfire Missile System under adverse countermeasure conditions and allows maximum use of planned Electro-Optic Counter Measures (EOCM) missile changes. Requires hardware/software modifications to the Laser Electronics Unit. Eliminates Remote Hellfire Electronics unit and four pylon Multiplex Remote Terminal Units (MRTU). Modification provides for compatibility with MIL-STD-1760. Provides modification to the Hellfire Launchers for use on the Longbow aircraft. There is no installation requirement for the launchers.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

Contract awarded Oct 96. First delivery was Feb 98

Installation Schedule:

	Pr Yr	FY 1999				FY 2000				FY 2001				FY 2002				FY 2003			
	Totals	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Inputs																					
Outputs																					

	FY 2004				FY 2005				FY 2006				FY 2007				To	Totals
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Complete	
Inputs																		
Outputs																		

METHOD OF IMPLEMENTATION: ADMINISTRATIVE LEADTIME: 24 Months PRODUCTION LEADTIME: 15 Months

Contract Dates:	FY 1999	FY 2000	FY 2001
Delivery Date:	FY 1999	FY 2000	FY 2001

INDIVIDUAL MODIFICATION — Date: February 1999

MODIFICATION TITLE (Cont): Alternate Laser Code 1-92-01-2033

FINANCIAL PLAN: ($ in Millions)

	FY 1998 and Prior		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		FY 2004		FY 2005		TC		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E		6.0																		6.0
PROCUREMENT																				
Kit Quantity																				
Installation Kits																				
Installation Kits, Nonrecurring																				
Equipment	238	12.4																	238	12.4
Equipment, Nonrecurring		3.0																		3.0
Engineering Change Orders		4.2																		4.2
Data																				
Training Equipment		0.6																		0.6
Support Equipment																				
Other		3.6																		3.6
Interim Contractor Support		3.4		3.2																6.6
PM Matrix Support		5.1		0.2																5.3
Installation of Hardware																				
FY 1998 & Prior Eqpt -- Kits																				
FY 1999 Eqpt -- Kits																				
FY 2000 Eqpt -- Kits																				
FY 2001 Eqpt -- Kits																				
FY 2002 Eqpt -- kits																				
FY 2003 Eqpt -- kits																				
FY 2004 Eqpt -- kits																				
FY 2005 Eqpt -- kits																				
TC Equip-Kits																				
Total Installment																				
Total Procurement Cost		32.3		3.4																35.7

INDIVIDUAL MODIFICATION Date February 1999

MODIFICATION TITLE: TADS/PNVS I/II upgrades 1-94-01-2004

MODELS OF SYSTEMS AFFECTED: Itemize names of systems in this text box.

DESCRIPTION / JUSTIFICATION:

Safety and logistical improvement. Provides for system upgrade through new/updated hardware integration into Lots I&II TADS/PNVS systems. This configuration baseline upgrade will make the systems compatible with the rest of the Apache (TADS/PNVS) fleet. This effort will incorporate all ECP changes that were previously not required to be installed due to incompatibility of the systems. Additionally, this effort will eliminate anomalies associated with aging trainer aircraft that may cause them to be potentially unsafe to operate as a result of degraded fidelity. Also provides for offsight contractor support for the upgrade/integration of hardware in the TADS/PNVS. Installation costs are included in contract and are not broken out separately.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

Contract award was May 95. Date of first delivery was Aug 95.

Installation Schedule:

	Pr Yr	FY 1999				FY 2000				FY 2001				FY 2002				FY 2003			
	Totals	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Inputs	43	6	4	5	5																
Outputs	43	4	4	4	4	4															

	FY 2004				FY 2005				FY 2006				FY 2007				To	Totals
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Complete	
Inputs																		63
Outputs																		63

METHOD OF IMPLEMENTATION: ADMINISTRATIVE LEADTIME: 2 Months PRODUCTION LEADTIME: 8 Months

Contract Dates:	FY 1999	Oct98	FY 2000		FY 2001
Delivery Date:	FY 1999	May99	FY 2000		FY 2001

INDIVIDUAL MODIFICATION — Date: February 1999

MODIFICATION TITLE (Cont): TADS/PNVS I/II upgrades 1-94-01-2004

FINANCIAL PLAN: ($ in Millions)

	FY 1998 and Prior		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		FY 2004		FY 2005		TC		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																				
PROCUREMENT																				
Kit Quantity	54		9																63	
Installation Kits		23.3		4.3																27.6
Installation Kits, Nonrecurring																				
Equipment		15.4		2.3																17.7
Equipment, Nonrecurring																				
Engineering Change Orders																				
Data																				
Training Equipment																				
Support Equipment																				
Other		9.3		0.7																10.0
PM Matrix Support		9.9		0.5																10.4
Installation of Hardware																				
FY 1998 & Prior Eqpt -- Kits	54																		54	
FY 1999 Eqpt -- Kits			5		4														9	
FY 2000 Eqpt -- Kits																				
FY 2001 Eqpt -- Kits																				
FY 2002 Eqpt -- kits																				
FY 2003 Eqpt -- kits																				
FY 2004 Eqpt -- kits																				
FY 2005 Eqpt -- kits																				
TC Equip-Kits																				
Total Installment	54		5		4														63	
Total Procurement Cost		57.9		7.8																65.7

INDIVIDUAL MODIFICATION Date February 1999

MODIFICATION TITLE: TADS/PNVS Upgrades 1-94-01-2005

MODELS OF SYSTEMS AFFECTED: AH-64 Apache.

DESCRIPTION / JUSTIFICATION:

Operational, and logistical improvement. Provide for system upgrade through new/updated hardware integration into Lots III thru XII TADS/PNVS systems. Facilitate maintainers access to TADS/PNVS systems thereby allowing for accelerated application of outstanding ECPs. Additionally, satisfies program growth and the life extension requirements and provides for offsite contractor support for upgrades/integration of hardware in the TADS/PNVS. This will also provide a single configuration TADS/PNVS to the Longbow. Critical AH-64D element. Also provides funding for the 218 A Model Apaches that will not be remanufactured into Longbows. Installation costs are included in contract and are not broken out separately.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

Contract award was Dec 95. Date of first delivery was Jun 96.

Installation Schedule:

	Pr Yr	FY 1999				FY 2000				FY 2001				FY 2002				FY 2003			
	Totals	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Inputs	84	12	12	14	15	15	15	18	18	18	11	15	15	15	15	15	15	18	18	18	18
Outputs	45	9	10	12	12	12	13	15	15	15	15	15	15	17	17	15	15	15	15	15	16

	FY 2004				FY 2005				FY 2006				FY 2007				To	Totals
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Complete	
Inputs	18	18	18	18	23	23	24	24	16	16	17	17	16	17	16	17	56	748
Outputs	18	18	18	18	25	25	26	26	31	31	31	31	16	17	16	17	56	748

METHOD OF IMPLEMENTATION: ADMINISTRATIVE LEADTIME: 2 Months PRODUCTION LEADTIME: 7 Months

Contract Dates:	FY 1999	Dec98	FY 2000	Dec99	FY 2001 Dec00
Delivery Date:	FY 1999	Jul98	FY 2000	Jul00	FY 2001 Jul01

INDIVIDUAL MODIFICATION — Date: February 1999

MODIFICATION TITLE (Cont): TADS/PNVS Upgrades 1-94-01-2005

FINANCIAL PLAN: ($ in Millions)

	FY 1998 and Prior		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		FY 2004		FY 2005		TC		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																				
PROCUREMENT																				
Kit Quantity	97		55		55		68		68		70		70		77		188		748	
Installation Kits		4.5		2.5		2.5		3.2		3.3		3.4		3.5		4.1		11.0		38.0
Installation Kits, Nonrecurring																				
Equipment				1.2		1.3		1.5		1.5		1.6		1.6		1.7		3.5		13.9
Equipment, Nonrecurring																				
Engineering Change Orders																				
Data																				
Training Equipment																				
Support Equipment																				
Other				2.5		2.5		2.3		2.4		2.4		2.8		3.0		10.3		28.2
PM Matrix Support		0.9		0.4																1.3
Installation of Hardware																				
FY 1998 & Prior Eqpt -- Kits	45		43		9														97	
FY 1999 Eqpt -- Kits					46		9												55	
FY 2000 Eqpt -- Kits							51		4										55	
FY 2001 Eqpt -- Kits									60		8								68	
FY 2002 Eqpt -- kits											53		15						68	
FY 2003 Eqpt -- kits													57		13				70	
FY 2004 Eqpt -- kits															70				70	
FY 2005 Eqpt -- kits															19		58		77	
TC Equi 188 Kits																	188		188	
Total Installment	45		43		55		60		64		61		72		102		246		748	
Total Procurement Cost		5.4		6.6		6.3		7.0		7.2		7.4		7.9		8.8		24.8		81.4

INDIVIDUAL MODIFICATION Date February 1999

MODIFICATION TITLE: Apache Integrated Training Program Trainer Upgrade

MODELS OF SYSTEMS AFFECTED: AH-64 Apache

DESCRIPTION / JUSTIFICATION:

Operational requirement. Upgrade Apache operator and maintenance training devices in FY 01-05 to support A-Model training thru FY 10. Training devices include Armament/ Electrical Trainer (AET-A7) Apache Sustainment Training Kit (ASTK) and the Airframe, Engine and Drivetrain System Trainer (AEDST - A6). Requirement will continue to exist to train AH-64A maintainers in light of the decision not to remanufacture 218 AH-64As. Upgrades toTADS Selected Task Trainer (TSTT) with critical aircraft troubleshooting ECP's (EGI, ORT Conversion, TADS OIP, Fuel Control Modification). Devices located at every Apache Battalion, USAALS, and USAAVNC.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

Using existing contract and SOW issued Nov 98.

Installation Schedule:

	Pr Yr	FY 1999				FY 2000				FY 2001				FY 2002				FY 2003			
	Totals	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Inputs						1	1			1	1			1	1			2	1		
Outputs								1	1			1	1			1	1			2	1

	FY 2004				FY 2005				FY 2006				FY 2007				To	Totals
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Complete	
Inputs	1																	10
Outputs			1															10

METHOD OF IMPLEMENTATION: ADMINISTRATIVE LEADTIME: 3 Months PRODUCTION LEADTIME: 6 Months

Contract Dates:	FY 1999	FY 2000	Nov 99	FY 2001	Nov 00
Delivery Date:	FY 1999	FY 2000	May 00	FY 2001	May 01

INDIVIDUAL MODIFICATION — Date: February 1999

MODIFICATION TITLE (Cont): Apache Integrated Training Program Trainer Upgrade

FINANCIAL PLAN: ($ in Millions)

	FY 1998 and Prior		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		FY 2004		FY 2005		TC		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																				
PROCUREMENT																				
Kit Quantity																				
Installation Kits																				
Installation Kits, Nonrecurring																				
Equipment					2	4.0	2	4.1	2	4.4	3	6.5	1	2.3					10	21.3
Equipment, Nonrecurring																				
Engineering Change Orders																				
Data																				
Training Equipment																				
Support Equipment																				
Other																				
PM Matrix Support																				
Installation of Hardware																				
FY 1998 & Prior Eqpt -- Kits																				
FY 1999 Eqpt -- Kits																				
FY 2000 Eqpt -- Kits																				
FY 2001 Eqpt -- Kits																				
FY 2002 Eqpt -- kits																				
FY 2003 Eqpt -- kits																				
FY 2004 Eqpt -- kits																				
FY 2005 Eqpt -- kits																				
TC Equip-Kits																				
Total Installment																				
Total Procurement Cost						4.0		4.1		4.4		6.5		2.3						21.3

Exhibit P-40, Budget Item Justification Sheet

Date: February 1999

Appropriation / Budget Activity/Serial No: AIRCRAFT PROCUREMENT / 2 / Modification of Aircraft

P-1 Item Nomenclature: CH-47 CARGO HELICOPTER MODS (MYP) (AA0252)

Program Elements for Code B Items:

Code:

Other Related Program Elements:

	Prior Years	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	To Complete	Total Prog
Proc Qty												
Gross Cost	15.5	48.5	60.3	80.9	70.7	34.7	138.8	172.7	210.2	208.9	293.9	1335.1
Less PY Adv Proc												
Plus CY Adv Proc												
Net Proc (P-1)	15.5	48.5	60.3	80.9	70.7	34.7	138.8	172.7	210.2	208.9	293.9	1335.1
Initial Spares												
Total Proc Cost	15.5	48.5	60.3	80.9	70.7	34.7	138.8	172.7	210.2	208.9	293.9	1335.1
Flyaway U/C												
Wpn Sys Proc U/C												

DESCRIPTION: The CH-47 heavy lift helicopter is a day/night tandem rotor helicopter powered by two T-55 turbine engines. The CH-47 is the Army's only active heavy cargo helicopter and is a key element in the Contingency CORPS. The CHINOOK provides invaluable battlefield mobility for tactical vehicles, artillery and engineer equipment, personnel and logistical support equipment. Cargo Helicopters provide the logistical base for Air-Land operations. The CHINOOK also provides support of operations other than war.

JUSTIFICATION: FY 00 and FY 01 funding procures safety and operational modifications to the CH-47D fleet and trainers to maintain the latest configuration. Modifications are planned to fielded aircraft to incorporate safety and operational modifications to the CH-47D aircraft. These changes contribute to the effectiveness of heavy lift capability, maintainability, reliability, and aircraft/crew safety. The major modifications occurring during FY 00 and FY 01 are procurement of kits for Improved Battery, Halon Replacement, Conversion of the T55-L-712 to T55-GA-714A Engines, Engine Filtration System, and Extended Range Fuel System.

Exhibit P-40M Budget Item Justification Sheet										Date: February 1999	
Appropriation / Budget Activity/Serial No.: AIRCRAFT PROCUREMENT / 2 / Modification of Aircraft						P-1 Item Nomenclature: CH-47 CARGO HELICOPTER MODS (MYP) (AA0252)					
Program Elements for Code B Items			Code	Other Related Program Elements							
Description		Fiscal Years									
OSIP NO.	Classification	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	TC	Total
Installation of Modification Kits Various											
Various	Operational/Safety	26.2	2.2	1.3	0.8	0.0	0.0	0.0	0.0	0.0	30.4
Improved Cross Shaft Adapters, Coupling & Bolts											
1-95-01-0817	Safety	0.0	0.0	0.0	1.1	0.2	0.2	0.0	0.0	0.0	1.6
Improved Battery											
1-95-01-0822	Operational	0.0	0.0	0.0	0.0	1.9	0.3	0.3	0.0	0.0	2.5
Halon Replacement											
1-95-01-0813	Legislative	0.0	1.7	0.8	0.0	0.0	0.0	0.0	0.0	0.0	2.4
Engine Filtration System											
1-93-01-0807	Operational	0.0	0.0	0.0	0.0	4.9	5.5	6.4	8.2	42.1	67.1
Extended Range Fuel System											
1-97-01-822	Operational	7.1	5.3	6.0	0.2	10.9	14.3	18.1	12.9	0.2	75.0
Engine Upgrade to T55-GA-714A Configuration											
1-96-01-0828	Operational	91.0	71.7	62.6	32.6	120.9	152.4	185.4	187.8	251.6	1,156.1
Totals		124.3	80.9	70.7	34.7	138.8	172.7	210.2	208.9	293.9	1,335.1

INDIVIDUAL MODIFICATION Date February 1999

MODIFICATION TITLE: Installation of Modification Kits Various

MODELS OF SYSTEMS AFFECTED: CH-47D CHINOOK and MH-47E

DESCRIPTION / JUSTIFICATION:

Modification kits procured with prior funding remain uninstalled due to deliveries, scheduling and funding. This funding will install these modification kits in the CH-47D aircraft and the MH-47E aircraft where appropriate. Installing all kits in all aircraft will result in more efficient maintenance, increased operational capability and safety improvements.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

Installations are ongoing.

Installation Schedule:

	Pr Yr	FY 1999				FY 2000				FY 2001				FY 2002				FY 2003			
	Totals	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Inputs	4474	418	418	418	419	300	300	300	302	185	185	185	185								
Outputs	4474		418	418	418	419	300	300	300	302	185	185	185	185							

	FY 2004				FY 2005				FY 2006				FY 2007				To	Totals
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Complete	
Inputs																		8089
Outputs																		8089

METHOD OF IMPLEMENTATION: Contract ADMINISTRATIVE LEADTIME: Months PRODUCTION LEADTIME: Months

Contract Dates: FY 1999 FY 2000 FY 2001

Delivery Date: FY 1999 FY 2000 FY 2001

INDIVIDUAL MODIFICATION — Date: February 1999

MODIFICATION TITLE (Cont): Installation of Modification Kits Various

FINANCIAL PLAN: ($ in Millions)

	FY 1998 and Prior		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		FY 2004		FY 2005		TC		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																				
PROCUREMENT																				
Kit Quantity	8089	20.4																	8089	20.4
Installation Kits																				
Installation Kits, Nonrecurring																				
Equipment																				
Equipment, Nonrecurring																				
Engineering Change Orders																				
Data																				
Training Equipment																				
Support Equipment																				
Other																				
Interim Contractor Support																				
Installation of Hardware																				
FY 1998 & Prior Eqpt -- Kits	4474	5.8	1673	2.2	1202	1.3	740	0.8											8089	10.0
FY 1999 Eqpt -- Kits																				
FY 2000 Eqpt -- Kits																				
FY 2001 Eqpt -- Kits																				
FY 2002 Eqpt -- kits																				
FY 2003 Eqpt -- kits																				
FY 2004 Eqpt -- kits																				
FY 2005 Eqpt -- kits																				
TC Equip-Kits																				
Total Installment	4474	5.8	1673	2.2	1202	1.3	740	0.8											8089	10.0
Total Procurement Cost		26.2		2.2		1.3		0.8												30.4

INDIVIDUAL MODIFICATION Date February 1999

MODIFICATION TITLE: Improved Cross Shaft Adapters, Coupling & Bolts 1-95-01-0817

MODELS OF SYSTEMS AFFECTED: CH-47D CHINOOK, MH47E, and Trainers.

DESCRIPTION / JUSTIFICATION:

Type of Improvement - Safety. This modification is to improve Cross Shaft Adapters, Couplings, and Bolts. Field reports have identified failure of the steel cross shaft adapters. Corrosion pitting inside the bolt holes have served as stress risers for fatigue failures. Correction of this deficiency will reduce maintenance, resolve safety concerns, and increase reliability and maintainability.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

	Planned	Accomplished
Production Contract Award	Jan 01	
First Production Hardware Delivery	Jan 02	
Field Retrofit Initiated	Jan 02	

Installation Schedule:

	Pr Yr	FY 1999				FY 2000				FY 2001				FY 2002				FY 2003			
	Totals	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Inputs															78	78	78	58	58	58	59
Outputs																78	78	78	58	58	58

	FY 2004				FY 2005				FY 2006				FY 2007				To	Totals
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Complete	
Inputs																		467
Outputs	59																	467

METHOD OF IMPLEMENTATION: Contract ADMINISTRATIVE LEADTIME: 9 Months PRODUCTION LEADTIME: 12 Months

Contract Dates: FY 1999 FY 2000 FY 2001 Jan 01

Delivery Date: FY 1999 FY 2000 FY 2001 Jan 02

INDIVIDUAL MODIFICATION — Date: February 1999

MODIFICATION TITLE (Cont): Improved Cross Shaft Adapters, Coupling & Bolts 1-95-01-0817

FINANCIAL PLAN: ($ in Millions)

	FY 1998 and Prior		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		FY 2004		FY 2005		TC		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																				
PROCUREMENT																				
Installation Kits							465	1.1											465	1.1
Installation Kits, Nonrecurring																				
Equipment																				
Equipment, Nonrecurring																				
Engineering Change Orders																				
Data																				
Training Equipment																				
Support Equipment																				
Other																				
Interim Contractor Support																				
Installation of Hardware																				
FY 1998 & Prior Eqpt -- Kits																				
FY 1999 Eqpt -- Kits																				
FY 2000 Eqpt -- Kits																				
FY 2001 Eqpt -- Kits									234	0.2	233	0.2							467	0.5
FY 2002 Eqpt -- kits																				
FY 2003 Eqpt -- kits																				
FY 2004 Eqpt -- kits																				
FY 2005 Eqpt -- kits																				
TC Equip-Kits																				
Total Installment									234	0.2	233	0.2							467	0.5
Total Procurement Cost								1.1		0.2		0.2								1.6

INDIVIDUAL MODIFICATION Date February 1999

MODIFICATION TITLE: Improved Battery 1-95-01-0822

MODELS OF SYSTEMS AFFECTED: CH-47D CHINOOK and Trainers.

DESCRIPTION / JUSTIFICATION:

Type of Improvement - Improved Operational Capability. Incorporation of a New Lead Acid Battery will reduce the frequent battery failure. Currently the aircraft battery has a frequent failure rate. This has been a major maintenance concern for the users.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

	Planned	Accomplished
Production Contract Award	Jan 02	
First Production Hardware Delivery	Jul 02	
Field Retrofit Initiated	Oct 03	

Installation Schedule:

	Pr Yr	FY 1999				FY 2000				FY 2001				FY 2002				FY 2003			
	Totals	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Inputs																		58	58	59	59
Outputs																			58	58	59

	FY 2004				FY 2005				FY 2006				FY 2007				To	Totals
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Complete	
Inputs	58	58	58	59														467
Outputs	59	58	58	58	59													467

METHOD OF IMPLEMENTATION: Contract ADMINISTRATIVE LEADTIME: 9 Months PRODUCTION LEADTIME: 7 Months

Contract Dates: FY 1999 FY 2000 Jan 00 FY 2001 Jan 01

Delivery Date: FY 1999 FY 2000 Jul 00 FY 2001 Jul 01

INDIVIDUAL MODIFICATION — Date: February 1999

MODIFICATION TITLE (Cont): Improved Battery 1-95-01-0822

FINANCIAL PLAN: ($ in Millions)

	FY 1998 and Prior		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		FY 2004		FY 2005		TC		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																				
PROCUREMENT																				
A-kit									467	1.7									467	1.7
Batteries									467	0.2									467	0.2
Installation of Hardware																				
FY 1998 & Prior Eqpt -- Kits																				
FY 1999 Eqpt -- Kits																				
FY 2000 Eqpt -- Kits											234	0.3	233	0.3					467	0.6
FY 2001 Eqpt -- Kits																				
FY 2002 Eqpt -- kits																				
FY 2003 Eqpt -- kits																				
FY 2004 Eqpt -- kits																				
FY 2005 Eqpt -- kits																				
TC Equip-Kits																				
Total Installment											234	0.3	233	0.3					467	0.6
Total Procurement Cost										1.9		0.3		0.3						2.5

INDIVIDUAL MODIFICATION Date February 1999

MODIFICATION TITLE: Halon Replacement 1-95-01-0813

MODELS OF SYSTEMS AFFECTED: CH-47D CHINOOK and MH-47.

DESCRIPTION / JUSTIFICATION:

Type of Improvement - Legislative Compliance. Use of Halon violates the Montreal Protocol and violates the Clean Air Act. This modification will retrofit hand held aircraft fire extinquishers and the onboard fire extinquishing system in the engine nacelle. The current halon extinquishers and systems deplete the ozone level and will be replaced with a new chemical agent.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

	Planned	Accomplished
Production Contract Award	Jan 99	
First Production Hardware Delivery	Sep 00	
Field Retrofit Initiated	Oct 00	

Installation Schedule:

	Pr Yr	FY 1999				FY 2000				FY 2001				FY 2002				FY 2003			
	Totals	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Inputs						116	117	117	117												
Outputs							116	117	117	117											

	FY 2004				FY 2005				FY 2006				FY 2007				To	Totals
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Complete	
Inputs																		467
Outputs																		467

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

Contract Dates:	FY 1999	Jan 99	FY 2000	FY 2001
Delivery Date:	FY 1999	Sep 00	FY 2000	FY 2001

INDIVIDUAL MODIFICATION — Date: February 1999

MODIFICATION TITLE (Cont): Halon Replacement 1-95-01-0813

FINANCIAL PLAN: ($ in Millions)

	FY 1998 and Prior		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		FY 2004		FY 2005		TC		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																				
PROCUREMENT																				
Kit Quantity																				
Installation Kits			467	1.7															467	1.7
Installation Kits, Nonrecurring																				
Equipment																				
Equipment, Nonrecurring																				
Engineering Change Orders																				
Data																				
Training Equipment																				
Support Equipment																				
Other																				
Interim Contractor Support																				
Installation of Hardware																				
FY 1998 & Prior Eqpt -- Kits																				
FY 1999 Eqpt -- Kits					467	0.8													467	0.8
FY 2000 Eqpt -- Kits																				
FY 2001 Eqpt -- Kits																				
FY 2002 Eqpt -- kits																				
FY 2003 Eqpt -- kits																				
FY 2004 Eqpt -- kits																				
FY 2005 Eqpt -- kits																				
TC Equip-Kits																				
Total Installment					467	0.8													467	0.8
Total Procurement Cost				1.7		0.8														2.4

INDIVIDUAL MODIFICATION Date February 1999

MODIFICATION TITLE: Engine Filtration System 1-93-01-0807

MODELS OF SYSTEMS AFFECTED: CH-47D CHINOOK, MH-47E, and Trainers

DESCRIPTION / JUSTIFICATION:

Type of Improvement - Improved Operational Capability. This funding provides an engine modification to separate sand and dust at the engine inlet to allow clean air to flow into the engine. For missions requiring extended operation at very low altitudes over sand and dust terrain, separation of sand and dust at engine inlet is a necessity to assure normal engine life for sustained operations. Procurement of this system is essential to assure operation in sandy regions.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

	Planned	Accomplished
Design Review	Sep 99	
Testing	Dec 00	
Production Contract	Jan 02	
First Hardware Delivery	Sep 02	
Field Installation Initiated	Jan 03	

Installation Schedule:

	Pr Yr	FY 1999				FY 2000				FY 2001				FY 2002				FY 2003			
	Totals	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Inputs																		8	9	9	9
Outputs																			8	9	9

	FY 2004				FY 2005				FY 2006				FY 2007				To	Totals
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Complete	
Inputs	8	9	9	9	10	10	10	10	12	13	13	13	40	40	40	40	146	467
Outputs	9	8	9	9	9	10	10	10	10	12	13	13	13	40	40	40	186	467

METHOD OF IMPLEMENTATION: Contract ADMINISTRATIVE LEADTIME: 1 Months PRODUCTION LEADTIME: 8 Months

Contract Dates: FY 1999 FY 2000 Jan 00 FY 2001 Jan 01

Delivery Date: FY 1999 FY 2000 Sep 00 FY 2001 Sep 01

INDIVIDUAL MODIFICATION																				
Date																		February 1999		
MODIFICATION TITLE (Cont):									Engine Filtration System 1-93-01-0807											
FINANCIAL PLAN: ($ in Millions)																				
	FY 1998 and Prior		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		FY 2004		FY 2005		TC		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																				
PROCUREMENT																				
A - Kits									35	1.2	35	1.3	40	1.5	51	1.9	49	1.9	210	7.9
B - Kits									35	3.7	35	3.8	40	4.5	51	5.8	306	35.8	467	53.6
Installation of Hardware																				
FY 1998 & Prior Eqpt -- Kits																				
FY 1999 Eqpt -- Kits																				
FY 2000 Eqpt -- Kits																				
FY 2001 Eqpt -- Kits																				
FY 2002 Eqpt -- kits																				
FY 2003 Eqpt -- kits											35	0.4							35	0.4
FY 2004 Eqpt -- kits													35	0.4					35	0.4
FY 2005 Eqpt -- kits															40	0.5			40	0.5
TC Equip-Kits																	357	4.4	357	4.4
Total Installment											35	0.4	35	0.4	40	0.5	357	4.4	467	5.7
Total Procurement Cost										4.9		5.5		6.4		8.2		42.1		67.1

INDIVIDUAL MODIFICATION Date February 1999

MODIFICATION TITLE: Extended Range Fuel System 1-97-01-822

MODELS OF SYSTEMS AFFECTED: CH-47D Chinook

DESCRIPTION / JUSTIFICATION:

Type of Improvement - Improved Operational Capability. The Extended Range Fuel System (ERFS) provides the CH-47D with up to 2400 gallons of auxiliary fuel for worldwide self-deployment or tactical forward area refueling. The typical ERFS installation includes three 800-gallon auxiliary fuel tanks fitted with crashworthy self-sealing bladders, pressure refueling capability, and fuel quantity probes. For mission flexibility, one, two, or three auxiliary fuel tanks can be installed. The B - Kit system components include tank assemblies, a fuel control panel, individual tank restraint systems, interconnecting self-sealing fuel hoses, fuel vent hoses, electrical cables, and a Forward Area Refueling Equipment (FARE) kit. The FARE kit provides the necessary components to permit tactical forward area refueling of combat weapons systems at two refueling points 200 feet from the helicopter. The A- Kit is the airframe modification kit, with the airframe modifications installed, the ERFS can be installed or removed by a crew of four in less than 30 minutes by hand without the use of tools. National Guard Dedicated Procurement has funded 128 hardware kits, this budget line will fund all Army installations.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

	Planned	Accomplished
Production Contract Award	Aug 98	Aug 98
First Hardware Delivery	Jan 99	Jan 99
Testing Completed	Jun 99	
Field Installation Initiated	Sep 99	

Installation Schedule:

	Pr Yr	FY 1999				FY 2000				FY 2001				FY 2002				FY 2003			
	Totals	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Inputs					58	51	52	52	52	8	9	9	9					10	10	10	11
Outputs						58	51	52	52	52	8	9	9	9					10	10	10

	FY 2004				FY 2005				FY 2006				FY 2007				To	Totals
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Complete	
Inputs	7	7	7	7	12	12	12	13	13									431
Outputs	11	7	7	7	7	12	12	12	13	13								431

METHOD OF IMPLEMENTATION: Contract ADMINISTRATIVE LEADTIME: 4 Months PRODUCTION LEADTIME: 6 Months

Contract Dates:	FY 1999	Feb 99	FY 2000	Feb 00	FY 2001	Feb 01
Delivery Date:	FY 1999	Aug 99	FY 2000	Aug 00	FY 2001	Aug 01

INDIVIDUAL MODIFICATION — Date: February 1999

MODIFICATION TITLE (Cont): Extended Range Fuel System 1-97-01-822

FINANCIAL PLAN: ($ in Millions)

	FY 1998 and Prior		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		FY 2004		FY 2005		TC		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
PROCUREMENT																				
ERFS II B-KIT	11	5.9	7	4.1	7	4.1			16	9.9	21	13.3	26	16.8	18	11.8			106	65.9
ERFS II A KIT	80	0.9	57	0.7	35	0.4			41	0.5	28	0.4	49	0.6	13	0.1			303	3.7
PM Admin Support		0.3		0.2		0.2				0.5		0.5		0.5		0.5				2.5
Installation of Hardware																				
FY 1998 & Prior Eqpt -- Kits			58	0.4															58	0.4
FY 1999 Eqpt -- Kits					207	1.3													207	1.3
FY 2000 Eqpt -- Kits							35	0.2											35	0.2
FY 2001 Eqpt -- Kits																				
FY 2002 Eqpt -- kits											41	0.3							41	0.3
FY 2003 Eqpt -- kits													28	0.2					28	0.2
FY 2004 Eqpt -- kits															49	0.4			49	0.4
FY 2005 Eqpt -- kits																	13	0.2	13	0.2
TC Equip-Kits																				
Total Installment			58	0.4	207	1.3	35	0.2			41	0.3	28	0.2	49	0.4	13	0.2	431	2.9
Total Procurement Cost		7.1		5.3		6.0		0.2		10.9		14.3		18.1		12.9		0.2		75.0

INDIVIDUAL MODIFICATION Date February 1999

MODIFICATION TITLE: Engine Upgrade to T55-GA-714A Configuration 1-96-01-0828

MODELS OF SYSTEMS AFFECTED: CH-47D CHINOOK and Trainers

DESCRIPTION / JUSTIFICATION:

Type of Improvement - Improved Operational Capability. This modification will upgrade the T55-L-712 engine to T55-GA-714A configuration increasing power to allow the aircraft to carry its primary payloads under high altitude/temperatures. The CH-47D as configured does not meet its existing 1975 Required Operational Capability (ROC), i.e. 15,000 lbs. payload for 30 Nautical Miles radius at 4,000 feet/95 degrees Farenheit. The addition of numerous engineering changes to provide safety, the latest in operational technology, and improved communications has increased the empty weight of the aircraft. Upgrade of the T55-L-712 engine to T55-GA-714A configuration will provide the capability to meet the required operational capability. The program consists of : Converted Engines - two per aircraft plus spares, Engine Fielding Kits - two per aircraft, Airframe Mod Kits. - one per aircraft, the installation of the Airframe Kit and Converted Engines on the aircraft, and Logistic Support (training, fielding support).

