

DEPARTMENT OF THE NAVY
FISCAL YEAR (FY) 2010
BUDGET ESTIMATES



JUSTIFICATION OF ESTIMATES
MAY 2009

AIRCRAFT PROCUREMENT, NAVY
Volume II:
BUDGET ACTIVITY 5

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Department of Defense Appropriations Act, 2010

Aircraft Procurement, Navy

For construction, procurement, production, modification, and modernization of aircraft, equipment, including ordnance, spare parts, and accessories therefor; specialized equipment; expansion of public and private plants, including the land necessary therefor, and such lands and interests therein, may be acquired, and construction prosecuted thereon prior to approval of title; and procurement and installation of equipment, appliances, and machine tools in public and private plants; reserve plant and Government and contractor-owned equipment layaway, \$19,294,865,000, to remain available for obligation until September 30, 2012.

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Department of the Navy
 FY 2010/2011 President's Budget
 Exhibit P-1 FY 2010 Base and Overseas Contingency Operations (OCO) Request
 Summary
 (Dollars in Thousands)

05 MAY 2009

APPROPRIATION: Aircraft Procurement, Navy

Budget Activity -----	FY 2008 Base&OCO Actuals -----	FY 2009 Base&OCO SupReq 4/9/09 -----	FY 2010 Base -----	FY 2010 OCO -----	FY 2010 Total -----
05. Modification of aircraft	2,548,454	2,073,327	2,021,742	859,282	2,881,024
TOTAL Aircraft Procurement, Navy	2,548,454	2,073,327	2,021,742	859,282	2,881,024

UNCLASSIFIED

Department of the Navy
 FY 2010/2011 President's Budget
 Exhibit P-1 FY 2010 Base and Overseas Contingency Operations (OCO) Request
 (Dollars in Thousands)

APPROPRIATION: 1506N Aircraft Procurement, Navy

DATE: 05 MAY 2009

LINE NO	ITEM NOMENCLATURE	IDENT CODE	FY 2008 Base&OCO Actuals		FY 2009 Base&OCO SupReq 4/9/09		FY 2010 Base		FY 2010 OCO		FY 2010 Total		S E C
			Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	
BUDGET ACTIVITY 05: Modification of aircraft													

MODIFICATION OF AIRCRAFT													
28	EA-6 SERIES	A		206,021		33,337		39,977		45,000		84,977	U
29	AV-8 SERIES	A		44,537		83,646		35,668		28,296		63,964	U
30	F-18 SERIES	A		485,036		480,718		484,129		96,000		580,129	U
31	H-46 SERIES	A		51,517		52,834		35,325		17,485		52,810	U
32	AH-1W SERIES	A		33,633		6,356		66,461				66,461	U
33	H-53 SERIES	A		115,877		91,480		68,197		164,730		232,927	U
34	SH-60 SERIES	A		52,167		72,279		82,253		11,192		93,445	U
35	H-1 SERIES	A		45,145		8,875		20,040		11,217		31,257	U
36	EP-3 SERIES	A		85,645		64,479		92,530				92,530	U
37	P-3 SERIES	A		558,028		290,038		485,171		74,900		560,071	U
38	S-3 SERIES	A		461									U
39	E-2 SERIES	A		10,244		27,408		22,853		17,200		40,053	U
40	TRAINER A/C SERIES	A		20,090		22,095		20,907				20,907	U
41	C-2A	A		32,398		22,055		21,343		14,100		35,443	U
42	C-130 SERIES	A		29,323		6,449		22,449		52,324		74,773	U
43	FEWSG	A		4,569		669		9,486				9,486	U
44	CARGO/TRANSPORT A/C SERIES	A		20,762		16,204		19,429				19,429	U
45	E-6 SERIES	A		84,589		88,632		102,646				102,646	U
46	EXECUTIVE HELICOPTERS SERIES	A		47,904		51,666		42,456				42,456	U

Exhibit P-1Q: FY 2010 Base and Overseas Contingency Operations (OCO) Request, as of May 5, 2009 at 14:28:23

UNCLASSIFIED

Department of the Navy
 FY 2010/2011 President's Budget
 Exhibit P-1 FY 2010 Base and Overseas Contingency Operations (OCO) Request
 (Dollars in Thousands)

APPROPRIATION: 1506N Aircraft Procurement, Navy

DATE: 05 MAY 2009

LINE NO	ITEM NOMENCLATURE	IDENT CODE	FY 2008 Base&OCO Actuals		FY 2009 Base&OCO SupReq 4/9/09		FY 2010 Base		FY 2010 OCO		FY 2010 Total		S E C
			Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	
47	SPECIAL PROJECT AIRCRAFT	A		25,157		102,705		14,869				14,869	U
48	T-45 SERIES	A		56,771		65,472		51,484				51,484	U
49	POWER PLANT CHANGES	A		27,114		26,142		26,395		4,456		30,851	U
50	JPATS SERIES	A		8,205		8,866		4,922				4,922	U
51	AVIATION LIFE SUPPORT MODS	A		4,132		1,984		5,594				5,594	U
52	COMMON ECM EQUIPMENT	A		216,631		237,994		47,419		263,382		310,801	U
53	COMMON AVIONICS CHANGES	A		147,729		148,501		151,112				151,112	U
54	COMMON DEFENSIVE WEAPON SYSTEM	A		9,635		7,265				5,500		5,500	U
55	ID SYSTEMS	A		10,213		11,997		24,125				24,125	U
56	V-22 (TILT/ROTOR ACFT) OSPREY	B		114,921		43,181		24,502		53,500		78,002	U
TOTAL Modification of aircraft				2,548,454		2,073,327		2,021,742		859,282		2,881,024	
TOTAL Aircraft Procurement, Navy				2,548,454		2,073,327		2,021,742		859,282		2,881,024	

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Exhibit P-40, BUDGET ITEM JUSTIFICATION							DATE: May 2009				
APPROPRIATION/BUDGET ACTIVITY Aircraft Procurement, Navy/APN-5 Aircraft Modifications							P-1 ITEM NOMENCLATURE 051100, EA-6 SERIES				
Program Element for Code B Items:							Other Related Program Elements				
	Prior Years	ID Code	FY2008	FY2009	FY2010	OCO FY2010	Total FY2010				
QTY		A									
COST (In Millions)	2974.5	A	206.0	33.3	40.0	45.0	85.0				
DESCRIPTION:											
This line item funds modifications to EA-6B aircraft and Airborne Electronic Attack products. The EA-6B Prowler is a four-seat, twin-engine, mid-wing, electronic attack, tactical aircraft. The EA-6B is employed in both Navy and Marine Corps squadrons to provide all DoD tactical electronic attack capability. Modifications budgeted and programmed include: procurement of Low Band Transmitter (LBT) inventory, ICAP III upgrades and installation, outer wing panels, Digital Flight Control System upgrade and readiness initiatives to ensure EA-6B and ALQ-99 viability.											
<u>OSIP No.</u>	<u>Description</u>	<u>Prior Years</u>	<u>FY2008</u>	<u>FY2009</u>	<u>FY2010</u>	<u>FY2010 OCO</u>	<u>FY2010 Total</u>				
019-79	ALQ-99 PODS	907.9	55.5	33.2	40.0	40.0	80.0				
032-85	EA-6B STRUCTURAL IMPROVEME	1082.9	21.3	0.1							
001-01	ICAP III	356.8	122.3								
005-03	MIDS / LINK 16	27.7	6.9								
018-10	Intrepid Tiger Pod (AN/ALQ-228)					5.0	5.0				
	INACTIVE OSIPS	599.1									
Total		2974.5	206.0	33.3	40.0	45.0	85.0				
Note:											
1. Totals may not add due to rounding.											

MODIFICATION TITLE: ALQ-99 PODS (OSIP 019-79)

MODELS OF SYSTEMS AFFECTED: EA-6 SERIES TYPE MODIFICATION: RELIABILITY / MISSION CAPABILITY

DESCRIPTION/JUSTIFICATION:

LOW BAND TRANSMITTER:

The Low Band Transmitter (LBT) provides an expanded jamming capability against the Early Warning/Acquisition Radars and Communication Links of modern Integrated Air Defense Systems. Reliability and maintainability will also be greatly improved over that of current ALQ-99 Transmitters. ALQ-99 Transmitters are Weapons Replaceable Assemblies that are readily removed and installed in the ALQ-99 Pod, thus no installation effort/funding is associated with this program. Aircraft Operational Flight Program changes are required to support aircraft integration of this transmitter.

LBT is a replacement for three AN/ALQ-99 transmitters that have found new and greatly expanded employment in the Overseas Contingency Operations (OCO) operations, providing protection to Coalition air and ground forces in continuous and direct contact with enemy forces. LBT combines the functionality of the modified transmitters into a single highly reliable solid state transmitter increasing both availability and mission effectiveness. The LBT increases reliability and flexibility. OCO support has required more sustained jamming than projected and resulted in higher system failure rates. The LBT is an O-Level remove and replace item. This capability will be available for all EA-6B/EA-18G aircraft, which includes four Naval Air Reserve aircraft. The Extended Low Band Radome (ELBR) currently flown on the EA-6B is structurally incompatible with the EA-18G. EA-18G compatible Extended Low Band Radomes (GELBRs) need to be produced for the integration of the ALQ-99 onto the EA-18G.

SUPPORT EQUIPMENT:

Introduction of new/modified ALQ-99 pod equipment requires new/modified organizational, intermediate and depot level support equipment, such as modifications and additions to the pod test set to support Low Band Transmitter and Band 7/8 Transmitter, modifications to High Power Device Test Set to extend frequency coverage to test Band 9/10 transmitters.

ENGINEERING CHANGES:

This ALQ-99 PODS Operational and Safety Improvement Program covers ALQ-99 Pod modifications required to improve reliability/maintainability/availability, enhance mission capability, resolve obsolescence issues, and correct deficiencies found in testing or in the field.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

Following a competitive acquisition and Milestone II approval, Engineering and Manufacturing Prototype and Low Rate Initial Production (LRIP) testing conducted at government and contractor facilities successfully demonstrated the key performance parameters identified in OPNAV/N88 Itr Ser No. N880C3/6S663399 of 26 JUL 96 can be attained with the present design. Testing of LRIP units began in April 07, Milestone III was achieved in April 2008 and a Full Rate Production (FRP) contract was awarded June 2008. In response to the increasing force protection requirement, an Early Operational Capability (EOC) for LBT was met in August 2006.

FINANCIAL PLAN: (TOA, \$ in Millions)

	Prior Years		FY 2008		FY 2009		FY 2010		OCO FY2010												
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
RDT&E																					
PROCUREMENT																					
Installation Kits N/R																					
Installation Equipment	2575	199.9																			
EXTENDED LOW BAND RADOME (GELBR)							22	2.8													
ALQ 99 BAND TWT IM		2.0	1	1.8																	
BAND 9/10 GFE		0.3																			
BAND 9/10 RADOME	260	4.9																			
BAND 9/10 TRANSMITTER CONG ADD	235	132.8																			
LOW BAND TRANSMITTER	83	103.3	37	48.6	24	31.3	32	30.4	33	40.0											
PAO TRANSMITTER MOD	1296	5.8																			
REPAIR OF GFE (UEU)		6.2																			
UNIVERSAL EXCITER UPGRADE	480	223.3																			
Installation Equipment N/R		23.1		0.1		0.1		5.9													
Engineering Change Orders		1.3																			
Data		10.2		0.1		0.1		*													
Training Equipment		1.6																			
Support Equipment	6	102.5		1.4		0.1		*													
ILS		4.3																			
Other Support		67.6		3.5		1.8		0.8													
Interim Contractor Support																					
Installation Cost	1207	18.9																			
Total Procurement		907.9		55.5		33.2		40.0		40.0											

Notes:
 1. Totals may not add due to rounding.
 2. Asterisk indicates amount value less than \$51K.
 3. Install schedules not provided for GFE that fits into the POD without structural modification, or for equipment not requiring APN-5 funding for installation into the POD/aircraft (e.g.: LBT, UEU).

Exhibit P-3a Individual Modification

MODIFICATION TITLE: Intrepid Tiger AN/ALQ-228 Spiral (018-10)

MODELS OF SYSTEMS AFFECTED: EA-6 SERIES TYPE MODIFICATION: RELIABILITY/MISSION CAPABILITY

DESCRIPTION/JUSTIFICATION:

A government-based spiral effort for the AN/ALQ-228 Intrepid Tiger Pod, arising from deficiencies encountered with the currently fielded configuration, is to expand Electronic Attack (EA) effectiveness against current threats and provide adaptability to future threats. Key to this capability is network accessibility that includes CORPORAL derived infrastructure and integration on multiple USMC aviation platforms including the AV-8B Harrier.

Technology upgrades include the replacement of existing components to Open Architecture compliant and easily updateable hardware and software. Technique Generator Upgrade: Updates will enable new techniques to provide additional capability that counters existing and anticipated threat systems while maintaining an open architecture to allow future counter threat upgrades. Antenna Upgrades: Upgrades will expand frequency coverage to that of current and anticipated threat systems dynamically operating in a broad spectrum. Network Upgrade: Will enable a non-co-located operator access to pod functions and information via radio signals to enhance operational and tactical flexibility. Interface Upgrades: Will enable ground and air based users to configure and monitor pod operation and technique effectiveness. Other Supporting Upgrades: Includes hardware and software components that enable functions of power, cooling, status, control and connectivity as through processors, sensors, radios, RF components and support equipment critical to overall pod and system operation to include techniques, mission planning, operational execution, postflight analysis and shipping containers.

FY10 Overseas Contingency Operations (OCO) Supplemental funds provided to address deficiencies discovered during fleet operations and to incorporate the developed upgrades into 5 test ready EDMs required to mitigate capability and operational deficiencies to meet operational requirements and to conduct all required testing for fielding.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

FINANCIAL PLAN: (TOA, \$ in Millions)

	Prior Years		FY 2008		FY 2009		FY 2010		FY2010 OCO													
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
RDT&E																						
PROCUREMENT																						
Installation Kits																						
Installation Kits N/R																						
Installation Equipment																						
Installation Equipment N/R										3.0												
Engineering Change Orders										2.0												
Data																						
Training Equipment																						
Support Equipment																						
ILS																						
Other Support																						
Interim Contractor Support																						
Installation Cost																						
Total Procurement										5.0												5.0

- Notes:
1. Totals may not add due to rounding
 2. Asterisk indicates amount less than \$51K

Exhibit P-40, BUDGET ITEM JUSTIFICATION							DATE: May 2009				
APPROPRIATION/BUDGET ACTIVITY Aircraft Procurement, Navy / APN5 Aircraft Modifications							P-1 ITEM NOMENCLATURE 051400, AV-8 SERIES				
Program Element for Code B Items:							Other Related Program Elements				
	PRIOR YEARS	ID Code	FY2008	FY2009	FY2010	FY2010 OCO	FY2010 Total				
QUANTITY											
COST (In Millions)	661.4	A	44.5	83.6	35.7	28.3	64.0				

DESCRIPTION: This line item funds modifications to T/AV-8B aircraft. The AV-8B is a single engine, single crew member aircraft capable of vertical/short take-off and landing (V/STOL) operations. The AV-8B meets the Marine Corps requirements for a light attack aircraft to provide responsive offensive air power that can operate from ships and austere forward bases in direct support of ground forces. The overall goal of the modifications budgeted in FY 2010 is to continue incorporation of OSCAR; incorporation of Readiness Management Plan systems; electrical and structural changes; inventory sustainment and upgrade efforts to offset obsolescence and attrition; incorporation of Litening Pod upgrades; and incorporation of AV-8B F402-RR-408 engine safety and operational changes. FY09 Overseas Contingency Operations (OCO) funding for AV-8B Expeditionary Litening Pod Upgrade to increase combat capability. FY09 and FY10 OCO funding will provide for ALE-47 capability to address obsolescence and improve readiness. FY10 OCO funds provided for Attrition Recovery upgrade to address mission availability, and combat relevance and operational safety.

The AV-8B active inventory (25 Apr 2008) consists of 4 major configurations:

- 17 Two-Seat TAV-8B aircraft
- 5 DAY Attack aircraft
- 37 NIGHT Attack aircraft
- 89 Night Attack/RADAR aircraft

Retrofit quantities of each ECP depend on the aircraft configuration type & when the change was introduced into production.

The specific modifications budgeted and programmed are:

<u>OSIP / Description</u>	<u>PRIOR YEARS</u>	<u>FY2008</u>	<u>FY2009</u>	<u>FY2010</u>	<u>FY2010 OCO</u>	<u>FY2010 Total</u>
001-91 OMNIBUS O&S IMPROVEMENTS	94.1	0.2	0.2			
003-96 KAPTON WIRE REPLACEM	39.2	*	*			
025-99 TAV-8B PERFORMANCE UPGRADE	110.4	0.3	0.3			
023-00 AV-8B LITENING POD	211.3	8.6	39.1	4.6		4.6
012-02 OPEN SYSTEMS CORE AVIONICS REQUIREMENT	97.7	6.1	5.5	2.2		2.2
002-04 ENGINE LIFE MANAGEMENT PROGRAM	17.5	8.1	5.6	7.1		7.1
025-04 ALE-47	0.0		8.6		8.9	8.9
006-06 OBSOLESCENCE REPLACEMENT	16.6	7.0	14.8	9.0		9.0
015-07 AV-8 ATTRITION RECOVERY	22.5	14.4	9.6	12.9	19.4	32.2
INACTIVE OSIPS	52.0					
TOTAL	661.4	44.5	83.6	35.7	28.3	64.0

Asterisk (*) indicates amount value less than \$51K

MODIFICATION TITLE: AV-8B LITENING POD(OSIP 023-00)

MODELS OF SYSTEMS AFFECTED: AV-8B Night Attack & Radar/Night Attack TYPE MODIFICATION: Upgrade

DESCRIPTION / JUSTIFICATION:

The system will integrate and procure an external targeting pod that includes an infrared (IR) and low-light TV targeting device capable of detecting, classifying, auto-tracking, and designating air-to-surface targets. The system will support first-pass autonomous delivery of conventional, precision guided, and accurate munitions to include Laser Maverick, GBU-12 and GBU-16 and JDAM (Joint Direct Attack Munition). The system will provide targeting capabilities for the AV-8B fleet of Night Attack and Radar/Night Attack aircraft through the end of its service life. The addition of the LITENING II Targeting Pod gives the AV-8B (Night and Radar) the capability to perform precision targeting. Congressional adds of FY01 \$80M, FY02 \$24.7M, FY03 \$28.0M and FY04 \$37.0M to procure additional pods. Congressional add of FY07 \$3.25M to upgrade litening targeting pods. FY07 supplemental funds were provided for AV-8B Litening capability on Station 4/Centerline to support the movement of the litening targeting pod to the AV-8B centerline station allowing carriage of both left and right hand configured pods, which increased the AV-8Bs ordnance capacity by 200%. Reduced sensor masking and elimination of asymmetry problems associated with targeting pod carriage on a wing station will yield better aircraft handling, increased bring-back capability, and significantly increased combat effectiveness in support of OIF and Overseas Contingency Operations (OCO). FY08 supplemental provided for Station 4 kit procurement. FY09 Overseas Contingency Operations (OCO) funds are provided for AV-8B Expeditionary Litening Pod Upgrade. Funds provided will allow for upgrade of presently procured LITENING Targeting pods to GEN4 capability in order to maintain commonality with the F-18 and EA-6B platforms. Pods are presently being procured by F/A-18 and EA-6B. This configuration will allow commonality by upgrading the existing inventory of pods and also keeping Contractor Logistics Support (CLS) costs down. This improvement will accelerate the upgrade of AV-8B pods to a Plug and Play II/GEN4 WRA configuration as directed by DC(A). Upgrade will increase combat capability by providing video downlink and extended range to the ground based EPLRS radio and support USMC AV-8B deployments to OCO.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

The Targeting Pod is a non developmental item and has been in full production for several years. It was a winner of a targeting FLIR competition for the Air Force Reserve and Air National Guard and put in service on their F-16s 2nd Qtr FY00. The design, integration, and testing of the Targeting Pod for the AV-8B was done on the Radar and/or Night Attack during 3rd Qtr FY00. The integration utilized existing aircraft software, a weapons station adapter, and Targeting Pod interface software. PEO(A) had approved the acquisition strategy to acquire the pods through an existing USAF contract and provided a targeting pod capability to the Fleet in 1st Qtr FY02. Additional full Litening integration to utilize targeting information from the Litening Pod in OC1.2 to create aircraft targeting solutions was developed and tested under this OSIP and introduced under the H2O OFP program. Video datalink with the ability to transmit Litening POD video (to Rover III grand stations utilized by forward air controllers) was introduced as Rover upgrades. Station 4 efforts determine feasibility of carrying the Pod on centerline station to allow for more weapons carriage on other wing stations. The ability to carry the Litening Pod on wing stations 2,5,6 and multi-target cueing is included in the H4.0/H5.0 Program. Future upgrades will include retrofit of current Rover Pods with new transmitters and upgrading existing Pods to Rover configuration. Congressionally directed funding in the amount of \$1.7M in FY06 and \$4.2M in FY07 was allocated for Litening on Station 4 (Centerline) in support of OCO. Congressionally directed funding in the amount of \$3.25M in FY07 for Litening Pod Upgrade. FY07 Supplemental directed funding, in the amount of \$9.5M, enabled IP communications (chat, status of forces, imagery, and pre-formatted messages) via radio relay among dispersed tactical elements and provide enhanced collaboration capability between EA-6B, F-18 and AV-8B pilots and corresponding Joint Forward Air Controllers (JFACs) and Tactical Air Control Party/Post (TACP) personnel, allowing more accurate targeting and faster assessments.