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

	Planned	Accomplished
Production Decision	Feb 97	Feb 97
Low Rate Initial Production Contract Award	Sep 97	Dec 97
First Production Hardware Delivery	Feb 99	
Engine Fielding Initiated	Jun 99	

Installation Schedule:

	Pr Yr	FY 1999				FY 2000				FY 2001				FY 2002				FY 2003			
	Totals	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Inputs				12	13	9	9	9	9	9	9	9	9	7	6	6	6	15	15	16	16
Outputs					12	13	9	9	9	9	9	9	9	9	7	6	6	6	15	15	16

	FY 2004				FY 2005				FY 2006				FY 2007				To	Totals
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Complete	
Inputs	18	18	18	18	18	18	18	18	18	18	18	18	10	10	10	12		442
Outputs	16	18	18	18	18	18	18	18	18	18	18	18	18	10	10	10	12	442

METHOD OF IMPLEMENTATION: Contract ADMINISTRATIVE LEADTIME: 5 Months PRODUCTION LEADTIME: 18 Months

Contract Dates:	FY 1999	Mar 99	FY 2000	Mar 00	FY 2001	Mar 01
Delivery Date:	FY 1999	Aug 00	FY 2000	Aug 01	FY 2001	Aug 02

INDIVIDUAL MODIFICATION — Date: February 1999

MODIFICATION TITLE (Cont): Engine Upgrade to T55-GA-714A Configuration 1-96-01-0828

FINANCIAL PLAN: ($ in Millions)

	FY 1998 and Prior		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		FY 2004		FY 2005		TC		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																				
PROCUREMENT																				
Converted Engines	95	60.0	73	53.8	60	44.4	25	18.1	120	89.4	147	111.4	179	138.6	180	142.0	271	219.0	1150	876.7
Engine Fielding Kits	108	15.9	59	8.8	54	8.1	29	4.4	115	17.8	141	22.3	166	26.7	154	25.3	58	8.7	884	138.0
Airframe Kits	50	6.2	22	2.8	28	3.5	34	4.3	52	6.8	71	9.4	72	9.8	72	10.0	41	5.5	442	58.2
PM Admin Support				3.1		3.3		3.4		3.4		3.5		3.6		3.7		7.6		31.6
Logistics		9.0		2.2		1.8		0.8		2.4		2.9		3.5		3.6		5.4		31.6
Installation of Hardware																				
FY 1998 & Prior Eqpt -- Kits			25	1.1															25	1.1
FY 1999 Eqpt -- Kits					36	1.5													36	1.5
FY 2000 Eqpt -- Kits							36	1.6											36	1.6
FY 2001 Eqpt -- Kits									25	1.1									25	1.1
FY 2002 Eqpt -- kits											62	2.8							62	2.8
FY 2003 Eqpt -- kits													72	3.3					72	3.3
FY 2004 Eqpt -- kits															72	3.3			72	3.3
FY 2005 Eqpt -- kits																	114	5.4	114	5.4
TC Equip-Kits																				
Total Installment			25	1.1	36	1.5	36	1.6	25	1.1	62	2.8	72	3.3	72	3.3	114	5.4	442	20.0
Total Procurement Cost		91.0		71.7		62.6		32.6		120.9		152.4		185.4		187.8		251.6		1156.1

Exhibit P-40, Budget Item Justification Sheet

Date: February 1999

Appropriation / Budget Activity/Serial No: AIRCRAFT PROCUREMENT / 2 / Modification of Aircraft

P-1 Item Nomenclature: CH-47 ICH (AA0254)

Program Elements for Code B Items:

Code:

Other Related Program Elements:

	Prior Years	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	To Complete	Total Prog
Proc Qty							11	16	29	30	214	300
Gross Cost	0.0	0.0	0.0	0.0	0.0	48.7	149.8	178.8	303.5	311.4	1980.5	2972.6
Less PY Adv Proc							34.2	42.8	72.1	73.0	546.9	768.9
Plus CY Adv Proc						34.2	42.8	72.1	73.0	62.9	484.0	768.9
Net Proc (P-1)	0.0	0.0	0.0	0.0	0.0	82.9	158.4	208.1	304.4	301.3	1917.6	2972.6
Initial Spares												
Total Proc Cost	0.0	0.0	0.0	0.0	0.0	82.9	158.4	208.1	304.4	301.3	1917.6	2972.6
Flyaway U/C							12.1	10.1	9.3	9.3	8.6	
Wpn Sys Proc U/C							13.6	11.2	10.5	10.2	9.3	

The improved Cargo Helicopter (ICH) will be a modification to the current CH-47D helicopter to extend airframe service life, introduce an open electronic architecture that is compatible with the Army XXI digitized battlefield, and reduce Operating and Support (O&S) cost. This heavy lift helicopter program will be based on a remanufacture approach. The airframe will be rebuilt, mission capability improved, and vibrations reduced through airframe stiffening to provide for long term O&S cost reductions. Continued support, coverage, and sustainment of Maneuver, Fire Support, Air Defense, and Survivability mission areas will be provided by the ICH. Its mission is transportation of ground forces, class III/class V supplies, and battle critical cargo in support of all future contingencies.
A service life extension program, the ICH will sustain the aging CH-47D fleet and bridge the gap until the development of a follow-on aricraft. It will be fielded as a direct replacement for 300 of the CH-47D fleet. Data base will be updated to reflect FY02-FY05 advance procurement.

Exhibit P-40M Budget Item Justification Sheet										Date: February 1999	
Appropriation / Budget Activity/Serial No.: AIRCRAFT PROCUREMENT / 2 / Modification of Aircraft					P-1 Item Nomenclature: CH-47 ICH (AA0254)						
Program Elements for Code B Items			Code		Other Related Program Elements						
Description		Fiscal Years									
OSIP NO.	Classification	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	TC	Total
Improved Cargo Helicopter											
TBD	Operational/Safety	0.0	0.0	0.0	48.7	115.6	136.0	231.4	238.4	1,433.6	2,203.7
Totals		0.0	0.0	0.0	48.7	115.6	136.0	231.4	238.4	1,433.6	2,203.7

INDIVIDUAL MODIFICATION — Date: February 1999

MODIFICATION TITLE: Improved Cargo Helicopter TBD

MODELS OF SYSTEMS AFFECTED: Itemize names of systems in this text box.

DESCRIPTION / JUSTIFICATION:

The improved Cargo Helicopter (ICH) will be a modification to the current CH-47D helicopter to extend airframe service life, introduce an open electronic architecture that is compatible with the Army XXI digitized battlefield, and reduce Operating and Support (O&S) cost. This heavy lift helicopter program will be based on a remanufacture approach. The airframe will be rebuilt, mission capability improved, and vibrations reduced through airframe stiffening to provide for long term O&S cost reductions. Continued support, coverage, and sustainment of Maneuver, Fire Support, Air Defense, and Survivability mission areas will be provided by the ICH. Its mission is transportation of ground forces, class III/class V supplies, and battle critical cargo in support of all future contingencies.
A service life extension program, the ICH will sustain the aging CH-47D fleet and bridge the gap until the development of a follow-on aricraft. It will be fielded as a direct replacement for 300 of the CH-47D fleet.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

	Planned	Accomplished
EMD Contract Award		May 98
LRIP I Contract Award	Dec 01	
LRIP II Contract Award	Mar 03	
MS III Production Decision	Jan 04	

Installation Schedule:

	Pr Yr	FY 1999				FY 2000				FY 2001				FY 2002				FY 2003			
	Totals	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Inputs														2	3	3	3	4	4	4	4
Outputs																		2	3	3	3

	FY 2004				FY 2005				FY 2006				FY 2007				To	Totals
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Complete	
Inputs	7	7	7	8	7	7	8	8	6	6	7	7	6	6	7	7	162	300
Outputs	4	4	4	4	7	7	7	8	7	7	8	8	6	6	7	7	188	300

METHOD OF IMPLEMENTATION: Contract — ADMINISTRATIVE LEADTIME: 6 Months — PRODUCTION LEADTIME: 18/12 Months

Contract Dates: FY 1999 — FY 2000 — FY 2001

Delivery Date: FY 1999 — FY 2000 — FY 2001

INDIVIDUAL MODIFICATION — Date: February 1999

MODIFICATION TITLE (Cont): Improved Cargo Helicopter TBD

FINANCIAL PLAN: ($ in Millions)

	FY 1998 and Prior		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		FY 2004		FY 2005		TC		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
PROCUREMENT																				
Recurring Hardware										86.1		100.6		192.6		202.4		1142.1		1723.8
Other Flyaway								40.4		12.8		14.8		15.4		16.5		139.0		238.9
Training Devices								4.6		10.7		12.8		13.5		9.7		74.2		125.5
Other Support								3.7		6.0		7.8		9.9		9.8		78.3		115.5
Installation of Hardware																				
FY 1998 & Prior Eqpt -- Kits																				
FY 1999 Eqpt -- Kits																				
FY 2000 Eqpt -- Kits																				
FY 2001 Eqpt -- Kits																				
FY 2002 Eqpt -- kits																				
FY 2003 Eqpt -- kits																				
FY 2004 Eqpt -- kits																				
FY 2005 Eqpt -- kits																				
TC Equip-Kits																				
Total Installment																				
Total Procurement Cost								48.7		115.6		136.0		231.4		238.4		1433.6		2203.7

Exhibit P-40, Budget Item Justification Sheet

Date: February 1999

Appropriation / Budget Activity/Serial No: AIRCRAFT PROCUREMENT / 2 / Modification of Aircraft

P-1 Item Nomenclature: CH-47 ICH ADVANCE PROCUREMENT (AA0254)

Program Elements for Code B Items:

Code:

Other Related Program Elements:

	Prior Years	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	To Complete	Total Prog
Proc Qty												
Gross Cost	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				0.0
Less PY Adv Proc												
Plus CY Adv Proc						34.2	42.8	72.1	73.0	62.9	484.0	768.9
Net Proc (P-1)						34.2	42.8	72.1	73.0	62.9	484.0	768.9
Initial Spares												
Total Proc Cost						34.2	42.8	72.1	73.0	62.9	484.0	768.9
Flyaway U/C												
Wpn Sys Proc U/C												

The improved Cargo Helicopter (ICH) will be a modification to the current CH-47D helicopter to extend airframe service life, introduce an open electronic architecture that is compatible with the Army XXI digitized battlefield, and reduce Operating ad Support (O&S) cost. This heavy lift helicopter program will be based on a remanufacture approach. The airframe will be rebuilt, mission capability improved, and vibrations reduced through airframe stiffening to provide for long term O&S cost reductions. Continued support, coverage, and sustainment of Maneuver, Fire Support, Air Defense, and Survivability mission areas will be provided by the ICH. Its mission is transportation of ground forces, class III/class V supplies, and battle critical cargo in support of all future contingencies.
A service life extension program, the ICH will sustain the aging CH-47D fleet and bridge the gap until the development of a follow-on aircraft. It will be fielded as a direct replacement for 300 of the CH-47D fleet.

FY 01 funds Advanced Procurement to support deliveries of avionics and airframe components. Long Lead is required to provide funding for those parts, tooling, test equipment, and materiels which are lead time critical to the end item modification. Long lead funding is required to preserve the planned helicopter delivery schedule.

Advance Procurement Requirements Analysis-Funding (P-10A)

First System Award Date:	First System Completion Date:	Date:
		February 1999

Appropriation / Budget Activity/Serial No:	P-1 Line Item Nomenclature / Weapon System:
AIRCRAFT PROCUREMENT / 2 / Modification of Aircraft	CH-47 ICH ADVANCE PROCUREMENT (AA0254)

($ in Millions)

	PLT (mos)	When Rqd (mos)	Pr Yrs	1997	1998	1999	2000	2001	2002	2003	2004	2005	To Comp	Total
End Item Quantity:														
Avionics	13	14						19.8	25.9	44.4	45.2	38.9	303.5	477.6
Airframe	15	16						14.4	16.9	27.7	27.8	24.0	180.5	291.3
Total Advance Procurement								34.2	42.8	72.1	73.0	62.9	484.0	769.0

Description:

Advance Procurement Requirements Analysis-Budget Justification (P-10B)

Date: February 1999

Appropriation / Budget Activity/Serial No: AIRCRAFT PROCUREMENT / 2 / Modification of Aircraft

P-1 Line Item Nomenclature / Weapon System: CH-47 ICH ADVANCE PROCUREMENT (AA0254)

($ in Millions)

	PLT (mos)	Quantity Per Assembly	Unit Cost	2000 Qty	2000 Contract Forecast Date	2000 Total Cost Request	2001 Qty	2001 Contract Forecast Date	2001 Total Cost Request
End Item									
Avionics	13	11	18.0				11	Nov 00	
Airframe	15	11	13.1				11	Nov 00	
Total Advance Procurement									

Description:

Advance Procurement Requirements Analysis-Present Value Analysis (P-10C)

Date: February 1999

Appropriation / Budget Activity/Serial No: AIRCRAFT PROCUREMENT / 2 / Modification of Aircraft

P-1 Line Item Nomenclature / Weapon System: CH-47 ICH ADVANCE PROCUREMENT (AA0254)

($ in Millions)

	Pr Yrs	1997	1998	1999	2000	2001	2002	2003	2004	2005	To Comp	Total
Proposal w/o AP												
Then Year Cost												
Constant Year Cost												
Present Value												
AP Proposal												
Then Year Cost												
Constant Year Cost												
Present Value												
AP Savings (Difference)												
Then Year Cost												
Constant Year Cost												
Present Value												

Remarks: Contract not priced without advanced procurement.

Exhibit P-40, Budget Item Justification Sheet											Date: February 1999	
Appropriation / Budget Activity/Serial No: AIRCRAFT PROCUREMENT / 2 / Modification of Aircraft						P-1 Item Nomenclature: UTILITY/CARGO AIRPLANE MODS (AA0270)						
Program Elements for Code B Items:				Code: A	Other Related Program Elements:							
	Prior Years	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	To Complete	Total Prog
Proc Qty												
Gross Cost	0.0	0.7	6.3	8.6	6.3	5.4	9.3	9.9	7.3	7.3	68.1	129.2
Less PY Adv Proc												
Plus CY Adv Proc												
Net Proc (P-1)	0.0	0.7	6.3	8.6	6.3	5.4	9.3	9.9	7.3	7.3	68.1	129.2
Initial Spares												
Total Proc Cost	0.0	0.7	6.3	8.6	6.3	5.4	9.3	9.9	7.3	7.3	68.1	129.2
Flyaway U/C												
Wpn Sys Proc U/C												

DESCRIPTION: This modification updates and modernizes the C-12 aircraft communication, navigation, surveillance and flight management equipment to current international standards. The modification ensures continued worldwide deployment capability, and safe operations into the 21st Century.

JUSTIFICATION: The FY 00 & FY 01 funds will be used for communications, navigation and surveillance equipment that is supportive of future Air Traffic Management requirements. The upgrade will also permit the Army fixed wing aircraft to operate in compliance with other existing and emerging regulations. During deployments in support of Desert Storm/Desert Shield/Provide Comfort, only selected aircraft with non-standard modifications were capable of being deployed to and within the theater. As requirements for new avionics equipment continue, aircraft delays and airspace exclusion are likely for aircraft not properly equipped. Upgrade of obsolete communication and navigation systems will enhance reliability and maintainability by employing commercial systems thereby improving C-12 availability for mission requirements.

Exhibit P-40M Budget Item Justification Sheet

Date: February 1999 Feb-99

Appropriation / Budget Activity/Serial No.	P-1 Item Nomenclature
AIRCRAFT PROCUREMENT / 2 / Modification of Aircraft	UTILITY/CARGO AIRPLANE MODS (AA0270)

Program Elements for Code B Items	Code	Other Related Program Elements

Description		Fiscal Years									
OSIP NO.	Classification	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	TC	Total
Avionics System Cockpit Upgrade											
1-96-01-0612	Operational	7.0	8.6	6.3	5.4	9.3	9.9	7.3	7.3	68.1	129.2
Totals		7.0	8.6	6.3	5.4	9.3	9.9	7.3	7.3	68.1	129.2

INDIVIDUAL MODIFICATION Date February 1999

MODIFICATION TITLE: Avionics System Cockpit Upgrade 1-96-01-0612

MODELS OF SYSTEMS AFFECTED: C-12C, F3, D1, D2, F1, F2, J, R, and RC-12K, N, P, Q

DESCRIPTION / JUSTIFICATION:

This effort will update and modernize C-12 communications, navigation, surveillance, and flight management equipment to current international requirements, enhance fleet standardization, allow worldwide deployments and continued safe operations into the 21st Century. As currently equipped, the aircraft are not suitable for worldwide deployment nor capable of using modern navigation and air traffic control facilities. The following equipment is included in this upgrade: Flight Management System, Electronic Flight Information System, Terrain Awareness Warning System, FM Immunity (voice and navigation), 8.33kHz frequency spacing, APX 100 Mode S upgrade, ARC 210, Traffic Collision Avoidance System II, and Engine Instruments. The preceding components reflect critically needed items. However, Air Traffic Management and DOD Navigation Warfare requirements are evolving and will require additional systems in the near future. The kit quantities reflected on the next page represent a wide variety of avionics kits with different mixes each fiscal year. Additionally, kit configurations vary based on the aircraft that they will be installed on. Consequently, kit unit cost will vary significantly from year to year.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

Development is not required for Avionics System Cockpit Upgrade.

Installation Schedule:

	Pr Yr	FY 1999				FY 2000				FY 2001				FY 2002				FY 2003			
	Totals	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Inputs	228		3	5	5		4	5	5		7	7	7		8	8	9		4	4	5
Outputs	228		3	5	5		4	5	5		7	7	7		8	8	9		4	4	5

	FY 2004				FY 2005				FY 2006				FY 2007				To	Totals
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Complete	
Inputs		4	4	4	6	7	7	7	2	7	7	7	3	6	6	6	35	432
Outputs		4	4	4	6	7	7	7	2	7	7	7	3	6	6	6	35	432

METHOD OF IMPLEMENTATION: ADMINISTRATIVE LEADTIME: 3 Months PRODUCTION LEADTIME: 3 Month

Contract Dates:	FY 1999	Jan 99	FY 2000	Jan 00	FY 2001	Jan 01
Delivery Date:	FY 1999	Mar 99	FY 2000	Mar 00	FY 2001	Mar01

INDIVIDUAL MODIFICATION — Date: February 1999

MODIFICATION TITLE (Cont): Avionics System Cockpit Upgrade 1-96-01-0612

FINANCIAL PLAN: ($ in Millions)

	FY 1998 and Prior		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		FY 2004		FY 2005		TC		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																				
PROCUREMENT																				
Kit Quantity																				
Installation Kits	228	6.7	13	7.2	14	4.2	21	3.9	25	6.9	13	7.4	12	5.3	27	6.1	79	49.1	432	96.8
Installation Kits, Nonrecurring																				
Equipment																				
Equipment, Nonrecurring																				
Engineering Change Orders																				
Data				0.1		0.1		0.1		0.1		0.1		0.1		0.1		0.6		1.3
Training Equipment																				
Support Equipment																				
Other																				
Interim Contractor Support																				
Installation of Hardware																				
FY 1998 & Prior Eqpt-228 Kits	228	0.3																	228	0.3
FY 1999 Eqpt -- 5 Kits			13	1.3															13	1.3
FY 2000 Eqpt -- 14 Kits					14	2.0													14	2.0
FY 2001 Eqpt -- 21 Kits							21	1.4											21	1.4
FY 2002 Eqpt -- 25 Kits									25	2.3									25	2.3
FY 2003 Eqpt -- 13 Kits											13	2.4							13	2.4
FY 2004 Eqpt -- 12 Kits													12	1.9					12	1.9
FY 2005 Eqpt -- 27 Kits															27	1.1			27	1.1
TC Equip-Kits -- 196 Kits																	79	18.4	79	18.4
Total Installment	228	0.3	13	1.3	14	2.0	21	1.4	25	2.3	13	2.4	12	1.9	27	1.1	79	18.4	432	31.1
Total Procurement Cost		7.0		8.6		6.3		5.4		9.3		9.9		7.3		7.3		68.1		129.2

Exhibit P-40, Budget Item Justification Sheet

Date: February 1999

Appropriation / Budget Activity/Serial No: AIRCRAFT PROCUREMENT / 2 / Modification of Aircraft

P-1 Item Nomenclature: OH-58 MODS (AA0400)

Program Elements for Code B Items:

Code:

Other Related Program Elements:

	Prior Years	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	To Complete	Total Prog
Proc Qty												
Gross Cost	22.9	1.1	0.7	0.1	0.5	0.5	0.5	0.5	0.5	0.5	0.7	28.4
Less PY Adv Proc												
Plus CY Adv Proc												
Net Proc (P-1)	22.9	1.1	0.7	0.1	0.5	0.5	0.5	0.5	0.5	0.5	0.7	28.4
Initial Spares												
Total Proc Cost	22.9	1.1	0.7	0.1	0.5	0.5	0.5	0.5	0.5	0.5	0.7	28.4
Flyaway U/C												
Wpn Sys Proc U/C												

DESCRIPTION:

a. The OH-58 A&C model helicopters are low silhouette, single rotor helicopters powered by a single gas turbine engine (T63-A-700/720) used for observation, scout, and command and control. This is a single pilot aircraft with provisions for a second pilot and the capability to carry two passengers or cargo in the rear cargo area. The OH-58C is an upgraded OH-58A model with a more powerful engine, transmission, navigational upgrade and instrumentation. The OH-58A/C programs consist of incorporating the SINCGARS-VHF-FM radio, Combat Lighting for Night Vision, an External 3 Micron Engine Oil Filter and Global Positioning Systems.

b. There are no plans to procure additional OH-58A&C's for the Army. Although the OH-58A/C fleet is being gradually downsized, approximately 363 aircraft will remain in the inventory until 2015. This includes approximately 71 "float" aircraft.

JUSTIFICATION: FY00 & 01 funding will be used to install modification kits procured in prior years. Funding is also required for safety modifications, in addition to operational improvement modifications required to meet mission requirements throughout the year 2015.

Exhibit P-40, Budget Item Justification Sheet

Date: February 1999

Appropriation / Budget Activity/Serial No: AIRCRAFT PROCUREMENT / 2 / Modification of Aircraft

P-1 Item Nomenclature: AIRCRAFT LONG RANGE MODS (AA0560)

Program Elements for Code B Items:

Code:

Other Related Program Elements:

	Prior Years	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	To Complete	Total Prog
Proc Qty												
Gross Cost	6.1	0.9	0.8	0.8	0.8	0.8	0.8	0.7	0.8	0.8	7.3	20.5
Less PY Adv Proc												
Plus CY Adv Proc												
Net Proc (P-1)	6.1	0.9	0.8	0.8	0.8	0.8	0.8	0.7	0.8	0.8	7.3	20.5
Initial Spares												
Total Proc Cost	6.1	0.9	0.8	0.8	0.8	0.8	0.8	0.7	0.8	0.8	7.3	20.5
Flyaway U/C												
Wpn Sys Proc U/C												

DESCRIPTION: This modification updates and modernizes the C-20F, C-20E and C-37 aircraft communications, navigation, and flight management systems enhancing the aircrafts' capability for worldwide deployments. In addition, the C-20E and C-20F will receive passenger compartment electricial system upgrades. The C-20E and C-20F were procured with FY 87 and FY 90 funds respectively. These aircraft support the US Army's executive flight detachment at the three star and above level

JUSTIFICATION: FY 00 & FY 01 funds will be used for interior electrical system upgrades and to install the communications equipment needed for the Future Air Navigation System into the C-20E and F aircraft. Funds will be used to meet future avionics/data link requirements resulting from worldwide navigation transition to Global Positioning System (GPS) enroute and approach systems, Global Air Traffic Management (GATM), and Chairman of the Joint Chief of Staff Master Navigation Plan requirements. The C-20E and C-20F aircraft have not received a passenger compartment electrical system upgrade since arriving in the fleet 11 years ago so a an update is planned for the system beginning in FY01.

Exhibit P-40, Budget Item Justification Sheet	Date: February 1999
Appropriation / Budget Activity/Serial No: AIRCRAFT PROCUREMENT / 2 / Modification of Aircraft	P-1 Item Nomenclature: LONGBOW (AA6670)
Program Elements for Code B Items:	Code: / Other Related Program Elements:

	Prior Years	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	To Complete	Total Prog
Proc Qty												
Gross Cost	535.3	390.5	491.0	604.2	771.2	737.0	846.3	874.3	804.5	458.3	787.1	7299.6
Less PY Adv Proc	116.9	16.8	30.4	36.9	41.7	35.7	35.0	29.5	29.7	14.2	61.8	448.6
Plus CY Adv Proc	133.7	30.4	36.9	41.7	35.7	35.0	29.5	29.7	14.2	43.1	18.7	448.6
Net Proc (P-1)	552.1	404.1	497.5	609.0	765.2	736.3	840.8	874.5	789.0	487.1	744.0	7299.6
Initial Spares		7.4	8.1	21.8	8.3	13.2	20.0	26.9	15.7	15.4	49.8	186.6
Total Proc Cost	552.1	411.5	505.6	630.8	773.5	749.5	860.8	901.4	804.7	502.6	793.7	7486.2
Flyaway U/C												
Wpn Sys Proc U/C												

DESCRIPTION: The Longbow Weapon System (AH-64D) consists of a modified AH-64 airframe, a Fire Control Radar (FCR) mission kit and a Longbow HELLFIRE missile. Three hundred twenty AH-64Ds will incorporate the General Electric T700-GE-701C engines for improved performance when carrying the FCR mission kits. Those AH-64D aircraft fielded without the FCR mission kits will have the T700-GE-701 engines, but can accept the FCR mission kit with T700-GE-701C engines. The Longbow Weapon System will provide the AH-64 with automatic target detection, classification, prioritization and a true fire-and-forget engagement capability, greatly increasing weapon system effectiveness and aircraft survivability. The weapon system will be employable day or night, in adverse weather and in obscurants. The weapon system will effectively engage and destroy advanced threat armor on the AirLand Battlefield of the late 1990s and into the next century. To be effective and survive on this future battlefield, the attack helicopter team will rapidly engage multiple targets with minimum exposure time, and deploy a system that is inherently resistant to threat countermeasures (CMs).

JUSTIFICATION:

FY 00 funds buy 74 aircraft/45 FCRs and FY 01 funds buy 60 aircraft/44 FCRs, including associated support equipment, tooling, GFE, and training devices. Funding contains digitization requirements. The 18 October 95 Acquisition Decision Memorandum authorized Longbow Apache to proceed into production and award of single year contract not to exceed quantity of 18 aircraft in FY96. A multi-year contract was signed on 16 August 96. Airframe quantities and funding reflect a multi-year (MY) scenario. Multiyear contracts for the FCR mission kit were signed in Nov 97. Quantities and funding reflect this multiyear scenario. 530 AH-64A Apaches will be remanufactured to the common AH-64D configuration with 320 being equipped with the FCR kits and 701C engines.

Initial spares includes FCR components

Exhibit P-40M Budget Item Justification Sheet										Date: February 1999	
Appropriation / Budget Activity/Serial No.: AIRCRAFT PROCUREMENT / 2 / Modification of Aircraft						P-1 Item Nomenclature: LONGBOW (AA6670)					
Program Elements for Code B Items			Code	Other Related Program Elements							
Description		Fiscal Years									
OSIP NO.	Classification	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	TC	Total
Longbow Apache Mods											
TBD1	Operational	982.9	472.4	613.5	587.9	698.0	753.1	737.0	415.7	329.5	5,590.0
Apache Longbow FCR											
TBD2	Operational	269.7	94.8	116.0	113.4	113.3	91.6	37.8	28.4	395.7	1,260.7
Totals		1,252.6	567.2	729.5	701.3	811.3	844.7	774.8	444.1	725.2	6,850.7

Exhibit P-40, Budget Item Justification Sheet	Date: February 1999
Appropriation / Budget Activity/Serial No: AIRCRAFT PROCUREMENT / 2 / Modification of Aircraft	P-1 Item Nomenclature: LONGBOW APACHE MODS (AA6607)
Program Elements for Code B Items:	Code: / Other Related Program Elements:

	Prior Years	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	To Complete	Total Prog
Proc Qty	24	24	44	66	74	60	66	72	72	28		530
Gross Cost	332.8	284.1	366.0	472.4	613.5	587.9	698.0	753.1	737.0	415.7	329.5	5590.0
Less PY Adv Proc												
Plus CY Adv Proc												
Net Proc (P-1)	332.8	284.1	366.0	472.4	613.5	587.9	698.0	753.1	737.0	415.7	329.5	5590.0
Initial Spares												
Total Proc Cost	332.8	284.1	366.0	472.4	613.5	587.9	698.0	753.1	737.0	415.7	329.5	5590.0
Flyaway U/C	15.5	9.1	6.3	6.3	6.7	7.9	8.0	8.0	8.6	12.9		8.3
Wpn Sys Proc U/C	17.0	12.4	9.1	7.9	8.3	10.4	11.3	11.2	10.9	15.9		11.5

DESCRIPTION:

The Longbow Weapon System (AH-64D) consists of a modified AH-64 airframe, a Fire Control Radar (FCR) mission kit and a Longbow HELLFIRE missile. Three hundred twenty AH-64Ds will incorporate the General Electric T700-GE-701C engines for improved performance when carrying the FCR mission kits. Those AH-64D aircraft fielded without the FCR mission kits will have the T700-GE-701 engines, but can accept the FCR mission kit with T700-GE-701C engines. The Longbow Weapon System will provide the AH-64 with automatic target detection, classification, prioritization and a true fire-and-forget engagement capability, greatly increasing weapon system effectiveness and aircraft survivability. The weapon system will be employable day or night, in adverse weather and in obscurants. The weapon system will effectively engage and destroy advanced threat armor on the Air Land Battlefield of the late 1990s and into the next century. To be effective and survive on this future battlefield, the attack helicopter team will rapidly engage multiple targets with minimum exposure time, and deploy a system that is inherently resistant to threat countermeasures (CMs).

JUSTIFICATION:

FY 00 funds buy 74 aircraft and FY 01 funds buy 60 aircraft, including associated support equipment, tooling, GFE, and training. 530 AH-64A Apaches will be remanufactured to the common AH-64D configuration with 320 being equipped with the FCR kits and 701C engines.

* Unit costs are annual procurement unit costs including advanced procurement.

Exhibit P-43, Simulator and Training Device Justification

Date: February 1999

Appropriation / Budget Activity/Serial No.	P-1 Item Nomenclature	Other Related Program Elements:	IOC Date:
AIRCRAFT PROCUREMENT / 2 / Modification of Aircraft	LONGBOW APACHE MODS (AA6607)		

Training Device by Type	Site	Delivery Date	Ready for Training Date	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005
LCT	Ft. Hood / multiple	Sep 99	Oct 99	20753	10351	29795	28375	48713	139057	80625	
LCTS	Ft. Hood	Sep 00	Oct 00		23248						
MAVWEST (L-7)	Ft. Eustis	Sep 99	Oct 99	25507		26941	18306	37235			
AEDST (L-6)	Ft. Eustis	Sep 99	Oct 99	30799	5745	18210	9153	37231			
TESS	CTC / Home station	Jul 99	Aug 99	4583	3502	11212	17288	9800	4600	400	400
ECO/CLS						4083	10836	12988	16108	14530	14849
Total				81642	42846	90241	83958	145967	159765	95555	15249

TRAINING SYSTEM DESCRIPTION: The Longbow Training Device Suite (TDS) includes the following: Longbow Crew Trainer (LCT), FY 96 start year (39 total through POM, 5 in EPP for a total of 44). Longbow Collective Training System (LCTS), FY 99 start year (1 total) Tactical Engagement Simulation System (TESS) "A" and "B" Kit, FY 98 start year (1/aircraft) Multiplex Avionics, Visionics, Weapons and Electrical Systems Trainer (MAVWEST), FY 97 start year (10 total) and Airframe, Engine, and Drivetrain Systems Trainer (AEDST), FY 97 start year (12 total). The cornerstone of the TDS is the LCT which is a dual-seat, pilot and co-pilot gunner (CPG) sustainment training device. The basis of issue is one device per operational battalion at selected MACOM locations (based upon Longbow Apache unit density), four at the USA Aviation Center (USAAVNC), and two at the Western Area Aviation Training Site (WAATS). The LCT will be deployed to meet the Aircraft Configuration of the gaining unit. Development and production of the LCT will precede development of the maintainer devices and will establish the technical baseline for the MAVWEST. The LCT will provide a transportable training and sustainment capability to the field. The LCT and the LCTS will be networkable through Distributed Interactive Simulation (DIS) protocols and interfaces and will be interoperable with the Combined Arms Tactical Trainer (CATT) systems. Each Longbow Apache aircraft will have an embedded TESS "A" Kit to provide cockpit interface with a strap-on "B" Kit. The "B" Kit will simulate all on-board weapons for real-time casualty assessment for force-on-force collective training at the Combat Training Centers and at home stations. The MAVWEST and AEDST are maintainer training devices for the US Aviation Logistics School (USAAL), Ft. Eustis.

Exhibit P-40, Budget Item Justification Sheet											Date: February 1999	
Appropriation / Budget Activity/Serial No: AIRCRAFT PROCUREMENT / 2 / Modification of Aircraft						P-1 Item Nomenclature: APACHE LONGBOW FCR (AA6608)						
Program Elements for Code B Items:				Code:	Other Related Program Elements:							
	Prior Years	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	To Complete	Total Prog
Proc Qty	10	10	21	40	45	44	57	14			79	320
Gross Cost	85.5	89.6	94.6	94.8	116.0	113.4	113.3	91.6	37.8	28.4	395.7	1260.7
Less PY Adv Proc												
Plus CY Adv Proc												
Net Proc (P-1)	85.5	89.6	94.6	94.8	116.0	113.4	113.3	91.6	37.8	28.4	395.7	1260.7
Initial Spares												
Total Proc Cost	85.5	89.6	94.6	94.8	116.0	113.4	113.3	91.6	37.8	28.4	395.7	1260.7
Flyaway U/C	12.7	8.5	4.8	2.6	2.8	2.8	2.1	6.5			6.0	4.5
Wpn Sys Proc U/C	12.7	10.0	4.8	2.6	2.8	2.8	2.1	6.5			6.0	4.5

DESCRIPTION:

The Longbow Weapon System (AH-64D) consists of a modified AH-64 airframe, a Fire Control Radar (FCR) mission kit and a Longbow HELLFIRE missile. Three hundred twenty AH-64Ds will incorporate the General Electric T700-GE-701C engines for improved performance when carrying the FCR mission kits. Those AH-64D aircraft fielded without the FCR mission kits will have the T700-GE-701 engines installed, but can accept the FCR mission kit with T700-GE-701C engines. The Longbow Weapon System will provide the AH-64 with automatic target detection, classification, prioritization and a true fire-and-forget engagement capability, greatly increasing weapon system effectiveness and aircraft survivability. The weapon system will be employable day or night, in adverse weather and in obscurants. The weapon system will effectively engage and destroy advanced threat armor on the AirLand Battlefield of the late 1990s and into the next century. To be effective and survive on this future battlefield, the attack helicopter team will rapidly engage multiple targets with minimum exposure time, and deploy a system that is inherently resistant to threat countermeasures (CMs).

JUSTIFICATION:

FY 00 funds buy 45 FCRs and FY 01 funds buy 44 FCRs. FCR quantities & funding reflect multiyear procurements for FY 98-02. 530 AH-64A Apaches will be remanufactured to the common AH-64D configuration with 320 being equipped with the FCR kits and 701C engines.

*Unit costs are annual procurement unit costs including advanced procurement.

INDIVIDUAL MODIFICATION Date February 1999

MODIFICATION TITLE: Longbow Apache Mods TBD1

MODELS OF SYSTEMS AFFECTED: AH-64 Attack Helicopter (Apache)

DESCRIPTION / JUSTIFICATION:

The Longbow Weapon System (AH-64D) consists of a modified AH-64A airframe, a Fire Control Radar (FCR) mission kit and a Longbow Hellfire missile. The AH-64 aircraft will be modified with those changes necessary to effectively and efficiently integrate the Fire Control Radar. These changes consist of increased electrical power, expanded forward avionics bays, increased cooling, upgraded processors, MANPRINT crew station and 701C engines. These upgrades will significantly enhance warfighting capability and battlefield survivability by providing for advanced digitized avionics and the employment of true fire and forget engagement capablity.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

Milestone 1B (DAB) Jul 89, Milestone II (DAB) Dec 90, Milestone III (DAB) Oct 95,
Multiyear Lot 1 contract award Aug 96,
First Production Delivery Mar 97,
First Unit Equipped Jul 98
IOC Accomplished Nov 98

Installation Schedule:

	Pr Yr	FY 1999				FY 2000				FY 2001				FY 2002				FY 2003			
	Totals	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Inputs																					
Outputs																					

	FY 2004				FY 2005				FY 2006				FY 2007				To	Totals
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Complete	
Inputs																		
Outputs																		

METHOD OF IMPLEMENTATION: ADMINISTRATIVE LEADTIME: 2 Months PRODUCTION LEADTIME: 12 Months

Contract Dates:	FY 1999	Dec 98	FY 2000	Dec 99	FY 2001	Dec 00
Delivery Date:	FY 1999	Nov 99	FY 2000	Jan 01	FY 2001	Mar 02

INDIVIDUAL MODIFICATION — Date: February 1999

MODIFICATION TITLE (Cont): Longbow Apache Mods TBD1

FINANCIAL PLAN: ($ in Millions)

	FY 1998 and Prior		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		FY 2004		FY 2005		TC		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																				
PROCUREMENT																				
Aircraft Quantity	92		66		74		60		66		72		72		28				530	
Recurring Hardware		531.9		327.1		367.3		322.7		352.0		389.2		379.5		188.1				2857.8
Other Flyaway		243.3		66.3		95.6		127.8		147.9		155.2		145.0		72.4		199.4		1252.9
Training Devices		121.5		42.8		90.2		84.0		146.0		159.8		95.6		15.2		86.5		841.6
Other Support		86.2		36.2		60.4		53.4		52.1		48.9		51.3		53.9		43.6		486.0
2nd Gen FLIR														65.6		86.1				151.7
Installation of Hardware																				
FY 1998 & Prior Eqpt -- Kits																				
FY 1999 Eqpt -- Kits																				
FY 2000 Eqpt -- Kits																				
FY 2001 Eqpt -- Kits																				
FY 2002 Eqpt -- kits																				
FY 2003 Eqpt -- kits																				
FY 2004 Eqpt -- kits																				
FY 2005 Eqpt -- kits																				
TC Equip-Kits																				
Total Installment																				
Total Procurement Cost		982.9		472.4		613.5		587.9		698.0		753.1		737.0		415.7		329.5		5590.0

INDIVIDUAL MODIFICATION Date February 1999

MODIFICATION TITLE: Apache Longbow FCR TBD2

MODELS OF SYSTEMS AFFECTED: AH-64 Attack Helicopter (Apache)

DESCRIPTION / JUSTIFICATION:

Longbow Fire Control Radar (FCR) is a millimeter wave target acquisition system developed for integration on the Apache . FCR provides three tactical modes of operation. Ground Targeting Mode (GTM), Air Targeting Mode (ATM), and Terrain Profile Mode (TPM). In GTM, the FCR provides the capability to rapidly scan up to approximately 50 square kilometers of the battlefield using selectable scan widths which are directionally controllable by the crew. In this mode, the FCR detects, locates, classifies, and prioritizes moving and stationary targets. Targets are classified as air defense units, track vehicles, wheel vehicles, helicopters, fixed wing aircraft, or unknown. It has the capability to detect stationary targets out to a range of six kilometers and moving targets out to eight kilometers. In the ATM, the FCR detects, classifies and prioritizes airborne targets. TPM provides terrain avoidance information to the crew for navigation during periods of reduced visibility. FCR does all the above day or night and during periods of reduced visibility caused by atmospheric conditions and/or battlefield obscuration. In both targeting modes, the FCR provides rapid target acquisition and engagement while reducing exposure and providing multiple target engagement capability when coupled with the fire-and-forget Longbow Hellfire Missile. The FCR is a fully integrated system on the AH-64D which provides enhanced situational awareness, survivability, and lethality.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

Milestone 1B (DAB)	Jul 89
Milestone II (DAB)	Dec 90
Milestone III (DAB)	Oct 95
Lot 1 contract award	Mar 96
First Production Delivery	Mar 97

Installation Schedule:

	Pr Yr	FY 1999				FY 2000				FY 2001				FY 2002				FY 2003			
	Totals	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Inputs																					
Outputs																					

	FY 2004				FY 2005				FY 2006				FY 2007				To	Totals
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Complete	
Inputs																		
Outputs																		

METHOD OF IMPLEMENTATION: ADMINISTRATIVE LEADTIME: 2 Months PRODUCTION LEADTIME: 14 Months

Contract Dates:	FY 1999	Nov 98	FY 2000	Nov 99	FY 2001	Nov 00	
Delivery Date:	FY 1999	Mar 00	FY 2000	Mar 01	FY 2001	Mar 02	

INDIVIDUAL MODIFICATION — Date: February 1999

MODIFICATION TITLE (Cont): Apache Longbow FCR TBD2

FINANCIAL PLAN: ($ in Millions)

	FY 1998 and Prior		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		FY 2004		FY 2005		TC		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																				
PROCUREMENT																				
Kit Quantity	41		40		45		44		57		14						79		320	
Recurring Hardware		234.5		94.8		116.0		113.4		113.3		91.6						373.1		1136.7
Other Flyaway		20.3																		20.3
Training Devices																				
Other		14.9												37.8		28.4		22.6		103.7
Installation of Hardware																				
FY 1998 & Prior Eqpt -- Kits																				
FY 1999 Eqpt -- Kits																				
FY 2000 Eqpt -- Kits																				
FY 2001 Eqpt -- Kits																				
FY 2002 Eqpt -- kits																				
FY 2003 Eqpt -- kits																				
FY 2004 Eqpt -- kits																				
FY 2005 Eqpt -- kits																				
TC Equip-Kits																				
Total Installment																				
Total Procurement Cost		269.7		94.8		116.0		113.4		113.3		91.6		37.8		28.4		395.7		1260.7

FY 2000 / FY 2001 BUDGET PRODUCTION SCHEDULE

P-1 Item Nomenclature: APACHE LONGBOW FCR (AA6608)

Date: February 1999

COST ELEMENTS	MFR	FY	SERV	PROC QTY Each	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
1. Airframes	1	98	A	44	0	44			A											3	3	3	3	4	4	4	4	4	4	4
	1	99	A	66	0	66														A										66
	1	00	A	74	0	74																								74
	1	01	A	60	0	60																								60
2. FCR (Fire Control Radar)	2	98	A	21	0	21		A														1	1	1	1	1	1	1	2	2	10
	2	99	A	40	0	40														A										40
	2	00	A	45	0	45																								45
	2	01	A	44	0	44																								44

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
	FY 98			CY 98									FY 99			CY 99									

MFR	NAME / LOCATION	PRODUCTION RATES MIN.	1-8-5	MAX.	REACHED D +
1	Boeing	48	72	120	
2	Longbow Limited Liability Company, Orlando FL	48	72	120	36

MFR Number			ADMIN LEAD TIME Prior 1 Oct.	After 1 Oct.	MFR After 1 Oct.	TOTAL After 1 Oct.
1	INITIAL		10	2	28	30
	REORDER		2	2	12	14
2	INITIAL		10	2	28	30
	REORDER		2	2	14	16
	INITIAL					
	REORDER					
	INITIAL					
	REORDER					
	INITIAL					
	REORDER					

REMARKS

FY 2000 / FY 2001 BUDGET PRODUCTION SCHEDULE

P-1 Item Nomenclature: APACHE LONGBOW FCR (AA6608)

Date: February 1999

COST ELEMENTS	MFR	FY	SERV	PROC QTY Each	ACCEP. PRIOR TO 1 OCT	BAL DUE AS OF 1 OCT	FY 00 OCT	NOV	DEC	CY 00 JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	FY 01 OCT	NOV	DEC	CY 01 JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	LATER
1. Airframes	1	98	A	44	40	4	4																								
	1	99	A	66	0	66		4	4	4	4	5	5	5	5	5	5	5	5	5	5										
	1	00	A	74	0	74			A													5	5	5	5	5	5	5	5	5	29
	1	01	A	60	0	60															A										60
2. FCR (Fire Control Radar)	2	98	A	21	11	10	2	2	2	2	2																				
	2	99	A	40	0	40						3	3	3	3	3	3	3	3	4	4	4	4								
	2	00	A	45	0	45		A																4	4	4	4	4	4	4	17
	2	01	A	44	0	44														A											44

MFR	NAME / LOCATION	PRODUCTION RATES MIN.	1-8-5	MAX.	REACHED D +
1	Boeing	48	72	120	
2	Longbow Limited Liability Company, Orlando FL	48	72	120	36

MFR Number		ADMIN LEAD TIME Prior 1 Oct.	ADMIN LEAD TIME After 1 Oct.	MFR After 1 Oct.	TOTAL After 1 Oct.
1	INITIAL	10	2	28	30
	REORDER	2	2	12	14
2	INITIAL	10	2	28	30
	REORDER	2	2	14	16

REMARKS

FY 2000 / FY 2001 BUDGET PRODUCTION SCHEDULE

P-1 Item Nomenclature: APACHE LONGBOW FCR (AA6608)

Date: February 1999

COST ELEMENTS	MFR	FY	SERV	PROC QTY Each	ACCEP. PRIOR TO 1 OCT	BAL DUE AS OF 1 OCT	FY02 OCT	FY02 NOV	FY02 DEC	FY02 JAN	FY02 FEB	FY02 MAR	FY02 APR	FY02 MAY	FY02 JUN	FY02 JUL	FY02 AUG	FY02 SEP	FY03 OCT	FY03 NOV	FY03 DEC	FY03 JAN	FY03 FEB	FY03 MAR	FY03 APR	FY03 MAY	FY03 JUN	FY03 JUL	FY03 AUG	FY03 SEP	LATER
1. Airframes	1	98	A	44	44																										
	1	99	A	66	66																										
	1	00	A	74	45	29	5	6	6	6	6																				
	1	01	A	60	0	60						5	5	5	5	5	5	5	5	5	5	5	5								
2. FCR (Fire Control Radar)	2	98	A	21	21																										
	2	99	A	40	40																										
	2	00	A	45	28	17	4	4	3	3	3																				
	2	01	A	44	0	44						4	3	4	4	4	4	4	4	4	3	3	3								

Fiscal Year 02 / Fiscal Year 03; Calendar Year 02 / Calendar Year 03

MFR	NAME / LOCATION	PRODUCTION RATES MIN.	PRODUCTION RATES 1-8-5	PRODUCTION RATES MAX.	REACHED D +	MFR Number		ADMIN LEAD TIME Prior 1 Oct.	ADMIN LEAD TIME After 1 Oct.	MFR After 1 Oct.	TOTAL After 1 Oct.	REMARKS
1	Boeing	48	72	120		1	INITIAL	10	2	28	30	
							REORDER	2	2	12	14	
2	Longbow Limited Liability Company, Orlando FL	48	72	120	36	2	INITIAL	10	2	28	30	
							REORDER	2	2	14	16	
							INITIAL					
							REORDER					
							INITIAL					
							REORDER					
							INITIAL					
							REORDER					

Exhibit P-40, Budget Item Justification Sheet

Date: February 1999

Appropriation / Budget Activity/Serial No: AIRCRAFT PROCUREMENT / 2 / Modification of Aircraft

P-1 Item Nomenclature: LONGBOW (ADV PROC) (AA6670)

Program Elements for Code B Items:

Code:

Other Related Program Elements:

	Prior Years	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	To Complete	Total Prog
Proc Qty												
Gross Cost	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Less PY Adv Proc												
Plus CY Adv Proc	133.7	30.4	36.9	41.7	35.7	35.0	29.5	29.7	14.2	43.1	23.1	453.0
Net Proc (P-1)	133.7	30.4	36.9	41.7	35.7	35.0	29.5	29.7	14.2	43.1	23.1	453.0
Initial Spares												
Total Proc Cost	133.7	30.4	36.9	41.7	35.7	35.0	29.5	29.7	14.2	43.1	23.1	453.0
Flyaway U/C												
Wpn Sys Proc U/C												

DESCRIPTION:

The Longbow program encompasses modifications to 530 AH-64A Apaches as well as upgrades to the aircraft systems for the AH-64D series to efficiently and effectively integrate the Fire Control Radar (FCR) and radar frequency (RF) missile. It provides an adverse weather fire-and-forget missile capability that increases the lethality and survivability. The Longbow Apache also retains the capability to fire the Semi-Active Laser Hellfire. The design enhancements increase operational capability of the crew and provide increased survivability and lethality while complying with Congressional direction to standardize the fleet to a common configuration.

JUSTIFICATION:

Five hundred thirty (530) AH-64A Apaches will be remanufactured to the common AH-64D configuration with 320 being equipped with the FCR kits and 701C engines. FY 00 and FY 01 funds Advance Procurement to support deliveries of airframes and FCRs. Long Lead funding is required to provide funding for those parts, tooling, test equipment, and materials which are lead time critical to the end item. Long lead funding is required to preserve the planned helicopter delivery schedule.

Advance Procurement Requirements Analysis-Funding (P-10A)

First System Award Date:

First System Completion Date:

Date: February 1999

Appropriation / Budget Activity/Serial No: AIRCRAFT PROCUREMENT / 2 / Modification of Aircraft

P-1 Line Item Nomenclature / Weapon System: LONGBOW (ADV PROC) (AA6670)

($ in Millions)

	PLT (mos)	When Rqd (mos)	Pr Yrs	1997	1998	1999	2000	2001	2002	2003	2004	2005	To Comp	Total
End Item Quantity:														
Aircraft			24	24	44	66	74	60	66	72	72	28		530
FCR			10	10	21	40	45	44	57	14			79	320
Airframe	30	N/A	81.6	25.0	26.4	30.7	24.6	26.4	29.5	29.7	14.2		4.4	292.5
GFE - FCR Kit	30	29	52.1	5.4	10.5	11.0	11.1	8.6				43.1	18.7	160.5
Total Advance Procurement			133.7	30.4	36.9	41.7	35.7	35.0	29.5	29.7	14.2	43.1	23.1	453.0

Description:

Advance Procurement Requirements Analysis-Budget Justification (P-10B)

Date: February 1999

Appropriation / Budget Activity/Serial No: AIRCRAFT PROCUREMENT / 2 / Modification of Aircraft

P-1 Line Item Nomenclature / Weapon System: LONGBOW (ADV PROC) (AA6670)

($ in Millions)

	PLT (mos)	Quantity Per Assembly	Unit Cost	2000 Qty	2000 Contract Forecast Date	2000 Total Cost Request	2001 Qty	2001 Contract Forecast Date	2001 Total Cost Request
End Item									
Airframe	30	Various Components	N/A	60	Dec 99	24.6	66	Dec 00	26.4
GFE - FCR Kit	30	Various Components	N/A	44	Nov 99	11.1	57	Nov 00	8.6
Total Advance Procurement						35.7			35.0

Description: Multiyear airframe contract awarded Aug 96. Above "Contract Forecast Date" for airframe represents "Funding Action" dates for Lots VI and VII. Multiyear FCR contract awarded Nov 97. Above "Contract Forecast Date" represents "Funding Action" dates for Lots VI and VII.

Exhibit P-40, Budget Item Justification Sheet

Date: February 1999

Appropriation / Budget Activity/Serial No: AIRCRAFT PROCUREMENT / 2 / Modification of Aircraft

P-1 Item Nomenclature: UH-1 MODS (AB0602)

Program Elements for Code B Items:

Code:

Other Related Program Elements:

	Prior Years	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	To Complete	Total Prog
Proc Qty												
Gross Cost	338.9	6.1	2.6	3.8	4.4	4.3	3.3	3.3	3.4	3.4	0.0	373.6
Less PY Adv Proc												
Plus CY Adv Proc												
Net Proc (P-1)	338.9	6.1	2.6	3.8	4.4	4.3	3.3	3.3	3.4	3.4	0.0	373.6
Initial Spares												
Total Proc Cost	338.9	6.1	2.6	3.8	4.4	4.3	3.3	3.3	3.4	3.4	0.0	373.6
Flyaway U/C												
Wpn Sys Proc U/C												

DESCRIPTION: The UH-1 helicopter is used for transportation of personnnel, equipment and supplies, command & control, and medical evacuation. The UH-1 requires modification upgrades to ensure that it can operate on the modern battlefield and be logistically supportable through the year 2017. There are two models, the UH-1H and the UH-1V (MEDEVAC), most of which are located in National Guard units.

JUSTIFICATION: FY 00 and 01 funding will be used to procure and install navigation and communication avionics which are required because the currently installed avionics are quickly becoming logistically nonsupportable. Installation of modification kits is limited to those aircraft that will remain in the force structure through the year 2017.

Exhibit P-40, Budget Item Justification Sheet											Date: February 1999	
Appropriation / Budget Activity/Serial No: AIRCRAFT PROCUREMENT / 2 / Modification of Aircraft						P-1 Item Nomenclature: UH-60 MODS (AA0480)						
Program Elements for Code B Items:				Code:	Other Related Program Elements:							
	Prior Years	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	To Complete	Total Prog
Proc Qty												
Gross Cost	437.3	12.4	28.7	21.6	12.1	15.1	87.1	116.2	99.8	105.6	0.0	935.9
Less PY Adv Proc												
Plus CY Adv Proc												
Net Proc (P-1)	437.3	12.4	28.7	21.6	12.1	15.1	87.1	116.2	99.8	105.6	0.0	935.9
Initial Spares												
Total Proc Cost	437.3	12.4	28.7	21.6	12.1	15.1	87.1	116.2	99.8	105.6	0.0	935.9
Flyaway U/C												
Wpn Sys Proc U/C												

DESCRIPTION:

The UH-60A/L/Q is a twin engine, single rotor helicopter that is used in the performance of the air assault, air cavalry and aeromedical evacuation missions. It is designed to carry a crew of four plus eleven combat-equipped troops or an external load up to 9,000 pounds. It performs the mission of transporting troops and equipment into combat, resupplying the troops while in combat and performing aeromedical evacuation, repositioning of reserves, and command and control. The UH-60A/L/Q is a major contributor across the continuum of military operations, i.e., civil disaster relief, drug intervention, national and humanitarian assistance.

JUSTIFICATION:

The modifications that will occur during FY00 & FY01 are the procurement and installation of the External Stores Support System (ESSS) Auxiliary Fuel Monitoring System (AFMS), the Battery/Power Light Relocate, the Night Vision Goggles (NVG) Lighting Lower Console and the Engine Driveshaft Redesign for approximately 1500 aircraft. Additionally, funding also provides for common fleet modifications to be applied to the EH-60A QUICK FIX and MH-60K Special Operations Aircraft (SOA). The funding for the EH-60A QUICK FIX and MH-60K Special Operations Aircraft includes only the cost of procurring the MOD kit and the identified MWO standard manhours for normal installation. All addition costs for unique series aircraft (EH/MH) over and above the established MWO experiences would be incurred by SOA/EH PMs. These modifications provide a more capable aircraft to support the combat mission requirements and provide for enhanced aircraft safety and more efficient and less expensive operation and support. The Modernization/Service Life Extension Program and the UH-60Q MEDEVAC program begin in FY02.

Exhibit P-40M Budget Item Justification Sheet											Date: February 1999
Appropriation / Budget Activity/Serial No.: AIRCRAFT PROCUREMENT / 2 / Modification of Aircraft					P-1 Item Nomenclature: UH-60 MODS (AA0480)						
Program Elements for Code B Items			Code	Other Related Program Elements							
Description		Fiscal Years									
OSIP NO.	Classification	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	TC	Total
Ext Stores Sup Sys (ESSS) Aux Fuel Monitoring Sys (AFMS)											
1-94-01-1948	Safety	16.9	12.1	1.7	2.0	0.0	0.0	0.0	0.0	0.0	32.7
Halon Changeout											
1-92-01-1945	Legislative	0.1	2.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.8
Battery/Power Light Relocate											
1-94-01-1953	RM	0.3	1.8	5.5	10.0	2.8	1.4	0.0	0.0	0.0	21.8
NVG Lighting Lower Console											
1-90-01-1933	Operational	1.9	5.0	4.9	2.8	0.6	0.0	0.0	0.0	0.0	15.2
Engine Driveshaft Redesign											
1-95-01-1957	Safety	0.0	0.0	0.0	0.3	9.7	11.8	0.0	0.0	0.0	21.8
Refurbishment/Standardization (No P3a Set)											
1-92-01-1942	Op/Log	114.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	114.9
Single Channel Ground & Airborne Radio Sys (SINCGARS) (No P3a Set)											
1-84-01-1977	Operational	47.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	47.8
Modernization/Service Life Extension Program (No P3a Set)											
TBD	Operational	0.0	0.0	0.0	0.0	46.5	75.6	59.4	61.3	0.0	242.8
UH-60Q Medivac (No P3a Set)											
TBD1	Operational	9.1	0.0	0.0	0.0	27.5	27.4	27.4	31.3	0.0	122.7
Fire Hawk (No P3a Set)											
TBD2	Operational	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0
UH-60L Safety/Operational Modifications (No P3a Set)											
TBD3	Safety/Operational	0.0	0.0	0.0	0.0	0.0	0.0	13.0	13.0	0.0	26.0
Totals		193.0	21.6	12.1	15.1	87.1	116.2	99.8	105.6	0.0	650.5

INDIVIDUAL MODIFICATION Date February 1999

MODIFICATION TITLE: Ext Stores Sup Sys (ESSS) Aux Fuel Monitoring Sys (AFMS) 1-94-01-1948

MODELS OF SYSTEMS AFFECTED: UH-60A/L Black Hawk

DESCRIPTION / JUSTIFICATION:

The Auxiliary Fuel Monitoring System (AFMS) shall provide the pilots with a fuel quantity display for each installed auxiliary fuel tank. Each tank will have its own fuel probe. The system will monitor external fuel for imbalance conditions that result in a aircraft lateral center-of-gravity changes that exceed a certain designated value. If an imbalance is detected, the system will activate a light on the AFMS panel, the aux fuel segment light on the caution/advisory panel, and the master warning panel. Aircrews will have the capability to directly read the weight of all the auxiliary fuel that may be in each of the External Stores Support System (ESSS)/Extended Range Fuel System (ERFS) and store locations. This safety modification will continue to assure that a fully capable aircraft is available to support the combat mission requirement. Gauging will improve aircraft management of auxiliary fuel for everyday mission use of the system.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

Installation Schedule:

	Pr Yr	FY 1999				FY 2000				FY 2001				FY 2002				FY 2003			
	Totals	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Inputs	90	120	110	100	80	50	50	50	50	60	70	70	33								
Outputs		90	100	100	100	100	80	70	50	50	50	50	50	43							

	FY 2004				FY 2005				FY 2006				FY 2007				To	Totals
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Complete	
Inputs																		933
Outputs																		933

METHOD OF IMPLEMENTATION: OLR Teams ADMINISTRATIVE LEADTIME: 3 Months PRODUCTION LEADTIME: 3 Months

Contract Dates:	FY 1999	Jan 99	FY 2000	FY 2001
Delivery Date:	FY 1999	Mar 99	FY 2000	FY 2001

INDIVIDUAL MODIFICATION — Date: February 1999

MODIFICATION TITLE (Cont): Ext Stores Sup Sys (ESSS) Aux Fuel Monitoring Sys (AFMS) 1-94-01-1948

FINANCIAL PLAN: ($ in Millions)

	FY 1998 and Prior		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		FY 2004		FY 2005		TC		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																				
PROCUREMENT																				
Kit Quantity	600	14.6	333	7.4															933	22.0
Installation Kits																				
Installation Kits, Nonrecurring		1.5																		1.5
Equipment																				
Equipment, Nonrecurring																				
Engineering Change Orders																				
Data																				
Training Equipment																				
Support Equipment																				
Other																				
Interim Contractor Support																				
Installation of Hardware																				
FY 1998 & Prior Eq-600 Kits	90	0.8	410	4.7	100	0.9													600	6.4
FY 1999 Eqpt --433 Kits					100	0.9	233	2.0											333	2.9
FY 2000 Eqpt -- Kits																				
FY 2001 Eqpt -- Kits																				
FY 2002 Eqpt -- kits																				
FY 2003 Eqpt -- kits																				
FY 2004 Eqpt -- kits																				
FY 2005 Eqpt -- kits																				
TC Equip-Kits																				
Total Installment	90	0.8	410	4.7	200	1.7	233	2.0											933	9.2
Total Procurement Cost		16.9		12.1		1.7		2.0												32.7

INDIVIDUAL MODIFICATION Date February 1999

MODIFICATION TITLE: Halon Changeout 1-92-01-1945

MODELS OF SYSTEMS AFFECTED: UH-60L Black Hawk

DESCRIPTION / JUSTIFICATION:

Procurement of halon violates the Montreal Protocol and violates the Clean Air Act. This modification will replace hand held aircraft fire extinguishers and the on board engine fire extinguishing system with a product useable agent. The current halon extinguishers and systems deplete the ozone level and halon will be replaced with a new chemical agent. The PM plans on performing operational assessments of existing candidates that have been developed by others. Operational assessments will be performed using these different candidates to determine how they work within the army aircraft and to determine what, if any, modifications are required to the aircraft for the installation of the new system. It will be determined from these operational assessments which system will provide the best results with the least structural change to the Black Hawk aircraft. Follow on assessments and monitoring could continue until the beginning of the Black Hawk modernization program FY02 at which time the implementation of this halon modification program will begin.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

Installation Schedule:

	Pr Yr	FY 1999				FY 2000				FY 2001				FY 2002				FY 2003			
	Totals	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Inputs																					
Outputs																					

	FY 2004				FY 2005				FY 2006				FY 2007				To	Totals
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Complete	
Inputs																		
Outputs																		

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

Contract Dates:	FY 1999	FY 2000	FY 2001
Delivery Date:	FY 1999	FY 2000	FY 2001

INDIVIDUAL MODIFICATION																				
Date	February 1999																			
MODIFICATION TITLE (Cont):	Halon Changeout 1-92-01-1945																			
FINANCIAL PLAN: ($ in Millions)																				
	FY 1998 and Prior		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		FY 2004		FY 2005		TC		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																				
PROCUREMENT																				
Kit Quantity																				
Installation Kits																				
Installation Kits, Nonrecurring		0.1		1.1																1.2
Equipment																				
Equipment, Nonrecurring				1.3																1.3
Engineering Change Orders																				
Data				0.3																0.3
Training Equipment																				
Support Equipment																				
Other																				
Interim Contractor Support																				
Installation of Hardware																				
FY 1998 & Prior Eqpt -- Kits																				
FY 1999 Eqpt --15 Kits																				
FY 2000 Eqpt -- Kits																				
FY 2001 Eqpt -- Kits																				
FY 2002 Eqpt -- kits																				
FY 2003 Eqpt -- kits																				
FY 2004 Eqpt -- kits																				
FY 2005 Eqpt -- kits																				
TC Equip-Kits																				
Total Installment																				
Total Procurement Cost		0.1		2.7																2.8

INDIVIDUAL MODIFICATION Date February 1999

MODIFICATION TITLE: Battery/Power Light Relocate 1-94-01-1953

MODELS OF SYSTEMS AFFECTED: UH-60A/L and EH-60A/L Black Hawk

DESCRIPTION / JUSTIFICATION:

Provide the fleet with a low cost, low maintenance, longer life, battery, which would replace the existing maintenance intensive Nickel Cadmium battery. Maintenance cost, both spares and man-hours, will be reduced and disposal cost minimized by providing a recyclable battery. The new battery will meet the EPA environmental health hazard restrictions.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

Installation Schedule:

	Pr Yr	FY 1999				FY 2000				FY 2001				FY 2002				FY 2003			
	Totals	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Inputs								40	60	110	130	140	150	150	135	130	130	130	148		
Outputs								20	30	100	120	130	130	145	140	140	140	140	140	78	

	FY 2004				FY 2005				FY 2006				FY 2007				To	Totals
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Complete	
Inputs																		1453
Outputs																		1453

METHOD OF IMPLEMENTATION: OLR Teams ADMINISTRATIVE LEADTIME: 6 Months PRODUCTION LEADTIME: 8 Months

Contract Dates:	FY 1999	Jul 99	FY 2000	Mar 00	FY 2001	Mar 01
Delivery Date:	FY 1999	Jan 00	FY 2000	Oct 00	FY 2001	Oct 01

INDIVIDUAL MODIFICATION — Date: February 1999

MODIFICATION TITLE (Cont): Battery/Power Light Relocate 1-94-01-1953

FINANCIAL PLAN: ($ in Millions)

	FY 1998 and Prior		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		FY 2004		FY 2005		TC		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																				
PROCUREMENT																				
Kit Quantity			100	1.8	625	5.0	728	7.1											1453	13.9
Installation Kits																				
Installation Kits, Nonrecurring		0.3																		0.3
Equipment																				
Equipment, Nonrecurring																				
Engineering Change Orders																				
Data																				
Training Equipment																				
Support Equipment																				
Other																				
Interim Contractor Support																				
Installation of Hardware																				
FY 1998 & Prior Eqpt -- Kits																				
FY 1999 Eqpt --100 Kits					100	0.5													100	0.5
FY 2000 Eqpt --625 Kits							530	2.9	95	0.5									625	3.4
FY 2001 Eqpt --728 Kits									450	2.3	278	1.4							728	3.7
FY 2002 Eqpt -- kits																				
FY 2003 Eqpt -- kits																				
FY 2004 Eqpt -- kits																				
FY 2005 Eqpt -- kits																				
TC Equip-Kits																				
Total Installment					100	0.5	530	2.9	545	2.8	278	1.4							1453	7.6
Total Procurement Cost		0.3		1.8		5.5		10.0		2.8		1.4								21.8

INDIVIDUAL MODIFICATION Date February 1999

MODIFICATION TITLE: NVG Lighting Lower Console 1-90-01-1933

MODELS OF SYSTEMS AFFECTED: UH-60A/L Black Hawk

DESCRIPTION / JUSTIFICATION:

This is a safety related requirement resulting from incident report findings stipulating the lack of the lower console lighting as a present factor in the incident. This safety related improvement will improve cockpit lighting which will increase the capability of the night vision goggles and eliminate the pilot's/co-pilot's need to transition from goggles to no-goggles (heads down) in order to see and operate the radio control heads. Until this is accomplished, the radios and equipment in the lower console must remain unlighted.