FINANCIAL PLAN: (TOA, \$ IN MILLIONS)

	PRIOR YEARS		FY 2008		FY 2009		FY 2010		FY2010 OCO											
	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$
RDT&E																				
PROCUREMENT																				
INSTALLATION KITS																				
Litening PD/ROVER	2	4.9																		
Night	44	.1																		
POD RETROFIT KITS	47	3.9																		
Radar	47	.1																		
Reman	47	.1																		
Station 4 Pods	29	1.7	28	1.7	18	1.2	5	.3												
INSTALLATION KITS N/R		7.6																		
INSTALL EQUIPMENT																				
CFE PODS	96	124.6																		
Pod Upgrade Kits **	16	4.3	10	2.8	43	34.5	9	2.7												
MULTI STATION	127	1.9																		
INSTALL EQUIPMENT N/R		8.5																		
ECO		1.1																		
DATA		1.1		.3		.1														
TRAINING EQUIP		5.8		.5		.5		.2												
SUPPORT EQUIP		1.6																		
ILS		.6																		
OTHER SUPPORT		43.4		2.1		2.8		.4												
INTERIM CONTRACTOR SUPPORT																				
***INSTALLATION COST			2	1.2	7		24	1.0												
TOTAL PROCUREMENT		211.3		8.6		39.1		4.6												

Asterisk (*) indicates amount value less than \$51K

Asterisk (**) Funds previously represented in line INSTALLATION KITS N/R

Asterisk (***) FY08 Supplemental funds for Installation of 18 Sta 4 Mods as follows: FY08 Qty 2, FY09 Qty 7, and FY10 Qty 9.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: AV-8B Night Attack & Radar/Night Attack MODIFICATION TITLE: AV-8B LITENING POD(OSIP 023-00)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Depot Installation

ADMINISTRATIVE LEADTIME: 1 Months PRODUCTION LEADTIME: 11 Months

CONTRACT DATES: FY 2008 Sep 08 FY 2009 Nov 08 FY 2010 Nov 09

DELIVERY DATE: FY 2008 Sep 09 FY 2009 Nov 09 FY 2010 Nov 10

(\$ in Millions)

Cost:	PRIOR YEARS		FY 2008		FY 2009		FY 2010		FY2010 OCO												
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
FY 2007 & PY (29) Kits			2	1.2	7		20	.8													
FY 2008 (28) kits							4	.3													
FY 2009 (18) kits																					
FY 2010 (5) kits																					
FY 2011 () kits																					
FY 2012 () kits																					
FY 2013 () kits																					
FY 2014 () kits																					
FY 2015 () kits																					
TO COMPLETE (49) kits																					
Total			2	1.2	7		24	1.0													

Note: FY08 Supplemental funds for Installation of 18 Sta 4 Mods as follows: FY08 Qty 2, FY09 Qty 7, and FY10 Qty 9.

Installation Schedule

	FY 2007 & PY	FY 2008				FY 2009				FY 2010				FY 2011				FY 2012				
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
In		2					2	5	5	6	6	7										
Out				2			1	5	5	5	7											

	FY 2013				FY 2014				FY 2015				To Complete	Total	
	1	2	3	4	1	2	3	4	1	2	3	4			
In															
Out															

Exhibit P-3a

MODIFICATION TITLE: ENGINE LIFE MANAGEMENT PROGRAM(OSIP 002-04)MODELS OF SYSTEMS AFFECTED: TAV-8B, AV-8B Day, AV-8B Night, AV-8B Night/Radar TYPE MODIFICATION: Safety

DESCRIPTION / JUSTIFICATION:

The AV-8B is a single engine aircraft with unique capabilities. The VSTOL environment is very unforgiving and allows no tolerance for engine problems. In the past, the Pegasus F402 has suffered from a less than optimal safety and reliability record demonstrating a 12.11 mishap (Class A) per 100,000 flight hours compared to a historical average rate of less than 2.0 over the rest of the Navy and Marine Corps in recent years. The Engine Life Management Program is a comprehensive program to increase safety of flight and operational readiness of the AV-8B F402-RR-408 Engine. Funding provided is to incorporate Engineering Change Proposals to increase safety of flight and operational readiness of the F-402-RR-408 Engine.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

The Engine Life Management Program was developed in October 2000. OSIP 02-04 supports the Harrier AV-8B Engine Life Management Program (ELMP) through APN funding. Power Plant changes are required throughout the aircraft service life as the aircraft ages and operationally revealed deficiencies are discovered, researched and solutions engineered. The Component Improvement Program (CIP), which is RDT&E funded, provides for the developing and demonstrating of the engineered solutions to these deficiencies and through the Engineering Change Proposal (ECP) process the Power Plant changes are initiated. The power plant program procures the necessary kits, installation, non-recurring engineering, and technical data. The kits provided are for engine and propulsion related hardware to support the AV-8B F402 engine such as nozzle guide vanes (NGV), Pilot Lever Angle Units (PLAU), Fuel Control Units, Generator Turbine Starters (GTS) and accessory components, rotors and vanes for compressor sections, power turbines, combustion sections, exhaust ducts, engine monitor systems, and blade and vane coatings and foils to improve Foreign Object Damage (FOD) tolerance. The purpose of the program is to increase safety of flight and operational readiness of the AV-8B F402-RR-408 Engine. The ELMP is comprised of several Engineering Project Description investigations and a series of tri-annual Accelerated Simulated Mission Endurance Tests (ASMET). The Engineering Project Description (EPD) investigations and ASMET tests provide data points for existing Fleet problems and predict future engineering issues with the F402-RR-408. The EPD investigations are conducted annually and an ASMET test began 4Q/04. Engineering Change Proposals resulting from Engineering Investigations and ASMET teardown results will be researched and their development formalized under the development program and incorporated into the F402-RR-408 via OSIP 02-04.

ECP-589 GTS Chip Detector - New chip detector for early detection of potential
 ECP-951 GTS Exhaust Duct
 ECP-3532 Bulkhead Cracking
 ECP-3584 PPC 180
 ECP-3605 Change the quill shaft number from 1760-4004 to 1910-4002 for -408 Engine FMUs.
 ECP-3629 Revised Oil Breather Vent Pipe
 ECP-3641C1/PPC 196
 ECP-3647 Improved Alignment of Bulkhead Sealing Rings
 ECP-3705R1 Two Piece Bottom Heat Shield ECP- 3754 HP8 Pipe Clamps
 ECP-3733 PPC 213
 ECP-3739 PPC 214
 ECP-3743 PPC 215
 ECP-3745 Combustion Chamber Improvement
 ECP-3800 PPC 223, QEC 3
 ECP-3800 PPC 216
 ECP-3806 Rear Nozzle Trimmers - Pad for Centrally Tied Trimmer
 ECP-3813 Oil Piping #3 Vane
 ECP-3843 Sand Tolerant NGV - Revised NGV's to improve durability and increase
 ECP-3848R1 HPC Casing Manifold Bridge Pipe
 ECP-3852 LPC Stage 2 Vanes Hard Coating
 ECP-3854R1 LPC3 Vane Sealing Strip
 ECP-3855 LPCI Dampning Foil
 ECP-3868R1 Improved GB Lubrication
 ECP-3881 FMU Shut Off Valve
 ECP-3883 Introduction of IBI
 ECP-3886 PDR Assembly component life damaging particles within the GTS
 ECP-3887 IGW Position Transmitter with Rev. Drive Shaft
 ECP-3898 Introduction of replacement gears at various engine locations
 ECP-3903 Modified BOV to prevent stiction
 ECP-3904 Encapsulated Revision
 ECP-3905 FMU DRIVE SHAFT
 ECP-3892 LPC Rotor 2 Blade with Revised Stagger Angle
 ECP-3893 LPS 1, 2, & 3 Van Serialization
 IPPC 227 FDS

The following TBD ECP's are revisions to improve durability and increase component life and or introduce new parts due to obsolescence

ECP-TBD GTS PWR Turbine/Compressor RGW/Compressor Turbine - Revision due to obsolescence, introduces a new part number.
 ECP-TBD CCOC Thermocouples
 ECP-TBD HPC Vane Modification
 ECP-TBD LPT1 Liner
 ECP-TBD Introduction of new HPT2 Blade
 ECP-TBD Fine Oil Filter
 ECP-TBD Control System Obsolescence
 ECP-TBD EVICS IDEC POR Correction
 ECP-TBD EVICS IDEC Diagnostic Improvements
 ECP-TBD EVICS Obsolescence
 ECP-TBD EVICS HMU Pilot Valve Improvements
 ECP-TBD DECLJ Obsolescence
 ECP-TBD Final Drive End-Similar to RAF design
 ECP-TBD Hot nozzle redesign - cracking problem
 ECP-TBD Exhaust Diffuser Redesign
 ECP-TBD Thrust Push Improvements
 ECP-TBD GTS Improvements
 ECP-TBD No 2 Bearing Re-design
 ECP-TBD LPC1 Vane Thick Trailing Edge
 ECP-TBD LPB Production Processing of F402 LPC 1 Blade Root (dovetail)
 ECP-TBD LPB Production Processing of F402 LPC Stage 1 Disk Slots

ECP-TBD DECU/FMU WOW/ Improvements
 ECP-TBD LPC 1 Blade FOD Tolerance (LPB)
 ECP-TBD LPC 1 Blade Dovetail Coatings (LPB)
 ECP-TBD #2 Bearing Redesign
 ECP-TBD PLAU Shut Off Valve
 ECP-TBD Obsolescence, starter contactor
 ECP-TBD Obsolescence, protection unit
 ECP-TBD Obsolescence, starter motor
 ECP-TBD New break-in box with expanded capability
 ECP-TBD Power turbine rotor blade failure fix
 ECP-TBD Nozzle and spigot ring assy material change for improved reliability
 ECP-TBD New Starter Contactor - improved reliability
 ECP-TBD FMU Obsolescence ECP
 ECP-TBD 2 Transducer modification
 ECP-TBD DCU Redesign

FINANCIAL PLAN: (TOA, \$ IN MILLIONS)

	PRIOR YEARS		FY 2008		FY 2009		FY 2010		FY 2010 OCO												
	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	
RDT&E																					
PROCUREMENT																					
INSTALLATION KITS																					
ECP-3843 SAND TOLERANCE	87	5.9	8	1.8	7	1.6	8	2.0													
ECP-589 MAGNETIC CHIP DETECTOR	309	1.4																			
INSTALLATION KITS N/R		.1																			
INSTALL EQUIPMENT																					
ECP TBD CSEMS/DUAL TRANSDUCER					16	1.6	34	3.4													
ECP TBD EVICS																					
INSTALL EQUIPMENT N/R						.2		.1													
ECO																					
DATA		1.3		.5		.4		.2													
TRAINING EQUIP																					
SUPPORT EQUIP		3.1		4.0		.3		.2													
ILS		4.3		1.4		1.3		1.1													
OTHER SUPPORT		1.3		.5		.1		.1													
INTERIM CONTRACTOR SUPPORT																					
INSTALLATION COST																					
TOTAL PROCUREMENT		17.5		8.1		5.6		7.1													

Asterisk (*) indicates amount value less than \$51K

EMS Kits are "O" Level Installations. EMS kit quantity is based on the number of aircraft.

Exhibit P-3a

MODIFICATION TITLE: ALE-47 (OSIP 025-04)

MODELS OF SYSTEMS AFFECTED: AV-8B TYPE MODIFICATION: Upgrade

DESCRIPTION / JUSTIFICATION:

ALE-47 is a form-fit enhanced functionality countermeasures dispenser system replacement for the obsolete ALE-39. This OSIP installs more reliable digital sequencers and dispenser magazines to improve aircraft readiness. When fully funded, the Warfare Management Computer (WMC) software will be modified to allow full ALE-47 functionality. Congressionally directed funding in the amount of \$4.810M was allocated in FY06 for ALE-47 in support of Overseas Contingency Operations (OCO). FY09 and FY10 OCO funds are provided for the procurement and installation of ALE 47 wiring kits. These kits will provide the deployed fleet with increased readiness, reducing the risk associated with the limited electronic warfare capabilities that the current ALE-39 configuration provides. This effort provides for procurement of additional hardware to bring the present day system up to full ALE-47 functionality.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES: Improves aircraft readiness by replacing failure prone analog sequencers and providing expanded countermeasures capability. Positions the AV-8B for future integration of advanced counter measures expendables and programs.

FINANCIAL PLAN: (TOA, \$ IN MILLIONS)

FISCAL YEAR	PRIOR YEARS		FY 2008		FY 2009		FY 2010		FY 2010 OCO														
	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	
RDT&E																							
PROCUREMENT																							
INSTALLATION KITS	28	0.4																					
ALE-47 Wiring					129	5.8			125	6.1													
INSTALL EQUIPMENT																							
INSTALL EQUIPMENT N/R																							
ECO																							
DATA		0.7																					
TRAINING EQUIP		0.1																					
SUPPORT EQUIP		1.5																					
ILS		0.3																					
OTHER SUPPORT		3.9				0.3				0.3													
INTERIM CONTRACTOR SUPPORT																							
INSTALLATION COST						2.5		129		2.5													
TOTAL PROCUREMENT		6.8				8.6				8.9													

Asterisk (*) indicates amount value less than \$51K.

Exhibit P-3a

MODIFICATION TITLE: OBSOLESCENCE REPLACEMENT(OSIP 006-06)

MODELS OF SYSTEMS AFFECTED: T/AV-8B TYPE MODIFICATION: Safety

DESCRIPTION / JUSTIFICATION

This OSIP provides for maintaining the readiness of the AV-8B weapons system until its projected end of service, which is now expected to extend to 2025 or until replaced by STOMLJSF. This requires the airframe and integrated systems to exceed planned service life and will require both structural and obsolescence solutions. Funds will be utilized to manage and prepare, process and incorporate ECPs and implement changes to sustain and improve AV-8B weapons system readiness including safety, mission availability, structural integrity, and component (avionics/systems) reliability, maintainability, and obsolescence conditions as they arise. Due to fleet aircraft PAA inventory shortfalls, all depot level modification installations must be planned and programmed concurrent with Integrated Maintenance Plan (IMP) scheduled depot overhaul events to minimize aircraft out-of-service periods, to the extent allowed by authorized budget. The program intends to pursue resolution of ECP-282-Fuel Coupling- will install new clamshell couplings with safety straps and modify the wing to fuselage fuel interconnect with threaded couplings; ECP-283- Water Tank Pre-Filter-incorporates a filter to prevent contamination and engine water flow stoppage at the poppet drain valve; ECP-305- Throttle and Stick Grip, Night Attack and TAV-8B- replaces obsolete throttle and stick grips with current fleet configuration; ECP-305- Fuel Belows Conduit Leak-incorporates a safer double bellows design with increased gage material; ECP-CP-PT-042 Center Tank Improvement-Replaces failing fuel tank structural frames 19, 20, 21 with a safer strengthened design; ECP-PMA-001 Pylon Hooks - correct in-service deficiency to restore safe separation and jettison of weapons. ECP-TBD Alt Structural Modification Improvement- will install structural components orders in all aircraft to reduce stress and prevent Frame 43 bulkhead cracking and potential catastrophic failure in the area of the vertical tail and horizontal stabilizer; ECP-308 Electronic Altitude Airspeed Sensor (EAAS)-modifies EAAS unit to correct crew ejection safety deficiencies; ECP-TBD Bullet Fairing- modify to prevent corrosion deterioration of fairing internal structure. ECP-TBD- Main Landing Gear (MLG) Hand Operating Strut- redesign to forestall premature strut wear resulting in premature failure of MLG door mechanism; ECP-TBD Frame 16 Nozzle Ring- provide solution of fatigue cracking in the engine nozzle ring raceway and bulkhead buttresses; ECP-321 Main Landing Gear Upper Torque Link Pin-incorporates redesign with reduced diameter and incorporate new material to reduce cracking and thread chip-out conditions which compromise main landing gear integrity; ECP-323 Nose Landing Gear Steering Dowel Pin-incorporates redesign with strengthened material to resist stress failures; ECP-322 Emergency Landing Gear Blow Down Bottle-incorporates redesign to prevent helium loss resulting in failure to fully extend and lock all four landing gear. ECP-CP-043 Frame 30, 31 and 32 Heatshield- implement solution for heatshield fatigue cracking; ECP-PMA-2008-0002 Cargo Pod (Blivet)- replaces obsolete pod currently in use with an improved version. ECP-TBD Wheel bearing seal/grease- will modify the existing wheel bearing seal to better prevent water intrusion and increase grease retention. Will also replace the existing grease with a higher lubricity, water resistant grease; ECP-TBD Blast Shields- implement solution for acoustic fatigue failures; ECP-CP-049 LERX-modify wing leading edge root extensions; ECP-324- Forward ECS Air Ducts- modify failing staying ties/fasteners which are causing FCD failures in the ECS system; ECP-TBD Display Computers- modify or replace to address processor obsolescence; power panel, terminal, and circuit breaker reliability improvements; ECP-CP-045 DC Contactor reliability improvements; GAL12 25MM Gun system reliability improvements; TAV-8B 30KVA Generators- replace obsolete 20KVA generators and generator control units with current fleet standard 30KVA systems. FY07 Overseas Contingency Operations (OCO) funding provided to procure additional 30KVA generators, due to the fact that the current 20KVA generators will be unsupportable by late 2008 due to obsolescence. Without replacement of the obsolete 20KVA generator units, there will be fewer aircraft ready and available to operate in OIF and OOD. Aircraft will be grounded and current 30KVA spares inventory depleted, resulting in prolonged degraded fleet readiness unless 20KVA generators are replaced with 30KVA's. Failure to replace the obsolete 20KVA units will result in critical obsolescence operational impacts to Fleet Pilot Training Rates (PTR); ECP-320 Ventral Fin (VFIN) Antenna-replace current deficient, unreliable antennas with an improved design; ECP-307 SAMSU Beed Air Filtering reliability improvements; ECP-TBD Internozzle Fairing-redesign to prevent premature fatigue and acoustic cracking; ECP-TBD Thermal Battery to identify and incorporate obsolescence remediation; FLE Tracking will incorporate Software Trouble Report (STR) corrections to allow the recording of Fatigue Life Expended on the AV-8B concurrent with the release of the H5.0 Operational Flight Program (OFP). This action will allow the accurate tracking of FLE to facilitate the transition from flight hour tracking with a 6,000 hour limit, to 100% FLE. This effort will increase the flight hours available to a minimum of 12,000 hours, and will reduce the impact of combat operations in support of Overseas Contingency Operations that drive flying of the aircraft beyond Weapons Systems Planning Document estimates. ECP-CP-044 Power Management Indicator/ Engine Monitoring Unit (PVM/EMU)-redesign to eliminate obsolescence issues, and priority emergent safety and obsolescence issues as they arise. Congressionally directed funding in the amount of \$2.3M for V-Fin Antenna and \$.637M for 25MM Gunbot Conversion was allocated in FY06 in support of OCO. The FY06 OCO V-Fin Antenna funding in the amount of \$2.3M, was redirected to ALE-47 (OSIP 25-04) OCO.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

Non-recurring engineering and ILS work on new ECPs began in FY07 for future ECP procurements and installations. O-Level kits and first initial D-level valver kits will be procured in FY07, with first depot level installations to occur in FY08. Kit procurements and installations will continue in FY09, and throughout the FYDP. Support equipment procurements will continue to support future installations and manage aircraft obsolescence.