Existing cockpit lighting and relighted radio control panels will be upgraded to be in conformance with DOD Spec MIL-L-85762 and compatible with ANVIS-6 goggles. The proposed cockpit lighting upgrade will improve night operations capability.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

Installation Schedule:

	Pr Yr	FY 1999				FY 2000				FY 2001				FY 2002				FY 2003			
	Totals	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Inputs	200		115	115	120	120	120	110	100	75	75	75	75	75	78						
Outputs	200		80	100	100	110	110	110	100	100	75	75	75	75	75	68					

	FY 2004				FY 2005				FY 2006				FY 2007				To	Totals
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Complete	
Inputs																		1453
Outputs																		1453

METHOD OF IMPLEMENTATION: OLR Teams ADMINISTRATIVE LEADTIME: 1 Months PRODUCTION LEADTIME: 3 Months

Contract Dates:	FY 1999	Nov 98	FY 2000	Nov 99	FY 2001	Nov 00
Delivery Date:	FY 1999	Feb 99	FY 2000	Feb 00	FY 2001	Feb 01

INDIVIDUAL MODIFICATION — Date: February 1999

MODIFICATION TITLE (Cont): NVG Lighting Lower Console 1-90-01-1933

FINANCIAL PLAN: ($ in Millions)

	FY 1998 and Prior		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		FY 2004		FY 2005		TC		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																				
PROCUREMENT																				
Kit Quantity	200	1.3	550	4.0	500	3.6	203	1.6											1453	10.5
Installation Kits																				
Installation Kits, Nonrecurring																				
Equipment																				
Equipment, Nonrecurring																				
Engineering Change Orders																				
Data																				
Training Equipment																				
Support Equipment																				
Other																				
Interim Contractor Support																				
Installation of Hardware																				
FY 1998 & Prior Eq-200 Kits	200	0.6																	200	0.6
FY 1999 Eqpt --550 Kits			350	1.0	200	0.6													550	1.6
FY 2000 Eqpt --500 Kits					250	0.7	250	1.0											500	1.7
FY 2001 Eqpt --203 Kits							50	0.2	153	0.6									203	0.8
FY 2002 Eqpt -- kits																				
FY 2003 Eqpt -- kits																				
FY 2004 Eqpt -- kits																				
FY 2005 Eqpt -- kits																				
TC Equip-Kits																				
Total Installment	200	0.6	350	1.0	450	1.3	300	1.2	153	0.6									1453	4.7
Total Procurement Cost		1.9		5.0		4.9		2.8		0.6										15.2

INDIVIDUAL MODIFICATION Date February 1999

MODIFICATION TITLE: Engine Driveshaft Redesign 1-95-01-1957

MODELS OF SYSTEMS AFFECTED: UH-60 Black Hawk

DESCRIPTION / JUSTIFICATION:

This is a Safety Modification. This design incorporates a diaphragm flexible coupling that will increase balance capability, be more tolerant of misalignment, out of alignment and eliminate engine drive disconnects. These conditions occur with the Thomas Couplings currently installed on all UH-60 Black Hawks.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

Installation Schedule:

	Pr Yr	FY 1999				FY 2000				FY 2001				FY 2002				FY 2003			
	Totals	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Inputs															200	200	250	250	250	253	50
Outputs															150	250	250	250	200	200	153

	FY 2004				FY 2005				FY 2006				FY 2007				To	Totals
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Complete	
Inputs																		1453
Outputs																		1453

METHOD OF IMPLEMENTATION: Units ADMINISTRATIVE LEADTIME: 2 Months PRODUCTION LEADTIME: 3 Months

Contract Dates: FY 1999 FY 2000 FY 2001

Delivery Date: FY 1999 FY 2000 FY 2001

INDIVIDUAL MODIFICATION — Date: February 1999

MODIFICATION TITLE (Cont): Engine Driveshaft Redesign 1-95-01-1957

FINANCIAL PLAN: ($ in Millions)

	FY 1998 and Prior		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		FY 2004		FY 2005		TC		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																				
PROCUREMENT																				
Kit Quantity									700	5.6	753	6.1							1453	11.7
Installation Kits																				
Installation Kits, Nonrecurring								0.3												0.3
Equipment																				
Equipment, Nonrecurring																				
Engineering Change Orders																				
Data																				
Training Equipment																				
Support Equipment																				
Other																				
Interim Contractor Support																				
Installation of Hardware																				
FY 1998 & Prior Eqpt -- Kits																				
FY 1999 Eqpt -- Kits																				
FY 2000 Eqpt -- Kits																				
FY 2001 Eqpt -- Kits																				
FY 2002 Eqpt --700 kits									650	4.1	50	0.4							700	4.5
FY 2003 Eqpt --753 kits											753	5.3							753	5.3
FY 2004 Eqpt -- kits																				
FY 2005 Eqpt -- kits																				
TC Equip-Kits																				
Total Installment									650	4.1	803	5.7							1453	9.8
Total Procurement Cost								0.3		9.7		11.8								21.8

Exhibit P-40, Budget Item Justification Sheet											Date: February 1999	
Appropriation / Budget Activity/Serial No: AIRCRAFT PROCUREMENT / 2 / Modification of Aircraft							P-1 Item Nomenclature: KIOWA WARRIOR (AZ2200)					
Program Elements for Code B Items:				Code:	Other Related Program Elements:							
	Prior Years	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	To Complete	Total Prog
Proc Qty												
Gross Cost	1294.4	197.1	53.7	52.2	39.0	82.2	121.1	43.6	31.5	32.2	35.9	1982.9
Less PY Adv Proc												
Plus CY Adv Proc												
Net Proc (P-1)	1294.4	197.1	53.7	52.2	39.0	82.2	121.1	43.6	31.5	32.2	35.9	1982.9
Initial Spares												
Total Proc Cost	1294.4	197.1	53.7	52.2	39.0	82.2	121.1	43.6	31.5	32.2	35.9	1982.9
Flyaway U/C												
Wpn Sys Proc U/C												

DESCRIPTION: The OH-58D Kiowa Warrior is a two-place, single-engine, light helicopter with four main rotor blades and a thermal imaging system and laser range finder/designator in a Mast Mounted Sight situated above the main rotor system. The aircraft operates autonomously at standoff ranges providing armed reconnaissance, command and control, and target acquisition/designation for Apache helicopters and other airborne weapons platforms in day, night, and adverse-weather conditions. Commencing in FY91, fielded aircraft were retrofit with Air-to-Air Stinger and Air-to-Ground weapons; in-line production incorporation began with the last six aircraft of the FY89 procurement. Added Multi-Purpose Light Helicopter kits provide rapid deployment capability. A Control Display System processor modification replaced three processors with two Joint Integrated Avionics Working Group standard 80960 processors. Hand-held Halon fire extinguishers are being replaced per the Clean Air Act of 1990. Crew Station Mission Equipment Training (CSMET) Devices are procured as the sole device to support flight crew training. The Safey Enhancement Program (SEP) was initiated in FY96 to incorporate R3 engines, crashworthy crew seats, a supplemental restraint system, digitization, and improved weapons interface. The SEP will improve recognition and identification of emergency situations, reduce pilot workload during emergency maneuvers, significantly improve the crashworthiness of the airframe thus improving crew survivability, improve engine reliability to reduce the probability of engine failure and exposure to emergency autorotations, and add digitization capabilities. Partial SEP improvements have been incorporated into the later lots under the Remanufacture and the Retrofit modification lines; these aircraft will complete SEP modifications through field retrofits. Other fielded aircraft will be totally SEP modified on the contractor's SEP modification line.

JUSTIFICATION: Acquisition efforts allow the Kiowa Warrior to serve as the Army's night, armed reconnaissance aviation capability until RAH-66 fielding begins and to complement Comanche throughout its projected life with gradual displacement. The FY00 program continues SEP, procures additional CSMETs, and continues fire extinguisher efforts.

Exhibit P-40M Budget Item Justification Sheet

Date: February 1999

Appropriation / Budget Activity/Serial No.: AIRCRAFT PROCUREMENT / 2 / Modification of Aircraft

P-1 Item Nomenclature: KIOWA WARRIOR (AZ2200)

Program Elements for Code B Items:

Code:

Other Related Program Elements:

Description		Fiscal Years									
OSIP NO.	Classification	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	TC	Total
Remanufacture											
TBD 1	Operational	937.7	1.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	939.6
Retrofit											
1-88-01-2103	Operational	483.7	1.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	485.6
Halon Fire Extinguisher											
TBD 2	Congressional	1.8	0.5	0.4	0.0	0.0	0.0	0.0	0.0	0.0	2.7
Crew Station Mission Equipment Trainer (CSMET)											
TBD 3	Training	3.9	9.9	4.2	2.6	0.0	0.0	0.0	0.0	26.4	47.0
Safety Enhancement Program											
TBD 4	Safety	118.1	38.0	34.4	79.6	121.1	43.6	31.5	32.2	9.5	508.0
Totals		1,545.2	52.2	39.0	82.2	121.1	43.6	31.5	32.2	35.9	1,982.9

INDIVIDUAL MODIFICATION Date February 1999

MODIFICATION TITLE: Remanufacture TBD 1

MODELS OF SYSTEMS AFFECTED: OH-58A

DESCRIPTION / JUSTIFICATION:

The OH-58D Kiowa Warrior is capable of fighting in all terrain and battlefield environments, day or night, with adverse visibility conditions. It supports armed air cavalry reconnaissance and light attack helicopter units. An OH-58A airframe is modified with an improved rotor-and-drive system, a fully-integrated, night-vision-compatible cockpit; a complete airborne-target-handover system; a precision navigation capability; and an above-the-rotor Mast Mounted Sight. Included are Air-to-Air Stinger, Air-to-Ground weapons, and Multi-Purpose Light Helicopter (MPLH) kits. Select Safety Enhancement Program and Task Force XXI improvements are incorporated in later modification/production lots. These improvements include R3 Engines, Improved Master Controller Processor Units, Crashworthy Crew Seats, Improved Data Modem, SINCGARS SIP Radios, Quick-Disconnect Helmet Cables and Ground Crew Intercom.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

All development milestones complete.

Installation data below and on the following page not applicable. Modification of the aircraft will be accomplished by Bell Helicopter Textron at their facilities.

Installation Schedule:

	Pr Yr	FY 1999				FY 2000				FY 2001				FY 2002				FY 2003			
	Totals	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Inputs																					
Outputs																					

	FY 2004				FY 2005				FY 2006				FY 2007				To	Totals
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Complete	
Inputs																		
Outputs																		

METHOD OF IMPLEMENTATION:	Contractor Line	ADMINISTRATIVE LEADTIME:	8	Months	PRODUCTION LEADTIME:	18 Months
Contract Dates:	FY 1999		FY 2000		FY 2001	
Delivery Date:	FY 1999		FY 2000		FY 2001	

INDIVIDUAL MODIFICATION — Date: February 1999

MODIFICATION TITLE (Cont): Remanufacture TBD 1

FINANCIAL PLAN: ($ in Millions)

	FY 1998 and Prior		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		FY 2004		FY 2005		TC		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																				
PROCUREMENT																				
Aircraft Modified	132																		132	
Hardware Recurring		603.7																		603.7
Engineering Change Orders		52.2		0.4																52.6
Multi-Purpose Light Helo Kits		13.4																		13.4
Data		20.3																		20.3
Peculiar Ground Spt Equip		8.0																		8.0
Project Mgt/Administration		31.6																		31.6
Fielding		11.2		0.3																11.5
Other		126.8																		126.8
Interim Contractor Spt - R3		2.0		0.9																2.9
Interim Contractor Spt - IMCPU		0.3																		0.3
Interim Contractor Spt - IFTE		0.5																		0.5
Testing		3.7																		3.7
Government Furnished Eq		64.0		0.3																64.3
Installation of Hardware																				
FY 1998 & Prior Eqpt -- Kits																				
FY 1999 Eqpt -- Kits																				
FY 2000 Eqpt -- Kits																				
FY 2001 Eqpt -- Kits																				
FY 2002 Eqpt -- kits																				
FY 2003 Eqpt -- kits																				
FY 2004 Eqpt -- kits																				
FY 2005 Eqpt -- kits																				
TC Equip-Kits																				
Total Installment																				
Total Procurement Cost		937.7		1.9																939.6

INDIVIDUAL MODIFICATION Date February 1999

MODIFICATION TITLE: Retrofit 1-88-01-2103

MODELS OF SYSTEMS AFFECTED: OH-58D Aircraft Helicopter Improvement Program (AHIP)

DESCRIPTION / JUSTIFICATION:

Retrofits a total of 185 fielded OH-58D aircraft to the fully armed Kiowa Warrior configuration. Includes Air-to-Air Stinger (ATAS), Air-to-Ground (ATG) weapons, and Multi-Purpose Light Helicopter (MPLH) kits. ATAS provides a mid-range defensive and offensive air-to-air capability against threat aircraft. ATG weapons provide defensive and suppressive fire and service high-priority targets. MPLH kits provide rapid deployment capability. Select Safety Enhancement Program improvements (R3 Engines, Improved Master Controller Processor Units, Crashworthy Crew Seats, Improved Data Modem, SINCGARS SIP Radios, Quick-Disconnect Helmet Cables and Ground Crew Intercom) are included in later retrofit lots. The OH-58D Kiowa Warrior is fielded in air cavalry reconnaissance and light attack units. This aircraft provides the Army with a versatile, lethal, deployable aircraft capable of seeing, fighting, and surviving in all types of terrain and battlefield environments, day or night, with adverse visibility conditions.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

Installation data below/on following page not applicable. Retrofit of aircraft will be accomplished by Bell Helicopter Textron at their facilities.

Installation Schedule:

	Pr Yr	FY 1999				FY 2000				FY 2001				FY 2002				FY 2003			
	Totals	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Inputs																					
Outputs																					

	FY 2004				FY 2005				FY 2006				FY 2007				To	Totals
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Complete	
Inputs																		
Outputs																		

METHOD OF IMPLEMENTATION: Contractor Line ADMINISTRATIVE LEADTIME: 8 Months PRODUCTION LEADTIME: 12 Months

Contract Dates:	FY 1999	FY 2000	FY 2001
Delivery Date:	FY 1999	FY 2000	FY 2001

INDIVIDUAL MODIFICATION — Date: February 1999

MODIFICATION TITLE (Cont): Retrofit 1-88-01-2103

FINANCIAL PLAN: ($ in Millions)

	FY 1998 and Prior		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		FY 2004		FY 2005		TC		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																				
PROCUREMENT																				
Aircraft Modified	185																		185	
Hardware, Recurring		330.8																		330.8
Government Furnished Equip		31.9		0.3																32.2
Engineering Change Orders		17.6		0.4																18.0
Data		0.5																		0.5
Testing		2.7																		2.7
Peculiar Ground Spt Equip		5.0																		5.0
Fielding		13.1		0.3																13.4
Program Mgt/Administration		28.7																		28.7
Interim Contractor Spt - R3		2.0		0.9																2.9
Interim Contractor Spt - IFTE		0.5																		0.5
Interim Contractor Spt - IMCPU		0.3																		0.3
Other		50.6																		50.6
Installation of Hardware																				
FY 1998 & Prior Eqpt -- Kits																				
FY 1999 Eqpt -- Kits																				
FY 2000 Eqpt -- Kits																				
FY 2001 Eqpt -- Kits																				
FY 2002 Eqpt -- kits																				
FY 2003 Eqpt -- kits																				
FY 2004 Eqpt -- kits																				
FY 2005 Eqpt -- kits																				
TC Equip-Kits																				
Total Installment																				
Total Procurement Cost		483.7		1.9																485.6

INDIVIDUAL MODIFICATION Date February 1999

MODIFICATION TITLE: Halon Fire Extinguisher TBD 2

MODELS OF SYSTEMS AFFECTED: OH-58D Kiowa Warrior

DESCRIPTION / JUSTIFICATION:

All U.S. Army hand-held fire extinguishers are to be replaced with CO2 extinguishers in accordance with the Clean Air Act of 1990. This act prohibits the use of ozone-depleting chemicals (ODC).

CO2 extinguishers are provided for the Kiowa Warrior airframe by the Army at no cost to the Program. Kiowa Warrior funding is used for A-Kit engineering and installation.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

Installation Schedule:

	Pr Yr	FY 1999				FY 2000				FY 2001				FY 2002				FY 2003			
	Totals	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Inputs				103	103	91	90														
Outputs				103	103	91	90														

	FY 2004				FY 2005				FY 2006				FY 2007				To	Totals
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Complete	
Inputs																		387
Outputs																		387

METHOD OF IMPLEMENTATION: Field Retrofit/OLR ADMINISTRATIVE LEADTIME: 5 Months PRODUCTION LEADTIME: 1 Months

Contract Dates:	FY 1999	Mar 99	FY 2000	Oct 00	FY 2001
Delivery Date:	FY 1999	Apr 99	FY 2000	Nov 00	FY 2001

INDIVIDUAL MODIFICATION Date February 1999

MODIFICATION TITLE (Cont): Halon Fire Extinguisher TBD 2

FINANCIAL PLAN: ($ in Millions)

	FY 1998 and Prior		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		FY 2004		FY 2005		TC		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																				
PROCUREMENT																				
Kit Quantity	387																		387	
Installation Kits	26	0.1	180	0.3	181	0.3													387	0.7
Installation Kits, Nonrecurring																				
Equipment																				
Equipment, Nonrecurring		1.3																		1.3
Engineering Change Orders		0.4																		0.4
Data																				
Training Equipment																				
Support Equipment																				
Other																				
Interim Contractor Support																				
Installation of Hardware																				
FY 1998 & Prior Eqpt -- 26 Kits			26	0.1															26	0.1
FY 1999 Eqpt -- 180 Kits			180	0.1															180	0.1
FY 2000 Eqpt -- 181 Kits					181	0.1													181	0.1
FY 2001 Eqpt -- Kits																				
FY 2002 Eqpt -- kits																				
FY 2003 Eqpt -- kits																				
FY 2004 Eqpt -- kits																				
FY 2005 Eqpt -- kits																				
TC Equip-Kits																				
Total Installment			206	0.2	181	0.1													387	0.3
Total Procurement Cost		1.8		0.5		0.4														2.7

INDIVIDUAL MODIFICATION Date February 1999

MODIFICATION TITLE: Crew Station Mission Equipment Trainer (CSMET) TBD 3

MODELS OF SYSTEMS AFFECTED: Complements OH-58D Kiowa Warrior

DESCRIPTION / JUSTIFICATION:

The Crew Station Mission Equipment Trainer (CSMET) is a unit-level training device that supports training for the OH-58D Kiowa Warrior flight crews. The CSMET supports refresher and sustainment training of those skills required to initialize, operate, and employ the weapon system, aircraft survivability equipment, airborne target handover system, communication and navigation equipment, Mast Mounted Sight cockpit controls, data transfer system, Aviator Night Vision Imaging System (ANVIS) display, and airborne video tape recorder. The CSMET will network with other devices for collective training. Currently, there are no Training Devices, Simulators or Simulations (TDSS) available to fielded Kiowa Warrior units. Therefore, the aircraft itself provides the only primary sustainment training device.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES: PLANNED ACCOMPLISHED

Installation data is not applicable; CSMET is a stand-alone training device.

Installation Schedule:

	Pr Yr	FY 1999				FY 2000				FY 2001				FY 2002				FY 2003			
	Totals	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Inputs																					
Outputs																					

	FY 2004				FY 2005				FY 2006				FY 2007				To	Totals
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Complete	
Inputs																		
Outputs																		

METHOD OF IMPLEMENTATION: Stand-Alone Device ADMINISTRATIVE LEADTIME: 3 Months PRODUCTION LEADTIME: 12 Months

Contract Dates:	FY 1999	Jan 99	FY 2000	Jan 00	FY 2001	Jan 01
Delivery Date:	FY 1999	Jan 00	FY 2000	Jan 01	FY 2001	Jan 02

INDIVIDUAL MODIFICATION — Date: February 1999

MODIFICATION TITLE (Cont): Crew Station Mission Equipment Trainer (CSMET) TBD 3

FINANCIAL PLAN: ($ in Millions)

	FY 1998 and Prior		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		FY 2004		FY 2005		TC		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E	1	1.8																	1	1.8
PROCUREMENT																				
Training Device Quantity	2	2.3	10	9.9	4	4.2	3	2.6									25	26.4	44	45.4
Installation Kits																				
Installation Kits, Nonrecurring																				
Equipment																				
Equipment, Nonrecurring																				
Engineering Change Orders																				
Data																				
Training Equipment																				
Support Equipment																				
Other		1.6																		1.6
Interim Contractor Support																				
Installation of Hardware																				
FY 1998 & Prior Eqpt -- Kits																				
FY 1999 Eqpt -- Kits																				
FY 2000 Eqpt -- Kits																				
FY 2001 Eqpt -- Kits																				
FY 2002 Eqpt -- kits																				
FY 2003 Eqpt -- kits																				
FY 2004 Eqpt -- kits																				
FY 2005 Eqpt -- kits																				
TC Equip-Kits																				
Total Installment																				
Total Procurement Cost		3.9		9.9		4.2		2.6										26.4		47.0

INDIVIDUAL MODIFICATION Date February 1999

MODIFICATION TITLE: Safety Enhancement Program TBD 4

MODELS OF SYSTEMS AFFECTED: OH-58D Kiowa Warrior

DESCRIPTION / JUSTIFICATION:

The Safety Enhancement Program (SEP) incorporates multiple improvements to resolve safety issues and to equip the airframe to perform as a digitized platform interfacing with the tactical internet. The R3 Engine increases reliability and control responsiveness and overcomes the rotor droop anomaly by providing faster response time to power demands. The accompanying Improved Master Controller Processor Unit (IMCPU) provides 100% growth capability for memory and throughput while reducing aircraft empty weight and operating and support costs. IMCPU will enable Improved Data Modem, Battlefield Combat Identification System, Improved Navigation System/Global Positioning System, Digital Map, Radio Frequency Interferometer (future consideration), etc. Task Force XXI software changes are being incorporated in the IMCPU. Energy Attenuating seats are being incorporated for crew safety in case of vertical and horizontal impacts. Air bags will increase crew protection in all modes of flight. A total of 387 aircraft will receive these safety modifications; 77 of these aircraft are partially SEP equipped in the Bell Helicopter remanufacture and retrofit lines; additional SEP equipment will be applied via field retrofit. Participating contractors have the desired flexibillity to produce at these rates.

Installation Schedule data not provided. Majority of aircraft will be block modified at Bell Helicopter Textron facilities; however, not all aircraft will receive the complete complement of modifications at that facility. Some aircraft will receive portions of the modification efforts via field retrofit; and similarly, not all field retrofit aircraft will receive all field retrofit modifications.

Installation Schedule:

	Pr Yr	FY 1999				FY 2000				FY 2001				FY 2002				FY 2003			
	Totals	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Inputs																					
Outputs																					

	FY 2004				FY 2005				FY 2006				FY 2007				To	Totals
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Complete	
Inputs																		
Outputs																		

METHOD OF IMPLEMENTATION: Kr Line & Fld Retrofi ADMINISTRATIVE LEADTIME: 4 Months PRODUCTION LEADTIME: 11 Months

Contract Dates:	FY 1999	Feb 99	FY 2000	Feb 00	FY 2001	Feb 01
Delivery Date:	FY 1999	Jan 00	FY 2000	Jan 01	FY 2001	Jan 02

MODIFICATION TITLE (Cont): Safety Enhancement Program TBD 4

FINANCIAL PLAN: ($ in Millions)

	FY 1998 and Prior		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		FY 2004		FY 2005		TC		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																				
PROCUREMENT																				
Aircraft Modified - Bell	28		28		20		44		54		40		44		43		9		310	
Hardware Nonrecurring		10.5		2.5																13.0
Hardware Recurring		10.2		5.5		9.8		15.3		9.1		6.8		7.7		7.7		1.6		73.7
Government Furnished Equip:																				
Processor (IMCPU) (B Kits)	69	20.5	28	5.6	10	2.9	54	14.6	114	31.6	32	9.1							307	84.3
R3 Engines (B Kits)	105	45.7	20	6.8	9	3.2	45	17.1	123	49.1	13	5.4							315	127.3
Airbags (B Kits)					163	4.8	229	6.8											392	11.6
Other (B Kits)				1.5		0.9		1.9		2.3		1.8		1.9		1.8		0.8		12.9
Engineering Change Orders		3.3		1.7		0.3		1.2		2.0		0.4		0.1		0.6		0.3		9.9
Project Management/Admin		16.5		5.5		3.9		8.7		10.7		8.0		8.8		8.8				70.9
Transportation				0.1		0.1		0.1		0.1		0.2		0.2		0.1		3.0		3.9
System Test & Evaluation		3.5		0.4																3.9
Training				0.5																0.5
Other		3.2		1.8		3.3		2.7		2.7		2.8		2.5		3.0		1.7		23.7
Installation of Hardware																				
FY 1998 & Prior Eqpt-28 A/C	28	4.7																	28	4.7
FY 1999 Eqpt --28 Line A/C			28	6.1															28	6.1
FY 2000 Eqpt --20 Line A/C					20	4.5													20	4.5
FY 2000 Eqpt -- 89 Fld A/C					89	0.7														0.7
FY 2001 Eqpt -- 44 LineA/C							44	10.0											44	10.0
FY 2001 Eqpt --211 Fld A/C							211	1.2												1.2
FY 2002 Eqpt --54 Line A/C									54	12.1									54	12.1
FY 2002 Eqpt --260 Fld A/C									260	1.4										1.4
FY 2003 Eqpt --40 Line A/C											40	9.1							40	9.1
FY 2004 Eqpt --44 Line A/C													44	10.3					44	10.3
FY 2005 Eqpt --43 Line A/C															43	10.2			43	10.2
TC Equip - 9 A/C																	9	2.1	9	2.1
Total Installment	28	4.7	28	6.1	109	5.2	255	11.2	314	13.5	40	9.1	44	10.3	43	10.2	9	2.1	310	72.4
Total Procurement Cost		118.1		38.0		34.4		79.6		121.1		43.6		31.5		32.2		9.5		508.0

Exhibit P-40, Budget Item Justification Sheet

Date: February 1999

Appropriation / Budget Activity/Serial No: AIRCRAFT PROCUREMENT / 2 / Modification of Aircraft

P-1 Item Nomenclature: EH-60 QUICKFIX MODS (AB3000)

Program Elements for Code B Items:

Code:

Other Related Program Elements:

	Prior Years	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	To Complete	Total Prog
Proc Qty												
Gross Cost	83.1	13.8	36.5	0.0	4.9	9.8	0.0	99.7	119.5	113.5	Cont	Cont
Less PY Adv Proc												
Plus CY Adv Proc												
Net Proc (P-1)	83.1	13.8	36.5	0.0	4.9	9.8	0.0	99.7	119.5	113.5	Cont	Cont
Initial Spares	71.2	2.3		0.8							Cont	Cont
Total Proc Cost	154.3	16.1	36.5	0.8	4.9	9.8	0.0	99.7	119.5	113.5	Cont	Cont
Flyaway U/C												
Wpn Sys Proc U/C												

DESCRIPTION: QUICKFIX, EH-60A, is a tactical heliborne communications intercept, direction finding and jamming system. QUICKFIX consists of AN/ALQ-151(V)2 intercept and direction finding mission equipment, an AN/TLQ-17A communications jammer and airborne self-protection equipment mounted in a BLACKHAWK helicopter. Four systems are currently in service with every active Army Division and Armored Cavalry Regiment (ACR). The system is used to search for, intercept, record, locate, report on and jam radio signals in the high frequency/very high frequency (HF/VHF) ranges. QUICKFIX systems interoperate with each other and the ground based TRAILBLAZER and TEAMMATE systems in a netted configuration for direction finding purposes. The EH-60 QUICKFIX MODS line pays for required materiel changes to these fielded QUICKFIX systems.

Advanced QUICKFIX (AQF) , EH-60L, is a materiel change to the existing heliborne QUICKFIX system. The system provides Commanders of Division and ACRs with an organic capability to listen to, precisely locate for hard kill or order-of-battle resolution, threat conventional and Low Probability of Intercept (LPI) command and control and fire control communications nets. AQF will identify and precisely locate opposition counter/mortar and counter/battery ground surveillance radar emissions. The system is specifically designed to ensure transportability, prime mover maintainability, and mobility equal to, or greater than that of the supported divisions and regiments, while exploiting or eliminating - at the Commander's discretion - the latest, most modern types of hostile modulations and transmission techniques at the key time and place on the battlefield. The system interoperates with ground based intelligence and electronic warfare assets (Ground Sensor) to provide for emitter location accuracies sufficient for "steel on target".

The Army has decided to restructure the IEWCS program, essentially making a "right turn" from IEWCS into a new program to be called Prophet. The Prophet program will consist of air and ground platforms and a ground control element. Due to the restructure of the IEWCS systems into the Prophet program , the LRIP AQFs will not be upgraded as originally planned for fielding to the 82nd ABN Div. The AQFs will become the airborne platform of this restructured Prophet program. FY99 will be the transition year leading to a Special In Process Review (SIPR) in 3Q99.

JUSTIFICATION:
FY00/FY01 funding is required to implement modification workorders (MWO) to the existing EH-60 helicopters that are for the Full Scale Engineering Development (FSED)/Low Rate Initial Production (LRIP) AQFs.

Exhibit P-40M Budget Item Justification Sheet

Date: February 1999

Appropriation / Budget Activity/Serial No.: AIRCRAFT PROCUREMENT / 2 / Modification of Aircraft

P-1 Item Nomenclature: EH-60 QUICKFIX MODS (AB3000)

Program Elements for Code B Items:

Code:

Other Related Program Elements:

Description		Fiscal Years									
OSIP NO.	Classification	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	TC	Total
T701C Helicopter Engines											
1-91-07-0001(1)	Operation	34.8	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	35.1
Advanced EH-60 Quickfix Mods											
1-91-07-0001(3)	Operational	88.7	0.0	4.9	9.5	0.0	99.7	119.5	113.5	Cont	Cont
Totals		123.5	0.0	4.9	9.8	0.0	99.7	119.5	113.5	Cont	Cont

INDIVIDUAL MODIFICATION Date February 1999

MODIFICATION TITLE: T701C Helicopter Engines 1-91-07-0001(1)

MODELS OF SYSTEMS AFFECTED:

DESCRIPTION / JUSTIFICATION:

Funds provide for the Advanced QUICKFIX BLACKHAWK Helicopter Power Train Upgrade, whereby existing helicopter engines will be replaced with T701C engines, Improved Durability Gear Boxes (IDGB) and improved Flight Controls thereby increasing lift payload capability. This upgrade is essential to provide the lift capability necessary to carry the mission equipment, External Storage Support Systems (ESSS) and additional fuel required to increase the time on station from 2 hours to the Operational Requirements Document (ORD) requirement of 4.5 hours. Without this upgrade, the mission equipment and fuel would exceed the maximum gross takeoff weight permitted.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

	PLANNED	ACCOMPLISHED
T701 HELICOPTER ENGINES		
PLANNED CONTRACT AWARD FY 95	FEB 95	FEB 95
FIRST KIT APPLIED	NOV 96	NOV 96
LAST KIT APPLIED	AUG 01	

Installation Schedule:

	Pr Yr	FY 1999				FY 2000				FY 2001				FY 2002				FY 2003			
	Totals	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Inputs	12										12										
Outputs	12											6	6								

	FY 2004				FY 2005				FY 2006				FY 2007				To	Totals
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Complete	
Inputs																		24
Outputs																		24

METHOD OF IMPLEMENTATION: Contractor's Facility ADMINISTRATIVE LEADTIME: 13 Months PRODUCTION LEADTIME: 21 Months

Contract Dates:	FY 1999	FY 2000	FY 2001
Delivery Date:	FY 1999	FY 2000	FY 2001

INDIVIDUAL MODIFICATION — Date: February 1999

MODIFICATION TITLE (Cont): T701C Helicopter Engines 1-91-07-0001(1)

FINANCIAL PLAN: ($ in Millions)

	FY 1998 and Prior		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		FY 2004		FY 2005		TC		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																				
PROCUREMENT																				
Kit Quantity																				
Installation Kits	24	31.8																	24	31.8
Installation Kits, Nonrecurring																				
Equipment																				
Equipment, Nonrecurring																				
Engineering Change Orders		0.9																		0.9
Data		1.2																		1.2
Training Equipment																				
Support Equipment																				
Other		0.7																		0.7
Interim Contractor Support																				
Installation of Hardware																				
FY 1998 & Prior Eqpt -- Kits	12	0.2					12	0.3											24	0.5
FY 1999 Eqpt -- Kits																				
FY 2000 Eqpt -- Kits																				
FY 2001 Eqpt -- Kits																				
FY 2002 Eqpt -- kits																				
FY 2003 Eqpt -- kits																				
FY 2004 Eqpt -- kits																				
FY 2005 Eqpt -- kits																				
TC Equip-Kits																				
Total Installment	12	0.2					12	0.3											24	0.5
Total Procurement Cost		34.8						0.3												35.1

INDIVIDUAL MODIFICATION Date February 1999

MODIFICATION TITLE: Advanced EH-60 Quickfix Mods

MODELS OF SYSTEMS AFFECTED: QUICKFIX, EH-60A, AN/ALQ-151(V)2

DESCRIPTION / JUSTIFICATION:

The Low Rate Initial Production (LRIP) AQFs will not be upgraded as originally planned for fielding to the 82nd Airborne Division. FY00 and FY01 funds are required to implement modification workorders (MWOs) to the existing EH-60 helicopters that are being used for the Full Scale Engineering Development/LRIP AQFs. The AQF will be used as the airborne platform for the restructured Prophet program. Funds in 03 and beyond will support the airborne platform of the Prophet program.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

	PLANNED	ACCOMPLISHED
ADVANCED QUICKFIX (AQF)		
PLANNED CONTRACT AWARD	DEC 95	NOV 95*
FIRST KIT APPLIED	JUN 98	JUN 98
LAST KIT APPLIED	JUN 99	

*Due to protest, contract was on hold until Jan 96

Installation Schedule:

	Pr Yr	FY 1999				FY 2000				FY 2001				FY 2002				FY 2003			
	Totals	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Inputs	3																				
Outputs	2			1																	

	FY 2004				FY 2005				FY 2006				FY 2007				To	Totals
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Complete	
Inputs																		3
Outputs																		3

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

Contract Dates:	FY 1999	FY 2000	FY 2001
Delivery Date:	FY 1999	FY 2000	FY 2001

INDIVIDUAL MODIFICATION — Date: February 1999

MODIFICATION TITLE (Cont): Advanced EH-60 Quickfix Mods 1-91-07-0001(3)

FINANCIAL PLAN: ($ in Millions)

	FY 1998 and Prior		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		FY 2004		FY 2005		TC		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																				
PROCUREMENT																				
Kit Quantity																				
Installation Kits																				
Installation Kits, Nonrecurring																				
Equipment	3	30.3										99.7		119.5		113.5			3	363.0
Integration/SW, Non rec		10.4				1.6		2.5												14.5
Engineering Change Orders		9.5				2.6		6.1												18.2
Data		3.3																		3.3
Training Equipment																				
Support Equipment																				
Other		18.5																		18.5
Interim Contractor Support																				
First Article Testing		3.8																		3.8
Other Equip/GFE Repair		8.7				0.3		0.4												9.4
PM Admin		3.1				0.4		0.5												4.0
FIELDING																				
Installation of Hardware																				
FY 1998 & Prior Eqpt -- Kits	3	1.1																	3	1.1
FY 1999 Eqpt -- Kits																				
FY 2000 Eqpt -- Kits																				
FY 2001 Eqpt -- Kits																				
FY 2002 Eqpt -- kits																				
FY 2003 Eqpt -- kits																				
FY 2004 Eqpt -- kits																				
FY 2005 Eqpt -- kits																				
TC Equip-Kits																				
Total Installment	3	1.1																	3	1.1
Total Procurement Cost		88.7				4.9		9.5				99.7		119.5		113.5				435.8

Exhibit P-40, Budget Item Justification Sheet

Date: February 1999

Appropriation / Budget Activity/Serial No: AIRCRAFT PROCUREMENT / 2 / Modification of Aircraft

P-1 Item Nomenclature: AIRBORNE AVIONICS (AA0700)

Program Elements for Code B Items:

Code:

Other Related Program Elements:

	Prior Years	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	To Complete	Total Prog
Proc Qty												
Gross Cost	161.3	58.3	41.7	56.2	43.7	43.3	71.2	56.3	71.0	53.8	119.6	776.4
Less PY Adv Proc												
Plus CY Adv Proc												
Net Proc (P-1)	161.3	58.3	41.7	56.2	43.7	43.3	71.2	56.3	71.0	53.8	119.6	776.4
Initial Spares												
Total Proc Cost	161.3	58.3	41.7	56.2	43.7	43.3	71.2	56.3	71.0	53.8	119.6	776.4
Flyaway U/C												
Wpn Sys Proc U/C												

Description: The Airborne Avionics budget line includes the Global Positioning System (GPS) , the Improved Data Modem (IDM) and the Aviation Mission Planning System (AMPS). The GPS, IDM and AMPS are three of the aviation systems required to support the digitization of the battlefield. The GPS provides Army aviation with extremely accurate and secure navigation capability and assists in situational awareness and prevention of fratricide. GPS is installed in several configurations based on mission profile, operational requirements, and avionics architecture of the aircraft. The Doppler GPS Navigation System (DGNS)/AN/ASN-128B is used for the utility and cargo helicopters. The Embedded GPS Inertial Navigation System (EGI) is integrated into the Scout/Attack fleet of helicopters. A Pre-Planned Product Improvement to the DGNS and EGI will begin in FY00/01 to intergrate a GPS Receiver Applications Module-Selective Availability Anti-Spoofing (GRAASM), an interchangeable module in accordance with NAVWAR and civil airspace regulatory requirements. The IDM is a joint service program for Army, Air-Force, and Marine aircraft, as well as Army command control platforms, which supports battlefield synchronization. It is a digital data link modem which exchanges targeting data between various weapon systems. It is being modified to incorporate Embedded Battle Command which will provide a common aviation solution for processing Situational Awareness information and Joint Variable Message Format messages. The AMPS is a mission planning/battle synchronization tool that will automate aviation mission planning tasks. It includes tactical command and control, mission planning, mission management, and maintenance management. It interfaces with the Maneuver Control System and associated networks. A Pre-Planned Product Improvement to the DGNS and EGI will begin in FY00/01 to integrate a GPS Receiver Applications Module-Selective Availability Anti-Spoofing (GRAASM), an interchangeable module in accordance with NAVWAR and airspace requirements.
Justification: The FY00 funding provides for the procurement and modification of 250 DGNS boxes to be integrated on the UH-60A/L and CH-47D aircraft, installations of 375 in FY00, and 250 in FY01. In addition, FY00 funding provides for the procurement of 36 IDMs with Embedded Battle Command (EBC) which allows for a common EBC solution for aviation. FY00/01 will begin procurement of the AMPS mission rehearsal capability as well as provide software upgrades to the AMPs system. Systems project management , PM admin, nonrecurring engineering, and other cost for GPS, IDM and AMPS are also funded during these fiscal years.

Exhibit P-40C Budget Item Justification Sheet		Date: February 1999
Appropriation / Budget Activity/Serial No.: AIRCRAFT PROCUREMENT / 2 / Modification of Aircraft	P-1 Item Nomenclature: AIRBORNE AVIONICS (AA0700)	
Program Elements for Code B Items	Code	Other Related Program Elements

The IDM program is in response to the need for "Digitization of the Battlefield" and supports the five Army modernization objectives. Its joint service application makes IDM particularly valuable in a threat environment. AMPS provides the capability to electronically disseminate missions and battle plans from brigade commander all the way to individual aviation warfighting platforms.

Exhibit P-40M Budget Item Justification Sheet										Date: February 1999	
Appropriation / Budget Activity/Serial No.: AIRCRAFT PROCUREMENT / 2 / Modification of Aircraft					P-1 Item Nomenclature: AIRBORNE AVIONICS (AA0700)						
Program Elements for Code B Items			Code		Other Related Program Elements						
Description		Fiscal Years									
OSIP NO.	Classification	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	TC	Total
Embedded GPS Inertial Navigation System (EGI) (No P3a Set)											
TBD 1	Legislative	34.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	34.5
Doppler GPS Navigation System (DGNS) (AN/ASN-128B)											
TBD 2	Legislative	57.8	18.9	15.4	2.7	0.0	0.0	0.0	0.0	0.0	94.8
Global Positioning System (GPS) [AN/ASN-149] (No P3a Set)											
TBD 3	Legislative	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1
Improved Data Modem (IDM)											
TBD 4	Oper/Log	40.7	27.7	16.6	15.6	35.6	41.7	36.1	22.4	30.3	266.7
Aviation Mission Planning System											
1-95-01-2185	Oper/Log	29.8	9.5	9.2	9.1	7.1	0.0	0.0	0.0	0.0	64.7
Embedded GPS Inertial Navigation System (EGI) PPI											
TBD 1-1	Legislative	0.0	0.0	0.0	11.9	10.5	5.3	10.6	11.0	4.4	53.7
Doppler GPS Navigation System (DGNS) (AN/ASN-128B) PPI											
TBD 2-2	Legislative	0.0	0.0	2.5	4.0	18.0	9.3	24.3	20.4	22.7	101.2
Totals		164.9	56.1	43.7	43.3	71.2	56.3	71.0	53.8	57.4	617.7

INDIVIDUAL MODIFICATION Date February 1999

MODIFICATION TITLE: Doppler GPS Navigation System (DGNS) (AN/ASN-128B) TBD 2

MODELS OF SYSTEMS AFFECTED: Blackhawk (UH-60 A/L), Chinook (CH-47D)

DESCRIPTION / JUSTIFICATION:

Modification of UH-60A/L and CH-47D aircraft is required to integrate a state of the art Global base navigation system. The goal is to enhance aircraft navigation and warfighting capability to meet the JCS navigation plan. GPS is one of the six aviation systems required for Digitization of the Battlefield. The UH-60A/L cost includes support equipment, a Command Instrument Processor (CIP), which must be used in conjunction with the DGNS/AN-ASN-128B and in lieu of the current analog version. Quantities for the CH-47D configuration are: FY97 (203), FY98 (100), FY99 100, FY00 (25).

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

	Planned	Accomplished
Integration Design Contract Award	Aug 93	Aug 93
Production Contract Award	Aug 95	Aug 95
Production Follow on Contract	Mar 99	

Installation Schedule:

	Pr Yr	FY 1999				FY 2000				FY 2001				FY 2002				FY 2003			
	Totals	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Inputs	766	100	100	100	83	100	100	100	75	62	62	63	63								
Outputs	646	120	100	100	100	83	100	100	100	75	62	62	63	63							

	FY 2004				FY 2005				FY 2006				FY 2007				To	Totals
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Complete	
Inputs																		1774
Outputs																		1774

METHOD OF IMPLEMENTATION: Contractor Teams ADMINISTRATIVE LEADTIME: 1 Months PRODUCTION LEADTIME: 7 Months

Contract Dates:	FY 1999	Jan99	FY 2000	Jan 00	FY 2001
Delivery Date:	FY 1999	Sep 99	FY 2000	Sep 00	FY 2001

INDIVIDUAL MODIFICATION — Date: February 1999

MODIFICATION TITLE (Cont): Doppler GPS Navigation System (DGNS) (AN/ASN-128B) TBD 2

FINANCIAL PLAN: ($ in Millions)

	FY 1998 and Prior		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		FY 2004		FY 2005		TC		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																				
PROCUREMENT																				
Kit Quantity	1149	25.5	375	8.6	250	6.8													1774	40.9
Installation Kits		6.2		2.0		1.4														9.6
Installation Kits, Nonrecurring		0.8																		0.8
Equipment																				
Equipment, Nonrecurring		3.5																		3.5
Engineering Change Orders		0.7																		0.7
Data																				
Training Equipment																				
Support Equipment	564	8.2	188	2.8	188	2.8													940	13.8
Other (Inc PM Mgt & Matrix Spt)		4.9		1.7		0.7		0.2												7.5
Interim Contractor Support																				
Installation of Hardware																				
FY 1998 & Prior Eqpt -- Kits	766	8.0	383	3.8															1149	11.8
FY 1999 Eqpt -- Kits					375	3.7													375	3.7
FY 2000 Eqpt -- Kits							250	2.5											250	2.5
FY 2001 Eqpt -- Kits																				
FY 2002 Eqpt -- kits																				
FY 2003 Eqpt -- kits																				
FY 2004 Eqpt -- kits																				
FY 2005 Eqpt -- kits																				
TC Equip-Kits																				
Total Installment	766	8.0	383	3.8	375	3.7	250	2.5											1774	18.0
Total Procurement Cost		57.8		18.9		15.4		2.7												94.8

INDIVIDUAL MODIFICATION Date February 1999

MODIFICATION TITLE: Embedded GPS Inertial Navigation System (EGI) PPI TBD 1-1

MODELS OF SYSTEMS AFFECTED: Kiowa Warrior (OH-58D), Apache A+ (AH-64A+,) Longbow (AH-64D)

DESCRIPTION / JUSTIFICATION:

GPS is one of the aviation systems required for Digitization of the Battlefield. FY 01 starts the aircraft integration and GPS EGI Preplanned Product Improvement (PPPI) interchangeable module, GRAASM, in accordance with NAVWAR and civil airspace regulatory requirements for the APACHE (AH-64A+), LONGBOW (AH-64D), and KIOWA Warrior (OH-58D). The non-recurring provides the LONGBOW and KIOWA Warrior aircraft integration and testing. The Kit cost will vary depending on aircraft configuration. In FY 01, 61 GRAASM modules will be procured for the LONGBOW production Line, of the 72 APACHEs inducted. Remaining 11 will receive EGI upgrade boxes (2 each) on the LONGBOW production line (no cost to this PM). Aircraft quantities to receive GRAASM from this modification: LONGBOW Production Line 474 EGI's will receive 1 module, APACHE Field Retrofit,196 aircraft, will receive 2 each,(these aircraft have 2 previously install EGIs for modification, and KIOWA Field Retrofit, 399, will receive 1 module per aircraft. Only the LONGBOW GFE modules will exclude installation kit and install cost.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

	Planned	Accomplished
Contract Award (ECP)	Nov 00	
Production Contract Award	Apr 01	

Installation Schedule:

	Pr Yr	FY 1999				FY 2000				FY 2001				FY 2002				FY 2003			
	Totals	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Inputs																		55	55	54	54
Outputs																			55	55	54

	FY 2004				FY 2005				FY 2006				FY 2007				To	Totals
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Complete	
Inputs	25	25	25	25	64	64	64	64	55	54	54	54						791
Outputs	54	25	25	25	25	64	64	64	64	55	54	54	54					791

METHOD OF IMPLEMENTATION: ADMINISTRATIVE LEADTIME: 1 Months PRODUCTION LEADTIME: 6 Months

Contract Dates:	FY 1999	FY 2000	FY 2001
Delivery Date:	FY 1999	FY 2000	FY 2001

INDIVIDUAL MODIFICATION — Date: February 1999

MODIFICATION TITLE (Cont): Embedded GPS Inertial Navigation System (EGI) PPI TBD 1-1

FINANCIAL PLAN: ($ in Millions)

	FY 1998 and Prior		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		FY 2004		FY 2005		TC		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																				
PROCUREMENT																				
Kit Quantity							61	0.9	279	7.2	161	3.4	317	8.2	278	7.1	170	2.4	1266	29.2
Installation Kits										0.8		0.3		0.9		0.7				2.7
Installation Kits, Nonrecurring																				
Equipment																				
Equipment, Nonrecurring								10.4												10.4
Engineering Change Orders																				
Data										0.2										0.2
Training Equipment										1.6										1.6
Support Equipment																				
Other (Inc PM Mgt & Matrix Spt)								0.6		0.7		0.5		0.8		1.4				4.0
Interim Contractor Support																				
Installation of Hardware																				
FY 1998 & Prior Eqpt -- Kits																				
FY 1999 Eqpt -- Kits																				
FY 2000 Eqpt -- Kits																				
FY 2001 Eqpt -- Kits																				
FY 2002 Eqpt -- 218 kits											218	1.1							218	1.1
FY 2003 Eqpt -- 100 kits													100	0.7					100	0.7
FY 2004 Eqpt - 256 kits															256	1.8			256	1.8
FY 2005 Eqpt -- 217 kits																	217	2.0	217	2.0
TC Equip-Kits																				
Total Installment											218	1.1	100	0.7	256	1.8	217	2.0	791	5.6
Total Procurement Cost								11.9		10.5		5.3		10.6		11.0		4.4		53.7

INDIVIDUAL MODIFICATION Date February 1999

MODIFICATION TITLE: Doppler GPS Navigation System (DGNS) (AN/ASN-128B) PPI TBD 2-2

MODELS OF SYSTEMS AFFECTED: Blackhawk (UH-60 A/L), Chinook (CH-47D)

DESCRIPTION / JUSTIFICATION:

GPS is one of the six aviation systems required for Digitization of the Battlefield. FY 00 starts the Pre Planned Product Improvement for the AN/ASN-28B/DGNS nonrecurring aircraft integration on the UH-60A/L and CH-47D. This modification is a Joint service initiative which will provide a common interchangeable module, GPS Receiver Applications Module (GRAM)-Selective Availability Anti-Spoofing Module (SAASM). The AN/ASN-128B/DGNS Pre-Planned Product Improvement interchangeable module is in accordance with NAVWAR and civil airspace regulatory requirements for the UH-60 A/L and CH-47D aircraft fleet.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

	Planned	Accomplished
Contract Award (ECP)	Dec 00	
Production Contract Award	Apr 02	

Installation Schedule:

	Pr Yr	FY 1999				FY 2000				FY 2001				FY 2002				FY 2003			
	Totals	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Inputs																		80	80	80	80
Outputs																			80	80	80

	FY 2004				FY 2005				FY 2006				FY 2007				To	Totals
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Complete	
Inputs	44	44	44	43	138	137	137	137	98	97	97	97	56	55	55	55	220	1874
Outputs	80	44	44	44	43	138	137	137	137	98	97	97	97	56	55	55	275	1874

METHOD OF IMPLEMENTATION: Contractor Team ADMINISTRATIVE LEADTIME: 1 Months PRODUCTION LEADTIME: 6 Months

Contract Dates:	FY 1999	FY 2000	FY 2001
Delivery Date:	FY 1999	FY 2000	FY 2001

INDIVIDUAL MODIFICATION — Date: February 1999

MODIFICATION TITLE (Cont): Doppler GPS Navigation System (DGNS) (AN/ASN-128B) PPI TBD 2-2

FINANCIAL PLAN: ($ in Millions)

	FY 1998 and Prior		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		FY 2004		FY 2005		TC		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																				
PROCUREMENT																				
Kit Quantity									320	11.2	175	6.1	549	19.2	389	13.6	441	15.4	1874	65.5
Installation Kits										1.1		0.6		1.9		1.3		1.5		6.4
Installation Kits, Nonrecurring																				
Equipment																				
Equipment, Nonrecurring								3.0												3.0
Engineering Change Orders						2.5		0.5		3.3										6.3
Data										0.2										0.2
Training Equipment										1.2										1.2
Support Equipment																				
Other (Inc PM ADMIN/MAT SPT)								0.5		1.0		0.4		2.0		1.7				5.6
Interim Contractor Support																				
Installation of Hardware																				
FY 1998 & Prior Eqpt -- Kits																				
FY 1999 Eqpt -- Kits																				
FY 2000 Eqpt -- Kits																				
FY 2001 Eqpt -- Kits																				
FY 2002 Eqpt --320 kits											320	2.2							320	2.2
FY 2003 Eqpt --175 kits													175	1.2					175	1.2
FY 2004 Eqpt - 549 kits															549	3.8			549	3.8
FY 2005 Eqpt --389 kits																	389	2.7	389	2.7
TC Equip-Kits 441																	441	3.1	441	3.1
Total Installment											320	2.2	175	1.2	549	3.8	830	5.8	1874	13.0
Total Procurement Cost						2.5		4.0		18.0		9.3		24.3		20.4		22.7		101.2

INDIVIDUAL MODIFICATION Date February 1999

MODIFICATION TITLE: Improved Data Modem (IDM) TBD 4

MODELS OF SYSTEMS AFFECTED: IDM MD-1295/A; Aircraft: Longbow (AH-64D), Kiowa Warrior (OH-58D), Special Operations Aircraft (MH-47E/MH-60K), Aviation

DESCRIPTION / JUSTIFICATION:

The Improved Data Modem (IDM) is one of the aviation programs in response to the need for Digitization of the Battlefield. It will provide the field commander with the capability for enhanced command and control, situational awareness and enhanced operations in joint service digitized environments. The IDM is a digital data link modem which exchanges targeting data between the various weapons systems in support of the following missions: suppression of enemy air defenses, close air support, forward air control, air combat and command control. The IDM will enable the army to maintain capabilities to gather, process and transmit information to all areas of the battlefield. The IDM is being modified to incorporate Embedded Battle Command (EBC) which will provide a common EBC solution for aviation, minimize changes to platform architecture, maximize software reuse, and reduce platform software life cycle costs. IDMs for Longbow, uninducted Kiowa Warrior aircraft, CH-47 Improved Cargo Helicopter, UH-60Q Medevac, and UH-60-X will be incorporated in production. IDMs for fielded Kiowa Warrior aircraft will be installed by the Kiowa Warrior PM during implementation of the safety enhancement engineering change. The IDMs for Special Operations Aircraft will be installed by SOA logistics contractors. This will result in no installation costs for incorporation of EBC into IDM.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

	Planned	Accomplished
Participate in FBCB2 IOTE with Ground Test Set	Oct 99	
Full Rate Production Contract	Jan 01	

Installation Schedule:

	Pr Yr	FY 1999				FY 2000				FY 2001				FY 2002				FY 2003			
	Totals	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Inputs																					
Outputs																					

	FY 2004				FY 2005				FY 2006				FY 2007				To	Totals
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Complete	
Inputs																		
Outputs																		

METHOD OF IMPLEMENTATION:	ADMINISTRATIVE LEADTIME:	PRODUCTION LEADTIME:
Contract Dates:	FY 1999	FY 2000	FY 2001
Delivery Date:	FY 1999	FY 2000	FY 2001

INDIVIDUAL MODIFICATION — Date: February 1999

MODIFICATION TITLE (Cont): Improved Data Modem (IDM) TBD 4

FINANCIAL PLAN: ($ in Millions)

	FY 1998 and Prior		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		FY 2004		FY 2005		TC		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E				1.4		1.9		1.9												5.2
PROCUREMENT																				
Kit Quantity	260	8.8					124	7.2	261	15.5	197	11.9	178	11.0	207	13.1	214	13.8	1441	81.3
Installation Kits																				
Installation Kits, Nonrecurring		5.3																		5.3
Equipment		0.1																		0.1
Equipment, Nonrecurring		10.9		8.1		8.2		4.1		3.8		1.6		1.6		1.7				40.0
Modifications									168	7.4	242	10.9	107	4.9	71	3.3	81	3.9	669	30.4
Engineering Change Orders		2.0				0.1		0.4		0.8		0.6		0.6		0.6		1.8		6.9
Data				0.2																0.2
Training Equipment																				
Support Equipment		0.1																		0.1
Other (Incl PM Mgt/Matrix Spt)		9.1		0.5		0.8		0.8		1.8		2.0		1.5		0.8		1.5		18.8
Interim Contractor Support																				
Fielding		0.7		0.3		0.3		0.3		0.3		2.8		2.8		2.9		9.3		19.7
System Test & Evaluation		0.4				0.3														0.7
Aircraft Integration		3.3		18.6		6.9		2.8		6.0		11.9		13.7						63.2
Installation of Hardware																				
FY 1998 & Prior Eqpt -- Kits																				
FY 1999 Eqpt -- Kits																				
FY 2000 Eqpt -- Kits																				
FY 2001 Eqpt -- Kits																				
FY 2002 Eqpt -- kits																				
FY 2003 Eqpt -- kits																				
FY 2004 Eqpt -- kits																				
FY 2005 Eqpt -- kits																				
TC Equip-Kits																				
Total Installment																				
Total Procurement Cost		40.7		27.7		16.6		15.6		35.6		41.7		36.1		22.4		30.3		266.7

INDIVIDUAL MODIFICATION Date February 1999

MODIFICATION TITLE: Aviation Mission Planning System 1-95-01-2185

MODELS OF SYSTEMS AFFECTED: Kiowa Warrior (OH-58D); Blackhawk (UH-60 A/L); MEDIVAC (UH-60Q); Chinook (CH-47D); Longbow (AH-64D/AH-64 Modernization)

DESCRIPTION / JUSTIFICATION:

The AMPS is a mission planning/battle-synchronization tool that will automate aviation mission planning tasks. The system will also generate mission data in either hard copy or electronic formats which can be loaded on the aircraft platforms. The AMPS includes tactical command and control, mission planning, mission management, and maintenance management. It interfaces with the Maneuver Control system (MCS) and associated networks which will furnish the aviation commander with continuous situational awareness, allowing the commander to rapidly adjust mission plans. Since the airframes have the data receptacles/busses required to interface with AMPS there is no installation cost/schedule.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

	Planned	Accomplished
In-Process Review	Jan 00	

Installation Schedule:

	Pr Yr	FY 1999				FY 2000				FY 2001				FY 2002				FY 2003			
	Totals	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Inputs																					
Outputs																					

	FY 2004				FY 2005				FY 2006				FY 2007				To	Totals
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Complete	
Inputs																		
Outputs																		

METHOD OF IMPLEMENTATION:	ADMINISTRATIVE LEADTIME:	PRODUCTION LEADTIME:
Contract Dates:	FY 1999	FY 2000	FY 2001
Delivery Date:	FY 1999	FY 2000	FY 2001

INDIVIDUAL MODIFICATION — Date: February 1999

MODIFICATION TITLE (Cont): Aviation Mission Planning System 1-95-01-2185

FINANCIAL PLAN: ($ in Millions)

	FY 1998 and Prior		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		FY 2004		FY 2005		TC		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																				
PROCUREMENT																				
Kit Quantity	496	14.5	84	3.2															580	17.7
Installation Kits																				
Installation Kits, Nonrecurring																				
Equipment		4.4		1.2		3.9		3.7		2.5										15.7
Equipment, Nonrecurring																				
Engineering Change Orders		8.2		4.3		4.6		4.7		4.0										25.8
Data																				
Training Equipment																				
Support Equipment																				
Other (Inc PM Mgt/Matrix Spt)		2.7		0.5		0.5		0.5		0.3										4.5
Interim Contractor Support																				
Fielding				0.3		0.2		0.2		0.3										1.0
Installation of Hardware																				
FY 1998 & Prior Eqpt -- Kits																				
FY 1999 Eqpt -- Kits																				
FY 2000 Eqpt -- Kits																				
FY 2001 Eqpt -- Kits																				
FY 2002 Eqpt -- kits																				
FY 2003 Eqpt -- kits																				
FY 2004 Eqpt -- kits																				
FY 2005 Eqpt -- kits																				
TC Equip-Kits																				
Total Installment																				
Total Procurement Cost		29.8		9.5		9.2		9.1		7.1										64.7

Exhibit P-40, Budget Item Justification Sheet											Date: February 1999	
Appropriation / Budget Activity/Serial No: AIRCRAFT PROCUREMENT / 2 / Modification of Aircraft								P-1 Item Nomenclature: ASE MODS (SIRFC) (AA0720)				
Program Elements for Code B Items:				Code:	Other Related Program Elements:							
	Prior Years	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	To Complete	Total Prog
Proc Qty												
Gross Cost	126.0	27.4	23.1	2.7	11.8	4.5	14.4	4.8	5.0	2.3	0.0	222.1
Less PY Adv Proc												
Plus CY Adv Proc												
Net Proc (P-1)	126.0	27.4	23.1	2.7	11.8	4.5	14.4	4.8	5.0	2.3	0.0	222.1
Initial Spares												
Total Proc Cost	126.0	27.4	23.1	2.7	11.8	4.5	14.4	4.8	5.0	2.3	0.0	222.1
Flyaway U/C												
Wpn Sys Proc U/C												

DESCRIPTION:
ASE modifications provides funding for Aircraft Survivability Equipment (ASE) upgrades by incorporation of latest state-of-the-art technology needed to meet current and emerging threats. Modular upgrades are applied in lieu of new developments to obtain the most cost effective improved systems. Modifications to current systems will sustain and protect the forces, conduct precision strikes, and dominate the maneuver battle. Installing ASE items on aircraft systems improve their threat defeating capabilities. This budget item rolls up three modification efforts that test, procure and install A-Kits on Army airframes.

JUSTIFICATION:
FY00 and FY01 funding is required to procure AN/ALQ-211, Suite of Integrated Radio Frequency Countermeasures (SIRFC) for the Special Operations Aircraft (SOA). The SOA requires additional capabilities to detect and defeat air and ground radar frequency (RF) missiles and to provide situational awareness to the pilot. The improvements needed will be satisfied by SIRFC. FY00-01 funds will also support nonrecurring engineering for the integration program. The SIRFC system brings the latest and most sophisticated state-of-the-art technology available for the US Army aircraft to survive on the modern digital battlefield.