FINANCIAL PLAN: (TOA, \$ IN MILLIONS)

	PRIOR YEARS		FY 2008		FY 2009		FY 2010		FY 2010 OCO												
	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	
RDT&E																					
PROCUREMENT																					
INSTALLATION KITS																					
ECP-282 Fuel Coupling P1	1	*	150	.4																	
ECP-282 Fuel Coupling P2	1	*	34	.4	21	.3	25	.5													
ECP-283 Water Tank Pre-Filter	149	.5																			
ECP-307 SAMSU			2	*	146	.8															
ECP-CP-042 Ctr Tank Mod			6	.4	15	1.0	14	1.0													
ECP-CP-044 PMI/EMU	150	.1																			
ECP-CP-045 DC Contactor					148	.2															
ECP-PMA-001 Pylon Hooks	1,057	*																			
ECP-321 MLG UTLP					148	.9															
ECP-323 NLG Steering Dowel Pin			2	*	48	.1	48	.1													
ECP-322 Blow-Down Bottle			148	.1																	
ECP-324 Forward ECS			2	*	146	1.1															
ECP-TBD Internozzle Fairing																					
ECP-TBD DC Vibration Isolators Panel					2	.1															
ECP-TBD Bullet Fairing Replacement					1	.1															
ECP-TBD Alt Structural Mod																					
INSTALLATION KITS N/R			2.0		1.1		2.0		.4												
INSTALL EQUIPMENT																					
30KVA Generators	18	4.1																			
ECP-TBD Display Computer Kits																					
ECP-303 EAAS					168	.6															
ECP-TBD Thermal Battery																					
FLE TRACKING		.4																			
ECP-PMA-002 Cargo Pods	36	1.1																			
INSTALL EQUIPMENT N/R		*							.1												
ECO																					
DATA		1.0		.1		.3		*													
TRAINING EQUIP						.2															
SUPPORT EQUIP		3.4		.6		1.0		.3													
ILS		.5		.3		.6															
OTHER SUPPORT		3.5		2.7		2.9		4.0													
INTERIM CONTRACTOR SUPPORT																					
INSTALLATION COST			1	.8	36	2.6	61	2.6													
TOTAL PROCUREMENT		16.6		7.0		14.8		9.0													

Asterisk (*) indicates amount value less than \$51K

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: T/AV-8B MODIFICATION TITLE: OBSOLESCENCE REPLACEMENT (OSIP 006-06)

INSTALLATION INFORMATION: Quantities will not match kit procurement line due to "O" Level installs.

METHOD OF IMPLEMENTATION: Installation will be accomplished by Naval Aviation Depot or Contractor Drive In Mod or FMT.

ADMINISTRATIVE LEADTIME: Various Months PRODUCTION LEADTIME: Various Months

CONTRACT DATES: FY 2008 Multiple FY 2009 Multiple FY 2010 Multiple

DELIVERY DATE: FY 2008 Multiple FY 2009 Multiple FY 2010 Multiple

(\$ in Millions)

Cost:	PRIOR YEARS		FY 2008		FY 2009		FY 2010		FY 2010 OCO												
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
FY 2007 & PY (1) kits			1	-																	
FY 2008 (44) kits			1	0.7	30	1.5	13	0.1													
FY 2009 (87) kits					6	1.1	45	2.1													
FY 2010 (87) kits							3	0.5													
FY 2011 () kits																					
FY 2012 () kits																					
FY 2013 () kits																					
FY 2014 () kits																					
FY 2015 () kits																					
TO COMPLETE () kits																					
Total			2	0.8	36	2.6	61	2.6													

Installation Schedule

	FY 2007 & PY	FY 2008				FY 2009				FY 2010				FY 2011				FY 2012				
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
In				1	1	9	9	9	9	15	15	15	16									
Out				1	1	9	9	9	9	15	15	15	16									

	FY 2013				FY 2014				FY 2015				To Complete	Total	
	1	2	3	4	1	2	3	4	1	2	3	4			
In															
Out															

MODIFICATION TITLE: AV-8 ATTRITION RECOVERY DAY TO NIGHT(OSIP 015-07)

MODELS OF SYSTEMS AFFECTED: AV-8B TYPE MODIFICATION: Upgrade

DESCRIPTION / JUSTIFICATION:

The present AV-8B inventory is insufficient to maintain Primary Authorized Aircraft (PAA), provide for an effective Integrated Maintenance Plan (IMP), allow for crash damage repair and attrition, and accomplish timely reliability and capability upgrades through transition to JSF. Currently obsolete configured AV-8B Harrier aircraft will be restored to fleet representative configuration through modifications primarily integrated by the prime contractor to compensate for attrition and the resultant PAA shortfall. Individual aircraft kits will vary based on utilization and configuration at the time the aircraft was taken out of service. Rolls-Royce Pegasus -408B engines will be provided from current fleet inventory. Modification engineering integration and incorporation of components and systems are to be performed by the contractor, augmented by government field activity GFE component baselining and RFI certifications as required. FY07 OCO supplemental funding was provided to accelerate upgrade of the first attrition recovery aircraft, a Day Attack configured aircraft, into a Night capable asset. Failure to address inventory shortfalls will progressively aggravate the effect of PAA deficiencies on mission availability and combat relevance to support Overseas Contingency Operations (OCO), as well as operational safety. While this is not a total aircraft inventory solution, the additional aircraft will provide critical pipeline aircraft to help maintain operational aircraft in AV-8B squadrons supporting OCO.

The program has been funded \$15.5M of FY07 OCO funding. FY10 OCO funding will enable upgrade of one obsolete configured AV-8B asset to a Fleet relevant configuration to provide for partial inventory recovery. These aircraft directly support ground operations in Iraq and Afghanistan and routinely deploy aboard LHA/D ships in support of global security missions.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

Non-recurring engineering and kit buys for the first upgraded aircraft were completed with FY07 OCO supplemental funding, and the upgrade of that aircraft is underway. Non-recurring engineering (for varying configuration baselines), kit buys and installations for the second two attrition recovery aircraft also currently underway.

FINANCIAL PLAN: (TOA, \$ IN MILLIONS)

	PRIOR YEARS		FY 2008		FY 2009		FY 2010		FY 2010 OCO													
	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$
RDT&E																						
PROCUREMENT																						
INSTALLATION KITS																						
Installation Kits (A Kits)	1	5.9	1	0.5	1	0.8	1	6.5	1	7.0												
Installation Kits (A Kits)--GFE	1	4.1	1	0.1	1	0.5	1	2.9	1	3.2												
INSTALLATION KITS N/R		7.6		5.4		4.2																
INSTALL EQUIPMENT																						
Install Equip (B Kits)	1	0.1																				
Install Equip (B Kits)--GFE	1	3.8			1	0.6	1	2.5	1	2.8												
INSTALL EQUIPMENT N/R																						
ECO																						
DATA				1.6		0.2				2												
TRAINING EQUIP																						
SUPPORT EQUIP		0.2																				
ILS		0.5		0.4						*												
OTHER SUPPORT		0.3		0.7		0.9		0.9		4												
INTERIM CONTRACTOR SUPPORT																						
INSTALLATION COST			2	5.7	1	2.4				5.7												
TOTAL PROCUREMENT		22.5		14.4		9.6		12.9		19.4												

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: AV-8B

MODIFICATION TITLE: AV-8 ATTRITION RECOVERY DAY TO NIGHT(OSIP 015-07)

INSTALLATION INFORMATION: All modification kit materials will be delivered fully installed in the flight accepted aircraft.

METHOD OF IMPLEMENTATION: Installation will be accomplished by Contractor Drive-In Mod and Depot field mod team

ADMINISTRATIVE LEADTIME: 9 Months PRODUCTION LEADTIME: Various Months

CONTRACT DATES: FY 2008 Various FY 2009 Various FY 2010 Various

DELIVERY DATE: FY 2008 Various FY 2009 Various FY 2010 Various

(\$ in Millions)

Cost:	PRIOR YEARS		FY 2008		FY 2009		FY 2010		FY 2010 OCO													
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
FY 2007 & PY (1) Kits			1	4.7																		
FY 2008 (1) kits			1	0.9																		
FY 2009 (1) kits					1	2.4																
FY 2010 (1) kits										5.7												
FY 2011 () kits																						
FY 2012 () kits																						
FY 2013 () kits																						
FY 2014 () kits																						
FY 2015 () kits																						
TO COMPLETE () kits																						
Total			2	5.7	1	2.4				5.7												

FY10 OCO equipment is installed in FY11

Installation Schedule

PRIOR YEARS	FY 2008				FY 2009				FY 2010				FY 2011				FY 2012				
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
In				2		1				1	1										
Out																					

	FY 2013				FY 2014				FY 2015				To Complete	Total	
	1	2	3	4	1	2	3	4	1	2	3	4			
In															
Out															

Exhibit P-40, BUDGET ITEM JUSTIFICATION							DATE: MAY 2009				
APPROPRIATION/BUDGET ACTIVITY Aircraft Procurement, Navy/APN-5 Aircraft Modifications							P-1 ITEM NOMENCLATURE 52500 F-18 Series Modification				
Program Element for Code B Items: 0204136N							Other Related Program Elements				
	Prior Years	ID Code	FY 2008	FY 2009	FY 2010	OCO FY 2010	Total FY 2010				
QUANTITY											
COST (In Millions)	2,993.5		485.0	480.7	484.1	96.0	580.1				
MISSION/DESCRIPTION:											
<p>This line item funds modifications to all F/A-18 aircraft models. The F/A-18 Naval Strike Fighter is a twin-engine, mid-wing, multi-mission tactical aircraft. The F/A-18 is employed in both Navy and Marine Corps squadrons. Commencing with the FY 1988 procurement, both the single seat and two-seat F/A-18's include a night attack capability. F/A-18 can be missionized through selected use of external equipment to accomplish specific fighter or attack missions. This commonality provides the Operational Commander more flexibility in employing his tactical aircraft in a dynamic scenario. The primary design mission for the F/A-18 is a strike fighter which includes the traditional fighter applications, such as fighter escort and fleet air defense, combined with the attack applications, such as interdiction and close air support. Since the same fighter and self defense capability is retained, the overall goal of the modifications budgeted in FY 2010 is to implement commonality/capability and structural safety and reliability improvements. The specific modifications budgeted and programmed are:</p>											
(TOA, \$ in Millions)											
<u>OSIP No.</u>	<u>Description</u>	<u>Prior Years</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>OCO FY2010</u>	<u>Total FY2010</u>				
011-84	Correction of Discrep.	606.6	75.3	60.2	56.9		56.9				
012-96	PIDS	62.9	3.0	3.7			0.0				
010-99	DCS	22.2	1.5	1.4	0.8		0.8				
011-99	SLMP	399.3	86.4	114.0	118.1		118.1				
012-99	MIDS	347.0	15.1	19.2	20.7		20.7				
021-00	USMC F/A-18 UPGRADE (ECP583)	267.4	20.5	16.6	17.6		17.6				
024-00	JHMCS	118.7	29.5	38.2	38.1		38.1				
012-01	ATFLIR	634.9	68.8	57.9	24.8		24.8				
019-01	E/F 2000 hr Correction of Discrep.	38.8	2.5	0.2			0.0				
005-02	Digital Wing Tip for AIM 9X	2.2	0.7				0.0				
006-02	C/D Training System	76.9	10.2	6.6	6.9		6.9				
012-03	E/F 4000 hr Correction of Discrep.	9.7	0.6				0.0				
013-03	E/F 6000 hr Correction of Discrep.	4.1	0.9				0.0				
014-03	E/F Correction of Operational Discrep.	102.2	27.1	27.1	41.5		41.5				
023-04	Core Avionics Upgrade	49.3	6.4	2.7	6.2		6.2				
024-04	Litening	128.0	29.5				0.0				
008-05	Reserve Squadron ECP560	14.5		0.3			0.0				
009-06	Link 4A Replacement	7.0	3.3	4.1			0.0				
002-07	AESA	13.7	96.9	105.8	120.8		120.8				
013-07	SHARP	4.8		11.6			0.0				
013-08	FACE		6.8				0.0				
002-10	Network Centric Ops				29.2		29.2				
011-10	EA-18G Unique				2.6		2.6				
006-12	IRST						0.0				
021-08	EW			11.3		96.0	96.0				
	Inactive OSIPS	83.3									
TOTAL		2,993.5	485.0	480.7	484.1	96.0	580.1				
	RESERVE INCLUDED IN TOTAL	11.7	11.8	7.9	7.9	0.4	0.4				
<p>Note 1: FY 2008 funds was realigned from OSIP 007-03 to BLI 0576 OSIP 012-01. Note 2: Asterisk indicates amount less than \$51K.</p>											

Exhibit P-3a	INDIVIDUAL MODIFICATION
MODIFICATION TITLE:	CORRECTION OF DISCREPANCIES IDENTIFIED DURING PRELIMINARY EVALUATION, SUBSEQUENT FLIGHT TEST PROGRAMS AND FLEET OPERATIONS (OSIP 011-84)
MODELS OF SYSTEM AFFECTED:	F/A-18 A/B/C/D TYPE MODIFICATION: SAFETY /RELIABILITY/IMPROVEMENT
DESCRIPTION/JUSTIFICATION:	
<p>Corrections to discrepancies found during testing and evaluation can sometimes be incorporated into production aircraft, effective with the physical configuration audit which establishes the product baseline of the aircraft. However, when this cannot be done due to time constraints, retrofit of the changes into already delivered aircraft requires funding through the Aircraft Modification Program. Additionally, deficiencies discovered during fleet operations must be corrected. The unacceptable alternative to retrofitting would be multiple configurations in the fleet, which will create maintenance and supply problems, and in many cases the mission capability of the aircraft would be adversely affected as well as reduced service life. Corrections to the following items/conditions are required:</p>	
<p>External Stores EMI Protection (ECP 087S1) Auto AC Bus Isolation (ECP 121R1) Battery Control Relay Unit (ECP 165R1) FY86 Block Upgrade (ECP 178R1C1) Center Fuselage Structural Mods (ECP 241R1) Dorsal Longeron (ECP 251) Dorsal Longeron (ECP 251R1) A/B Blue Angel Aircraft (ECP-254) 470.5 Bulkhead (ECP 262)* Righthand AMAD Bay (ECP 267R1)* Y508 Former (ECP 276) Strengthening Of Aft Area Of VT Above The Root Rib (ECP-301) Strengthening Of Fwd Area Of VT Including Root Rib Area (ECP-302) Improv. To VT Suppt Struct @ Y598 Otdb Former In Aft Fuse (ECP-303) 77.5% Spar, Crack At Upper Tool Hole (ECP-307) Strengthening Upper Areas Of The VT (FT96 Cracks) (ECP-308) AFT Engine Mount (ECP 305R1)* Y657.35 Engine Bay Door Former (ECP 306) Main Landing Gear (MLG) Planning Link (ECP 311)* MLG Trunnion Upgrade (ECP 319)* Y488 Bulkhead (ECP 320) Wing Fatigue Repair (ECP 353) MLG Shoulder Bolt (ECP 355) ASPJ System Improvement (ECP 364) Y470 Bulkhead Improvement (ECP 365) #1 Fuel Cell Floor (ECP 367) MLG Retract Actuator (ECP 375) Fretting on Formers & Spindles (ECP 391) Fuselage Skin, Y518 to Y534 (ECP 402)* Fuselage Skin, Y518 to Y534 (ECP 402R1)* Inlet Duct Skin at Y453 (ECP 417) Y470.5 Bulkhead MLG Trunnion (ECP 428) Speed Brake Trough (ECP 440) SUU-63 Wing Pylon Door Panel (ECP 488) Y470.5 Bulkhead Fatigue Change (ECP 492) Fuselage Skin at Y453 (ECP 498) Nacelle Skin Fatigue Improvements (ECP 501) LAU-115 Sparrow Mod (ECP 506)* ST-16 Failures (ECP 536)* Improvement of Inner Wing SPAR (ECP 544) Fuel Barrier Web (ECP 548) Wing Drag Longeron (ECP 550)* Y326.5 Plate Nut (ECP 561) Lower Center Keel Fire Hazard (ECP 562) Aileron/Trailing Edge Flap (ECP 574) Serocylinder Test Station (ECP-598) Flight Control Computer (ECP 595) Hydraulic Temp Gauges (ECP NI 879) Environment Control System Wiring (NI 742) Wing Fuel Dams (NI 796) MLG Trunnion Assembly (NI 824) Heat Exchanger (NI 827) Night Vision Display System (NVDS) (NI 830) Trailing Edge Flap (NI 839) Birdstrike Res Windshield (NI 843) Aileron Hinge Mod (NI 844) ANTI G VALVE (ECP XXX) Fuel Cell Floor Crack (ECP 973)</p>	<p>Provide for the application of external stores EMI Protection. This ECP includes Installation Costs ONLY. Modifies the 50A Battery Charging Converter installation to automatically isolate the busses and reset the generators following a dual power outage. Safety modification to the utility/emergency battery control circuits and adds a battery relay control unit. Prevents inadvertent battery discharge. Increases the power handling capabilities of the four port antenna and the RF switch able filter in order to accommodate the RF power output requirements of the ASPJ System. Improves fatigue for the Dorsal Deck, Duct Skin rivets at Y442, ECS Inlet Casting, and Y419 Nacelle Former at Ramp Truss Attachment. Life extension modification to the Dorsal Longeron. Life extension modification to the Dorsal Longeron. Modifications for the Naval Flight Demonstration Squadron (NFDS), Part I Smoke Display System, Part II VOR/ILS, Part III Aircrew Member Restraint System Improves the fatigue life of the Y470.5 Bulkhead Outer Cap. Reliability and maintainability improvement to the interference between the motive flow tube and the hot fuel recirculation tube. Increasing the strength of the Y508 Former by increasing the flange thickness and reinforcing the former with integral ribs. This change corrects deficiencies in the aft area of the vertical tail above the root rib. This change corrects deficiencies in the forward area of the vertical tail including the root rib. This change corrects deficiencies in the vertical tail support structure at Y598 outboard former in the aft fuselage. Provides for strengthening the Vertical Tail 77.5% spar to prevent cracks in the area of the upper tooling hole. This change corrects deficiencies in the upper areas of the vertical tail. Safety modification improves the aft engine mount support to prevent cracking in the aft engine mount support fitting. Modifies the existing door former to prevent cracking. Safety modification to the existing planning link assembly. Belleville washers spring is replaced with nested external compression springs to provide additional over center locking force and stroke capability. Safety modification reconfigures and strengthens the MLG trunnion assembly to prevent catastrophic failure upon landing or takeoff. Modifies the Y488 bulkhead to reduce structural stress and improve fatigue life. Modifies the fastener holes in the Wing Panel Forward Spar and the #4 Intermediate Wing Spar to increase fatigue life. Safety modification provides new shoulder bolts to correct a deficiency concerning elongation of the AFT bolt hole in the MLG Door Actuator Support Fitting. Improves reliability and maintainability by improving the cooling system and correcting transmit switchable filter qual test problems. Modifies the Y470 bulkhead to reduce structural stress and improve fatigue life. Safety modification to improve the fuel cell floor strength to prevent cracking during catapult. Redesigns the MLG Retract Actuator Support Fitting and the Flange of Y470.5 Bulkhead where the fitting attaches and revises hydraulic timing to lengthen the Fatigue Life of the structures. Safety modification to correct fretting observed on outboard formers of horizontal stabilizer. Modifies exterior fittings and adds and internal bathtub to strengthen the area, reduce structural stress, and improve fatigue life. Modifies exterior fittings and adds and internal bathtub to strengthen the area, reduce structural stress, and improve fatigue life. Addresses the retrofit design which will provide 12,000 SFH of life without cracks for the Inlet Duct Skin. Corrects the deficiency in the MLG Trunnion support at Y470.5 bulkhead. Modifies the existing speed brake trough area to strengthen it and improve fatigue life. Safety modification to the existing door panel to preclude loss of the door during flight Modifies the thickness of the existing bulkhead web to increase strength and improve fatigue life. Safety modification to strengthen existing fasteners attaching the PIN 74A324350 former to Y453 bulkhead. Retrofits the Inlet Nacelle Skin to correct acoustic vibration related fatigue failures. Modifies the lower rail of the LAU-115 to strengthen the area of the AIM-7 Sparrow missile forward hanger interface and improve fatigue life. Modifies aircraft between Lot VI and Lot XVI or realize Full Life Airframe (6000 Fatigue Hours) Strengthens the existing inner wing spar to improve fatigue life. Safety improvement to the existing fuel barrier web to prevent fuel leaks. Structural improvement to the Wing Drag Longeron due to tabs attached to the closeout webs were cracking during installation. Modifies the existing fasteners at the Y326.5 Bulkhead to improve fatigue life. Safety improvement to the secondary pressure regulator bay to eliminate fire hazards. Provides a full-life improvement for aircraft degradation caused by cracked trailing edge flap and aileron hinges. Provides for the upgrade of aging Peculiar Support Equipment. Improvements in reliability and maintainability of Peculiar Support Equipment and modification to existing Support Equipment. Improves safety-of-flight for the recovery from, and resistance to, out-of-control flight (OOCF) while also eliminating anomalies cited in FCC OFP 91C*004. (NON-RECURRING COSTS ONLY) Improves the reliability of the hydraulic temperature gauges. Modifies wiring to the number 3 Relay Panel Assembly to connect the Left MainGear (LMG) Weight on Wheels (WOW) Relay ABD the Dump/RAM Dump Relay. Safety improvement modifies the inner wing inboard closure rib to prevent fuel leaks. Safety improvement to the MLG trunnion assembly to improve fatigue life and prevent failed landing gear mishaps. Provides for the removal of the nickel core and replaces with a more reliable stainless steel and nickel core. Adds capability to the lighting system to make the NVDS compatible. Safety modification to the trailing edge flap to correct flap departures while in flight. Safety modification to the windshield to protect against birdstrikes during flight. Provide a full-life improvement for aircraft degradation caused by cracked trailing edge flap and aileron hinges. Improves pilot G-Load tolerance as part of the Navy Combat Edge (NCE) Anti-G Protection System. Safety modification to correct cracks at Y431, Y442, and Y453 in the fuel cavity floor deck centerline under tank two and three.</p>