Exhibit P-40M Budget Item Justification Sheet										Date: February 1999	
Appropriation / Budget Activity/Serial No.: AIRCRAFT PROCUREMENT / 2 / Modification of Aircraft					P-1 Item Nomenclature: ASE MODS (SIRFC) (AA0720)						
Program Elements for Code B Items			Code		Other Related Program Elements						
Description		Fiscal Years									
OSIP NO.	Classification	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	TC	Total
Laser Detecting Set AN/AVR-2A(V)/AH-64											
1-92-01-2182	Unclassified	8.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.9
AN/ALQ-211 Suite of Integrated Radio Frequency CMS											
1-92-01-2187	Unclassified	3.0	2.7	11.8	4.5	14.4	4.8	5.0	2.3		48.5
Advanced Threat Infrared Countermeasures (ATIRCM)											
TBD	Unclassified	11.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.2
Totals		23.1	2.7	11.8	4.5	14.4	4.8	5.0	2.3	0.0	68.6

INDIVIDUAL MODIFICATION Date February 1999

MODIFICATION TITLE: Laser Detecting Set AN/AVR-2A(V)/AH-64 1-92-01-2182

MODELS OF SYSTEMS AFFECTED: AH-64

DESCRIPTION / JUSTIFICATION:

The AN/AVR-2A(V) Laser Detecting Set (LDS) consists of two dual sensor units and an infrared unit comparator. The system interfaces with the AN/APR-39 radar detecting set, and utilizes the AN/APR-39 signal comparator and control unit to function as an integrated radar and laser detecting set system. Th laser sensor units detect laser energy and convert it to electrical signals. These signals are processed, formatted and sent to the comparator as digital work messages. The comparator further processes the data and forwards this threat information to be displayed on the AN/APR-39 signal indicator inside the cockpit, at the same time, an audio one alerts the crew. Materiel change (MC) estimates include the following - procurement of hardware, retrofit for aircraft and project management cost. In addition, technical manual changes, retrofit kit data, the modification work order (MWO) and engineering change order (ECO) will also be provided by the contractor. This procurement equal current requirement for installation kits for 346 APACHE aircraft. LONGBOW A-Kits will be installed as part of the LONGBOW production effort.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

Engineering Change Proposal (ECP) Development Award - Oct 92
ECP Approval - May 95
PY A-Kit Production Contract Award - May 95
PY A-Kit Production Hardware Delivery - Mar 97
FY97 A-Kit Production Contract Award - Mar 97
FY97 A-Kit Production Hardware Delivery - Jan 98
FY97 B-Kit Contract (Option) Award - Jun 97
FY97 B-Kit Hardware Delivery - Jan 99
Engineering Change Order Proposal - Jun 98
FY98 Engineering Change Order Award - Jan 99

Installation Schedule:

	Pr Yr	FY 1999				FY 2000				FY 2001				FY 2002				FY 2003			
	Totals	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Inputs	200	60	60	26																	
Outputs	102	26	64	70	51	16	17														

	FY 2004				FY 2005				FY 2006				FY 2007				To	Totals
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Complete	
Inputs																		346
Outputs																		346

METHOD OF IMPLEMENTATION:	ADMINISTRATIVE LEADTIME:	PRODUCTION LEADTIME:
Contract Dates:	FY 1999	FY 2000	FY 2001
Delivery Date:	FY 1999	FY 2000	FY 2001

INDIVIDUAL MODIFICATION — Date: February 1999

MODIFICATION TITLE (Cont): Laser Detecting Set AN/AVR-2A(V)/AH-64 1-92-01-2182

FINANCIAL PLAN: ($ in Millions)

	FY 1998 and Prior		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		FY 2004		FY 2005		TC		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																				
PROCUREMENT																				
Kit Quantity	50	6.3																	50	6.3
Installation Kits	346	5.5																	346	5.5
Installation Kits, Nonrecurring		4.4																		4.4
Equipment																				
Equipment, Nonrecurring		0.3																		0.3
Engineering Change Orders		6.8																		6.8
Data																				
Training Equipment																				
Support Equipment																				
Other		1.9																		1.9
Interim Contractor Support																				
System Test		0.1																		0.1
Installation of Hardware																				
FY 1998 & Prior Eqpt -- Kits	346	5.3																	346	5.3
FY 1999 Eqpt -- Kits																				
FY 2000 Eqpt -- Kits																				
FY 2001 Eqpt -- Kits																				
FY 2002 Eqpt -- kits																				
FY 2003 Eqpt -- kits																				
FY 2004 Eqpt -- kits																				
FY 2005 Eqpt -- kits																				
TC Equip-Kits																				
Total Installment	346	5.3																	346	5.3
Total Procurement Cost		30.6																		30.6

INDIVIDUAL MODIFICATION Date February 1999

MODIFICATION TITLE: AN/ALQ-211 Suite of Integrated Radio Frequency CMS 1-92-01-2187

MODELS OF SYSTEMS AFFECTED: AH-64D, MH-47D/L, MH-60K/L

DESCRIPTION / JUSTIFICATION:

The AN/ALQ-211, Suite of Integrated Radio Frequency Countermeasures (SIRFC) is the latest technology, state of the art, radar warning and radar jamming system that will protect Army Aircraft against newer, more capable threat air defense systems employing the latest and proliferated improvements in millimeter wave, pulse doppler, and multi-sprectral radar and Infrared technologies. The SIRFC consists of the Advanced Threat Warning Receiver (ATRWR) and the Advanced Threat Radar Jammer (ATRJ). The SIRFC will replace the current ASE equipment, AN/APR-39, AN/ALQ-136 and AN/ALQ-162. SIRFC is an Aircraft Survivability Equipment (ASE) project with OSD oversight and high joint interest (the AFSOC has selected SIRFC to be its bus controller and sensor fusion processor for the CV-22). It has application to other Air Force and Navy aircraft. The SIRFC system is necessary to the survival of the AH-64A/D, MH-47E/D, MH-60K/L, CH-47D, UH-60A/L, and EH-60 aircraft. The current requirement is for SIRFC systems to equip all AH-64D and MH-47/60 SOA aircraft, and portions of the Army UH-60 and CH-47 aircraft.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

Engineering Change Proposal (ECP) Development Award - 3QFY96 (APACHE)
ECP Approval - 4QFY00 (APACHE)
Integration Development (SOA)
Production Contract Award - 2QFY01
Production Hardware Delivery - 2QFY03
First Kit Applied - 2QFY03

Installation Schedule:

	Pr Yr	FY 1999				FY 2000				FY 2001				FY 2002				FY 2003			
	Totals	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Inputs																			1	3	3
Outputs																			1	3	3

	FY 2004				FY 2005				FY 2006				FY 2007				To	Totals
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Complete	
Inputs	3	3	3	3	3	3	3	3	3	3	3	3	3	2				48
Outputs	3	3	3	3	3	3	3	3	3	3	3	3	3	2				48

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

Contract Dates:	FY 1999	FY 2000	FY 2001
Delivery Date:	FY 1999	FY 2000	FY 2001

INDIVIDUAL MODIFICATION — Date: February 1999

MODIFICATION TITLE (Cont): AN/ALQ-211 Suite of Integrated Radio Frequency CMS 1-92-01-2187

FINANCIAL PLAN: ($ in Millions)

	FY 1998 and Prior		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		FY 2004		FY 2005		TC		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																				
PROCUREMENT																				
Kit Quantity																				
Installation Kits							12	3.0	12	3.1	12	3.1	12	3.2					48	12.4
Installation Kits, Nonrecurring		20.3		2.5		10.0				10.8										43.6
Equipment																				
Equipment, Nonrecurring																				
Engineering Change Orders																				
Data																				
Training Equipment																				
Support Equipment																				
Program Management		0.5		0.2		0.5		0.3		0.5		0.2		0.2		0.1				2.5
Contractor Logistics Support						1.3		1.2				0.5				0.4				3.4
Installation of Hardware																				
FY 1998 & Prior Eqpt -- Kits																				
FY 1999 Eqpt -- Kits																				
FY 2000 Eqpt -- Kits																				
FY 2001 Eqpt -- Kits											7	1.0							7	1.0
FY 2002 Eqpt -- kits													12	1.6					12	1.6
FY 2003 Eqpt -- kits															14	1.8			14	1.8
FY 2004 Eqpt -- kits																	15	1.9	15	1.9
FY 2005 Eqpt -- kits																				
TC Equip-Kits																				
Total Installment											7	1.0	12	1.6	14	1.8	15	1.9	48	6.3
Total Procurement Cost		20.8		2.7		11.8		4.5		14.4		4.8		5.0		2.3		1.9		68.2

INDIVIDUAL MODIFICATION Date February 1999

MODIFICATION TITLE: Advanced Threat Infrared Countermeasures (ATIRCM) TBD

MODELS OF SYSTEMS AFFECTED: AH-64D, MH-47D/E, MH-60K/L, EH-60, UH-60, OH-58D, CH-47D

DESCRIPTION / JUSTIFICATION:

The ATIRCM is a requirement for current generation Army aircraft. The ATIRCM/CMWS is one system which is the core of a Suite of Integrated Infrared Countermeasures (SIIRCM). This Suite will provide active and passive infrared countermeasures (IRCM) protection against infrared guided weapons. The system is designed to meet operational requirements for a modular IRCM system capable of providing awareness and self protection jamming countermeasures. The system is applicable to AH-64D, MH-47D/E, MH-60K/L, EH-60, UH-60, OH-58D and CH-47D aircrafts. The program has been designated a tri-service program, with application to Air Force and Navy aircrafts.

ATIRCM transitions to SSN AA0722 beginning in FY00. This P-Form reflects only FY98 and prior.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

Milestone I/II - Jun 95
EMD Contract Award - Sep 95
System Design Review - Mar 96
Preliminary Design Review - Jun 96
Critical Design Review - Feb 97

Installation Schedule:

	Pr Yr	FY 1999				FY 2000				FY 2001				FY 2002				FY 2003			
	Totals	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Inputs																					
Outputs																					

	FY 2004				FY 2005				FY 2006				FY 2007				To	Totals
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Complete	
Inputs																		
Outputs																		

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

Contract Dates:	FY 1999	FY 2000	FY 2001	Enter Date
Delivery Date:	FY 1999	FY 2000	FY 2001	Enter Date

INDIVIDUAL MODIFICATION																				Date	February 1999
MODIFICATION TITLE (Cont):	Advanced Threat Infrared Countermeasures (ATIRCM) TBD																				
FINANCIAL PLAN: ($ in Millions)																					
	FY 1998 and Prior		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		FY 2004		FY 2005		TC		TOTAL		
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	
RDT&E																					
PROCUREMENT																					
Kit Quantity																					
Installation Kits																					
Installation Kits, Nonrecurring		20.2																			20.2
Equipment																					
Equipment, Nonrecurring																					
Engineering Change Orders																					
Data																					
Training Equipment																					
Support Equipment																					
Other																					
Interim Contractor Support																					
Installation of Hardware																					
FY 1998 & Prior Eqpt -- Kits																					
FY 1999 Eqpt -- Kits																					
FY 2000 Eqpt -- Kits																					
FY 2001 Eqpt -- Kits																					
FY 2002 Eqpt -- kits																					
FY 2003 Eqpt -- kits																					
FY 2004 Eqpt -- kits																					
FY 2005 Eqpt -- kits																					
TC Equip-Kits																					
Total Installment																					
Total Procurement Cost		20.2																			20.2

Exhibit P-40, Budget Item Justification Sheet											Date: February 1999	
Appropriation / Budget Activity/Serial No: AIRCRAFT PROCUREMENT / 2 / Modification of Aircraft								P-1 Item Nomenclature: ASE MODS (ATIRCM) (AA0722)				
Program Elements for Code B Items:				Code:	Other Related Program Elements:							
	Prior Years	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	To Complete	Total Prog
Proc Qty												
Gross Cost	0.0	0.0	0.0	0.0	0.0	0.7	12.1	12.1	21.3	31.4	180.0	257.6
Less PY Adv Proc												
Plus CY Adv Proc												
Net Proc (P-1)	0.0	0.0	0.0	0.0	0.0	0.7	12.1	12.1	21.3	31.4	180.0	257.6
Initial Spares												
Total Proc Cost	0.0	0.0	0.0	0.0	0.0	0.7	12.1	12.1	21.3	31.4	180.0	257.6
Flyaway U/C												
Wpn Sys Proc U/C												

DESCRIPTION: The ATIRCM/CMWS is a U.S. Army tri-service program to develop, test, and integrate defensive infrared (IR) countermeasures capabilities into existing, current generation host platforms for more effective protection against a greater number of IR guided missile threats than afforded by currently fielded IR countermeasures. It is the next generation of infrared countermeasures for use on rotary and fixed wing aircraft. It is applicable to Army, Air Force, and Navy aircraft. The system consists of Common Missile Warning System (CMWS), Advanced Threat Infrared Jammer (ATIRJ), Advanced Threat Infrared Countermeasure Munitions (AIRCMM), and Electronic Control Unit (ECU). It is designated to detect when the aircraft is being engaged by a threat missile, and provide appropriate countermeasures to cause the missile to miss the aircraft. Countermeasures include laser jamming and dispensing decoys. The CMWS component system is a joint U.S. Navy, U.S. Marine Corps, and U.S. Air Force program to develop, test, and integrate common missile warning on tactical aircraft and rotorcraft for IR guided missile threat warning. The ATIRCM/CMWS is the core systems of the U.S. Army's modular Suite of Integrated Infrared Countermeasures (SIIRCM). The total objective for the ATIRCM/CMWS in support of Army aircraft is 1047. The planned procurement is 945.

JUSTIFICATION: The Army, as the lead service, has the responsibility of providing active, directional countermeasures jamming and advanced dispensing capability utilizing both existing flare decoys. The ATIRCM/CMWS will replace the existing AN/ALQ-156 or AN/AAR-47 missile approach detectors, AN/ALQ-144A countermeasure sets, and/or the M-130 general purpose dispensers, depending on the host platform configurations. For the Navy and the Air Force, no existing equivalent systems exist.

Exhibit P-40M Budget Item Justification Sheet					Date: February 1999					
Appropriation / Budget Activity/Serial No.: AIRCRAFT PROCUREMENT / 2 / Modification of Aircraft					P-1 Item Nomenclature: ASE MODS (ATIRCM) (AA0722)					
Program Elements for Code B Items		Code	Other Related Program Elements							
Description		Fiscal Years								
OSIP NO.	Classification	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	TC	Total
Advanced Threat Infrared Countermeasures (ATIRCM)											
TBD	Unclassified				0.7	12.1	12.1	21.3	31.4	180.0	257.6

INDIVIDUAL MODIFICATION Date February 1999

MODIFICATION TITLE: Advanced Threat Infrared Countermeasures (ATIRCM) TBD

MODELS OF SYSTEMS AFFECTED: AH-64D, MH-47D/E, MH-60K/L, EH-60, UH-60, 0H-58D, CH-47D

DESCRIPTION / JUSTIFICATION:

The ATIRCM is a requirement for current generation Army aircraft. The ATIRCM/CMWS is one system which is the core of a Suite of Integrated Infrared Countermeasures (SIIRCM). This Suite will provide active and passive infrared countermeasures (IRCM) protection against infrared guided weapons. The system is designed to meet operatonal requirements for a modular IRCM system capable of providing awareness and self protection jamming countermeasures. The system is applicable to AH-64D, MH-47D/E, MH-60K/L, EH-60, UH-60, 0H-58D and CH-47D aircraft. The program has been designated a tri-service program, with application to Air Force and Navy aircraft.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

Milestone I/II - Jun 95
EMD Contract Award - Sep 95
System Design Review - Mar 96
Preliminary Design Review - Jun 96
Critical Design Review - Feb 97
LRIP/Production Contract Award - Dec 00
LRIP/Production Hardware Delivery - Mar 02
First Kit Applied - Jun 02

Installation Schedule:

	Pr Yr	FY 1999				FY 2000				FY 2001				FY 2002				FY 2003			
	Totals	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Inputs														1	2			3	3	3	2
Outputs															1	2			3	3	3

	FY 2004				FY 2005				FY 2006				FY 2007				To	Totals
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Complete	
Inputs	8	8	8	9	21	21	21	20	28	28	28	28	28	28	28	28	693	1047
Outputs	8	8	8	9	21	21	21	22	28	28	28	28	28	28	28	28	693	1047

METHOD OF IMPLEMENTATION: ADMINISTRATIVE LEADTIME: 3 Months PRODUCTION LEADTIME: 15 Months

Contract Dates:	FY 1999	FY 2000	FY 2001	Dec 00
Delivery Date:	FY 1999	FY 2000	FY 2001	Mar 02

INDIVIDUAL MODIFICATION — Date: February 1999

MODIFICATION TITLE (Cont): Advanced Threat Infrared Countermeasures (ATIRCM) TBD

FINANCIAL PLAN: ($ in Millions)

	FY 1998 and Prior		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		FY 2004		FY 2005		TC		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																				
PROCUREMENT																				
Kit Quantity																				
Installation Kits							3	0.6	11	2.4	33	6.9	83	14.5	112	10.2	805	123.5	1047	158.1
Installation Kits, Nonrecurring								0.1		9.5		4.4		3.8		12.0		11.8		41.6
Equipment																				
Equipment, Nonrecurring																				
Engineering Change Orders																				
Data																				
Training Equipment																				
Support Equipment																				
Other																				
Interim Contractor Support																				
Installation of Hardware																				
FY 1998 & Prior Eqpt -- Kits																				
FY 1999 Eqpt -- Kits																				
FY 2000 Eqpt -- Kits																				
FY 2001 Eqpt -- Kits																				
FY 2002 Eqpt -- 3 kits									3	0.2									3	0.2
FY 2003 Eqpt --11 kits											11	0.8							11	0.8
FY 2004 Eqpt -- 33 kits													33	3.0					33	3.0
FY 2005 Eqpt -- 83 kits															83	9.2			83	9.2
TC Equip-460 Kits																	917	44.7	917	44.7
Total Installment									3	0.2	11	0.8	33	3.0	83	9.2	917	44.7	1047	57.9
Total Procurement Cost								0.7		12.1		12.1		21.3		31.4		180.0		257.6

Exhibit P-40, Budget Item Justification Sheet

Date: February 1999

Appropriation / Budget Activity/Serial No: AIRCRAFT PROCUREMENT / 2 / Modification of Aircraft

P-1 Item Nomenclature: GATM (AA0701)

Program Elements for Code B Items:

Code:

Other Related Program Elements:

	Prior Years	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	To Complete	Total Prog
Proc Qty												
Gross Cost	0.0	0.0	0.0	0.0	7.1	5.8	20.0	23.3	70.9	36.0	4.0	167.1
Less PY Adv Proc												
Plus CY Adv Proc												
Net Proc (P-1)	0.0	0.0	0.0	0.0	7.1	5.8	20.0	23.3	70.9	36.0	4.0	167.1
Initial Spares												
Total Proc Cost	0.0	0.0	0.0	0.0	7.1	5.8	20.0	23.3	70.9	36.0	4.0	167.1
Flyaway U/C												
Wpn Sys Proc U/C												

Description: Global Air Traffic Management is the military equivalent of the International Civil Aviation architecture known as Communications, Navigation, Surveillance and Air Traffic Management (CNS/ATM) programs. Current ground based navigation aids will be phased out of service (proposed by 2010) as the world transitions to digital, data (non-voice), space based navigation systems. Military aircraft will face some level (altitude and location dependent) of flight restrictions if not GATM equipped. GATM equipment is required for both rotary and fixed wing fleet aircraft operating in the European Theater.

Justification: FY00/01 funding will procure GATM equipment for Fixed Wing aircraft. Fixed Wing aircraft were purchased with current avionics and navigation equipment at the time of production. However, for the Army's Fixed Wing aircraft to remain current and have unrestricted access to the rapidly changing Air Traffic Management airspace, new communication, navigation and surveillance equipment will be needed to support GATM. Worldwide deployments using modern navigation and air traffic control facilities beyond 2000 are required. During deployments in support of Desert Storm/Desert Shield/Provide Comfort, only selected aircraft with non-standard modifications were capable of being deployed to and within the theater. In addition, elimination of obsolete communication and navigation systems will enhance reliability and maintainability by employing commercial systems thereby improving aircraft availability for mission requirements.

Exhibit P-40M Budget Item Justification Sheet										Date: February 1999	
Appropriation / Budget Activity/Serial No.: AIRCRAFT PROCUREMENT / 2 / Modification of Aircraft						P-1 Item Nomenclature: GATM (AA0701)					
Program Elements for Code B Items			Code	Other Related Program Elements							
Description		Fiscal Years									
OSIP NO.	Classification	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	TC	Total
Global Air Traffic Management(GATM) - Fixed Wing											
GATM-FW	U	0.0	0.0	7.1	5.8	5.0	9.1	32.6	29.5	4.0	93.1
Global Air Traffic Management - Rotary Wing (No P3a Set)											
GATM-RW	U	0.0	0.0	0.0	0.0	15.0	14.2	38.3	6.5		74.0
Totals		0.0	0.0	7.1	5.8	20.0	23.3	70.9	36.0	4.0	167.1

INDIVIDUAL MODIFICATION Date February 1999

MODIFICATION TITLE: Global Air Traffic Management(GATM) - Fixed Wing GATM-FW

MODELS OF SYSTEMS AFFECTED: C-12 series; RC-12 series; C-20F, E; C-21 and UC-35

DESCRIPTION / JUSTIFICATION:

Description: This effort will update and modernize communication, navigation, and surveillance equipment to current international requirements, allow worldwide deployments and continued safe operations into the 21st Century.

Justification: As currently equipped, the aircraft are not suitable for worldwide deployment nor capable of using modern navigation and air traffic control facilities. There is a variety of equipment that will be required by GATM including: datalink technology, SATCOM, communication management units, Electronic Flight Information System, surveillance equipment, radios, navigation equipment and multi-mode receivers. GATM requirements are evolving and will require additional systems in the near future. The kit quantities reflected on the next page represent a wide variety of avionics kits with different mixes each fiscal year. Additionally, kit configuration vary based on the aircraft that they will be installed on. Consequently, kit unit cost will vary significantly from year to year.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

	Planned	Accomplished
Contract Award	Jan 00	

Installation Schedule:

	Pr Yr	FY 1999				FY 2000				FY 2001				FY 2002				FY 2003			
	Totals	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Inputs							1	2			2	3	2		3	3	3	4	4	4	4
Outputs								1	2			2	3	2		3	3	3	4	4	4

	FY 2004				FY 2005				FY 2006				FY 2007				To	Totals
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	Complete	
Inputs	8	9	8	9	7	7	7	7										97
Outputs	8	9	8	9	7	7	7	7										93

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

Contract Dates: FY 1999 FY 2000 Jan00 FY 2001 Jan01

Delivery Date: FY 1999 FY 2000 Mar00 FY 2001 Mar01

INDIVIDUAL MODIFICATION — Date: February 1999

MODIFICATION TITLE (Cont): Global Air Traffic Management(GATM) - Fixed Wing GATM-FW

FINANCIAL PLAN: ($ in Millions)

	FY 1998 and Prior		FY 1999		FY 2000		FY 2001		FY 2002		FY 2003		FY 2004		FY 2005		TC		TOTAL	
	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$	Qty	$
RDT&E																				
PROCUREMENT																				
Kit Quantity																				
Installation Kits					3	4.1	7	4.5	9	3.9	16	7.0	34	25.0	28	23.0	9	3.9	106	71.4
Installation Kits, Nonrecurring																				
Equipment																				
Equipment, Nonrecurring																				
Engineering Change Orders																				
Data						0.1		0.1		0.1		0.1		0.6		0.5		0.1		1.6
Training Equipment																				
Support Equipment																				
Other																				
Interim Contractor Support																				
Installation of Hardware																				
FY 1998 & Prior Eqpt -- Kits																				
FY 1999 Eqpt -- Kits																				
FY 2000 Eqpt -- Kits					3	2.9													3	2.9
FY 2001 Eqpt -- Kits							7	1.2											7	1.2
FY 2002 Eqpt -- kits									9	1.0									9	1.0
FY 2003 Eqpt -- kits											16	2.0							16	2.0
FY 2004 Eqpt -- kits													34	7.0					34	7.0
FY 2005 Eqpt -- kits															28	6.0			28	6.0
TC Equip-Kits																	9		9	
Total Installment					3	2.9	7	1.2	9	1.0	16	2.0	34	7.0	28	6.0	9		106	20.1
Total Procurement Cost						7.1		5.8		5.0		9.1		32.6		29.5		4.0		93.1

Exhibit P-40, Budget Item Justification Sheet

Date: February 1999

Appropriation / Budget Activity/Serial No: AIRCRAFT PROCUREMENT / 2 / Modification of Aircraft

P-1 Item Nomenclature: MODIFICATIONS < $5.0M (AA0725)

Program Elements for Code B Items:

Code:

Other Related Program Elements:

	Prior Years	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	To Complete	Total Prog
Proc Qty												
Gross Cost	4.2	1.8	1.7	1.7	2.6	2.6	2.6	2.6	2.6	2.6	30.6	55.5
Less PY Adv Proc												
Plus CY Adv Proc												
Net Proc (P-1)	4.2	1.8	1.7	1.7	2.6	2.6	2.6	2.6	2.6	2.6	30.6	55.5
Initial Spares												
Total Proc Cost	4.2	1.8	1.7	1.7	2.6	2.6	2.6	2.6	2.6	2.6	30.6	55.5
Flyaway U/C												
Wpn Sys Proc U/C												

DESCRIPTION: This modification line updates and modernizes aircraft communication, navigation and flight management equipment to current international standards, allowing worldwide deployments, and upgrade capability for continued safe operations into the 21st Century. This line will update the C-23, C-26, UC-35 and other Fixed Wing aircraft to meet future avionics requirements resulting from worldwide navigation transition to Global Positioning System enroute and approach systems and the Chairman of the Joint Chief of Staff Master Navigation Plan requirements. In addition this funding will allow for the installation of Flight Data Recorders on Fixed Wing passenger carrying aircraft.

JUSTIFICATION: Funds for FY00 & FY01 are required for the Army's Fixed Wing aircraft to remain current and have unrestricted access to the rapidly changing Air Traffic Management airspace new communication, navigation and surveillance equipment will be needed. Worldwide deployments using modern navigation and air traffic control facilities beyond the year 2000 are required. During deployments in support of Desert Storm/Desert Shield/Provide Comfort, only selected aircraft with non-standard modifications were capable of being deployed to and within the theater. Elimination of obsolete communication and navigation systems will enhance reliability and maintainability by employing current commercial systems thereby improving aircraft availability and cockpit standardization. In addition the installation of Flight Data Recorders on all passenger carrying aircraft was mandated by the Assistant Deputy Chief of Staff for Operations and Plans.

Exhibit P-40, Budget Item Justification Sheet

Date: February 1999

Appropriation / Budget Activity/Serial No: AIRCRAFT PROCUREMENT / 3 / Spares and Repair Part

P-1 Item Nomenclature: SPARE PARTS (AIR) (AA0950)

Program Elements for Code B Items:

Code:

Other Related Program Elements:

	Prior Years	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	To Complete	Total Prog
Proc Qty												
Gross Cost	0.0	38.2	17.9	36.0	16.4	15.6	26.9	39.9	24.0	26.8	61.3	303.0
Less PY Adv Proc												
Plus CY Adv Proc												
Net Proc (P-1)	0.0	38.2	17.9	36.0	16.4	15.6	26.9	39.9	24.0	26.8	61.3	303.0
Initial Spares												
Total Proc Cost	0.0	38.2	17.9	36.0	16.4	15.6	26.9	39.9	24.0	26.8	61.3	303.0
Flyaway U/C												
Wpn Sys Proc U/C												

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 activity of the Army Working Capital Fund. To provide initial support, funds are normally required in the same year that end items are fielded. Initial spares breakout:

SYSTEM	FY 1998	FY 1999	FY 2000	FY 2001
ASE	0.6	0.6		
Blackhawk	2.4	1.9		
Guardrail, Common Sensor	0.8			
Guardrail Mods (TIARA)	3.2	6.8	5.9	

(cont)

Exhibit P-40C Budget Item Justification Sheet	Date: February 1999
Appropriation / Budget Activity/Serial No.: AIRCRAFT PROCUREMENT / 3 / Spares and Repair Part	P-1 Item Nomenclature: SPARE PARTS (AIR) (AA0950)
Program Elements for Code B Items	Code	Other Related Program Elements

SYSTEM	FY 1998	FY 1999	FY 2000	FY 2001
Longbow Apache	8.1	21.9	8.4	13.5
Avionics	2.9	4.1	2.0	2.1
Quick Fix		0.8		
Total	17.9	36.0	16.4	15.6

Exhibit P-40, Budget Item Justification Sheet												Date: February 1999
Appropriation / Budget Activity/Serial No: AIRCRAFT PROCUREMENT / 4 / Support Equipment and Facilities								P-1 Item Nomenclature: AIRCRAFT SURVIVABILITY EQUIPMENT (AZ3504)				
Program Elements for Code B Items:				Code:	Other Related Program Elements:							
	Prior Years	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	To Complete	Total Prog
Proc Qty												
Gross Cost	407.0	0.3	8.0	12.5	0.1	14.6	14.6	13.4	13.4	0.0	0.0	483.8
Less PY Adv Proc												
Plus CY Adv Proc												
Net Proc (P-1)	407.0	0.3	8.0	12.5	0.1	14.6	14.6	13.4	13.4	0.0	0.0	483.8
Initial Spares												
Total Proc Cost	407.0	0.3	8.0	12.5	0.1	14.6	14.6	13.4	13.4	0.0	0.0	483.8
Flyaway U/C												
Wpn Sys Proc U/C												

DESCRIPTION:

The AN/ALQ-211, Suite of Integrated Radio Frequency Countermeasures (SIRFC) is the latest technology, state of the art, radar warning and radar jamming system that will protect Army Aircraft against newer, more capable threat air defense systems employing the latest and proliferated improvements in millimeter wave, pulse doppler, and multi-spectral radar and Infrared technologies. The SIRFC consists of the Advanced Threat Warning Receiver (ATRWR) and the Advanced Threat Radar Jammer (ATRJ). The SIRFC will replace the current ASE equipment, AN/APR-39, AN/APR-44, AN/ALQ-136 and AN/ALQ-162. SIRFC is an Aircraft Survivability Equipment (ASE) project with OSD oversight and high joint interest. The Air Force Special Operations Command has selected SIRFC to be its bus controller and sensor fusion processor for the CV-22. It has application to other Air Force and Navy aircraft.

The Aircraft Survivability Equipment Trainer IV (ASET IV) is a ground based, mobile aviation threat emitter simulation and training system, which enables aircrews to recognize surface-to-air missile (SAM) and anti-aircraft artillery (AAA) threats in order to employ the correct aircraft threat avoidance tactics. Eight systems have been produced and are being upgraded to simulate the most current SAM and AAA threats, as well as to locate, identify, and track aircraft at night through the use of night vision cameras.

JUSTIFICATION:

The SIRFC system is necessary to the survival of the AH-64A/D, MH-47E/D, MH-60K/L, CH-47D, UH-60A/L, and EH-60 aircraft. The current requirement is for SIRFC systems to equip all AH-64D and MH-47/60 Special Operations Aircraft (SOA), and portions of the Army UH-60 and CH-47 aircraft. FY00 provides funding for SIRFC project management. FY01 funds are for the procurement of B-Kits for the SOA aircrafts and project management support.

Exhibit P-5, Weapon Aircraft Cost Analysis	Appropriation/ Budget Activity/Serial No: AIRCRAFT PROCUREMENT / 4 / Support Equipment and Facilities	P-1 Line Item Nomenclature: AIRCRAFT SURVIVABILITY EQUIPMENT (AZ3504)	Weapon System Type:	Date: February 1999

Aircraft Cost Elements	ID CD	FY 98			FY 99			FY 00			FY 01		
		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. AZ3506 - ASE WARNING RECEIVERS													
AN/TPQ-45 ASE Trainer IV (ASET IV)													
Nonrecurring Engineering		6742			6772								
Project Management Support & Fielding of ASE Systems		1298			628								
SUBTOTAL - ASE WARNING RECEIVERS		8040			7400								
2. AZ3508 - ASE RADAR CM													
Suite of Integrated Radio Freq CMS (SIRFC)	B												
B-Kit for SOA											13900	12	1158
Nonrecurring Engineering					4895								
Project Management					213			88			732		
SUBTOTAL - ASE RADAR CM					5108			88			14632		
TOTAL		8040			12508			88			14632		

Exhibit P-5a, Budget Procurement History and Planning

Date: February 1999

Appropriation / Budget Activity/Serial No:	Weapon System Type:	P-1 Line Item Nomenclature:
AIRCRAFT PROCUREMENT / 4 / Support Equipment and Facilities		AIRCRAFT SURVIVABILITY EQUIPMENT (AZ3504)

WBS Cost Elements: Fiscal Years	Contractor and Location	Contract Method and Type	Location of PCO	Award Date	Date of First Delivery	QTY Each	Unit Cost $OOO	Specs Avail Now?	Date Revsn Avail	RFP Issue Date
AN/TPQ-45 ASET IV Mod Kits	Sierra Technologies, Inc	Option	AMCOM, Huntsville, AL	Sep-98	Feb-00		6742	Yes	No	
FY 98										
FY 99		Option	AMCOM, Huntsville, AL	Jul-99	Dec-01		6445	Yes	No	
AN/ALQ-211, Suite of Integrated Radio Frequency CMS										
FY01	ITT Corp, Clifton, NJ	C/FFP	CECOM, Ft. Monmouth, NJ	Mar-01	Mar-03	12	1230	Yes	N/A	

REMARKS:

FY 2000 / FY 2001 BUDGET PRODUCTION SCHEDULE

P-1 Item Nomenclature: AIRCRAFT SURVIVABILITY EQUIPMENT (AZ3504)

Date: February 1999

COST ELEMENTS	MFR	FY	SERV	PROC QTY Each	ACCEP. PRIOR TO 1 OCT	BAL DUE AS OF 1 OCT	Fiscal Year 00												Fiscal Year 01												LATER
										Calendar Year 00												Calendar Year 01									
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
AN/ALQ-211, SIRFC	1	01	A	12	0	12																		A							12
							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.	ADMIN LEAD TIME After 1 Oct.	MFR After 1 Oct.	TOTAL After 1 Oct.	REMARKS
							INITIAL		6	18	24	
	ITT CORP	3	25	100		1	REORDER					
	CLIFTON, NJ						INITIAL					
							REORDER					
							INITIAL					
							REORDER					
							INITIAL					
							REORDER					
							INITIAL					
							REORDER					

Exhibit P-40, Budget Item Justification Sheet											Date: February 1999	
Appropriation / Budget Activity/Serial No: AIRCRAFT PROCUREMENT / 4 / Support Equipment and Facilities						P-1 Item Nomenclature: ASE INFRARED CM (AZ3507)						
Program Elements for Code B Items:				Code:	Other Related Program Elements:							
	Prior Years	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	To Complete	Total Prog
Proc Qty												
Gross Cost	0.0	0.0	0.0	0.0	0.0	8.1	26.8	69.4	114.2	111.6	890.6	1220.7
Less PY Adv Proc												
Plus CY Adv Proc												
Net Proc (P-1)	0.0	0.0	0.0	0.0	0.0	8.1	26.8	69.4	114.2	111.6	890.6	1220.7
Initial Spares												
Total Proc Cost	0.0	0.0	0.0	0.0	0.0	8.1	26.8	69.4	114.2	111.6	890.6	1220.7
Flyaway U/C												
Wpn Sys Proc U/C												

DESCRIPTION: The ATIRCM/CMWS is a U.S. Army tri-service program to develop, test, and integrate defensive infrared (IR) countermeasures capabilities into existing, current generation host platforms for more effective protection against a greater number of IR guided missile threats than afforded by currently fielded IR countermeasures. It is the next generation of infrared countermeasures for use on rotary and fixed wing aircraft. It is applicable to Army, Air Force, and Navy aircraft. The system consists of Common Missile Warning System (CMWS), Advanced Threat Infrared Jammer (ATIRJ), Advanced Threat Infrared Countermeasure Munitions (AIRCMM), and Electronic Control Unit (ECU). It is designated to detect when the aircraft is being engaged by a threat missile, and provide appropriate countermeasures to cause the missile to miss the aircraft. Countermeasures include laser jamming and dispensing decoys. The CMWS component system is a joint U.S. Navy, U.S. Marine Corps, and U.S. Air Force program to develop, test, and integrate common missile warning on tactical aircraft and rotorcraft for IR guided missile threat warning. The ATIRCM/CMWS is the core systems of the U.S. Army's modular Suite of Integrated Infrared Countermeasures (SIIRCM). The total objective for the ATIRCM/CMWS in support of Army aircraft is 1047.