AFT Fuselage Skin Crack (ECP592)
 Wing SPAR Crack (ECP XXX5)
 Forward Lower Keel Modification (ECP NI 931)
 Main Landing Gear (MLG) Axle (ECP 952)
 MLG Y488 Bulkhead (ECP 974NI)
 OBOGS Solid-State Oxygen Monitor (SSOM), CRU-99/A (ECP 590)
 Crease Longeron (ECP 608)
 Heat Deterrent (ECP NI-1013-05)
 MLG Planning Mechanism (ECP 1057NI)
 Bay 3 Shelf Redesign (ECP XXX13)
 Bay 4 Shelf Redesign (ECP XXX14)
 Cockpit Pressurization Warning System (ECP 6217)
 Vertical Tail (ECP XXX-16)
 Canopy/Windscreen (ECP XXX-17)
 NLG/MLG Fatigue Improvements (ECP-XXX18)
 F/A-18 A-D INNER WING CONVERSION (ECP 609)
 NFDS Mods, C&D Conversion (ECP-JAX-F18-001)
 Interwing Conversion ECP XXX-21 (Bundled in ECP-609)
 Repeatable Release Holdback Bar (ECP 0147)
 Redesign of Backrest Operation Plunger (ECP-9384MB)
 F/A-18 Panel, Blank-Center Instrument (ECP-984NI)
 Inner Wing Structure Fatigue Improvement (ECP-1022NI)
 Inboard LEF Crack Modification (ECP-1027NI)
 Inboard TEF Hinge (Wingside)(ECP-1031NI)
 TEF-Aileron Attach Lug Bushing (ECP-1034NI)
 LEF Stop Module & Torque Limiter Improvement (ECP-1054NI)
 AFT Fuselage Structure Failures (ECP-XXX23)
 NACES Improved Upper Catapult Sleeve, Safety ECP (ECP-XXX24)
 ECS/OBOGS Fitting Upgrade, Safety ECP (ECP 1036 NI)

Safety improvement to the fatigue life of the forward skin section of the chem.-milled panels.
 Strengthens the existing front inner wing SPAR to improve fatigue life.
 Improves fatigue life of the Nose Landing Gear (NLG) Drag Brace.
 Incorporation of Full Life redesigned Main Landing Gear Axle Polygon, extending Axle's service life from current 8300 total landings to 13000.
 Restores Full Life to Y488 Bulkhead due to cracks around MLG Uplock hardware holes
 Safety improvement to the OBOGS oxygen system, providing an additional monitoring capabilities against Hypoxia resulting in safer flight operation.
 Restores the load path lost when the Crease Longeron cracks at FS 453.
 Modifies the aircraft to correct structural fatigue problems caused by degraded ECS Peri-Seals.
 Improve MLG components and reduce MLG planning link failures.
 Modify avionic shelves to withstand catapult fatigue loads.
 Modify avionic shelves to withstand catapult fatigue loads.
 Notify pilot when pressurization is lost in cockpit.
 Modify vertical tail former and spars to prevent fatigue cracking.
 Modify canopy/windscreen frames and address delamination.
 Fatigue Improvements to include arresting gear planning link redesign
 Convert Lots 5 through 9 Inner Wings to be used on Lot 10 and above F/A-18C/D aircraft, & convert Lot 10 and 11 InnerWings to be used on Lot 12 and above F/A-18C/D aircraft.
 Removing the weapon systems from the aircraft, install Smoke Generation System and install Auxiliary Fuel Pumps for extended inverted flight.
 Converting Lot 10/11 Wings to Lot 12 and above configuration.
 Modifies the RRRHB to correct problems caused by degraded primary locking segments.
 Safety ECP incorporation a redesigned knurled and rounded top plunger backrest part# MBEU148542.
 Modification Of Center Instrument Panel, ALR-67 Control Indicator Support Bracket.
 Improving inner wing fatigue life Front SPAR.
 Modification will release stress on ILEF attach point to prevent cracks.
 Modification will release stress on TEF to prevent cracks.
 To prevent electronic magnetic interference (EMI) tabs from gouging TEF/AIL hinges causing life limited restrictions.
 Modification to correct failures in the LEF Torque Tubes Drive System Failures
 Modification to correct failed AFT fuselage areas
 Modification to incorporate a redesigned NACES upper catapult sleeve
 Modification to prevent cracks in the interface to an from the OBOGS concentrator by replacing the aluminum coated TEE/Elbow bodies with stainless steel bodies.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

Each change has been or will be tested prior to installation in the F/A-18.

Unit cost variances due to: - Many ECP Kits were/are provided to the Navy at no additional cost (warranty kits).*

- Some ECPs have numerous Technical Directives with different unit costs.

- Some ECPs require no kits, installs only.

Exhibit P-3a INDIVIDUAL MODIFICATION

MODIFICATION TITLE: CORRECTION OF DISCREPANCIES IDENTIFIED DURING PRELIMINARY EVALUATION, SUBSEQUENT FLIGHT TEST PROGRAMS AND FLEET OPERATIONS (OSIP 011-84)

MODELS OF SYSTEM AFFECTED: F/A-18 A/B/C/D TYPE MODIFICATION: SAFETY /RELIABILITY/IMPROVEMENT

FINANCIAL PLAN (TOA, \$ in Millions):

	Prior Years		FY 2008		FY 2009		FY 2010		OCO FY2010										
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
RD&E																			
PROCUREMENT																			
Installation Kits																			
ECP 087S1/External Stores EMI Protection																			
ECP 121R1/Auto AC Bus Isolation	356	0.7																	
ECP 165R1/Battery Control Relay Unit	251	0.5																	
ECP 178/FY86 Block Upgrade	82	4.7																	
ECP 241R1/Center Fuselage Structural Mods	1,719	0.6																	
ECP 251/Dorsal Longeron	1,926	0.8																	
ECP 251R1/Dorsal Longeron	443	8.6																	
ECP 262/470.5 Bulkhead	494	*																	
ECP 267R1/Righthand AMAD Bay	287	*																	
ECP 276/Y508 Former	836	1.0																	
ECP 306/AFT Engine Mount	619	*																	
ECP 306/Y657.35 Engine Bay Door Former	688	0.9																	
ECP 311/Main Landing Gear (MLG) Planing Link	10	*																	
ECP 319/MLG Trunnion Upgrade	1,405	*																	
ECP 320/Y488 Bulkhead	473	1.2																	
ECP 353/Wing Fatigue Repair	98	0.7																	
ECP 355/MLG Shoulder Belt	350	0.2																	
ECP 364/ASPJ System Improvement	225	*																	
ECP 365/Y470 Bulkhead Improvement	982	1.0																	
ECP 367/#1 Fuel Cell Floor	557	0.3																	
ECP 375/MLG Retract Actuator	1,323	5.7																	
ECP 391/Fretting on Former's & Spindles	582	0.3																	
ECP 402/Fuselage Skin, Y518 to Y533	638	*																	
ECP 402R1/Fuselage Skin, Y518 to Y534	720	2.1																	
ECP 417/Inlet Duct Skin at Y453	575	2.0																	
ECP 428/Y470.5 Bulkhead MLG Trunnion	2	0.1																	
ECP 440/Speed Brake Trough	591	1.0																	
ECP 488/SUU-63 Wing Pylon Door Panel	1,351	0.8																	
ECP 492/Y470.5 Bulkhead Fatigue Change	688	1.4																	
ECP 498/Fuselage Skin at Y453	696	0.7																	
ECP 501/Nacelle Skin Fatigue Improvements	663	3.7																	
ECP 506/LAU-115 Sparrow Mod	935	*																	
ECP 536/ST-16 Failures	70	10.6	25	2.7	25	2.4	25	2.5											
ECP 544/Improvement of Inner Wing SPAR	29	0.3																	
ECP 548/Fuel Barrier Web	750	1.4																	
ECP 550/Wing Drag Longeron	119	0.2																	
ECP 561/Y326.5 Plate Nut	532	0.2																	
ECP 562/Lower Center Keel Fire Hazard	798	0.4																	
ECP 574/Trailing Edge Flaps	1,026	26.8																	
ECP 574/Aileron	707	18.2																	
ECP 598 Servocylinder Test Station	9	1.4																	
NI879/Hydraulic Temp Guages	150	0.2																	
NI 742/Environment Control System Wiring	150	0.2																	
NI 796/Wing Fuel Dams	515	0.8																	
NI 824/MLG Trunnion Assembly	425	13.4																	
NI 827/Heat Exchanger	37	0.4																	
NI 830/Night Vision Display System (NVDS)	14	0.3																	
NI 839/Trailing Edge Flap	1,150	9.4																	
ECP XXX - ANTI G VALVE	800	1.0																	
ECP 973 Fuel Cell Floor Crack	100	1.2	100	1.0															

Exhibit P-3a

INDIVIDUAL MODIFICATION

MODIFICATION TITLE: CORRECTION OF DISCREPANCIES IDENTIFIED DURING PRELIMINARY EVALUATION, SUBSEQUENT FLIGHT TEST PROGRAMS AND FLEET OPERATIONS (OSIP 011-84)

MODELS OF SYSTEM AFFECTED: F/A-18 A/B/C/D TYPE MODIFICATION: SAFETY /RELIABILITY/IMPROVEMENT

FINANCIAL PLAN (TOA, \$ in Millions):

	Prior Years		FY 2008		FY 2009		FY 2010		OCO FY2010												
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
ECP 592 - Side Fuselage Crack																					
ECP XXX5 - Wing SPAR Crack																					
ECP NI 931 - Forward Lower Keel Modification																					
ECP 952 - MLG Axle	688	17.1																			
ECP974NI - MLG Y488 Bulkhead					80	0.1	80	0.1													
ECP 590 - OBOGS SSOM			630	2.2																	
ECP 608 - Crease Longeron																					
ECP NI-1013-05 Heat Derrant	630	6.6																			
ECP1057NI - MLG Planning Mechanism Improvements							80	0.0													
ECP XXX13 - Bay 3 Shelf Modification																					
ECP XXX14 - Bay 4 Shelf Modification																					
ECP 6217 - Cockpit Pressurization Warning System (CPWS)	554	6.4																			
ECP XXX16 - Vertical Tail																					
ECP XXX17 - Canopy/Windscreen					150	0.4	150	0.4													
ECP XXX18 NLG/MLG Fatigue Improvement					80	0.1	80	0.1													
ECP 609 Inner Wing Conversions/Modification			6	3.5	20	6.0	20	6.2													
ECP JAX F-18-001 NFDS MODS, C&D Conversion	12	4.7		0.5																	
ECP 0147 Repeatable Release Holdback Bar	285	1.5																			
ECP XXX21 Interwing Conversion Lot 10/11 to Lot 12 & Up																					
ECP9384 MB Redesign of Backrest Operation Plunger (Safety)			430	*																	
ECP1022 Inner Wing Fatigue improvement	18	0.2			100	0.9	100	0.9													
ECP1034 Trailing Edge flap/Aileron Attach log Bushing				0.1	80	0.2	80	0.3													
ECP1054NI LEF Stop Module & Torque Limiter Improvement					315	10.7	250	8.7													
ECPXXX23 AFT Fuselage Structure Failure					10	0.2	10	0.2													
ECPXXX24 NACES Improved Upper Catapult Sleeve, Safety ECP			275	0.3	200	0.2															
ECP1036 NI ECS/OBOGS Fitting Upgrade, Safety ECP			331	*																	
Installation Kits N/R		28.4		13.2		2.2															
Installation Equipment		2.3																			
Installation Equipment N/R		0.1																			
Engineering Change Orders																					
Data		12.0		1.0		0.1															
Training Equipment																					
Support Equipment		1.5																			
ILS		178.0		41.9		20.0		19.4													
Other Support																					
Interim Contractor Support																					
Installation Cost	29,146	222.7	166	8.9	407	16.7	701	18.1													
TOTAL PROCUREMENT		606.6		75.3		60.2		56.9													

Notes:

1. Totals may not add due to rounding.
2. Astensik indicates amount less than \$50K.
3. ECP 087S1 (External Stores EMI Protection) and ECP 608 (Crease Longeron) includes "Installation Costs" only.
4. ECP 595 (Flight Control Computer) includes Non-Recurring Costs only.

Exhibit P-3a **INDIVIDUAL MODIFICATION**

MODIFICATION TITLE: **DIGITAL COMMUNICATIONS SYSTEM (DCS) (OSIP 10-99)**

MODELS OF SYSTEM AFFECTED: **F/A-18 C/D (Lots 10-21)** TYPE MODIFICATION: **CAPABILITY IMPROVEMENT**

DESCRIPTION/JUSTIFICATION:

The Digital Communications System (DCS) consists of an upgraded AN/ARC-210 Receiver Transmitter (RT) [with embedded digital message transfer capability and embedded Communications Security (COMSEC)] installed in the F/A-18 and integrated with the F/A-18 weapons system [mission computer, controls & displays, and communication subsystem]. The DCS utilizes preformatted messages to communicate with standard United States Marine Corps (USMC), USA, and United States Air Force (USAF) digital communications devices to facilitate Close Air Support (CAS), Deep Air Strike (DAS), and Tactical Air Control (TAC) missions. DCS reduces voice communications requirements which tend to be slow, inaccurate, and susceptible to Meaconing, Interference, Jamming, and Intrusion (MJJI). DCS will enhance mission effectiveness by decreasing pilot workload which allows the pilot more time to counter increased threat capabilities (ORD# 486-88-98). This Operational Safety Improvement Program (OSIP) will also be used to address parts obsolescence issues and to perform non-recurring work associated with Network Centric operations and Interoperability requirements.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

The AN/ARC-210 RT is being upgraded to a DCS RT. The Initial Engineering Developmental Model (EDM) was delivered (using RDT&E,N resources) in FY1998 as scheduled. The F/A-18C/D requirements will be satisfied by retrofitting DCS into Lot X through Lot XXI. Functionality was provided in the Operational Flight Program (OFP) 15C fleet release in FY2000. Initial procurement of installation kits was awarded May 1999. F/A-18C/D Lots X and XI require an ACI and DCS radio. DCS radios are purchased through OSIP 04-94 (PMA-209). "B" Kits (Radios) purchased in FY02 and FY03 through this OSIP will balance total inventory of radios to installation kits. OSIP 04-94 is purchasing 20 Install A kits in FY2005 and 40 Install A kits in FY2006. Additional ACI requirements for increased install provisions are currently funded under OSIP 12-99.

FINANCIAL PLAN (TOA, \$ in Millions):

	Prior Years		FY 2008		FY 2009		FY 2010		OCO FY2010												
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
RD&E		35.3																			35.3
PROCUREMENT																					
Installation Kits																					
Lot XII through XXI Kit	360	1.1																			
Lot X through XI Kit	123	0.7																			
Installation Kits N/R		0.6																			
Installation Equipment																					
Lot XII through XXI Kit ("B" Kit)	40	1.9																			
Lot X through XI Kit (ACI)	128	8.7																			
Installation Equipment N/R																					
Engineering Change Orders		0.5				0.2															
Data		*																			
Training Equipment		0.6																			
Support Equipment		0.8																			
ILS		2.0		*		0.2															
Other Support		0.1																			
Interim Contractor Support																					
Installation Cost	414	5.2	80	1.5	34	0.9	15	0.8													
TOTAL PROCUREMENT		22.2		1.5		1.4		0.8													

- Notes:
- Totals may not add due to rounding
 - Asterisk indicates amount less than \$50K
 - "Installations" are 60 greater than "Installation Kit Procurement" due to 60 kits being procured on OSIP 04-94.
 - Installation cost varies depending on aircraft configuration and Lot being retrofit.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: F/A-18 C/D (Lots 10-21) MODIFICATION TITLE: DIGITAL COMMUNICATIONS SYSTEM (DCS) (OSIP 10-99)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Navy Depot Field Mod Team

ADMINISTRATIVE LEADTIME: 3 Months PRODUCTION LEADTIME: 24 Months

CONTRACT DATES: FY 2008: _____ FY 2009: _____ FY 2010: _____

DELIVERY DATE: FY 2008: _____ FY 2009: _____ FY 2010: _____

(\$ in Millions)

Cost:	Prior Years		FY 2008		FY 2009		FY 2010		OCO FY 2010												
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$											
FY 2007 & PY (543) kits	414	5.2	80	1.5	34	0.9	15	0.8													
FY 2008 () kits																					
FY 2009 () kits																					
FY 2010 () kits																					
FY 2011 () kits																					
FY 2012 () kits																					
FY 2013 () kits																					
FY 2014 () kits																					
FY 2015 () kits																					
To Complete () kits																					
TOTAL	414	5.2	80	1.5	34	0.9	15	0.8													

NOTE: "Installations" are 60 greater than "Installation Kit Procurement" due to 20 kits in FY05 and 40 kits in FY06 being procured on OSIP 04-94.

Installation Schedule

	FY 2007 & Prior	FY 2008				FY 2009				FY 2010				FY 2011				
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
In	414	30	15	15	20	34	0	0	0	5	5	5	0	0	0	0	0	0
Out	414	30	15	15	20	34	0	0	0	5	5	5	0	0	0	0	0	0

	FY 2012				FY 2013				FY 2014				FY 2015				To Complete	TOTAL		
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4				
In	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	543
Out	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	543

Exhibit P-3a **INDIVIDUAL MODIFICATION**

MODIFICATION TITLE: F/A-18 AIRCRAFT STRUCTURAL LIFE MANAGEMENT PLAN (SLMP) (OSIP 11-99) CBR+
 MODELS OF SYSTEM AFFECTED: F/A-18A/B/C/D TYPE MODIFICATION: SAFETY / LIFE EXTENSION

DESCRIPTION/JUSTIFICATION:
 Incorporation of structural enhancements and changes is required to attain F/A-18 service life and maintain sufficient aircraft inventory to meet fleet operational requirements through FY 2023. Structural enhancements and changes include resolution of discrepancies identified as a result of Structural Test (ST-16) and in-service experience. These enhancements and changes include: modifications to allow the entire airframe to extend flight hours; modifications to ensure structures currently limited to 78% of design life can achieve 100% life; modifications to ensure landing gear, catapult and attachment components can extend total landings. The unacceptable alternative to retrofitting would be the failure to reach full fatigue life for these aircraft and to not correct the structural defects discovered on fatigue test articles. In many cases, the mission capability of the aircraft would be adversely affected in addition to its reduced service life. As a result, aircraft may be prematurely removed from useful service. Center Barrel Replacement Plus (CBR+) is applicable to F/A-18A/B/C/Ds. ECP 904 Part 1 is the basic center barrel kit. ECP 904 Part 2 is required to extend Wing Root FLE and is not required for all aircraft. ECP 904 Part 3 is required to extend CAT & TRAPs and does not have to be installed concurrently with Part 1 and 2. Part 4 is to extend flight hours associated with flight control surfaces, wings, vertical tails and the forward/aft fuselage.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:
 Currently all Lot VI through XVII aircraft have 78% life limits without the SLMP modifications to bring them to 100% airframe life. MDA and NGC developed ECP536 retrofit repair to modify these aircraft so they could restore the airframe to full life. ECP 536 was approved and Validation was completed May 2001. NADEP North Island developed ECP 904NI (CBR+) which was approved on 27 April 2000, ECP 904 NI supersedes ECP 536. Validation started October 2000 and was completed in August 2001. Verification started August 2001 and was completed June 2002. ECP 536 moved from OSIP 11-99 to OSIP 11-84 in FY2002.

FINANCIAL PLAN (TOA, \$ in Millions):

	Prior Years		FY 2008		FY 2009		FY 2010		OCO FY 2010										
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$									
RDT&E		28.9																	
PROCUREMENT																			
Installation Kits																			
ECP 904 Part 1	195	163.3	15	14.2	30	33.0	40	37.6											
ECP 904 Part 2	100	38.4	28	18.1	32	4.7	32	0.6											
ECP 904 Part 3	18	2.1	28	4.7	28	4.8	28	5.0											
ECP 904 Part 4			40	2.8	30	5.1	58	8.0											
Installation Kits N/R	7	22.5																	
Installation Equipment	92	6.5	28	1.8	40	1.8	40	1.9											
Installation Equipment N/R	15	1.4																	
Engineering Change Orders																			
Data		5.0																	
Training Equipment																			
Support Equipment																			
ILS		42.2		9.5		6.8		7.0											
Other Support		0.8						0.1											
Interim Contractor Support																			
Installation Cost	92	116.9	28	35.4	40	57.7	40	57.9											
TOTAL PROCUREMENT		399.3		86.4		114.0		118.1											

- Notes:
 1. Totals may not add due to rounding.
 * ECP536 VAL/VER Kit provided under warranty.
 ** Prior Year VAL/VER Kits: (1) provided under warranty by Boeing and (1) provided by NAVICP on hand assets.
 *** Installations slipped one year due to FY2001 funding reductions.
 2. "Installation Kit" Pricing is Quantity Sensitive. FMS procurements in some years affects unit price.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: F/A-18A/B/C/D MODIFICATION TITLE: F/A-18 SERVICE LIFE MANAGEMENT PROGRAM (SLMP) (OSIP 11-99) CBR+

INSTALLATION INFORMATION: CONTRACTOR PROVIDING 1 WARRANTY KIT

METHOD OF IMPLEMENTATION: ONE KIT INSTALLED BY CONTRACTOR FOR VAL/VER, OTHER INSTALLS BY DEPOT

ADMINISTRATIVE LEADTIME: 3 Months PRODUCTION LEADTIME: 29 Months

CONTRACT DATES: FY 2008: Jan-08 FY 2009: Jan-09 FY 2010: Jan-10

DELIVERY DATE: FY 2008: Apr-10 FY 2009: Apr-11 FY 2010: Apr-12

(\$ in Millions)

Cost:	Prior Years		FY 2008		FY 2009		FY 2010		OCO FY 2010									
	Qty		Qty	\$	Qty	\$	Qty	\$	Qty	\$								
FY 2007 & PY (195) kits	92	116.9	28	35.4	40	57.7	25	41.1										
FY 2008 (15) kits							15	16.8										
FY 2009 (30) kits																		
FY 2010(40) kits																		
FY 2011 () kits																		
FY 2012 () kits																		
FY 2013 () kits																		
FY 2014 () kits																		
FY 2015 () kits																		
To Complete () kits																		
TOTAL	92	116.9	28	35.4	40	57.7	40	57.9										

1. July 2006 both Depots declared they would not meet the CBR induction schedule.
2. Restructured procurement profile and installation profile to relieve Depot back log.

Installation Schedule

	FY 2007 & Prior	FY 2008				FY 2009				FY 2010				FY 2011				
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
In	92	7	7	7	7	10	10	10	10	10	10	10	10	10	10	10	10	10
Out	92	7	7	7	7	10	10	10	10	10	10	10	10	10	10	10	10	10

	FY 2012				FY 2013				FY 2014				FY 2015				To Complete	TOTAL
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4		
In	10	10	10	10														200
Out	10	10	10	10														200

Exhibit P-3a **INDIVIDUAL MODIFICATION**

MODIFICATION TITLE: **MULTI-FUNCTIONAL INFORMATION DISTRIBUTION SYSTEM (MIDS) (12-99)**

MODELS OF SYSTEM AFFECTED: **F/A-18C/D/E/F and EA-18G** TYPE MODIFICATION: **CAPABILITY IMPROVEMENT**

DESCRIPTION/JUSTIFICATION:

The system is Tactical Data Link Communications to provide a secure communications and navigation system. Multifunctional Information Distribution System Low Volume Terminal (MIDS-LVT) is a Pre-planned Product Improvement (P3I) to the Joint Tactical Information System (JTIDS) and is being installed in USN/USMC F/A-18C/D/E/F and EA-18G aircraft, since the aircraft cannot accommodate the larger JTIDS Class 2 Terminals due to size and weight constraints. MIDS LVT is an International Cooperative Program (ICP) development with France, Germany, Italy, and Spain. A PMOU and Supplement 1 is in effect. The system is interoperable with JTIDS Class 2 Terminals utilized by NATO allies as well as the other Services. F/A-18 will be interoperable with all Link 16 equipped platforms in U.S. and Allied Nations. This OSIP will also be used to perform efforts to address parts obsolescence and to examine potential MIDS-related capability upgrades associated with Network Centric Operations and interoperability requirements. ORD # 337-06-93. The MIDS Joint Tactical Radio System (MIDS JTRS) is an ECP upgrade to the MIDS-LVT developed under ORD#642-61-04. MIDS JTRS offers the functionality of Link 16, TACAN, and digital voice in a software-controlled architecture (SCA) JTRS-compliant format, and provides the option of future expandability to host the Airborne Networking Waveform (ANW). MIDS JTRS will be retrofit in Lots 26-31 F/A-18E/F and EA-18G aircraft.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

This OSIP was originally planned for incorporation of MIDS into F/A-18C/D (Lots 12-21) and F/A-18E/F (Lots 22-31), but is now applicable to all F/A-18C/D/E/F and EA-18G aircraft. A MIDS installation kit Critical Design Review (CDR) was held at Boeing in September 1996. MIDS Terminal initial Engineering and Manufacturing Development (E&MD) delivery for F/A-18 occurred in February 1998. Installation into the first three (3) EMD aircraft began in March 1998 and ended in September 1998. In May 1999, Boeing was awarded the ECP contracts required to provision the F/A-18E/F for the MIDS LVT while still in production. These provisions include: an Interference Blanking Unit (IBU); an Amplifier Control Intercommunication Unit (ACI); a MIDS Compatible CVT upgrade; and a MIDS Compatible Transponder upgrade. This list of equipment was also required to be retrofit into F/A-18C/D and is included as the "Avionics Upgrade" in the table below. These provisions are required by other F/A-18 programs and can be installed independently of MIDS LVT. OPEVAL was completed in June 2003, with a recommendation of operationally effective and operationally not suitable. A Verification Correction of Deficiencies (VCD) was completed on 15 August 2003. The VCD report delivered on 4 September 2003 recommended full fleet release. Full Rate Production approval was granted on 25 September 2003. Integration testing of MIDS JTRS capabilities began in FY2007. FY2007 is a MIDS JTRS LRIP buy per the approved acquisition strategy and will enable Initial Operational Capability in FY2009.

FINANCIAL PLAN (TOA, \$ in Millions):

	Prior Years		FY 2008		FY 2009		FY 2010		OCO FY 2010												
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$											
RDT&E		31.6																			
PROCUREMENT																					
Installation Kits																					
Lot 12 through 21 Kits	397	57.4																			
Lot 26 through 31 Kits (MIDS-JTRS)	12	0.1	12	0.1	24	0.2	36	0.4													
Installation Kits N/R																					
Installation Equipment																					
Avionics Upgrade	397	59.3																			
MIDS LVT	415	117.6																			
MIDS JTRS	12	7.2	12	7.7	24	10.6	36	12.3													
Installation Equipment N/R		37.2																			
Engineering Change Orders		1.0		0.3		0.8		1.9													
Data		2.0																			
Training Equipment																					
Support Equipment		7.2																			
ILS		9.2		1.0		1.3		1.3													
Other Support		19.7		1.1		2.3		1.9													
Interim Contractor Support																					
Installation Cost	280	29.1	48	4.8	40	4.0	29	2.9													
TOTAL PROCUREMENT		347.0		15.1		19.2		20.7													

- Notes:
1. Totals may not add due to rounding
 2. Asterisk indicates amount less than \$50k
 3. "A" Kits and Avionics Upgrade continue to be procured and MIDS installations continue on the C/D's to maintain schedule.
 4. Lots 26 through 31 Kits (MIDS-JTRS) are an "O" Level Installation.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: F/A-18C/D/E/F and EA-18G MODIFICATION TITLE: MULTI-FUNCTIONAL INFORMATION DISTRIBUTION SYSTEM (MIDS) (12-99)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: DEPOT LEVEL

ADMINISTRATIVE LEADTIME: 5 Months PRODUCTION LEADTIME: 18 Months

CONTRACT DATES: FY 2008: _____ FY 2009: _____ FY 2010: _____ FY 2011: _____

DELIVERY DATE: FY 2008: _____ FY 2009: _____ FY 2010: _____ FY 2011: _____

(\$ in Millions)

Cost:	Prior Years		FY 2008		FY 2009		FY 2010		OCO FY 2010									
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$								
FY 2007 & PY (397) kits	280	29.1	48	4.8	40	4.0	29	2.9										
FY 2008 (0) kits																		
FY 2009 (0) kits																		
FY 2010(0) kits																		
FY 2011 (0) kits																		
FY 2012 (0) kits																		
FY 2013 (0) kits																		
FY 2014 (0) kits																		
FY 2015 (0) kits																		
To Complete (0) kits																		
TOTAL	280	29.1	48	4.8	40	4.0	29	2.9	0	0.0								

*Note: DERF funded "A" kit procurement.
Installation Schedule

	FY 2007 & Prior	FY 2008				FY 2009				FY 2010				FY 2011			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	280	12	12	12	12	10	10	10	10	7	7	7	8	0	0	0	0
Out	280	12	12	12	12	10	10	10	10	7	7	7	8	0	0	0	0

	FY 2012				FY 2013				FY 2014				FY 2015				To Complete	TOTAL
	1	2	3	4	0	2	3	4	1	2	3	4	1	2	3	4		
In	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	397
Out	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	397

Exhibit P-3a INDIVIDUAL MODIFICATION

MODIFICATION TITLE: USMC F/A-18 UPGRADE ECP-583 (OSIP 21-00)

MODELS OF SYSTEM AFFECTED: F/A-18A/B/C/D TYPE MODIFICATION: AVIONICS UPGRADE

DESCRIPTION/JUSTIFICATION:
 This Operational Safety Improvement Program (OSIP) upgrades United States Marine Corps (USMC) F/A-18A/B/C/Ds avionics including both hardware and software capabilities. This requirement is critical to meet the Marine Corps requirements for the Tactical Aircraft (TACAIR) Integration Plan. The Avionics Upgrade includes avionics subsystems already incorporated or being incorporated into USMC and/or Foreign Military Sales (FMS) F/A-18 aircraft. The Basic Engineering Change Proposal (ECP) 583 incorporates the following subsystems: AN/ARC-210(V) with HAVEQUICK II and SINGARS; Digital Communication Systems (DCS) Receiver/Transmitter (RT-1824(C)); Combined Interrogator/Transponder AN/APX-111 (V); Night Vision Display System (NVDS); Mission Computer CP-2360 (XN-8); Radar (AN/APG-73); Stores Management Set (SMS, AN/AYQ-9); AMRAAM Capability (radar modification, launchers, weapons pylons and control stick); Digital Display Indicator (DDI) Upgrade; Mission Data Loader (AN/ASQ-215); Targeting Forward-Looking Infrared (FLIR) provisions (AAS-38B). ECP 583R1 adds a digital wingtip modification, allowing use of the AIM-9X air-to-air missile. ECP 583R2 adds the following capabilities: Multi-functional Information Distribution System (MIDS LVT); Color Displays; Joint Helmet Mounted Cueing System (JHMCS); ALE-47; Tactical Aircraft Moving Map Capability (TAMMAC); and Auxiliary Memory Unit (AMU). ECP 583 R3 was cancelled. ECP583R4 will incorporate the Navy Aircrew Common Ejection Seat (NACES) for utilization with the JHMCS system. This OSIP also provided limited integration of the LITENING Enhanced Range FLIR on 24 USMC F/A-18Ds. This allowed the Marine Corps to utilize existing LITENING pods, currently in the AV-8B inventory, on USMC F/A-18Ds to provide the Air Ground Task Force capability and flexibility in the execution of operations in the combat spectrum.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:
 The number of aircraft to be retrofitted in the program of record has changed, the Marine Corps has deferred retrofiting some early lot F/A-18C/Ds vice only F/A-18A/Bs due to greater remaining life on those aircraft. ECP 583 was approved 25 March 1999. ECP 583R1 was approved in August 2001. ECP 583R2 was approved in 2004. ECP 583R3 was cancelled and ECP 583R4 was approved in 2006. A New Start notification was sent to Congress in FY2003 to initiate the Litening integration and procurement of the FY2004 Installation Kits. Due to lower than expected pricing, 24 aircraft are able to be modified with the originally identified funding.

FINANCIAL PLAN (TOA, \$ in Millions)

	Prior Years		FY 2008		FY 2009		FY 2010		OCO FY 2010													
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
RDT&E																						
PROCUREMENT																						
Installation Kits																						
ECP 583	27	7.5																				
ECP 583R1	82	0.3																				
ECP 583R2	25	12.0	16	10.2	6	1.9																
ECP 583R4	25	1.0	19	0.3	6	0.1																
Litening	24	0.9																				
Installation Kits N/R		13.9																				
Installation Equipment	1144	178.9	24	5.3	19	8.7	26	12.4														
Installation Equipment N/R																						
Engineering Change Orders																						
Data		1.2																				
Training		0.7		0.2																		
Support Equipment		1.5																				
ILS		19.4		0.9		0.4		0.4														
Other Support (Testing)		4.5		0.7				0.0														
Interim Contractor Support																						
Installation Cos	79	25.4	12	3.0	17	5.6	12	4.8														
TOTAL PROCUREMENT		267.4		20.5		16.6		17.6														

- Notes:
1. Totals may not add due to rounding
 2. 34 "Installation Kits" were purchased with NGRE Funds to include: 4 Val/Vers - FY1998; 20 "A" Kits - FY1999; and 10 "A" Kits - FY2000. The cost of these kits are not displayed in this OSIP.
 3. The Installation Kit procurement of ECP583R2 is for Validation/Verification.
 4. The additional ECP 583R1 kits are being procured to retrofit Navy Reserve aircraft already modified to an ECP 583 configuration under an OSIP that is no longer active.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: F/A-18A/B/C/D

MODIFICATION TITLE: USMC F/A-18 UPGRADE ECP-583 (OSIP 21-00)

(ECP583 and ECP 583R2)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: (ECP 583) ONE KIT INSTALLED BY CONTRACTOR FOR VAL/VER, OTHER INSTALLS FIELD TEAMS

ADMINISTRATIVE LEAD-TIME: Various

PRODUCTION LEAD-TIME: Various

CONTRACT DATES: FY 2008: Jan-08

FY 2009: Jan-09

FY 2010: _____

DELIVERY DATE: FY 2008: Jun-09

FY 2009: Jul-09

FY 2010: _____

(\$ in Millions)

Cost:	Prior Years		FY 2008		FY 2009		FY 2010		OCO FY 2010									
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$								
FY 2007 & PY (98) kits ^{1,2,3}	79	25.4	12	3.0	7	2.4												
FY 2008 (16) kits					8	3.1	8	3.4										
FY 2009 (6) kits					2		4	1.4										
FY 2010 (0) kits																		
FY 2011 (0) kits																		
FY 2012 (0) kits																		
FY 2013 (0) kits																		
FY 2014 (0) kits																		
FY 2015 (0) kits																		
To Complete (0) kits																		
TOTAL	79	25.4	12	3.0	17	5.6	12	4.8										

Notes:

- 34 "Installation Kits" were purchased with NGRE funds, not included in this OSIP.
- FY2004 Installations are funded with FY2002 Congressional add funding.
- FY2005 installations are funded with FY2003 Congressional add funding.
- FY2004 installations are for Litening. FY2006 installations are for ECP 583.

FY 2007 & Prior	FY 2008				FY 2009				FY 2010				FY 2011			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	79	4	4	4		5	6	6		2	5	5				
Out	79		4	4	4		5	6	6		2	5	5			

	FY 2012				FY 2013				FY 2014				FY 2015				To Complete	TOTAL
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4		
In																	0	120
Out																	0	120

Exhibit P-3a **INDIVIDUAL MODIFICATION**

MODIFICATION TITLE: **F/A-18 JOINT HELMET-MOUNTED CUEING SYSTEM (JHMCS) (OSIP 24-00)**

MODELS OF SYSTEM AFFECTED: **F/A-18C/D/E/F** TYPE MODIFICATION: **CAPABILITY IMPROVEMENT**

DESCRIPTION/JUSTIFICATION:

The Joint Helmet-Mounted Cueing System (JHMCS) is a multi-service system that provides United States Air Force (USAF), United States Navy (USN), and United States Marine Corps (USMC) aircraft the capability to cue and verify on-board weapons and weapons sensors to a specific azimuth/elevation determined by the pilot's head position and to confirm sensor line-of-sight. The intent is to reduce tasks required of aircrews, verify seeker/sensor position, and enhance weapons employment opportunities. In the air-to-air role, the aircrew will be able to cue and verify cueing of off-boresight weapon sensors and weapons (current and future short-range air-to-air missiles) to exploit the full weapons envelopes in the dynamic Within Visual Range (WVR) arena. In the air-to-ground role, this system will enhance lethality and survivability by reducing cockpit "heads down" and target acquisition time. For the strike, strike escort, and force application missions, the JHMCS possesses potential to enhance the flexibility of cueing weapons and sensors in the stressful air-to-ground tactical environment. The JHMCS incorporates an ejection-compatible helmet-mounted display system, with capability to cue and verify cueing of high off-axis sensors and weapons, on USAF and USN single seat and two seat fighter aircraft. The JHMCS includes a flight helmet with display optics, image source, display processor/video hardware and software to drive the display, upload reticle, magnetic helmet tracker hardware and software, interfaces to the aircraft NACES ejection seat, computers, weapons and sensor hardware, with software to integrate the JHMCS functions with other onboard systems. The JHMCS communicates with airborne sensors (FLIR, Radar) through the aircraft avionics MUX Bus. It communicates with weapons through the armament MUX Bus via the Stores Management System. The NACES ejection seat is required for the safe operation of the system. This system will provide aircraft equipped with the Joint Helmet Mounted Cueing System (JHMCS) the ability to cue and display weapons and sensors at night through the initial fielding of a narrow field of view Night Vision Device that integrates the JHMCS cueing and display symbology. The capability will be upgraded to a wide field of view system when available. The system will be compatible with the current JHMCS helmet and will use the power and data provided by the JHMCS Universal Connector on the helmet. The System includes a high resolution image intensifier assembly, a camera to record the pilot's visual scene and display assembly that combines the JHMCS symbology and the scene viewed through the NVD. It also has an objective lens with a leaky green filter that enables the fixed wing pilot to view the head-up display while wearing the system. The system is fully adjustable by the operator and is detachable from the helmet.