JUSTIFICATION: The Army, as the lead service, has the responsibility of providing active, directional countermeasures jamming and advanced dispensing capability utilizing both existing flare decoys. The ATIRCM/CMWS will replace the existing AN/ALQ-156 or AN/AAR-47 missile approach detectors, AN/ALQ-144A countermeasure sets, and/or the M-130 general purpose dispensers, depending on the host platform configurations. For the Navy and the Air Force, no existing equivalent systems exist.

Exhibit P-5, Weapon Aircraft Cost Analysis		Appropriation/ Budget Activity/Serial No: AIRCRAFT PROCUREMENT / 4 / Support Equipment and Facilities			P-1 Line Item Nomenclature: ASE INFRARED CM (AZ3507)			Weapon System Type:			Date: February 1999		
Aircraft Cost Elements	ID CD	**FY 98**			**FY 99**			**FY 00**			**FY 01**		
		TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost
		$OOO	Each	$OOO	$OOO	Each	$OOO	$OOO	Each	$OOO	$OOO	Each	$OOO
AZ3507 - ASE INFRARED CMS													
Advanced Threat Infrared Countermeasures	B										3696	3	1232
Nonrecurring Engineering											2329		
Recurring Engineering													
System Test & Evaluation											275		
Training											65		
Support Equipment											55		
Transportation													
Engineering Changes											238		
In-house/Matrix Support											911		
Project Management											407		
Data											171		
TOTAL											**8147**		

Exhibit P-5a, Budget Procurement History and Planning

Date: February 1999

Appropriation / Budget Activity/Serial No:	Weapon System Type:	P-1 Line Item Nomenclature:
AIRCRAFT PROCUREMENT / 4 / Support Equipment and Facilities		ASE INFRARED CM (AZ3507)

WBS Cost Elements: Fiscal Years	Contractor and Location	Contract Method and Type	Location of PCO	Award Date	Date of First Delivery	QTY Each	Unit Cost $OOO	Specs Avail Now?	Date Revsn Avail	RFP Issue Date
Advanced Threat Infrared Countermeasures FY01	Sanders Nashua, NH	SS/FFP	CECOM, New Jersey	Dec-00	Dec-01	3	1232	No		

REMARKS:

FY 00 / 01 BUDGET PRODUCTION SCHEDULE

P-1 Item Nomenclature: ASE INFRARED CM (AZ3507)

Date: February 1999

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	
Adv Threat IR Countermeasures	1	01	A	3	0	3			A															1	1	1					
Adv Threat IR Countermeasures	2	02	A	12																	A										12
Adv Threat IR Countermeasures	2	03	A	33																											33
Adv Threat IR Countermeasures	2	04	A	78																											78
Adv Threat IR Countermeasures	2	05	A	85																											85
Data Base to be updated to reflect these quantities for FY03-FY05.																															

	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	Lockheed Sanders	1	1	3			INITIAL		3	15	18	
							REORDER		3	9	12	
2	TBD	1	3	7			INITIAL					
							REORDER					
							INITIAL					
							REORDER					
							INITIAL					
							REORDER					
							INITIAL					
							REORDER					

Exhibit P-40, Budget Item Justification Sheet												Date: February 1999
Appropriation / Budget Activity/Serial No: AIRCRAFT PROCUREMENT / 4 / Support Equipment and Facilities								P-1 Item Nomenclature: AIRBORNE COMMAND & CONTROL (AA0710)				
Program Elements for Code B Items:				Code:	Other Related Program Elements:							
	Prior Years	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	To Complete	Total Prog
Proc Qty												
Gross Cost	43.5	0.0	0.0	0.0	0.0	17.3	35.5	77.2	78.3	65.5	0.0	317.3
Less PY Adv Proc												
Plus CY Adv Proc												
Net Proc (P-1)	43.5	0.0	0.0	0.0	0.0	17.3	35.5	77.2	78.3	65.5	0.0	317.3
Initial Spares												
Total Proc Cost	43.5	0.0	0.0	0.0	0.0	17.3	35.5	77.2	78.3	65.5	0.0	317.3
Flyaway U/C												
Wpn Sys Proc U/C												

Description: The Army Airborne Command and Control System (A2C2S) functions as a highly mobile command post. When mounted in the UH-60 helicopter it provides tactical voice, data, and digitized battlefield communications in both secure and nonsecure modes for Corps, Division, and Brigade commanders. The system provides battle commanders access to critical situational awareness and off-board national asset intelligence information via satellite communications, digitized battlefield communications links with Army combined arms team members, joint service and combined force elements, channel scanning, and intercommunications facilities for up to five operators, and joint interoperability as well as maritime and air traffic control communications.

Justification: FY 01 funding will procure 3 A2C2S systems, related system engineering, production tooling and data costs for the systems. The A2C2S is in response to real world needs of combat maneuver commanders to perform highly mobile and responsive digital, voice, and C2 functions in the UH-60 helicopter. This system enables the commander and staff to interject critical C2 across the designated battle area without sacrificing access to information products or jeopardizing continuity of operations due to command post relocation. This system supports close, deep, rear, and security operations and disaster relief, peacekeeping, drug interdiction, and both low and high intensity conflict missions. The A2C2S will assist in eliminating costly fratricide incidents via the capability to closely monitor and control operations. Satellite communications provide access to tactical communication systems and enable communication with the force and command structure from JCS down to Battalion when required. FY 03-05 funding also includes money to replace AMPS hardware which will have exceeded its useful life.

Exhibit P-5, Weapon Aircraft Cost Analysis		Appropriation/ Budget Activity/Serial No: AIRCRAFT PROCUREMENT / 4 / Support Equipment and Facilities			P-1 Line Item Nomenclature: AIRBORNE COMMAND & CONTROL (AA0710)			Weapon System Type:			Date: February 1999		
Aircraft Cost Elements	ID CD	**FY 98**			**FY 99**			**FY 00**			**FY 01**		
		TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost
		$OOO	Each	$OOO	$OOO	Each	$OOO	$OOO	Each	$OOO	$OOO	Each	$OOO
A2C2S													
A2C2S Mission Equipment Package											8533	3	2844
Production/Recurring engineering											3035		
Engineering Changes											341		
Publications Tech / Data											1139		
Systems engineering/management											629		
Systems Test and Evaluation											2872		
Training/Logistics											703		
TOTAL											**17252**		

Exhibit P-5a, Budget Procurement History and Planning

Date: February 1999

Appropriation / Budget Activity/Serial No:	Weapon System Type:	P-1 Line Item Nomenclature:
AIRCRAFT PROCUREMENT / 4 / Support Equipment and Facilities		AIRBORNE COMMAND & CONTROL (AA0710)

WBS Cost Elements: Fiscal Years	Contractor and Location	Contract Method and Type	Location of PCO	Award Date	Date of First Delivery	QTY Each	Unit Cost $OOO	Specs Avail Now?	Date Revsn Avail	RFP Issue Date
A2C2S Mission Equipment Package FY 01	Unknown	C/FP		Nov-00	Jul-02	3	2844	Y		Apr-00

REMARKS:

FY 00 / 01 BUDGET PRODUCTION SCHEDULE	P-1 Item Nomenclature: AIRBORNE COMMAND & CONTROL (AA0710)	Date: February 1999

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	
							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
							INITIAL						
							REORDER						
							INITIAL						
							REORDER						
							INITIAL						
							REORDER						
							INITIAL						
							REORDER						
							INITIAL						
							REORDER						

FY 00 / 01 BUDGET PRODUCTION SCHEDULE

P-1 Item Nomenclature: AIRBORNE COMMAND & CONTROL (AA0710)

Date: February 1999

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	
A2C2S Mission Equipment Package		FY 01	A	3				A												A							3			10

	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	Naval Research Lab, Washinton, DC	2	24	60	2
2	Unknown	2	24	60	2

MFR Number		ADMIN LEAD TIME Prior 1 Oct.	After 1 Oct.	MFR After 1 Oct.	TOTAL After 1 Oct.
	INITIAL	0	2	10	12
	REORDER				
	INITIAL	0	2	10	12
	REORDER				
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				
	INITIAL				
	REORDER				

REMARKS

Exhibit P-40, Budget Item Justification Sheet											Date: February 1999	
Appropriation / Budget Activity/Serial No: AIRCRAFT PROCUREMENT / 4 / Support Equipment and Facilities							P-1 Item Nomenclature: AVIONICS SUPPORT EQUIPMENT (AZ3000)					
Program Elements for Code B Items:				Code:	Other Related Program Elements:							
	Prior Years	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	To Complete	Total Prog
Proc Qty												
Gross Cost	115.7	9.9	2.6	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	130.7
Less PY Adv Proc												
Plus CY Adv Proc												
Net Proc (P-1)	115.7	9.9	2.6	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	130.7
Initial Spares	4.4											4.4
Total Proc Cost	120.1	9.9	2.6	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	135.1
Flyaway U/C												
Wpn Sys Proc U/C												

DESCRIPTION: Heads Up Display (HUD) AN/AVS-7 is a system which works in conjunction with the Aviator's Night Vision Imaging System (ANVIS) AN/AVS-6. The ANVIS/HUD collects critical flight information from aircraft sensors and converts this information into visual imagery. This system allows continuous heads up flight by the pilot without needing to look inward at the instrument panel. This provides significant operational and safety enhancements to night vision goggle flight. The HUD is made up of two subsystems, an aircraft integration kit (brackets, wiring harness, etc.) [A Kit] and an interface box, control panels and two optical displays per aircraft [B Kit]. The entire System weight ranges from 32 to 40 pounds per aircraft. The display unit head weight is approximately 140 grams. HUD is being installed on the CH-47D and UH-60 helicopters.

JUSTIFICATION: There are no FY 2000 or FY 2001 funds.

Exhibit P-5, Weapon Aircraft Cost Analysis		Appropriation/ Budget Activity/Serial No: AIRCRAFT PROCUREMENT / 4 / Support Equipment and Facilities			P-1 Line Item Nomenclature: AVIONICS SUPPORT EQUIPMENT (AZ3000)			Weapon System Type:			Date: February 1999		
Aircraft Cost Elements	ID CD	**FY 98**			**FY 99**			**FY 00**			**FY 01**		
		TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost
		$OOO	Each	$OOO	$OOO	Each	$OOO	$OOO	Each	$OOO	$OOO	Each	$OOO
ANVIS/HUD		2588			2548								
TOTAL		**2588**			**2548**								

Exhibit P-40, Budget Item Justification Sheet	Date: February 1999
Appropriation / Budget Activity/Serial No: AIRCRAFT PROCUREMENT / 4 / Support Equipment and Facilities	P-1 Item Nomenclature: ANVIS/HUD (K35601)
Program Elements for Code B Items:	Code:
Other Related Program Elements:	

	Prior Years	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	To Complete	Total Prog
Proc Qty	2076	34										2110
Gross Cost	115.7	9.9	2.6	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	130.7
Less PY Adv Proc												
Plus CY Adv Proc												
Net Proc (P-1)	115.7	9.9	2.6	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	130.7
Initial Spares	4.4											4.4
Total Proc Cost	120.1	9.9	2.6	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	135.1
Flyaway U/C	0.047	0.287	0.000	0.000								0.055
Wpn Sys Proc U/C	0.056	0.291	0.000	0.000								0.062

DESCRIPTION: Heads Up Display (HUD) AN/AVS-7 is a system which works in conjunction with the Aviator's Night Vision Imaging System (ANVIS) AN/AVS-6. The ANVIS/HUD collects critical flight information from aircraft sensors and converts this information into visual imagery. This system allows continuous heads up flight by the pilot without needing to look inward at the instrument panel. This provides significant operational and safety enhancements to night vision goggle flight. The HUD is made up of two subsystems, an aircraft integration kit (brackets, wiring harness, etc.) [A Kit] and an interface box, control panels and two optical displays per aircraft [B Kit]. The entire System weight ranges from 32 to 40 pounds per aircraft. The display unit head weight is approximately 140 grams. HUD is being installed on the CH-47D and UH-60 helicopters.

JUSTIFICATION: There are no FY 2000 or FY 2001 funds.

Exhibit P-5, Weapon Aircraft Cost Analysis	Appropriation/ Budget Activity/Serial No: AIRCRAFT PROCUREMENT / 4 / Support Equipment and Facilities	P-1 Line Item Nomenclature: ANVIS/HUD (K35601)	Weapon System Type:	Date: February 1999

Aircraft Cost Elements	ID CD	FY 98			FY 99			FY 00			FY 01		
		TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost
		$OOO	Each	$OOO	$OOO	Each	$OOO	$OOO	Each	$OOO	$OOO	Each	$OOO
Installation		2152			2137								
Fielding		291			262								
Government Engineering		45			46								
Project Management		100			103								
Gross P-1 End Cost		2588			2548								
Less: Prior Year Adv Proc													
Net P-1 Full Funding Cost		2588			2548								
All ANVIS/HUD systems for the Army have been procured. Army funding in FY98 and FY99 is required to install those systems.													
TOTAL		**2588**			**2548**								

Exhibit P-40, Budget Item Justification Sheet											Date: February 1999	
Appropriation / Budget Activity/Serial No: AIRCRAFT PROCUREMENT / 4 / Support Equipment and Facilities								P-1 Item Nomenclature: TRAINING DEVICES (AZ3700)				
Program Elements for Code B Items:				Code:	Other Related Program Elements:							
	Prior Years	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	To Complete	Total Prog
Proc Qty												
Gross Cost	28.9	8.0	12.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	49.6
Less PY Adv Proc												
Plus CY Adv Proc												
Net Proc (P-1)	28.9	8.0	12.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	49.6
Initial Spares												
Total Proc Cost	28.9	8.0	12.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	49.6
Flyaway U/C												
Wpn Sys Proc U/C												

DESCRIPTION: The Apache Integrated Training Program (AITP) will provide a training system which supports training for maintainers and operators. The AITP is an interactive computer-based training program that will provide new equipment and sustainment training in the field and at the schools. The training system includes:

- Maintenance trainers, which support individual task training of the AH-64A Airframe and subsystems:
  a. Airframe, Engine, and Drivetrain Systems Trainer (AEDST)
  b. Armament and Electrical Trainer (AET)
- Operator trainers:
  a. modification of the Cockpit, Weapons, Emergency Procedures Trainer (CWEPT) to an Apache Crew Trainer (ACT), which vastly improves individual and crew training.
  b. Upgrade flight simulators for Eighth Army in Korea

JUSTIFICATION: The development and delivery of AITP maintenance trainers returns flyable category B aircraft, used as maintenance trainers, back into the warfighting fleet. The operator trainers will provide and sustain task proficiency and optimize the greater capabilities to support the development and use of scarce flying hours. In particular, the leveraged ACTS technology will better prepare units for exercises at the National Training Center (NTC) and provide combined arms simulation training with other combat arms through Combined Arms Tactical Trainers (CATT).

Exhibit P-5, Weapon Aircraft Cost Analysis		Appropriation/ Budget Activity/Serial No: AIRCRAFT PROCUREMENT / 4 / Support Equipment and Facilities			P-1 Line Item Nomenclature: TRAINING DEVICES (AZ3700)			Weapon System Type:			Date: February 1999		
Aircraft Cost Elements	ID CD	**FY 98**			**FY 99**			**FY 00**			**FY 01**		
		TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost
		$OOO	Each	$OOO	$OOO	Each	$OOO	$OOO	Each	$OOO	$OOO	Each	$OOO
AIRCRAFT Flyaway Costs													
Airframes / CFE													
Avionics													
A. GFE													
Other GFE													
Armament (FCR)													
ECO (All Flyaway Components)													
Other Costs (Halon)													
Subtotal Flyaway Costs													
Non-Recurring Costs													
Tooling Equipment													
Other System Test													
Total Flyaway													
Support Cost													
Engine (leftover A model)													
Airframe PGSE													
Engine PGSE													
Peculiar Training Equipment		12745											
Publications Tech / Data													
Engineering Change Orders													
Other (specify) Net/ICS/Mtxsupt													
Subtotal Support Cost		**12745**											
Gross P-1 End Cost		12745											
Less: Prior Year Adv Proc													
Net P-1 Full Funding Cost		12745											
Plus: P-1 CY Adv Proc													
Other Non P-1 Costs													
Initial Spares													
Mods													
TOTAL		**12745**											

Exhibit P-5a, Budget Procurement History and Planning

Date: February 1999

Appropriation / Budget Activity/Serial No:	Weapon System Type:	P-1 Line Item Nomenclature:
AIRCRAFT PROCUREMENT / 4 / Support Equipment and Facilities		TRAINING DEVICES (AZ3700)

WBS Cost Elements: Fiscal Years	Contractor and Location	Contract Method and Type	Location of PCO	Award Date	Date of First Delivery	QTY Each	Unit Cost $OOO	Specs Avail Now?	Date Revsn Avail	RFP Issue Date
Simulator upgrades (2)	TBD	C/FFP	STRICOM	Feb-99	Mar-00	1	6373	N/A	N/A	
				Feb-99	Feb-01	1	6372	N/A	N/A	

REMARKS:

Award date for both trainers is Feb 99, however one is deliverable in Mar 00 and one is deliverable in Feb 01.

Exhibit P-43, Simulator and Training Device Justification

Date: February 1999

Appropriation / Budget Activity/Serial No.	P-1 Item Nomenclature	Other Related Program Elements:	IOC Date:
AIRCRAFT PROCUREMENT / 4 / Support Equipment and Facilities	TRAINING DEVICES (AZ3700)		

Training Device by Type	Site	Delivery Date	Ready for Training Date	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005
Upgrades to Simulators		Mar-00	Apr-00	6373							
	Korea	Feb-01	Mar-01	6372							

Exhibit P-40, Budget Item Justification Sheet											Date: February 1999	
Appropriation / Budget Activity/Serial No: AIRCRAFT PROCUREMENT / 4 / Support Equipment and Facilities								P-1 Item Nomenclature: COMMON GROUND EQUIPMENT (AZ3100)				
Program Elements for Code B Items:				Code:	Other Related Program Elements:							
	Prior Years	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	To Complete	Total Prog
Proc Qty												
Gross Cost	0.0	20.4	21.8	31.2	35.9	49.3	63.2	53.9	50.9	56.2	0.0	382.8
Less PY Adv Proc												
Plus CY Adv Proc												
Net Proc (P-1)	0.0	20.4	21.8	31.2	35.9	49.3	63.2	53.9	50.9	56.2	0.0	382.8
Initial Spares												
Total Proc Cost	0.0	20.4	21.8	31.2	35.9	49.3	63.2	53.9	50.9	56.2	0.0	382.8
Flyaway U/C												
Wpn Sys Proc U/C												

DESCRIPTION:

Sets, Kits and Outfits (SKO) consists of shop sets, tool kits and outfits configured to accomplish both routine and safety-of-flight maintenance repair functions on Army aircraft. All items of SKO are Code A.

Aviation Ground Support Equipment (AGSE) is necessary to make an aircraft, or one of its associated systems or subsystems, operational in its intended environments. This includes all equipment required to guide, control, inspect, test, adjust, calibrate, assess, gauge, assemble, disassemble, handle, transport, store, actuate, service, repair and/or overhaul the aircraft system or subsystems. Included are such items as aviation ground power units, hydraulic test stands, etc.

Airfield Support Equipment (AFSE): FY 00/01 funds will provide the Army the joint service capability to procure specific fixed base Air Traffic Control (ATC) systems required for the Federal Aviation Administration (FAA) modernization and upgrade of the National Airspace System (NAS). The NAS systems to be procured include the Voice Communication Switching System (VCSS), DoD Advanced Automation System (DAAS), Airfield Status Automation System (ASAS), and the Digital Airport Surveillance Radar (DASR). These systems will reduce and save significant Operational and Support (O&S) costs through the replacement of old, obsolete, antiquated analog legacy systems with new, state of the art, highly reliable ATC systems in towers and approach control facilities. Funding will also ensure interoperability between Army and FAA systems. The new Army ATC equipment will ensure the Army is an equal partner with the other Services and the FAA as the NAS is rebuilt and modernized. Furthermore, the old, obsolete unreliable and nonsupportable legacy systems throughout the Army will be replaced with highly modular, commercial, off the shelf systems. These new fixed base systems will be relatively easy to maintain and will provide commonality for both operational and maintenance training. Commonality and interoperability will ensure jointness among the Services and participating host nations.

Exhibit P-40C Budget Item Justification Sheet		Date: February 1999
Appropriation / Budget Activity/Serial No.: AIRCRAFT PROCUREMENT / 4 / Support Equipment and Facilities	P-1 Item Nomenclature: COMMON GROUND EQUIPMENT (AZ3100)	
Program Elements for Code B Items	Code	Other Related Program Elements

JUSTIFICATION:

Sets, Kits, and Outfits (SKO): FY 00 and 01 funding will achieve and sustain the operational readiness of all Army aviation field units, which operate AH-64, UH-60, CH-47, OH-58D and other Army aircraft. Sets, Kits, and Outfits (SKO) funding will also provide systems to correct safety-of-flight discrepancies which endanger both life and property. With more aircraft being added to the Army inventory, the fielding of new aviation units and the diversification of aviation missions creates an ever increasing requirement for SKO. The Unit Maintenance Aerial Recovery Kit (UMARK) is a lightweight, man-portable, aerial recovery kit which will provide Aviation Intermediate Maintenance (AVIM) and Aviation Unit Maintenance (AVUM) organizations the capability to quickly rig for aerial recovery, aircraft on the battlefield which cannot be repaired and must be evacuated. The AVIM Containerization and Modernization Program (CAMP) Shop Sets are a collection of machine and other specialty repair shops used to perform aviation intermediate and limited depot-level maintenance on all Army aircraft. The Shop Sets gain their tactical mobility from being housed in one-side expandable ISO shelters.

Aviation Ground Support Equipment (AGSE): FY 00 and 01 funding will achieve and sustain the operational readiness of all Army aviation field units, which are operating AH-64, UH-60, CH-47, OH-58D and other Army aircraft. Aviation Ground Support Equipment (AGSE) also provides a means to correct safety-of-flight discrepancies which endanger both life and property. With more aircraft being added to the Army inventory, the fielding of new aviation units and the diversification of aviation missions creates an ever increasing requirement for AGSE. The Aircraft Cleaning/Deicing System (ACDS) will provide the Army with an Environmental Protection Agency (EPA) compliant system for all aircraft. EPA compliance is mandated by federal law to eliminate toxic run off of contamination into the environment. The Generic Aircraft Nitrogen Generator (GANG) is being developed to provide Army Aviation with 95% pure nitrogen gas to properly service/adjust aircraft accumulators, main rotor blades, landing gear struts and tires. The GANG will also be used to refill nitrogen bottles used at all levels of aviation maintenance. The Standard Aircraft Towing System (SATS) will be utilized to reposition fixed/rotary wing aircraft and Aviation Ground Support Equipment (AGSE) in and around aircraft hangers and maintenance areas.

Airfield Support Equipment (AFSE): FY 00/01 funds will provide the Army the joint service capability to procure specific fixed base Air Traffic Control (ATC) systems required for the Federal Aviation Administration (FAA) modernization and upgrade of the National Airspace System (NAS). The NAS systems to be procured include the Voice Communication Switching System (VCSS), DoD Advanced Automation System (DAAS), Airfield Status Automation System (ASAS), and the Digital Airport Surveillance Radar (DASR). These systems will reduce and save significant Operational and Support (O&S) costs through the replacement of old, obsolete, antiquated analog legacy systems with new, state of the art, highly reliable ATC systems in towers and approach control facilities. Funding will also ensure interoperability between Army and FAA systems. The new Army ATC equipment will ensure the Army is an equal partner with the other Services and the FAA as the NAS is rebuilt and modernized. Furthermore, the old, obsolete unreliable and nonsupportable legacy systems throughout the Army will be replaced with highly modular, commercial, off the shelf systems. These new fixed base systems will be relatively easy to maintain and will provide commonality for both operational and maintenance training. Commonality and interoperability will ensure jointness among the Services and participating host nations.

Exhibit P-5, Weapon Aircraft Cost Analysis	Appropriation/ Budget Activity/Serial No: AIRCRAFT PROCUREMENT / 4 / Support Equipment and Facilities	P-1 Line Item Nomenclature: COMMON GROUND EQUIPMENT (AZ3100)	Weapon System Type:	Date: February 1999

Aircraft Cost Elements	ID CD	FY 98			FY 99			FY 00			FY 01		
		TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost	TotalCost	Qty	UnitCost
		$OOO	Each	$OOO	$OOO	Each	$OOO	$OOO	Each	$OOO	$OOO	Each	$OOO
SETS, KITS AND OUTFITS		7,740			3,603			3,505			3,461		
AVIATION GROUND SUPPORT EQUIPMENT		6,534			9,461			8,759			8,652		
AIRFIELD SUPPORT EQUIPMENT		7,541			18,153			23,651			37,204		
TOTAL		**21,815**			**31,217**			**35,915**			**49,317**		

Exhibit P-40, Budget Item Justification Sheet											Date: February 1999	
Appropriation / Budget Activity/Serial No: AIRCRAFT PROCUREMENT / 4 / Support Equipment and Facilities							P-1 Item Nomenclature: SETS, KITS AND OUTFITS (AZ3510)					
Program Elements for Code B Items:				Code:	Other Related Program Elements:							
	Prior Years	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	To Complete	Total Prog
Proc Qty												
Gross Cost	0.0	10.3	7.7	3.6	3.5	3.5	7.6	7.9	8.3	8.3	0.0	60.7
Less PY Adv Proc												
Plus CY Adv Proc												
Net Proc (P-1)	0.0	10.2	7.7	3.6	3.5	3.5	7.6	7.9	8.3	8.3	0.0	60.6
Initial Spares												
Total Proc Cost	0.0	10.2	7.7	3.6	3.5	3.5	7.6	7.9	8.3	8.3	0.0	60.6
Flyaway U/C												
Wpn Sys Proc U/C												

DESCRIPTION: Sets, Kits and Outfits (SKO) consists of shop sets, tool kits and outfits configured to accomplish both routine and safety-of-flight maintenance repair functions on Army aircraft. All items of SKO are Code A.

JUSTIFICATION: FY 00 and 01 funding will achieve and sustain the operational readiness of all Army aviation field units, which operate AH-64, UH-60, CH-47, OH-58D and other Army aircraft. Sets, Kits, and Outfits (SKO) funding will also provide systems to correct safety-of-flight discrepancies which endanger both life and property. With more aircraft being added to the Army inventory, the fielding of new aviation units and the diversification of aviation missions creates an ever increasing requirement for SKO. The Unit Maintenance Aerial Recovery Kit (UMARK) is a lightweight, man-portable, aerial recovery kit which will provide AVIM and AVUM organizations the capability to quickly rig for aerial recovery, aircraft on the battlefield which cannot be repaired and must be evacuated. The AVIM Containerization and Modernization Program (CAMP) Shop Sets are a collection of machine and other specialty repair shops used to perform aviation intermediate and limited depot-level maintenance on all Army aircraft. The Shop Sets gain their tactical mobility from being housed in one-side expandable ISO shelters.

Exhibit P-5, Weapon Aircraft Cost Analysis		Appropriation/ Budget Activity/Serial No: AIRCRAFT PROCUREMENT / 4 / Support Equipment and Facilities			P-1 Line Item Nomenclature: SETS, KITS AND OUTFITS (AZ3510)			Weapon System Type:			Date: February 1999		
Aircraft	ID	**FY 98**			**FY 99**			**FY 00**			**FY 01**		
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. New Aviation Tool Set (NATS)	A												
Hardware		6,269	11,869	1									
Fielding		60											
Program Management Support		198											
2. New Aviation Tool Set - A (NATS-A)	A												
Hardware		1,213	876	1									
3. Unit Maintenance Aerial Recovery Kit (UMARK)	A												
Hardware								2,250	75	30	2,250	75	30
UMARK Fielding								30			6		
Production Engineering													
4. Divisional Shop Sets	A												
Hardware					3,588	4	876						
Fielding					15			15					
5. AVIM Containerization and Modernization Program (CAMP) Shop Sets	A												
Hardware								1,200	1	1,200	1,200	1	1,200
								10			5		
TOTAL		7,740			3,603			3,505			3,461		

Exhibit P-5a, Budget Procurement History and Planning

Date: February 1999

Appropriation / Budget Activity/Serial No: AIRCRAFT PROCUREMENT / 4 / Support Equipment and Facilities

Weapon System Type:

P-1 Line Item Nomenclature: SETS, KITS AND OUTFITS (AZ3510)

WBS Cost Elements: Fiscal Years	Contractor and Location	Contract Method and Type	Location of PCO	Award Date	Date of First Delivery	QTY Each	Unit Cost $OOO	Specs Avail Now?	Date Revsn Avail	RFP Issue Date
1. New Aviation Tool Set (NATS)										
FY 97	Rock Island Arsenal (RIA)	MIPR	ATCOM	Apr-97	Nov-97	4,773	* 1	Yes	No	
FY 98	RIA	MIPR	AMCOM	Feb-98	Sep-98	11,869	* 1	Yes	No	
2. New Aviation Tool Set - A (NATS-A)										
FY 97	Rock Island Arsenal (RIA)	MIPR	ATCOM	Mar-97	May-97	1,074	* 2	Yes	No	
FY 98	RIA	MIPR	AMCOM	Jan-98	Mar-98	876	* 1	Yes	No	
3. Unit Maintenance Aerial Recovery Kit (UMARK)										
FY 00	TBS	C/FP	AMCOM	Jan-00	Jan-01	75	30	Yes	No	
FY 01	TBS	C/FP-O	AMCOM	Jan-01	Jan-02	75	30	Yes	No	
4. Divisional Shop Sets										
FY 99	Rock Island Arsenal (RIA)	MIPR	AMCOM	Jan-99	Sep-99	4	876	Yes	No	
5. AVIM Containerization and Modernization Program (CAMP) Shop Sets										
FY 00	Rock Island Arsenal (RIA)	MIPR	AMCOM	Dec-99	Apr-00	1	1200	Yes	No	
FY 01	RIA	MIPR	AMCOM	Dec-00	Apr-01	1	1200	Yes	No	

REMARKS: * More than one type of New Aviation Tool Set and New Aviation Tool Set -A are being procured, so unit prices are an average.

Exhibit P-40, Budget Item Justification Sheet											Date: February 1999	
Appropriation / Budget Activity/Serial No: AIRCRAFT PROCUREMENT / 4 / Support Equipment and Facilities						P-1 Item Nomenclature: AVIATION GROUND SUPPORT EQUIPMENT (AZ3520)						
Program Elements for Code B Items:				Code:	Other Related Program Elements:							
	Prior Years	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	To Complete	Total Prog
Proc Qty												
Gross Cost	0.0	6.9	6.5	9.5	8.8	8.7	8.2	7.9	8.3	8.3	0.0	73.0
Less PY Adv Proc												
Plus CY Adv Proc												
Net Proc (P-1)	0.0	6.9	6.5	9.5	8.8	8.7	8.2	7.9	8.3	8.3	0.0	73.0
Initial Spares												
Total Proc Cost	0.0	6.9	6.5	9.5	8.8	8.7	8.2	7.9	8.3	8.3	0.0	73.0
Flyaway U/C												
Wpn Sys Proc U/C												

DESCRIPTION: Aviation Ground Support Equipment (AGSE) is necessary to make an aircraft, or one of its associated systems or subsystems, operational in its intended environments. This includes all equipment required to guide, control, inspect, test, adjust, calibrate, assess, gauge, assemble, disassemble, handle, transport, store, actuate, service, repair and/or overhaul the aircraft system or subsystems. Included are such items as aviation ground power units, hydraulic test stands, etc.

JUSTIFICATION: FY 00 and 01 funding will achieve and sustain the operational readiness of all Army aviation field units, which are operating AH-64, UH-60, CH-47, OH-58D and other Army aircraft. Aviation Ground Support Equipment (AGSE) also provides a means to correct safety-of-flight discrepancies which endanger both life and property. With more aircraft being added to the Army inventory, the fielding of new aviation units and the diversification of aviation missions creates an ever increasing requirement for AGSE. The Aircraft Cleaning/Deicing System (ACDS) will provide the Army with an Environmental Protection Agency (EPA) compliant system for all aircraft. EPA compliance is mandated by federal law to eliminate toxic run off of contamination into the environment. The Generic Aircraft Nitrogen Generator (GANG) is being developed to provide Army Aviation with 95% pure nitrogen gas to properly service/adjust aircraft accumulators, main rotor blades, landing gear struts and tires. The GANG will also be used to refill nitrogen bottles used at all levels of aviation maintenance. The Standard Aircraft Towing System (SATS) will be utilized to reposition fixed/rotary wing aircraft and Aviation Ground Support Equipment (AGSE) in and around aircraft hangers and maintenance areas.