"Installation Equipment" quantities have been planned by the Joint Program Office to maximize the quantity fielded across all service platforms as expeditiously as possible, while balancing contractor production capacity. In order to meet this objective, in some cases the "Installation Equipment" is procured a year prior to the "Installation Kit" procurement. However, due to a year difference in production lead-times both the "Installation Kits" and "Installation Equipment" will be delivered at essentially the same time. This allows for the quickest introduction to the fleet of this critical war fighting capability and balances the needs of all services with production capacity.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

F/A-18E/F JHMCS completed Developmental Testing in August 2001. Operational Test (OPEVAL) was completed in April 2002. F/A-18E/F retrofit kit procurement began in FY 2004 and installed in FY 2005 starting with Lot 23 aircraft. JHMCS procurement for F/A-18C/D was approved at a milestone decision in January 2004. AFT Seat development completed in FY 2006. The first F/A-18C/D JHMCS retrofit kits were procured in FY 2005 and installed in FY 2006.

FINANCIAL PLAN (TOA, \$ in Millions):

	Prior Years		FY 2008		FY 2009		FY 2010		OCO FY 2010										
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$									
RDT&E		79.0																	
PROCUREMENT																			
Installation Kits																			
C/D	160	14.7	24	3.1	36	3.1	62	5.4											
E/F	53	4.1	21	1.7	24	2.8	17	2.1											
Canopy A Kits (AYC-1321)	258	2.0	59	0.9	41	0.1	56	0.2											
Ejection Seats A Kits (NACES)																			
Ejection Seat A Kits (ACC-695)	200	1.1	36	0.2	48	0.2	86	0.4											
Installation Kits N/R		15.7		1.2		2.0		2.4											
Installation Equipment																			
C/D	290	40.9	96	5.8	132	8.4	183	12.6											
E/F	101	7.5	63	3.9	72	4.9	62	4.1											
Installation Equipment N/R		1.0																	
Engineering Change Orders																			
Data		5.8		0.1															
Training				0.5		0.5		0.5											
Support Equipment	115	7.8	27	1.3	34	4.1	15	1.3											
ILS		14.3		3.3		5.1		4.4											
Spares																			
Other Support - Testing																			
Installation Cost	61	3.9	72	7.5	78	7.0	45	4.8											
TOTAL PROCUREMENT		118.7		29.5		38.2		38.1											

Notes:

1. Totals may not add due to rounding
2. Asterisk indicates amount less than \$50K
3. "Installation Equipment" is procured one year prior to "Installation Kits" due to a year greater production leadtime.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: F/A-18C/D/E/F MODIFICATION TITLE: F/A-18 JOINT HELMET-MOUNTED CUEING SYSTEM (JHMCS) (OSIP 24-00)

INSTALLATION INFORMATION: APPROX 5 KITS INSTALLED EVERY 4 WEEKS

METHOD OF IMPLEMENTATION: FIELD MOD TEAMS

ADMINISTRATIVE LEAD-TIME: 4 Months PRODUCTION LEAD-TIME: 21 Months

CONTRACT DATES: FY 2008: Feb-08 FY 2009: Feb-09 FY 2010: Feb-10

DELIVERY DATE: FY 2008: Nov-09 FY 2009: Nov-10 FY 2010: Nov-11

(\$ in Millions)

Cost:	Prior Years		FY 2008		FY 2009		FY 2010		OCO FY 2010											
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$										
FY 2007 & PY (211) kits	61	3.9	72	7.5	78	7.0	45	4.8												
FY 2008 (45) kits																				
FY 2009 (60) kits																				
FY 2010 (79) kits																				
FY 2011 (0) kits																				
FY 2012 (0) kits																				
FY 2013 (0) kits																				
FY 2014 (0) kits																				
FY 2015 (0) kits																				
To Complete (0) kits																				
TOTAL	61	3.9	72	7.5	78	7.0	45	4.8												

Installation Schedule

	FY 2007 & Prior	FY 2008				FY 2009				FY 2010				FY 2011			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	61	18	18	18	18	20	20	20	18	12	12	12	9	15	15	15	13
Out	61	18	18	18	18	20	20	20	18	12	12	12	9	15	15	15	13

	FY2012				FY2013				FY2014				FY2015				To Complete	TOTAL
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4		
In	21	21	21	16	0	0	0	0	0	0	0	0	0	0	0	0	0	256
Out	21	21	21	16	0	0	0	0	0	0	0	0	0	0	0	0	0	256

Note: 2 Val/Ver Kits not installed.

INDIVIDUAL MODIFICATION

Exhibit P-3a

MODIFICATION TITLE:

ADVANCED TARGETING FORWARD LOOKING INFRARED (ATFLIR) (OSIP 12-01)

MODELS OF SYSTEM AFFECTED:

F/A-18A+/C/D/E/F

TYPE MODIFICATION:

CAPABILITY IMPROVEMENTS

DESCRIPTION/JUSTIFICATION:

The Advanced Targeting Forward Looking Infrared (ATFLIR) (ORD# 605-78-02) will provide the F/A-18A+/C/D with a significantly enhanced capability to detect, track and attack air and ground targets. New laser guided and global positioning system (GPS) standoff weapon systems and higher altitude attack profiles require improved performance over the current AAS-38/46 Targeting Forward Looking Infra-Red (FLIR). The ATFLIR currently utilizes the 3rd generation of FLIR technology. The ATFLIR is designed to provide a quantum leap in operational effectiveness to fully support the standoff precision strike mission. Improved reliability and maintainability technology will increase operational availability while reducing life cycle costs. This OSIP is also used to perform efforts to address parts obsolescence and to examine and incorporate potential ATFLIR-related capability upgrades associated with Network Centric Operations, interoperability requirements, and upgraded targeting.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

ATFLIR development began in FY1997. OPEVAL testing was completed in June 2003 and the OPEVAL report was issued 4 September 2003. Full Rate Production approval was given in October 2003. Navigational forward looking Infra-Red (NAVFLIR) capability was removed from the system in December 2003. FY07 CONGRESSIONAL ADD : \$7.8M - for PGSE. Received for procurement of additional ATFLIR PGSE and logistics support. ATFLIR intermediate-level maintenance is being stood up currently. This equipment is required for organic repair capability, and is lead-time away from delivery. FY07 SUPPLEMENTAL : Rapid Deployment DataLink -- Streaming Video (\$6.500M): Supplemental funds received to incorporate several Engineering Changes that were deferred from the PB06 program of record to rapidly field a critical data link capability. Aircraft arriving in theatre without video downlink capability are being turned away from 80% of the Forward Air Controller missions. Video downlink capability has become a critical operational requirement for all aircraft deployed to Operation Iraqi Freedom (OIF). In support of deployed force commanders, a rapid deployment video downlink was funded and fielded by deferring ATFLIR Engineering Change Proposals (ECPs) planned as part of the PB06 submission. The deferred ECPs were planned to improve reliability and fix problems reported by fleet operators. IR Marker (\$7.920M): Supplemental funds received to incorporate an IR Marker into 45 ATFLIR pods, along with funding for the associated support requirements. The IR Marker allows Night Vision Device-equipped Forward Air Controllers to pinpoint and confirm targets for the aircrew to employ weapons in support of Close Air Support, force protection, and Imaging, Surveillance, and Reconnaissance (ISR) missions in OIF. Datalink (\$21.120M): Supplemental funds received to incorporate a data link into 88 ATFLIR pods, along with funding for the associated support requirements. Adding this capability will support the CENTCOM requirements for FLIR video datalink requirements to Rover III terminals to support Forward Air Controllers' target identification during Close Air Support (CAS), force protection, and ISR missions in OIF.

FINANCIAL PLAN (TOA, \$ in Millions):

	Prior Years		FY 2008		FY 2009		FY2010		FY 2010 OCO									
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$								
RDT&E		275.6																
PROCUREMENT																		
Installation Kits	24	0.4		3.5														
Installation Kits N/R																		
Installation Equipment(C/D)	187	413.5		5.0														
Installation Equipment(E/F)																		
Installation Equipment N/R		69.2		5.0		6.8												
Engineering Change Orders																		
Software Upgrades		1.7		0.9		0.3		0.3										
Pod Data Link (Ku)		1.9																
ATFLIR ECPs		6.4		16.2		19.8		2.2										
I2P ECP		1.4																
IR Marker ECP	45	28.3	45	17.5	45	10.5	45	14.0										
Data		5.7		0.2		0.9		0.1										
Training		3.4				*		*										
Support Equipment		53.8		12.6		11.8		0.7										
ILS		47.8		7.1		7.0		7.0										
Spares																		
Other Support		1.5		0.9		0.8		0.5										
Installation Cost																		
TOTAL PROCUREMENT		634.9		68.8		57.9		24.8										

Notes:

1. Totals may not add due to rounding
2. Asterisk indicates amount less than \$50K
3. 8 "A Kits" used for Validation/Verification will not be installed on aircraft.
4. The "Installation Kit" is required to allow Advanced NAVFLIR functionality on cockpit displays. This ECP is required for F/A-18A+ and all F/A-18C/Ds.

Exhibit P-3a INDIVIDUAL MODIFICATION

MODIFICATION TITLE: F/A-18C/D/E/F and EA-18G TRAINING SYSTEM (OSIP 006-02)

MODELS OF SYSTEM AFFECTED: F/A-18C/D/E/F and EA-18G TYPE MODIFICATION: TYPE MODIFICATION: TRAINERS UPGRADE

DESCRIPTION/JUSTIFICATION:
 F/A-18C/D/E/F and EA-18G training funds will be used to meet current Fleet Readiness Squadron (FRS) and Fleet Training and Readiness (T&R) requirements by purchasing new components and software to prevent obsolescence of the various trainers as F/A-18C/D/E/F and EA-18G aircraft are modified for capability enhancement and service life extension. Funding will also be used to update courseware and computer based training (CBT) as new capabilities are introduced to the fleet, and will enable the fleet to institute an aggressive post-FRS training environment to bring F/A-18C/D/E/F and EA-18G trainers into High Level Architecture/Navy Aviation Simulator Master Plan (HLA/NASMP) compliance and incorporate the Next Generation Threat System (NGTS).

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

FINANCIAL PLAN (TOA, \$ in Millions):

	Prior Years		FY 2008		FY2009		FY2010		FY2010 OCC									
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$								
RDT&E																		
PROCUREMENT																		
Installation Kits																		
Installation Kits N/R																		
Installation Equipment																		
Installation Equipment N/R																		
Engineering Change Orders																		
Data																		
Training		76.9		10.2		6.6		6.9										
Support Equipment																		
ILS																		
Spares																		
Other Support - Testing																		
Installation Cost																		
TOTAL PROCUREMENT		76.9		10.2		6.6		6.9										

Exhibit P-3a	INDIVIDUAL MODIFICATION
MODIFICATION TITLE: <u>E/F & EA-18G CORRECTION OF OPERATIONAL DISCREPANCIES (OSIP 14-03)</u>	
MODELS OF SYSTEM AFFECTED: <u>F/A-18 E/F & EA-18G</u>	<u>TYPE MODIFICATION: SAFETY/RELIABILITY/IMPROVEMENT</u>
DESCRIPTION/JUSTIFICATION:	
<p>Corrections to discrepancies discovered during testing and development can sometimes be incorporated into production aircraft, effective with the physical configuration audit which establishes the product baseline of the aircraft. However, when this cannot be done due to time constraints, retrofit of the changes into already delivered aircraft requires funding through the Aircraft Modification Program. Corrections to the following items/conditions are required to meet the F/A-18 E/F EA-18G transition plan and achieve planned life limits. Correct operational discrepancies discovered during testing and evaluations and during fleet operations. Modify, improve, retrofit, and restore aircraft structural safety and reliability to designed full life limits.</p>	
<p>ECS Exhaust Overtemp Final Fix/Bard Stacks, (ECP-6106R1) Aft ECS Cooling Fan, (ECP-6114) FCC Processor Upgrade, (ECP-6002) MLG Door Bushing Migration, (ECP-6104) AFT Fuselage Outbd Former Fwd Flange @ Y645, (ECP-6088) MLG Trunnion Bearing Loose Retention Nut, (ECP-6194) Long Stick Position, (ECP-XXX2) SKIN 12 Stiffener Back-up Structure, (ECP-6171) AFT Fan Shutoff Valve, (ECP-6199) AN/APN-194 (RADAR Altimeter) Mounting Tray Modification Step 2 , (ECP-6313) Leading Edge Extension (LEX) Lower Surface/Structure Cracks Redesign, (ECP-6193R1) MLG Outboard Tire Door Clevis, (ECP-6145) FT50 Y436 Inlet Former, (ECP-6188) Keel Beam Lower Cap Cracks, (ECP-6203)</p> <p>FT50 Teardown Bulkhead Cracking, (ECP-XX12) FT50 Fuel Barrier Web at Y510, (ECP-6326) FT50 18K Fuselage Outboard Former at Y645 Failure (ECP-6229)</p> <p>FT-50 Failure of Upper Wing Skin Splice Plate, (ECP-6183R1) DOOR 49 Replacement, (ECP-6098C1) Horizontal Actuator Cover-Door 71, (ECP-6068) MLG R/H Upper Planing Link Attach Fitting Failure, (ECP-6196C1) LEX Vent Mechanism Support Assembly Rod End Clevis Failure, (ECP-6208) Fuel Wash Filter Enhancement, (ECP-6216)</p> <p>ECS Ejector Cracks, (ECP-6255) MLG DOOR HINGE PINS STANDARD HARDWARE CONVERSION (ECP-6321) Cockpit Pressure Warning System (CPWS), (ECP-6217) Safety ECP MLG Strut Door Departures, (ECP-6235)</p> <p>HOL Follow-On Upgrades Lot 25 & Up, (ECP-XX21) 18E Follow-On Upgrades Lot 24 & Below, (ECP-XX22) MLG Proximity Switches & Sidebrace Down lock Mechanism, (ECP-6076) Fuel System Ground Pressurization Tube Water Entrapment, (ECP-6190) Wing Modification for Transonic Flying Qualities Improvement, (ECP-6191) Radar Bay Vent Valve Fail - MSP 862, (ECP-6198)</p> <p>Y679 Former Boot Strap Interface Fillet Seal Missing, (ECP-6206) ECS Cooling Duct Grounding Strap, (ECP-6209) ARS Lighting, (ECP-XXX23) NVG Friendly NAV Lighting, (ECP-XXX24) Bay 4L Equipment Bay Life Limits, (ECP-6221)</p> <p>Y591 Bulkhead Missing Fasteners at Keel Longeron, (ECP-6262)</p> <p>FT50 18K Y577 Former Redesign, (ECP-6303R1)</p>	<p>Modifies current exhaust ducts in order to reduce skin and structural temperatures caused by the ECS exhaust plume Strengthens ECS cooling fan to prevent and contain fan failures Replace existing FCC processor with upgraded higher order processors Improved bushing retention for MLG Door hinge attach points Repair former by adding a doubler to bring it back to original specification Replacing bearing retention nut with an improved retention nut Incorporation of improved retention mechanism in position sensor Strengthen the Centerline Structure to meet 2000 catapult requirement Modify the Aft Fan with an Improved Shut-Off Valve Drill hole in door to allow escape of moisture accumulation in order to prevent corrosion of the antenna Modifies LEX structure to prevent cracks induced from aerodynamic loads Redesign clevis to eliminate cracking imparted during gear cycling Introduces strengthened design to prevent cracking Redesign the existing keel beam lower cap at the arresting hook uplatch mechanism. Increase the thickness of the lower flange and web in this local area to handle the inertia loads from the arresting hook while its latched in the stowed position Modifies Keel To Prevent Future Cracking Modifies bulkhead to prevent cracking discovered during FT50 testing Retrofit redesign of the Fuel Barrier Web at Y510 resulting from cracks discovered during FT50 fatigue test article This ECP describes the effort to redesign the Fuselage Outboard Former Y645 resulting from cracks that were discovered during inspections conducted following the third lifetime of testing on the FT50 fatigue test article Redesigned Upper Wing Skin Splice Plate to address failures observed during fatigue testing Replace Door 49 for holes found elongated beyond spec. Improved fasteners to prevent deformation introduced by flight loads Redesign existing planing link attach fittings Redesign and strengthen door actuator Upgrade the Fuel Wash Filter to address a design deficiency which allows bypass of FO to the LDFS. Create a simpler and lower cost design for production and retrofit. Retrofit is required for A/C in the fleet with Tube Assemblies produced before sealant was applied to prevent filter bypass Modify ECS ejector to prevent cracks from being induced This modification incorporates a re-designed hinge pin. Provides a warning system to identify a possible insidious cabin pressure loss that could result in crew hypoxia and possible A/C loss L/H MLG Strut Doors departed in flight causing damage to adjacent doors and structure Forward hinges on failed doors show evidence of fatigue failures Unanticipated loads environment due to stores carriage Centerline 480 gal fuel tank. Mission Computer BIT performance upgrades & enhancements for aircraft with Higher Order Language (HOL) Mission Computer BIT performance upgrades & enhancements for aircraft without Higher Order Language (HOL) Modify down lock actuator assembly, jury link; replace lock plate & proximity switches Change manual drain valve to automatic drain valve to ensure that no water is trapped in the fuel system. Modify the wing and flight control surfaces to improve the flying qualities of the aircraft when flying above the speed of sound. To eliminate the Radar Bay Vent Valve failures (MSP 862 code). The condition was traced to an excessive voltage drop to the valve, a result of the Radar Bay Vent Valve circuit change which incorporated Forward Avionics Fan Delay Logic. Retrofit will consist of applying Fillet seal/brush coating to entire edge of lower leg of Support that interfaces with "Y679" Former Add a grounding strap to prevent accidental static discharge to an aircraft maintainer Add lighting to the ARS pod to improve the visibility of the tanking aircraft during night time refueling operations Modify cockpit lighting to be more friendly with night vision goggles (NVG) Retrofit Will Eddy Current Inspect and Install 1st Oversize Interface Fit Fasteners (14 Fasteners at Y326 & 5 Fasteners at Y357). Final Retrofit Redesign will Install New J-Beam, New Clips, Oversize Fasteners, New Post Support and New Dagger Pins. Cracks were found on the Y591 Bulkhead during the FT-50 Teardown. The cracks were located at the keel longeron attachment. Root cause investigation identified that 6 fasteners were missing between the horizontal leg of the longeron and the bulkhead for the FT-50 configuration. This ECP describes the effort to redesign the Y577 Former resulting from cracks that were discovered during inspections conducted following the third lifetime of testing on the FT50 fatigue test article</p>

FT50 18K Web and Wing Drag Longerons Redesign, (ECP-6304R1)	This ECP describes the effort to redesign the Web and Wing Drag Longerons resulting from cracks that were discovered during inspections conducted following the third lifetime of testing on the FT50 fatigue test article
FT50 18K Y618 Inboard Former (74A342314) Redesign, (ECP-6306R1)	This ECP describes the effort to redesign the Y618 Inboard Former resulting from cracks that were discovered during inspections conducted following the third lifetime of testing on the FT50 fatigue test article
Wing-Aft Shear Tie Bushing Migration, (ECP-6241R1)	Bushing migration will reduce the contact bearing area on the spars reducing fatigue life to less than spec requirements.
HS1 Reservoir Chafe, (ECP-XXX29)	Correct chafing condition between the hydraulic reservoir and structural components of the aircraft
TEF Clip Fatigue Prevention, (ECP-6213R1)	The trailing edge flap experienced a fatigue failure during ground testing. This change incorporates improvements to the trailing edge flap to assure fatigue life requirements are met
Boarding Ladder Sensors Improvement, (ECP-XXX30)	Improve boarding ladder sensors to prevent incorrect stowage indications
Brake Piston Assy Redesign, (ECP-XXX31)	Redesign the brake piston assembly to improve reliability
Inlet Ice Detector Hardware Redesign, (ECP-XXX32)	Redesign the ice detector system to reduce the number of false positives
Wing - Fuel Probe Corrosion Protection, (ECP-6219)	Add a layer of corrosion preventative between the fuel probe and its mounting to prevent galvanic corrosion between dissimilar metals
Common Preamps (ECP-6034)	Procures Common Preamps not funded in Lot 24
FT76 Forward Windshield Bolt Life Limit, (ECP-6258)	Failure analysis of FT76 Test Article bolt crack has resulted in a safe life determination of less than 6000 hours
Hydraulics Components Improvement, (ECP-XXX33)	To improve reliability of the Hydraulic components failures
IN-FLIGHT REFUELING (IFR) PROBE LINKAGE REDESIGN, (ECP-6319)	Incorporating a new designed IFR probe
ECP-6323 / Bleed Orifice Oversize, (ECP-6323)	To correct structural discrepancy discovered during fleet operation
LANDING GEAR CONTROL UNIT (LGCU) MIT UPGRADE, (ECP-6320)	Incorporating a new designed LGCU unit including software upgrade
Fire Bottle Bay Over-Temperature, (ECP-XXX36)	Modifies the aircraft to correct structural fatigue problems caused by degraded bay over-temperature
FT77 Wing Pylon Changes, (ECP-6282)	Failure analysis of cracks in the Mid-board Pylon Fitting discovered during teardown of the FT77 Test Article, has determined that it does not meet the 6000 hour specification requirement
ECS COMPONENTS INCREASE VIBRATION LOAD ISSUES, (ECP-XXX38)	Redesign/Re-qualify of ECS hardware to actual A/C Environment
AFT Engine Mount Attach Fitting, (ECP-XXX39)	Full life retrofit fix of the AFT engine mount pin
V38 OFP UPGRADES, (ECP-XXX40)	Software Upgrade
G81S00004 SE UPGRADE, (ECP-JAX-SE-027)	To support the F/A18 Interconnect Bob (IBOX), FLIR Power Supplies, and Strobe light power Supplies. (NRE & Data)
Hornet Feather (Vane) Wear PAD Retention System Redesign, (ECP-6075)	To redesign the Hornet Feather Wear Pad Retention System. The Hornet Feather pads have caused excessive wear of the engines afterburner ring on flight test a/c
Repeatable Release Holdback Bar, (ECP-IRRHB-0147)	Safety ECP, the RRHB (PLS) premature releases cause aircraft, flight deck, and personnel hazard condition
LEX Right Hand Walkway Mat, (ECP-6283) Safety ECP	Safety ECP, this ECP adds a walkway mat to the Right Hand Lex to replace existing anti-skid surface
Inlet Nacelle Bleed Plate Crack, (ECP-6227C1)	Cracks have been found on the Inlet Nacelle Bleed Plate caused by acoustic fatigue
Throttle Electronics Module Seal Improvement, (ECP-6228)	The throttle module sealing improvement adds various seals to the throttle electronics module to permanently prevent water intrusion into the box
Horizontal Stabilizer/Fuselage Rubbing, (ECP-6234)	Fuselage and Horizontal Stabilizer are rubbing against each other under aerodynamic load
Inadequate Clearance b/w APU Surge Control Valve and Y568 Support, (ECP-6238)	Redesign the 74A328283 ECS Floor Support so that adequate clearance exists between the APU Surge Control Valve and the ECS Floor Support to meet specification clearance requirements
FT50 18k Fuselage Outboard Former @ Y679 Failure, (ECP-6239R1)	To redesign the web of the aft fuselage outboard former at Y679 resulting from cracks that were discovered during inspections conducted following the third lifetime of testing on the FT50 fatigue test article
FT50 18K MLG Sidebrace Fitting Failure, (ECP-6240)	To redesign the LHS MLG Sidebrace/Retract Actuator Fitting resulting from cracks that were discovered during inspections conducted following the third lifetime of testing on the FT50 fatigue test article.
FT76 Jackpoint Support Fitting Life Limit, (ECP-6243)	Failure analysis of an FT76 Test Article crack discovered during teardown has resulted in a safe life determination of 5200 SFH
INBOARD WING CLOSURE BOLT, ANTI-ROTATION RETAINER, (ECP-6245)	During FT77 testing, at 3188 SFH inspections revealed broken lock-wires between fasteners thru the inbd closure rib. Additionally, several other fasteners had backed out of holes thru the inbd closure rib
FT76 Y301 Sheet Metal Routing Closure Life Limit, (ECP-6246)	Failure analysis of cracks on the Y301 Sheet Metal Routing Closure (74A305026-2005, -2006, -2009), discovered during teardown on the FT76 Test Article, has determined that the details do not meet full life requirements
FT50 18K Y520 Former Cracks at Lower Drop Link, (ECP-6247R1)	Cracks were found on the Y520 Former during the FT-50 Teardown. The cracks were located in the LHS former flange to web fillet radius, common to the lower drop link connection to the former
Tank 1 Improvements - Vent Cap Addition, (ECP-6248)	This ECP will cover the retrofit incorporation of Vent Tube Cap into Tank #1 to prevent leaks
Nut Plate Installation Sealing, (ECP-6249)	Missing, inconsistent, and potentially unclear engineering drawing callouts for wet installation of nut plates may have contributed to missing face surface sealant on subcontractor installed nut plates
FT76 Bay 3-4 Avionics Door Seal Support, (ECP-6256)	Failure analysis of cracks on the Bay 3-4 Avionics Door Seal Support (74A305268-2002, -2003, -2004), discovered during teardown on the FT76 Test Article, has determined that the details do not meet full life requirements
HFC-125 Fire Extinguisher Mount - Final Corrective Action, (ECP-6257)	Failure of HFC-125 Fire Bottle mounts identified during AFC-440 Fire Bottle Cartridge Retrofit on some A/C. The F/A-18E/F contract requires a 6000-hour service life. This ECP corrects this condition
FT76 Z90 Longerons Life Limit, (ECP-6259)	Revise five (5) fastener hole callouts from Class 2X fit to Interference fit for Production. Interim Production/Retrofit- Install five (5) 1st Oversize Interference fit fasteners
FT50 18K Y491 Bulkhead Redesign, (ECP-6260)	Cracks were found on the Y491 Bulkhead during the FT-50 Teardown. The cracks were located at the access hole at Z100 and the keel web attachment. Test Correlation analysis indicates the Safe Life is 4550 SFH. The F/A-18E/F contract requires a 6000-hour service life
FT76 L/H LEX Intermediate SPAR Life Limit, (ECP-6261)	Failure analysis of two cracks LH LEX Intermediate Spar at the CY286 Rib attachment, discovered during teardown on the FT76 Test Article, has determined that the spar does not meet full life requirements.
RH LEX CLOSURE AT Y301 LIFE LIMIT, (ECP-6263)	Failure analysis of cracks on the RH LEX Closure at Y301, discovered during teardown on the FT76 Test Article, has determined that the closure does not meet full life requirements

FT50 Y436 BULKHEAD LIFE LIMIT, (ECP-6264)

During tear down of the FT-50 test article cracks were found on the Y436 Center Bulkhead (74A325203 -2005) at the attachment of the dorsal deck stiffener on both the LH and RH side. Test Correlation analysis indicates the Safe Life is 3400 SFH. The F/A-18E/F contract requires a 6000-hour service life

FT76 Aft Windshield Attach Bolt Life Limit, (ECP-6269)

Failure analysis performed on a crack on the LH Aft Windshield Attach Bolt has determined that this bolt does not meet full life requirements

FT76 LH LEX Closure at Y265, (ECP-6270)

Failure analysis of the cracks at the LH LEX Closure at Y265 (CY260 Rib Attachment), discovered during teardown on the FT76 Test Article, has determined that the spar does not meet full life requirements

FT76 NLG Retract Actuator Supports & X7 Keel, (ECP-6271)

Retrofit is to replace (19) 3/16 in. Diameter Fasteners (Class 2X) With (9) 2nd Oversize in. Diameter Interference Fit Fasteners & (10) in. Diameter Interference Fit Fasteners

FT77 Wing Inboard Closure Rib Life Limit, (ECP-6275C1)

Failure analysis of three cracks in the Inboard Closure Rib at two hydraulic pass through holes, discovered during teardown of the FT77 Test Article, has determined that it does not meet the 6000 hour specification requirement

FT76 LEX Intermediate Spar at Y301 Life Limit, (ECP-6276)

Failure analysis of a crack in the LEX Intermediate Spar Integral Stiffener @ Y301, discovered during teardown on the FT76 Test Article, has determined that the detail does not meet full life requirements

FT76 Canopy Sill Longeron and Upper Nose Barrel Longeron at Y204 Life Limit, (ECP-6278)

Failure analysis of cracks in the Canopy Sill Longeron and the Upper Nose Barrel Longeron @ Y204 discovered during teardown on the FT76 Test Article, has determined that the details do not meet full life requirements

MLG Wheel Well Drainage, (ECP-6280)

Water retention in the recesses of the trailing edge casting common to the L/RHS Strut Doors

TEF SHROUD LINK, (ECP-6284)

Recent analysis to determine root cause of fleet failures has led to the finding that the TEF inboard link does not meet static requirement and loose jam nuts and maximum rigging length of the lower clevis exacerbate the problem

FT77 Lower Wing Skin Splice Fitting Life Limit, (ECP-6285C1)

Failure analysis of a drain hole crack in the Wing Lower Splice Fitting discovered during teardown of the FT77 Test Article, has determined that it does not meet the 6000 hour specification requirement

Low Speed Loss of Normal Brakes with Anti-Skid On, (ECP-6286)

The aircraft specification requires that the brake control system shall provide a means of controlling brake pressure on all landing surfaces on which the aircraft is designed to operate. The control speed range shall be from maximum ground speed to the lowest speed compatible with ground handling. A condition has occurred on some fielded Skid Control Systems where the combination of left hand transducer and skid control unit results in loss of brakes during extended taxi operations with anti-skid ON

FT76 Avionics Bay 3 & 4 Door Hinges, (ECP-6292)

The Bay 3/4 Avionics Door Hinges and Hinge Pins were cracked at several tang locations and the Hinge Pins were broken at four locations. Some of these cracks were initially discovered after 12,000 SFH of fatigue testing and remaining anomalies during teardown of the FT76 Test Article. Failure analysis of FT76 Test Article crack resulted in a safe life determination of 2350 SFH

FT50 18K Access Panel Edge Stiffener Redesign, (ECP-6293)

Cracks were found on the door edge stiffener at Y524 during the FT-50 Teardown. Test Correlation analysis indicates the Safe Life is 4500 SFH

FT77 Trailing Edge Flap Actuator Rib Life Limit, (ECP-6294)

Failure analysis of a fastener hole crack in the TEF Actuator Fitting discovered during teardown of the FT77 Test Article, has determined that it does not meet the 6000 hour service life

FT77 Wing Spar 6 Life Limit, (ECP-6295)

Failure analysis of a crack in the inboard radius of the spar discovered during teardown of the FT77 Test Article, has determined that it does not meet the 6000 hour service life

Inadequate Clearance Between APU SCV and Structure, (ECP-6211)

Correct chafing condition between aircraft structural material and the APU SCV to prevent damage to the aircraft structure

EA-18G Correction of Operational Test Discrepancies (ECP-XXX41)

Redesign / Modify system and / or subsystems discrepancies discovered during OPEVAL.

AESA OBSOLESCE PARTS (ECP-XXX)

PEI FOAM pt 2

Redesign of Backrest Operation Plunger MBEU148542 - Safety (ECP-9384MB)

Safety ECP incorporation a redesigned knurled and rounded top plunger backrest part# MBEU148542

LEX Retrofit Bundle ECPs (6261/6263/6270/6276) (ECP-6310)

Retrofit Only ESP. to combine the retrofits originally proposed in ECPs 6261, 6263, 6270, and 6276 into a single ECP

FT50 Y591 BULKHEAD AT SIDE LONGERON LIFE LIMIT (ECP-6287)

Cracks were found on the Y591 Bulkhead (74A328312) during the FT-50 Teardown. The Y591 Bulkhead is a Maintenance Critical part.

DOORS 37, 307, AND 124 DRAINAGE ISSUES, (ECP-6301)

Modification to correct door failures

FT50 STRUCTURAL RELATED ISSUES (ECP-XXX45)

To Correct A/C Fatigue related discrepancies as a result of FT-50 remaining issues

CRU-99/A Solid-State Oxygen Monitor (SSOM) (ECP-590) Safety ECP

Safety improvement to the OBOGS oxygen system, providing an additional monitoring capabilities against Hypoxia resulting in safer flight operation.

Arresting Hook Failures, (ECP-XXX46)

To correct fleet discovered arresting hook failures

Y618 INBRD Former near Keel Longeron Arresting Load, (ECP-6325)

Modifies Y618 Former to prevent cracking

Air Vehicle Safe Life Fatigue Modifications, (ECP-XXX43)

Modification to improve safe life fatigue issues

FT78 Flight Control Failures, (ECP-XXX47)

To correct flight control failures discovered during FT78

Tank 3 Bladder, Floor Foam and Backing Board (ECP-6018)

This ECP identifies the effort to increase usable fuel and decrease trapped/unusable fuel in Tank #3 by revising the shape of the Tank Floor Foam, Backing Board & Fuel Cell

Nacelle Outboard Bleed Drainage (ECP-6172)

To prevent water entrapment in the area of the Nacelle structure

Outer Wing Rib Cracks (ECP-6187)

To incorporate a full-life rib into LRIP 1, 2 and 3, and FRP1 aircraft

Centerline Pylon Feed-Thru Assembly Interface (ECP-6185)

This ECP will resolve plate thickness, plate receptacle orientation and aircraft wiring clocking in Retrofit

Engine Bay Door Strut Redesign (ECP-6089)

This ECP corrects the open forward engine bay door clearance problem with the ground during lateral engine remove and replace as required by the detail specification

Retrofit of ECS/OBUGS Tee & Elbow due to corrosion issues, (ECP-1036NI)

The bodies of both the Tee and Elbow are IVD coated aluminum. This change will replace each of these parts with units made with stainless steel bodies

Fuel Pressurization System Check Valve Failure, (ECP-1049NI)

Multiple Lot 23 and below aircraft have had internal fuel tank air pressurization system fuel intrusion due to pressurization system check valve failures

MLG Planing Mechanism Bellcrank Pivot Bolt Redesign, (ECP-5051)

An improvement to the Planing Mechanism Bellcrank Pivot Bolt to eliminate the potential for stress corrosion cracking

BALD Transponder Rotation - Change Incorporation Level, (ECP-5046C1)

This BALD Element was experiencing failures. An EI determined that it was collecting water and soap/contaminate in the connector backshell from aircraft washing procedures. This ECP will correct this condition

FT50 18K Fuel Floor Longeron at Y436 Redesign, (ECP-6305R1)

To redesign the Fuel Floor Longeron resulting from cracks that were discovered during inspections conducted following the third lifetime of testing on the FT50 fatigue test article

Warm Air Duct Deflections retrofit modline, (ECP-6308)

Correction of Warm Air Duct Deflections

FT77 Retrofit ECP for the Outer Wing, (ECP-6309)

The correct structural discrepancies in the outer wing area

FT77 Inner Wing Kick Rib, (ECP-6311)

This is to correct cracks discovered on the FT77 Test Article Analysis initially indicated a Safe life of 4700 SFH in the Inner Wing Kick Rib

Dry Bay Fire Suppression System (DBFSS), (ECP-6323)

To correct fleet operational failures

Secondary Regulator Bay Vent Line Modification, (ECP-6336)

New vent line routing to avoid possible overheating condition in the center keel area

Vertical Tail Rudder Hinge Fairing Fastener Improvements, (ECP-6337)

Design change to the fasteners mating the fairings to the intermediate support/stiffening brackets. This change involves changing the 5/32" diameter TiCb rivets to 3/16" diameter steel rivets

Design Improvements to FPU-11A 480G External Fuel Tank Modular Valve, (ECP-6338)

Issues with fuel transfer and refueling of the external fuel tanks prompted an EI of the external tank modular valve. EI revealed valve performance compromised by quality issues and the need for Design Product Improvements

Incorporation of GFE Improved Solid State Oxygen Monitoring, (ECP-6339)

OEM support for incorporation of GFE Improved Solid State Oxygen Monitoring System CRU-99/P

FT77/78 Aileron Retrofit, (ECP-6341)

Failure analysis of a drain hole crack in the aileron, discovered during teardown of the FT78 has determined the safe life is 3400 hours which does not specification

External Fuel Tank Air Pressure Regulator (ETPR), (ECP-6343)

Excessive leakage of the external fuel tank air pressure (ETPR) regulator, can potentially cause backpressure in the external air manifold, which in turn can interfere with refueling as identified by on-going investigation into Fleet failures

F/A-18 E/F Missile Rib Corrosion Prevention Improvements, (ECP-6345)
Fuel Tank Wiring Retrofit Improvements, (ECP-XXX48)
F/A18 NACES Improved Upper Catapult Sleeve, (ECP-XXX49) Safety ECP

Incorporation of EA-18G FCC Operational Flight Program (OFF) Version 38 into F/A-18E/F, **ECP-6300**

Each change has been or will be tested prior to installation in the F/A-18 and EA-18G
Some ECPs are "O" Level Installs
Some ECPs do not require kits, require installs and Non-Recurring efforts.

Corrosion has been found on the Outer Wing Panel Missile Rib. This ECP will allow coating and sealing configuration changes to improve corrosion protection on the missile rib and surrounding structure.

Retrofit improvement of the upper catapult sleeve components

This change provides for the ILS elements in release of the EA-18G Flight Control Computer (FCC) Operational Flight Program (OFF) software update (V38) for F/A-18E/F retrofit of Lot 21 and up.

Exhibit P-3a

INDIVIDUAL MODIFICATION

MODIFICATION TITLE:

E/F CORRECTION OF OPERATIONAL DISCREPANCIES (OSIP 14-03)

MODELS OF SYSTEM AFFECTED:

F/A-18E/F & EA-18G

TYPE MODIFICATION: SAFETY /RELIABILITY/IMPROVEMENT

FINANCIAL PLAN (TOA, \$ in Millions):