Exhibit P-5, Weapon Aircraft Cost Analysis		Appropriation/ Budget Activity/Serial No: AIRCRAFT PROCUREMENT / 4 / Support Equipment and Facilities			P-1 Line Item Nomenclature: AVIATION GROUND SUPPORT EQUIPMENT (AZ3520)			Weapon System Type:			Date: February 1999		
Aircraft Cost Elements	ID CD	**FY 98**			**FY 99**			**FY 00**			**FY 01**		
		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. Nondestructive Test Equipment(NDTE)	A												
NDTE Fielding		486											
2. Flexible Engine Diagnostic System(FEDS) (A08701)	A												
Hardware		5,012	2	2,506									
FEDS Fielding		8			7								
Depot Workload Cost Increase					1,652								
3. Shop Equipment Contact Maintenance (SECM)	A												
Hardware		993	88	11	3,728	355	11						
SECM Fielding		7			21								
Production Engineering		28											
4. Aircraft Cleaning/Deicing System(ACDS)	A												
Hardware					4,050	81	50	5,050	101	50	8,642	174	50
ACDS Fielding					3			19			10		
5. Generic Aircraft Nitrogen Generator (GANG)	A												
Hardware								3,672	54	68			
								18					
TOTAL		6,534			9,461			8,759			8,652		

Exhibit P-5a, Budget Procurement History and Planning

Date: February 1999

Appropriation / Budget Activity/Serial No:	Weapon System Type:	P-1 Line Item Nomenclature:
AIRCRAFT PROCUREMENT / 4 / Support Equipment and Facilities		AVIATION GROUND SUPPORT EQUIPMENT (AZ3520)

WBS Cost Elements: Fiscal Years	Contractor and Location	Contract Method and Type	Location of PCO	Award Date	Date of First Delivery	QTY Each	Unit Cost $OOO	Specs Avail Now?	Date Revsn Avail	RFP Issue Date
1. Nondestructive Test Equipment (NDTE)										
X-ray Machine										
FY 97	Lorad Corporation,Danbury,CT	C/FP-O	Kelly Air Force Base	Jan-97	Apr-97	10	27	Yes	No	
Ultra Sound										
FY 97	Krautkramer-Branson Inc. Lewistown, PA.	C/FP-O	Kelly Air Force Base	Jan-97	Mar-97	24	5	Yes	No	
Eddy Current										
FY 97	Staveley Instruments Inc. Kennewick, WA.	C/FP-O	Kelly Air Force Base	Jan-97	Apr-97	24	13	Yes	No	
Harmonic Bond										
FY 96	Staveley Instruments Inc.	C/FP-O	Kelly Air Force Base	Jul-96	Oct-96	24	14	Yes	No	
2. Flexible Engine Diagnostic System (FEDS) (A08701)										
FY 96	Corpus Christi Army Depot	*	ATCOM	Mar-96	Apr-98	2	2,044	Yes	No	
FY 98	Corpus Christi Army Depot	*	AMCOM	Jan-98	Feb-00	2	2,506	Yes	No	
3. Shop Equipment Contact Maintenance (SECM)										
FY 98	Defense General Supply Center Richmond, VA	**	AMCOM	Aug-98	Jan-99	88	11	Yes	No	
FY 99	Defense General Supply Center	**	AMCOM	Jan-99	Jun-99	355	11	Yes	No	

REMARKS:

* Funds to Corpus Christi Army Depot (CCAD) through Industrial Operations Command (IOC).

** Funds to Defense General Supply Center (DGSC) through the requisition process.

Exhibit P-5a, Budget Procurement History and Planning

Date: February 1999

Appropriation / Budget Activity/Serial No: AIRCRAFT PROCUREMENT / 4 / Support Equipment and Facilities

Weapon System Type:

P-1 Line Item Nomenclature: AVIATION GROUND SUPPORT EQUIPMENT (AZ3520)

WBS Cost Elements: Fiscal Years	Contractor and Location	Contract Method and Type	Location of PCO	Award Date	Date of First Delivery	QTY Each	Unit Cost $OOO	Specs Avail Now?	Date Revsn Avail	RFP Issue Date
4. Aircraft Cleaning/Deicing System (ACDS)										
FY 99	TBS	C/FP	AMCOM	Jan-99	Jul-99	81	50	Yes	No	
FY 00	TBS	C/FP-O	AMCOM	Jan-00	Jul-00	101	50	Yes	No	
FY 01	TBS	C/FP-O	AMCOM	Jan-01	Jul-01	174	50	Yes	No	
5. Generic Aircraft Nitrogen Generator (GANG)										
FY 00	TBS	C/FP	Kelly Air Force Base	Jan-00	Jan-00	54	68	Yes	No	

REMARKS:

Exhibit P-40, Budget Item Justification Sheet											Date: February 1999	
Appropriation / Budget Activity/Serial No: AIRCRAFT PROCUREMENT / 4 / Support Equipment and Facilities						P-1 Item Nomenclature: AIRFIELD SUPPORT EQUIPMENT (AZ1710)						
Program Elements for Code B Items:				Code:	Other Related Program Elements:							
	Prior Years	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	To Complete	Total Prog
Proc Qty												
Gross Cost	0.0	3.3	7.5	18.2	23.7	37.2	46.5	37.1	33.3	38.6	0.0	245.3
Less PY Adv Proc												
Plus CY Adv Proc												
Net Proc (P-1)	0.0	3.3	7.5	18.2	23.7	37.2	46.5	37.1	33.3	38.6	0.0	245.3
Initial Spares												
Total Proc Cost	0.0	3.3	7.5	18.2	23.7	37.2	46.5	37.1	33.3	38.6	0.0	245.3
Flyaway U/C												
Wpn Sys Proc U/C												

DESCRIPTION: Airfield Support Equipment (Fixed Base Air Traffic Control) requirements will be met through a vast array of high technology solutions resulting in a highly reliable and safe air traffic control system. The Federal Aviation Administration(FAA) and the DoD are currently modernizing the National Airspace System (NAS) to include upgrading and automating the complete infrastructure, systematically replacing antiquated analog systems (radars, communications switching systems) and installing state of the art digital technology. Army fixed base ATC systems must therefore be fully interoperable with the FAA systems so existing analog systems will be replaced with new generation systems. These include the Voice Communication Switching System (VCSS), the DoD Advanced Automation System (DAAS), the Airfield Status Automation Systems (ASAS) and the Digital Airport Surveillance Radar (DASR). The Fixed Base Precision Approach Radar (FBPAR) provides the Army's primary ground controlled precision approach capability to recover aircraft to fixed base facilities, ensuring safe landing in adverse weather conditions. Ancillary equipment includes a host of generic ground-based navigation aides (Non-Directional Beacons, Distance Measuring Equipment, Instrument Landing Systems), digital radios and wind measuring equipment. These types of ancillary equipment support requirements tailored to specific aviation stationing plans throughout the world.

Exhibit P-40C Budget Item Justification Sheet		Date: February 1999
Appropriation / Budget Activity/Serial No.: AIRCRAFT PROCUREMENT / 4 / Support Equipment and Facilities	P-1 Item Nomenclature: AIRFIELD SUPPORT EQUIPMENT (AZ1710)	
Program Elements for Code B Items	Code	Other Related Program Elements

JUSTIFICATION: FY 00/01 funds will provide the Army the joint service capability to procure specific fixed base Air Traffic Control (ATC) systems required for the Federal Aviation Administration (FAA) modernization and upgrade of the National Airspace System (NAS). The NAS systems to be procured include the Voice Communication Switching System (VCSS), DoD Advanced Automation System (DAAS), Airfield Status Automation System (ASAS), and the Digital Airport Surveillance Radar (DASR). These systems will reduce and save significant Operational and Support (O&S) costs through the replacement of old, obsolete, antiquated analog legacy systems with new, state of the art, highly reliable ATC systems in towers and approach control facilities. Funding will also ensure interoperability between Army and FAA systems. The new Army ATC equipment will ensure the Army is an equal partner with the other Services and the FAA as the NAS is rebuilt and modernized. Furthermore, the old, obsolete unreliable and nonsupportable legacy systems throughout the Army will be replaced with highly modular, commercial, off the shelf systems. These new fixed base systems will be relatively easy to maintain and will provide commonality for both operational and maintenance training. Commonality and interoperability will ensure jointness among the Services and participating host nations.

Exhibit P-5, Weapon Aircraft Cost Analysis		Appropriation/ Budget Activity/Serial No: AIRCRAFT PROCUREMENT / 4 / Support Equipment and Facilities			P-1 Line Item Nomenclature: AIRFIELD SUPPORT EQUIPMENT (AZ1710)			Weapon System Type:			Date: February 1999		
Aircraft Cost Elements	ID CD	**FY 98**			**FY 99**			**FY 00**			**FY 01**		
		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. Precision Approach Radar													
Hardware					2496	1	2496	2496	1	2496	12339	9	1371
Production Start Up Costs		5237			5060			1306			1442		
Interim Contractor Support					405			480			540		
Engineer, Furnish, & Install (EF&I)		460			1247			1046			6664		
Fielding								30			60		
2. Voice Communication Switching System (VCSS)													
Hardware					2729	12	227	1280	11	116	2202	12	184
Interim Contractor Support											36		
Engineer, Furnish, & Install (EF&I)		269			2787			1308			2249		
Fielding		102			291			136			234		
Other Costs		33											
3. DoD Advanced Automation System (DAAS) (DAAS)													
Hardware								7606	12	634	4199	8	525
Interim Contractor Support													
Engineer, Furnish, & Install (EF&I)		46			797			2071			1164		
Fielding								474			300		
4. Airfield Status Automation System (ASAS)													
Hardware								1872	12	156	1754	12	146
Interim Contractor Support													
Engineer, Furnish, & Install (EF&I)					400			2100			2100		
Fielding													
5. Digital Airport Surveillance Radar (DASR)													
Hardware													
Interim Contractor Support													
Engineer, Furnish, & Install (EF&I)								952			1584		
Fielding													
6. Ancillary Equipment		1394			741			494			337		
7. USAF Air National Guard Tower Equipment					1200								
TOTAL		**7541**			**18153**			**23651**			**37204**		

Exhibit P-5a, Budget Procurement History and Planning

Date: February 1999

Appropriation / Budget Activity/Serial No:	Weapon System Type:	P-1 Line Item Nomenclature:
AIRCRAFT PROCUREMENT / 4 / Support Equipment and Facilities		AIRFIELD SUPPORT EQUIPMENT (AZ1710)

WBS Cost Elements: Fiscal Years	Contractor and Location	Contract Method and Type	Location of PCO	Award Date	Date of First Delivery	QTY Each	Unit Cost $OOO	Specs Avail Now?	Date Revsn Avail	RFP Issue Date
1. Precision Approach Radar										
FY99	Raytheon Cambridge, MA	C/FP-O	CECOM	Apr-99	Jul-00	1	2496	Yes	No	
FY00	Raytheon Cambridge, MA	C/FP-O	CECOM	Dec-99	Mar-01	1	2496	Yes	No	
FY01	Raytheon Cambridge, MA	C/FP-O	CECOM	Dec-00	Mar-02	9	1371	Yes	No	
2. Voice Communication Switching System (VCSS)										
FY99	Federal Aviation Administration (FAA)	MIPR	FAA	Jan-99	Jul-99	12	227	Yes	No	
FY00	Federal Aviation Administration (FAA)	MIPR	FAA	Dec-99	Jun-00	11	116	Yes	No	
FY01	Federal Aviation Administration (FAA)	MIPR	FAA	Dec-00	Jun-01	12	184	Yes	No	
3. DoD Advanced Automation System (DAAS)										
FY00	Federal Aviation Administration (FAA)	MIPR	FAA	Jan-00	Jul-00	12	634	Yes	No	
FY01	Federal Aviation Administration (FAA)	MIPR	FAA	Dec-00	Jun-01	8	525	Yes	No	

REMARKS:

Exhibit P-5a, Budget Procurement History and Planning

Date: February 1999

Appropriation / Budget Activity/Serial No:	Weapon System Type:	P-1 Line Item Nomenclature:
AIRCRAFT PROCUREMENT / 4 / Support Equipment and Facilities		AIRFIELD SUPPORT EQUIPMENT (AZ1710)

WBS Cost Elements: Fiscal Years	Contractor and Location	Contract Method and Type	Location of PCO	Award Date	Date of First Delivery	QTY Each	Unit Cost $OOO	Specs Avail Now?	Date Revsn Avail	RFP Issue Date
4. Airfield Status Automation System (ASAS)										
FY00	NAVY	MIPR	NAVY	Dec-99	Jun-00	12	156	Yes	No	
FY01	NAVY	MIPR	NAVY	Dec-00	Jun-01	12	146	Yes	No	

REMARKS:

Exhibit P-40, Budget Item Justification Sheet											Date: February 1999	
Appropriation / Budget Activity/Serial No: AIRCRAFT PROCUREMENT / 4 / Support Equipment and Facilities						P-1 Item Nomenclature: AIRCREW INTEGRATED SYSTEMS (AZ3110)						
Program Elements for Code B Items:				Code:	Other Related Program Elements: RDTE: 643801(DB45) and 654801(DC45)							
	Prior Years	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	To Complete	Total Prog
Proc Qty												
Gross Cost	41.9	11.3	8.0	9.0	4.4	1.4	21.1	34.5	57.4	65.6	continued	continued
Less PY Adv Proc												
Plus CY Adv Proc												
Net Proc (P-1)	41.9	11.3	8.0	9.0	4.4	1.4	21.1	34.5	57.4	65.6	continued	continued
Initial Spares												
Total Proc Cost	41.9	11.3	8.0	9.0	4.4	1.4	21.1	34.5	57.4	65.6	continued	continued
Flyaway U/C												
Wpn Sys Proc U/C												

DESCRIPTION: Aircrew Integrated Systems (ACIS) addresses those items of equipment that are used to sustain Army aircrews and troops throughout the flight profile, enhancing mission performance and aircrew survivability during operational missions, training, aircraft crash, and the post crash period prior to rescue. The ACIS items that accomplish the aircrew-aircraft integration functions include aircraft cockpit air bags, chemical/biological protective mask blowers, helicopter oxygen systems, nuclear flash and laser eye protection, helmets, flotation devices, survival kits and equipment, NBC warning, and decontamination and filtration systems. A Nondevelopmental Item demonstration program for Digital Source Collector (flight data and voice recorder) for bussed and non-bussed Army rotary wing aircraft was also funded in this Standard Study Number. Basic Air Warrior ensembles will be procured to integrate aircrew equipment for maximum aircrew effectiveness by increased mission performance and safety, reduction of equipment weight and bulk, and increased tailorability to specific missions, threats, and the various aircraft platforms operated. The results of future development efforts will be applied as product improvements to the basic Air Warrior ensemble production as new technologies evolve.

JUSTIFICATION: Aircraft Procurement, Army (APA) funding for all ACIS programs and projects is included in this budget line item. FY00 and FY01 funding will provide for acquisition of the Cockpit Air Bag System (CABS) for UH-60 Blackhawk helicopters to improve crash survivability and reduce potential injuries and fatalities. The CABS includes an "A" kit (aircraft modification that provides for adaptation of CABS to the aircraft, e.g., electrical power, hard points and miscellaneous attachment hardware) and a "B" kit (CABS components, including crewmember air bag modules containing gas generators and the crash sensor and system packaging). Funding will permit incorporation of CABS into the UH-60 Blackhawk aircraft. Funding increases during FY 02 and beyond resource the Air Warrior basic ensemble production that commences in FY 02.

Exhibit P-5, Weapon Aircraft Cost Analysis		Appropriation/ Budget Activity/Serial No: AIRCRAFT PROCUREMENT / 4 / Support Equipment and Facilities			P-1 Line Item Nomenclature: AIRCREW INTEGRATED SYSTEMS (AZ3110)			Weapon System Type:			Date: February 1999		
Aircraft	ID	**FY 98**			**FY 99**			**FY 00**			**FY 01**		
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
Hardware:													
Cockpit Air Bag System (CABS):													
AH-64 Apache - Inertia Reels		1452	1550	1									
UH-60 Blackhawk - LRIP					6938	330	21						
UH-60 Blackhawk - Production								3870	184	21	1095	52	21
Subtotal Hardware Costs		**1452**			**6938**			**3870**			**1095**		
ECP, Sys Int, & Admin Costs:													
Engineering Change Proposal-CABS:													
UH-60 Blackhawk		3500											
Systems Integration Engineering		1763			722			300			150		
Project Management Administration		975			1148			224			174		
Subtotal ECP,Sys Int, & Admin Costs		**6238**			**1870**			**524**			**324**		
Support Cost													
Fielding		260			216								
Subtotal Support Cost		**260**			**216**								
TOTAL		**7950**			**9024**			**4394**			**1419**		

Exhibit P-5a, Budget Procurement History and Planning

Date: February 1999

Appropriation / Budget Activity/Serial No:	Weapon System Type:	P-1 Line Item Nomenclature:
AIRCRAFT PROCUREMENT / 4 / Support Equipment and Facilities		AIRCREW INTEGRATED SYSTEMS (AZ3110)

WBS Cost Elements: Fiscal Years	Contractor and Location	Contract Method and Type	Location of PCO	Award Date	Date of First Delivery	QTY Each	Unit Cost $OOO	Specs Avail Now?	Date Revsn Avail	RFP Issue Date
Cockpit Air Bag System (CABS):										
AH-64 Apache - Inertia Reels										
FY 98	H. Koch and Sons, Inc. Anaheim CA	C/FP	AMCOM, Huntsville, Al	Jun-98	Aug-98	1550	1	Yes		
UH-60 Blackhawk - Limited Production										
FY 99	Simula, Inc., Phoenix, Ax.	SS/FP	AATD, Ft. Eustis, Va.	Jun-99	Dec-99	330	21	Yes		
UH-60 Blackhawk - Production										
FY 00	Simula, Inc., Phoenix, Ax.	SS/FP	AATD, Ft. Eustis, VA	Dec-99	Jun-00	184	21	Yes		
FY 01	Unknown	C/FP	AMCOM, Huntsville, AL	Oct-00	Jun-01	52	21	Yes		

REMARKS: FY99 CABS buy is sole source to Simula, Inc. (RDT&E Developer).

Exhibit P-40, Budget Item Justification Sheet											Date: February 1999	
Appropriation / Budget Activity/Serial No: AIRCRAFT PROCUREMENT / 4 / Support Equipment and Facilities								P-1 Item Nomenclature: AIR TRAFFIC CONTROL (AA0050)				
Program Elements for Code B Items:				Code:	Other Related Program Elements:							
	Prior Years	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	To Complete	Total Prog
Proc Qty												
Gross Cost	56.9	13.7	7.8	5.7	8.8	38.1	29.0	34.1	35.2	20.5	0.0	249.8
Less PY Adv Proc												
Plus CY Adv Proc												
Net Proc (P-1)	56.9	13.7	7.8	5.7	8.8	38.1	29.0	34.1	35.2	20.5	0.0	249.8
Initial Spares												
Total Proc Cost	56.9	13.7	7.8	5.7	8.8	38.1	29.0	34.1	35.2	20.5	0.0	249.8
Flyaway U/C												
Wpn Sys Proc U/C												

DESCRIPTION: Air Traffic Control equipment contained in this budget cycle includes Tactical Terminal Control System (TTCS), Air Traffic Navigation Integration and Coordination System (ATNAVICS), the Tactical Airspace Integration System (TAIS), and Mobile Tower System (MOTS). The TTCS is providing secure, jam-resistant radio communications to remote landing and pickup zones along the forward edge of the battle area. The ATNAVICS will provide all weather instrument flight capabilities to include enroute, terminal and radar precision approach and landing services to all Army, other services, and allied aircraft. The TAIS will provide a highly mobile airspace deconfliction system providing Army Airspace Command and Control (A2C2) and air traffic control capabilities. It will interface with all Tactical Command and Control Systems while providing commanders with automated A2C2 capability to support all Corp/Division digitization initiatives into the next century. The MOTS will provide secure, jam-resistant radio communication to airfield/landing sites throughout the Corp and Division rear areas.

JUSTIFICATION: The FY 00/01 funding will provide for the production of the ATNAVICS, continued upgrades and production of the TAIS, and the production of the Mobile Tower System (MOTS). This new family of tactical Air Traffic Control systems will replace current generation equipment that is obsolete and not economically supportable. These systems will be compact,highly mobile,and relatively easy to install, and will be able to keep pace with the fast tempo of the modern battlefield. The continued acquisition of these Air Traffic Control systems will support present and future warfighting capabilities and assist the manuever commander/Army aviator by providing vast improvements in the areas of secure communications, automated data processing, equipment reliability, survivability, and transportability.

Exhibit P-5, Weapon Aircraft Cost Analysis		Appropriation/ Budget Activity/Serial No: AIRCRAFT PROCUREMENT / 4 / Support Equipment and Facilities			P-1 Line Item Nomenclature: AIR TRAFFIC CONTROL (AA0050)			Weapon System Type:			Date: February 1999		
Aircraft Cost Elements	ID CD	**FY 98**			**FY 99**			**FY 00**			**FY 01**		
		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. Tactical Terminal Control System (TTCS) (W614)													
Fielding		480			69								
Other Costs		99											
2. Tactical Airspace Integration System (TAIS)													
Hardware					2000	1	2000	2034	1	2034	20690	10	2069
Production Software Support		6000											
GFE		1106			164			99			305		
Testing		85			50			40					
Fielding											150		
Interim Contractor Support								195			295		
Other Costs		31											
3. Air Traffic Navigation and Integration System (ATNAVICS)													
Hardware					3198	1	3198	5556	2	2778	13661	6	2277
Production Start Up Costs											795		
Interim Contractor Support					140			787			872		
Testing													
Fielding					54			49			200		
4. Mobile Tower System (MOTS)													
Hardware											1000	1	1000
Production Start Up Costs											100		
TOTAL		**7801**			**5675**			**8760**			**38068**		

Exhibit P-5a, Budget Procurement History and Planning

Date: February 1999

Appropriation / Budget Activity/Serial No: AIRCRAFT PROCUREMENT / 4 / Support Equipment and Facilities

Weapon System Type:

P-1 Line Item Nomenclature: AIR TRAFFIC CONTROL (AA0050)

WBS Cost Elements: Fiscal Years	Contractor and Location	Contract Method and Type	Location of PCO	Award Date	Date of First Delivery	QTY Each	Unit Cost $OOO	Specs Avail Now?	Date Revsn Avail	RFP Issue Date
1. Tactical Airspace InegrationSystem (TAIS)										
FY 99	TBD	C/FP	AMCOM	Feb-99	Feb-00	1	2000	Yes	No	
FY00	TBD	C/FP-O	AMCOM	Feb-00	Nov-00	1	2000	Yes	No	
FY01	TBD	C/FP	AMCOM	Feb-01	Nov-01	10	2000	Yes	No	
2. Air Traffic Navigation and Integration System (ATNAVICS)										
FY99	Raytheon Cambridge, MA	C/FP-O	CECOM	Apr-99	Jul-00	1	3198	Yes	No	
FY00	Raytheon Cambridge, MA	C/FP-O	CECOM	Apr-00	Jul-01	2	2778	Yes	No	
FY01	Raytheon Cambridge, MA	C/FP-O	CECOM	Apr-01	Jul-02	6	2277	Yes	No	
3. Mobile Tower System (MOTS)										
FY 01	TBD	TBD	TBD	Jan-01	Jan-02	1	1000	Yes	No	

REMARKS:

Exhibit P-40, Budget Item Justification Sheet

Date: February 1999

Appropriation / Budget Activity/Serial No: AIRCRAFT PROCUREMENT / 4 / Support Equipment and Facilities

P-1 Item Nomenclature: INDUSTRIAL FACILITIES (AZ3300)

Program Elements for Code B Items:

Code:

Other Related Program Elements:

	Prior Years	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	To Complete	Total Prog
Proc Qty												
Gross Cost	402.2	2.0	2.0	1.5	1.5	1.4	1.6	1.6	2.2	2.2	0.0	418.1
Less PY Adv Proc												
Plus CY Adv Proc												
Net Proc (P-1)	402.2	2.0	2.0	1.5	1.5	1.4	1.6	1.6	2.2	2.2	0.0	418.1
Initial Spares												
Total Proc Cost	402.2	2.0	2.0	1.5	1.5	1.4	1.6	1.6	2.2	2.2	0.0	418.1
Flyaway U/C												
Wpn Sys Proc U/C												

DESCRIPTION: This program provides for the replacement of production test equipment. Funds are used to replace equipment that is old and becoming increasingly difficult to maintain. Instrumentation and equipment to be acquired consists of standard instrumentation recorders, tranducers, signal conditioners, encoders, computer systems, and related components in support of Aircraft systems. The program also provides funding for the Value Engineering (VE) program to stimulate activity for reducing manufacturing, acquisition, operation and support costs.

JUSTIFICATION: The FY00 and FY01 requests will provide the Aviation Technical Test Center with production support equipment in testing the APACHE, Black Hawk, and other aviation systems. Funding also supports rebuilds, upgrades and equipment rehabilitation of government owned equipment at the Ft. Rucker Test Facilities and value engineering support and training on all aviation systems in production.

	FY 1998	FY 1999	FY 2000	FY 2001
PIF	1.135	0.653	0.638	0.627
VE	0.828	0.836	0.824	0.813
TOTAL	1.963	1.489	1.462	1.440

Exhibit P-40, Budget Item Justification Sheet	Date: February 1999
Appropriation / Budget Activity/Serial No: AIRCRAFT PROCUREMENT / 4 / Support Equipment and Facilities	P-1 Item Nomenclature: AIRBORNE COMMUNICATIONS (AA0705)
Program Elements for Code B Items:	Code: / Other Related Program Elements:

	Prior Years	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	To Complete	Total Prog
Proc Qty												
Gross Cost	46.6	37.8	45.2	41.8	43.6	0.0	19.9	14.3	11.8	19.6	0.0	280.6
Less PY Adv Proc												
Plus CY Adv Proc												
Net Proc (P-1)	46.6	37.8	45.2	41.8	43.6	0.0	19.9	14.3	11.8	19.6	0.0	280.6
Initial Spares												
Total Proc Cost	46.6	37.8	45.2	41.8	43.6	0.0	19.9	14.3	11.8	19.6	0.0	280.6
Flyaway U/C												
Wpn Sys Proc U/C												

Description:

Airborne Communications include AN/ARC-220 high frequency (HF) Nap-of-the-Earth (NOE). The AN/ARC-220 HF incorporates automatic link establishment (ALE) to eliminate manual searches for workable frequencies, Night Vision compatible lighting and ECCM capabilities while allowing Army aviation to communicate securly at NOE altitudes. This capability allows the commander to dominate the maneuver battle while protecting his force. The AN/ARC-220 HF communications system is also capable of transmitting data and position, facilitating the winning of the information war.

Justification:

FY00 and FY01 funding is required to procure AN/ARC-220 HF radio systems, A-Kits and other associated program support activities. The AN/ARC-220 HF Radio communications system will allow communication between Army aircraft flying nap-of-the-earth maneuvers and other Army aircraft and ground radios. The radio system will provide aircraft capability for continuous and reliable, secure and non-secure communications at non-line-of-sight (NLOS) distances. The AN/ARC-220 HF radio supports digitization of the battlefield and enhances joint service communications. The AN/ARC-220 HF communications system supports the five (5) Army modernization objectives: project and sustain the force, protect the force, win the battlefield information war, conduct precision strikes throughout the battlefield, and dominate the maneuver battle.

Exhibit P-5, Weapon Aircraft Cost Analysis		Appropriation/ Budget Activity/Serial No: AIRCRAFT PROCUREMENT / 4 / Support Equipment and Facilities			P-1 Line Item Nomenclature: AIRBORNE COMMUNICATIONS (AA0705)			Weapon System Type:			Date: February 1999		
Aircraft	ID	**FY 98**			**FY 99**			**FY 00**			**FY 01**		
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
AVIONICS													
AN/ARC-220 NOE HF RADIO													
Recurring Costs													
A. Airborne Radio		12619	649	19	11806	506	23	16583	733	23			
B. VRC-100 Ground Radio		7518	228	33	2922	100	29	1790	60	30			
C. A-Kits		13622	1128	12	4955	522	9	15726	556	28			
D. A-Kit Installation		145			4366			6456					
Subtotal Costs		**33904**			**24049**			**40555**					
Non-Recurring Costs													
A-kit Integration		6092			11760								
Other System Test		97											
Total		**40093**			**35809**			**40555**					
Support Cost													
Fielding Support		644			766			887					
Program Management		2228			2089			2029					
Engineering Change Orders		1941			3126			92					
Force XXI/Digitization		342											
Subtotal Support Cost		**5155**			**5981**			**3008**					
		45248			41790			43563					
		45248			41790			43563					
TOTAL		**45248**			**41790**			**43563**					

Exhibit P-5a, Budget Procurement History and Planning

Date: February 1999

Appropriation / Budget Activity/Serial No:	Weapon System Type:	P-1 Line Item Nomenclature:
AIRCRAFT PROCUREMENT / 4 / Support Equipment and Facilities		AIRBORNE COMMUNICATIONS (AA0705)

WBS Cost Elements: / Fiscal Years	Contractor and Location	Contract Method and Type	Location of PCO	Award Date	Date of First Delivery	QTY Each	Unit Cost $OOO	Specs Avail Now?	Date Revsn Avail	RFP Issue Date
AN/ARC-220 HF Airborne Radio		C/FP								
FY98	Rockwell International	Option	CECOM	Mar-98	Feb-99	649	19	Yes		
FY99	Rockwell International	Option	CECOM	Jan-99	Jan-00	506	23	Yes		
FY00	Rockwell International	Option	CECOM	Dec-99	Jan-01	733	23	Yes		
AN/VRC-100 Ground Radio		C/FP								
FY98	Rockwell International	Option	CECOM	Mar-98	Feb-99	228	33	Yes		
FY99	Rockwell International	Option	CECOM	Jan-99	Jan-00	100	29	Yes		
FY00	Rockwell International	Option	CECOM	Dec-99	Jan-01	60	30	Yes		

REMARKS:

FY 00 / 01 BUDGET PRODUCTION SCHEDULE

P-1 Item Nomenclature: AIRBORNE COMMUNICATIONS (AA0705)

Date: February 1999

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
AN/ARC-220 Airborne HF Radio	1	98	A	649	0	649						A											52	60	60	60	60	60	60	60	177
AN/ARC-220 Airborne HF Radio	1	99	A	506	0	506																A									506
AN/ARC-220 Airborne HF Radio	1	00	A	733	0	733																									733
AN/VRC-100 Ground HF Radio	1	98	A	228	0	228						A											20	20	20	20	20	20	20	20	68
AN/VRC-100 Ground HF Radio	1	99	A	100	0	100																A									100
AN/VRC-100 Ground HF Radio	1	00	A	60	0	60																									60

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	Rockwell International - Collins Avionics Division	30	70	100			INITIAL	X		6	6	12	
	Cedar Rapids, IA						REORDER	X		3	6	9	
							INITIAL						
							REORDER						
2	Rockwell International - Collins Avionics Division	5	15	20			INITIAL						
	Cedar Rapids, IA						REORDER						
							INITIAL						
							REORDER						
							INITIAL						
							REORDER						

FY 00 / 01 BUDGET PRODUCTION SCHEDULE

P-1 Item Nomenclature: AIRBORNE COMMUNICATIONS (AA0705)

Date: February 1999

COST ELEMENTS	MFR	FY	SERV	PROC QTY Each	ACCEP. PRIOR TO 1 OCT	BAL DUE AS OF 1 OCT	Fiscal Year 00												Fiscal Year 01										LATER
							Calendar Year 00												Calendar Year 01										
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
AN/ARC-220 Airborne HF Radio	1	98	A	649	472	177	60	60	57																				
AN/ARC-220 Airborne HF Radio	1	99	A	506	0	506				42	42	42	42	42	42	42	42	42	42	43	43									
AN/ARC-220 Airborne HF Radio	1	00	A	733	0	733			A													61	61	61	61	61	61	61	61	61	184
AN/VRC-100 Ground HF Radio	1	98	A	228	160	68	20	24	24																					
AN/VRC-100 Ground HF Radio	1	99	A	100	0	100				8	8	8	8	8	8	8	8	9	9	9	9									
AN/VRC-100 Ground HF Radio	1	00	A	60	0	60			A													10	10	10	10	10	10			

	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	Rockwell International - Collins Avionics Division	30	70	100			INITIAL	X		6	6	12	
	Cedar Rapids, IA						REORDER	X		3	6	9	
							INITIAL						
							REORDER						
2	Rockwell International - Collins Avionics Division	5	15	20			INITIAL						
	Cedar Rapids, IA						REORDER						
							INITIAL						
							REORDER						
							INITIAL						
							REORDER						