	Prior Years		FY 2008		FY 2009		FY 2010		OCO FY 2010												
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$											
RD&E																					
PROCUREMENT																					
Installation Kits																					
ECP-610R1 / Exhaust Overtemp Final Fix/Bard Stacks	223	16.0																			
ECP-6114 / Alt ECS Cooling Fan	12	0.1																			
ECP-6002 / FCC Processor Upgrade	28	1.3																			
ECP-6104 / MLG Door Bushing Migration	32	0.1																			
ECP-6088 / Alt Fuselage Outboard Former Fwd Flange @Y645																					
ECP-6194 / MLG Trunnion Bearing Loose Retention Nut	80	0.3																			
ECP-XXX2 / Long Stick Position Tx																					
ECP-6171 / Skin 12 Stiffner Back-up Structure	54	0.1																			
ECP-6199 / Alt Fan Shutoff Valve																					
ECP-6313 / AN/APN-194 (RADAR Altimeter) Mounting Tray Modification Step 2					430	1.3															
ECP-6193R1 / (LEX) Lwr Surface/Structure Cracks Redesign	89	23.9																			
ECP-6145 / MLG Outboard Tire Door Clevis																					
ECP-6188 / Y436 Inlet Former	183	1.9																			
ECP-6203 / FT50 Keel Beam Lower Cap	38	0.1																			
ECP-XXX12 / FT50 Teardown Bulkhead Cracking																					
ECP-6326 / FT50 Fuel Barrier Web at Y510			72	0.5	72	0.5	72	0.5													
ECP-6229 / FT50 18K Fuselage Outboard Former at Y645 Failure									60	0.1											
ECP-6183R1 / FT50 Failure of Upper Wing Skin Splice Plate			96	1.5																	
ECP-6098C1 / DOOR 49 Replacement	12	0.2																			
ECP-6068 / Horizontal Actuator Vocoder Door 71	62	1.1																			
ECP-6196C1 / MLG R/H Upper Planing Link Attach Fitting Failure	88	0.3																			
ECP-6208 / LEX Vent Mechanism Support Assembly Rod end Clevis Failure	92	*																			
ECP-6216 / LDS Fuel Wash Filter	98	0.6																			
ECP-6255 / ECS Ejector Cracks																					
ECP-6321 MLG DOOR HINGE PINS STANDARD HARDWARE CONVERSION			72	0.1	72	0.1	72	0.2													
ECP-6217 / Cockpit Pressure Warning System (CPWS)	190	1.7																			
ECP-6235 / MLG Strut Door Departures	136	0.8																			
ECP-XXX21 / HOL Follow-on Upgrades Lot 25 & Up																					
ECP-XXX22 / 18E Follow-on upgrades Lot 24 & Below																					
ECP-6076 / MLG Proximity Switches & Sidebrace Downlock Mechanism	14	0.1																			
ECP-6190 / Fuel System Ground Pressurization Tube Water Entrapment	54	0.1																			
ECP-6191 / Wing Modification for Transonic Flying Qualities Improvement																					
ECP-6198 / Radar Bay Vent Valve Fail - MSP 862	76	*																			
ECP-6206 / Y679 Former Boot Strap Interface Fillet Seal Missing	80	*																			
ECP-6209 / ECS Cooling Duct Grounding Strap																					
ECP-XXX23 / ARS Lighting																					
ECP-XXX24 / NVG Friendly NAV Lighting																					
ECP-6221 / Bay SL-Y357 Bulkhead Horizontal Flange Life Limit	109	1.0																			
ECP-6262 / Y591 Bulkhead Missing Fasteners at Keel Longeron	60	0.1	60	1.6	61	1.7															
ECP-XXX26 / Fatigue Testing - Longeron																					
ECP-6303R1 / FT50 18K Y577 Former Redesign	72	0.2	72	0.2	72	0.2	72	0.2													
ECP-6304R1 / FT50 18K Web and Wing Drag Longeron Redesign	72	0.3	72	0.6	72	0.6	72	0.6													
ECP-6306R1 / FT50 18K Y618 Inboard Former (74A342314) Redesign	72	0.6	72	0.4	72	0.4	72	0.4													
ECP-6241R1 / Wing-Alt Shear Tie Bushing Migration	106	0.1																			
ECP-XXX29 / HS1 Reservoir Chafe																					
ECP-6213R1 / TEF Clip Fatigue Prevention		0.1			36	0.4	36	0.4													
ECP-XXX30 / Boarding Ladder Sensors Improvement																					
ECP-XXX31 / Main Wheel Brake Changes																					
ECP-XXX32 / Inlet Ice Detector Hardware Redesign																					
ECP-6219 / Wing - Fuel Probe Corrosion Protection	286	0.1																			
ECP-6034 / Procures Common Preamps not funded in Lot 24	36	6.0																			
ECP-6258 / FT76 Forward Windshield Bolt Life Limit	76	*																			
ECP-XXX33 / Hydraulics Components Improvement					36	*	36	*													
ECP-6319 / IN-FLIGHT REFUELING (IFR) PROBE LINKAGE REDESIGN			200	1.5																	
ECP-6323 / Bleed Orifice Oversize			361	0.2																	
ECP-6320 / LANDING GEAR CONTROL UNIT (LGCU) MIT UPGRADE			36	0.2	36	0.2	36	0.2													
ECP-XXX36 / Fire Bottle Bay Over-Temperature																					
ECP-6282 / FT77 Wing Pylon Changes			72	6.7	72	2.9	64	2.7													
ECP-XXX38 / ECS Components Increase Vibration Load Issues							36	*													
ECP-XXX39 / AFT Engine Mount Attach Fitting							62	0.2													
ECP-XXX40 / V38 OFF																					
ECP-JAX-SE-027 / G81S00004 SE UPGRADE																					
ECP-6075 / Hornet Feather (Vane) Wear Pad Retention System Resign																					
ECP-IRRB-0147 / Repeatable Release Holdback Bar	85	0.4																			
ECP-6283 / LEX Right Hand Walkway Mat	388	0.3																			
ECP-6227C1 / Intel Nacelle Bleed Plate Crack																					
ECP-6228 / Throttle Electronics Module Seal Improvement																					
ECP-6234 / Horizontal Stabilator Fuselage Rubbing	4	1.0			36	1.7	24	1.2													
ECP-6238 / Inadequate Clearance B/W APU Surge Control Valve & Y568 Supt																					
ECP-6239R1 / FT 50 18K Fuselage Outboard Former @Y679 Failure			72	0.3	72	0.3	72	0.3													
ECP-6240 / FT50 18K MLG Sidebrace Fitting Failure					36	*	36	*													

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: F/A-18A-F

MODIFICATION TITLE: CORE AVIONICS IMPROVEMENTS / UPGRADES (OSIP 23-04)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: PUBLIC/PRIVATE COMPETITION AND AT NAVAL AVIATION DEPOTS

ADMINISTRATIVE LEADTIME: 6 Months PRODUCTION LEADTIME: 5 Months

CONTRACT DATES: FY 2008: _____ FY 2009: Apr-09 FY 2010: Apr-10 _____

DELIVERY DATE: FY 2008: _____ FY 2009: Sep-09 FY 2010: Sep-10 _____

(\$ in Millions)

Cost:	Prior Years		FY 2008		FY 2009		FY 2010		OCO FY 2010												
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$											
FY 2007 & PY (48) kits	48	0.4																			
FY 2008 () kits																					
FY 2009 (4) kits					4	0.1															
FY 2010 (28) kits							28	*													
FY 2011 (0) kits																					
FY 2012 (0) kits																					
FY 2013 (0) kits																					
FY 2014 (0) kits																					
To Complete (0) kits																					
TOTAL	48	0.4	0	0.0	4	0.1	28	*													

Installation Schedule

	FY 2007 & Prior	FY 2007				FY 2008				FY 2009				
		1	2	3	4	1	2	3	4	1	2	3	4	
In	48	0	0	0	0	0	0	0	0	0	0	0	0	4
Out	48	0	0	0	0	0	0	0	0	0	0	0	0	4

	FY 2010				FY 2011				FY 2012				FY 2013				To Complete	TOTAL				
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4						
In	7	7	7	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	80
Out	7	7	7	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	80

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: F/A-18A E/F

MODIFICATION TITLE: AESA (OSIP 002-07) for ECP-6038 and ECP-6279

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: ONE KIT INSTALLED BY CONTRACTOR FOR VALVER, OTHER INSTALLS FIELD TEAMS

ADMINISTRATIVE LEADTIME: 3 Months

PRODUCTION LEADTIME: 12 Months

CONTRACT DATES: FY 2008: Dec-07 FY 2009: Dec-08 FY 2010: Dec-09

DELIVERY DATE: FY 2008: Dec-08 FY 2009: Dec-09 FY 2010: Dec-10

(\$ in Millions)

Cost:	Prior Years		FY 2008		FY 2009		FY 2010		OCO FY 2010											
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$										
FY 2007 & PY (108) kits	84		24																	
FY 2008 (38) kits					14	2.1	24	3.2												
FY 2009 (42) kits							6	0.8												
FY 2010 (66) kits																				
FY 2011 (0) kits																				
FY 2012 (0) kits																				
FY 2013 (0) kits																				
FY 2014 (0) kits																				
FY 2015 (0) kits																				
To Complete () kits																				
TOTAL	84		24		14	2.1	30	4.0												

Installation Schedule

	FY 2007 & Prior	FY 2008				FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	84	6	6	6	6	3	4	4	3	7	8	8	7												
Out	84	6	6	6	6	3	4	4	3	7	8	8	7												

	FY 2014				FY 2015				To Complete	Total
	1	2	3	4	1	2	3	4		
In										152
Out										152

NOTE: Prior year quantities refer to separate ECP procurements

Exhibit P-3a Individual Modification

MODIFICATION TITLE: Network Centric Operations: (OSIP 002-10)

MODELS OF SYSTEMS AFFECTED: F/A-18E/F Block 2 TYPE MODIFICATION: Avionics Upgrade

DESCRIPTION/JUSTIFICATION:
 OSIP 002-10 will implement a common configuration and capability across all F/A-18E/F Block 2. Improve platform performance in all mission areas including SuW, Air-to-Air, Strike, SEAD/DEAD and interoperability. End state: reduction in number of A/C's and weapons to execute SuW and Strike missions in most stressing scenarios, Decrease in time on target to execute SuW, SEAD/DEAD missions in MCO scenarios, Improved survivability due to decrease time on target.
 The F/A-18 program has developed and integrated multiple systems to be installed in Lot 26 and subsequent Block 2. The integration of the systems: Distributed targeting Processor and Mass Storage Unit, Digital Memory Unit, Advanced Navigation, Solid State Recorder, Digital Cueing Systems and G4 Processor, and Interoperability modifications due to MIDS Lvt and DCS radio Mil-Std will greatly improve the weapon systems threat capability. This OSIP will implement the required architecture in support of N88 NAVPLAN 2030.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:
 DMD, ANAV, DCR, G4/OPR are fully developed and delivered with Lot 30 and above in FY2008. Distributed Targeting Processor, PR09 funded issue is currently under development and planned to be completed in FY2011 with IOC in FY2012. ECP's included: ANAV: ECP xxx1, DMD: ECP xxx2, DTP/MSU: ECP xxx3, DCR: ECP xxx4, G4/OPR: ECP xxx5, USSR: ECP xxx6 and Interoperability: ECP xxx

FINANCIAL PLAN: (I O A, \$ IN MILLIONS)

	Prior Years		FY 2008		FY 2009		FY 2010		OCO FY 2010										
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$									
RDT&E																			
PROCUREMENT																			
Installation Kits																			
Installation Kits N/R																			
Installation Equipment																			
Installation Equipment N/R																			
Engineering Change Orders																			
ANAV-ECPxxx1								5.8											
DMD-ECPxxx2								5.0											
DTP/MSU-ECPxxx3								8.9											
USSR-ECPxxx4								1.2											
OPR/DCR-ECPxxx5								4.2											
RWR G4 ECPxxx6								4.2											
Data																			
Training Equipment																			
Support Equipment																			
ILS																			
Other Support																			
Interim Contractor Support																			
Installation Cost																			
Total Procurement								29.2											

Exhibit P-3a Individual Modification

MODIFICATION TITLE: EA-18G Unique OSIP (011-10)

MODELS OF SYSTEMS AFFECTED: EA-18G TYPE MODIFICATION: SAFETY /RELIABILITY/IMPROVEMENT

DESCRIPTION/JUSTIFICATION:

With EA-18G aircraft achieving IOC in FY2009, an OSIP to perform required safety of flight modifications, address obsolescence issues, and incorporate system improvements is required. This new OSIP requests funding to establish and maintain an APN-5 EA-18G Operational Safety Improvement Program (OSIP). In addition, funds are required to retrofit Weapons Replaceable Assemblies (WRAs) and Shop Replaceable Assemblies (SRAs). Funding will also support maintenance of a common configuration. Additionally, funding will be used to retrofit the MATT Replacement systems on the aircraft at the completion of the development program.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

MATT Replacement NRE in FY08-10. Aircraft production kit buys in FY11-12 (32 A/C) with installs in FY12-13 (32 A/C). Retrofit kit buys in FY11-13 (53 A/C) with installations in FY12-14.

FINANCIAL PLAN: (TOA, \$ in Millions)

	Prior Years		FY 2008		FY 2009		FY 2010		OCO FY 2010												
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$											
RDT&E																					
PROCUREMENT																					
Installation Kits																					
IBS Receiver Replacement Kit																					
Installation Kits N/R								2.6													
Installation Equipment																					
IBS Receiver Equip																					
Installation Equipment N/R																					
Engineering Change Orders																					
Data																					
Training Equipment																					
Support Equipment																					
ILS																					
Other Support																					
Interim Contractor Support																					
Installation Cost																					
Total Procurement								2.6													

Exhibit P-3a Individual Modification

MODIFICATION TITLE: EW Unique (OSIP 021-08)

MODELS OF SYSTEMS AFFECTED: F/A-18C/D ALR-67(V)3 Retrofit TYPE MODIFICATION: Capability Improvements

DESCRIPTION/JUSTIFICATION:

Purchase additional ALR-67(V)3 RWR systems to be used to retrofit F/A-18C/D platforms. These systems will replace existing ALR-67(V)2 systems. This will significantly increase aircrew survivability in the legacy F/A-18. Repetitive obsolescence issues of the V(2) system is a consistent issue in the Hornet community. The F/A-18 is flying missions in direct support of troops on the ground in Iraq and Afghanistan. The RWR ALR-67(V)3 is the threat recognition or Situational Awareness (SA) for the aircrew and is vital to their own safety as well as providing the opportunity to support the ground troops. If not funded, there would be a greater risk of lost aircraft and aircrew in a hostile environment, and loss of ability to provide close air support for ground missions. Possible Blue on Blue Fratricide.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

FINANCIAL PLAN: (TOA, \$ in Millions)

	Prior Years		FY 2008		FY 2009		FY 2010		OCO FY 2010										
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$									
RDT&E																			
PROCUREMENT																			
Installation Kits																			
ALR 67(V)3									48	40.0									
XXX Kit																			
XXX Kit																			
Installation Kits N/R																			
Installation Equipment																			
ALR 67(V)3									48	40.0									
Installation Equipment N/R																			
Engineering Change Orders						11.3													
Data																			
Training Equipment																			
Support Equipment																			
ILS																			
Other Support																			
Interim Contractor Support																			
Installation Cost									48	16.0									
Total Procurement						11.3				96.0									

- Notes:
1. Totals may not add due to rounding
 2. Asterisk indicates amount less than \$51K

BUDGET ITEM JUSTIFICATION SHEET										DATE:	
P-40										May 2008	
APPROPRIATION/BUDGET ACTIVITY							P-1 ITEM NOMENCLATURE				
Aircraft Procurement, Navy / APN5 Aircraft Modifications							052600, H-46 SERIES				
Program Element for Code B Items:							Other Related Program Elements				
	PRIOR YEARS	ID Code	FY 2008	FY 2009	FY 2010	FY 2010 OCO	FY 2010 Total				
QUANTITY											
COST (In Millions)	510.5	A	51.6	52.8	35.3	17.5	52.8				

DESCRIPTION: THIS LINE ITEM FUNDS MODIFICATIONS TO THE H-46 AIRCRAFT. THE H-46 IS A TWIN-TURBINE POWERED DUAL-PILOTED TANDEM-ROTOR HELICOPTER. THE CABIN CONTAINS PROVISIONS FOR ACCOMMODATING 25 TROOPS AND CREW MEMBERS. THE CABIN ALSO CONTAINS AN INTEGRAL CARGO AND RESCUE SYSTEM. THE OVERALL GOAL OF THE MODIFICATION BUDGET IN FY2010 IS TO KEEP THE H-46 A VIABLE PLATFORM UNTIL A REPLACEMENT AIRCRAFT CAN BE FIELDDED. H-46 HELICOPTERS ARE USED BY THE MARINE CORPS FOR TROOP TRANSPORT AND SEARCH AND RESCUE MISSIONS. USMC INVENTORY: (170) CH-46E + (3) HH-46E. (25) OF THE (170) CH-46E'S ARE RESERVE AIRCRAFT. ORIGINAL DESIGN SERVICE LIFE WAS 10,000 HOURS. IT WAS SUBSEQUENTLY EXTENDED TO 12,500 HOURS ON 18 DEC 1992 AND TO 15,000 HOURS ON 16 FEB 1996. AIRCRAFT WILL CONTINUE TO BE FLOWN PAST 15,000 FLIGHT HOURS ON AN AGE EXPLORATION PROGRAM.

(TOA, \$ in Millions)

OSIP No. / DESCRIPTION	PRIOR YEARS	FY 2008	FY 2009	FY 2010	FY 2010 OCO	FY 2010 Total
025-97 SAFETY IMPROVEMENT	77.3	2.2			1.2	1.2
015-01 ERIP	275.8	7.0	8.8			
011-05 LIGHTWEIGHT COCKPIT SEATS	15.0	1.7		0.3		0.3
018-07 H-46 GASSP	47.1	15.4	44.0	35.0		35.0
017-08 AVIONICS UPGRADE		25.3			16.3	16.3
INACTIVE OSIPS	95.2					
TOTAL	510.5	51.6	52.8	35.3	17.5	52.8

Note: Totals may not add due to rounding

Note: Reserve funding included in total.

Asterisk (*) indicates amount value less than \$51K

Exhibit P-3a

MODIFICATION TITLE: SAFETY IMPROVEMENT (OSIP 025-97)

MODELS OF SYSTEMS AFFECTED: H-46 SERIES TYPE MODIFICATION: SAFETY (HONA Category A)

DESCRIPTION / JUSTIFICATION: DESCRIPTION / JUSTIFICATION: The Safety Improvement Program was directed by Chief of Naval Operations (CNO) letter 7100 serial N880F/7U660758 dated 10 Jan 97, and approved as an Abbreviated Acquisition Program (AAP) by the Program Executive Officer (PEO) on 24 Oct 97. This program contains the following Engineering Change Proposals (ECP):

1. HYDRAULIC SYSTEM UPGRADE and UTILITY HYDRAULIC SYSTEM REDESIGN: This ECP was completed in FY2000, but the fleet has experienced ongoing problems with the hydraulic system following installation of the modification. The Utility Hydraulic System Redesign will assess the overall configuration of the hydraulic system and correct deficiencies to improve system performance. This modification will be installed in 177 CH-46E aircraft (153 active + 24 reserve).
2. LOWER DUAL BOOST ACTUATOR (LDBA): The housing for the actuator is highly susceptible to stress corrosion cracking. The material wear and housing cracks have resulted in LDBA malfunction. The pilot cannot control the drive direction of the helicopter, a potentially life threatening situation. This program will procure a redesigned actuator which eliminates the failure mode in the LDBA. This modification will be installed concurrent with Fleet Exchange (FE) repairs. This modification will be installed in 177 CH-46E aircraft (153 active + 24 reserve).
3. NIGHT VISION GOGGLE (NVG) COMPATIBLE COCKPIT and NVG COMPATIBLE COCKPIT DOME LIGHT: This ECP is complete.
4. RUNNING ENGINE WASH: This ECP is complete.
5. SLIDING RESCUE HATCH (HELL HOLE DOOR): This ECP is complete.
6. ALQ-157 INFRARED COUNTERMEASURES (IRCM): This ECP is complete.
7. AN/ALE-47 COUNTERMEASURES DISPENSING SYSTEM (CMDS): This ECP is an Aircraft Survivability Equipment (ASE) modification to improve aircraft operation/maintainability/survivability in combat operations. This safety improvement upgrades the AN/ALE-39 (CMDS). It improves the reliability, reduces fleet operational cost and enhances the ASE capabilities of the CH-46E aircraft operating in hostile environments by addressing the problems of "Things Falling Off Aircraft" (TFOA) and uncommanded dispensing of countermeasures. This improvement will be installed in 214 CH-46E aircraft in support of OIF II.
8. AN/AAR-47(V)2 MISSILE WARNING SET INSTALLATION: This ECP is an Aircraft Survivability Equipment (ASE) modification to improve aircraft operation/maintainability/survivability in combat operations. The current system has a high false alarm rate resulting in premature flare launch. The modification will improve reliability in missile protection by reducing the false alarm rate, which in turn will conserve flares. This improvement will be installed in 214 CH-46E aircraft in support of OIF II.
9. HH-46E SEARCH AND RESCUE (SAR) CONVERSION: All Navy H-46Ds have been retired leaving the Marine Corp as the sole operator of the H-46D Type-Model-Series (TMS). The high flight hours on the HH-46Ds airframes, poor engine reliability and obsolescence issues make this aircraft difficult and expensive to operate and maintain. This ECP will convert 3 CH-46E helicopters to the HH-46E configuration to perform the SAR mission, and will permit retirement of the H-46D TMS.
10. ALE-47 Expendable PODs: Provides a twofold increase in the number of pods installed on the aircraft which doubles the number of expendables that can be carried as well as improving the effectiveness of the expendables to better protect the H-46 in high threat areas. 165 aircraft to be modified.
11. Blue Force Tracker: Identifies location of friendly forces of all services both ground and air, also provides a limited long range communication capability. BFT displays this information on a moving map display in the cockpit. Installs provisions on 154 aircraft and buys 61 mission kits for deploying aircraft.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

1. UTILITY HYDRAULIC SYSTEM REDESIGN: The nonrecurring engineering is complete, and production installations are ongoing.
2. LOWER DUAL BOOST ACTUATOR: This upgrade is complete.
3. NVG COMPATIBLE COCKPIT DOME LIGHT: This upgrade is complete.
4. T58-16/402 RUNNING ENGINE WASH: This upgrade is complete.
5. SLIDING RESCUE HATCH (HELL HOLE DOOR): This upgrade is complete.
6. ALQ-157 INFRARED COUNTERMEASURES (IRCM): This upgrade is complete.
7. AN/ALE-47 COUNTERMEASURES DISPENSING SYSTEM (CMDS): This ECP was approved 26 Feb 2004. Depot installs are ongoing.
8. AN/AAR-47(V)2 MISSILE WARNING SET INSTALLATION: This ECP was approved 26 Feb 2004. Depot installs are ongoing.
9. HH-46E SEARCH AND RESCUE (SAR) CONVERSION: This upgrade is complete.
10. ALE-47 Expendable PODs: Installations are all on contract.
11. Blue Force Tracking: Installations ongoing.

FINANCIAL PLAN: (TOA, \$ IN MILLIONS)

FISCAL YEAR	PRIOR YEARS		FY 2008		FY 2009		FY 2010		FY 2010 OCO		FY 2011		FY 2012		FY 2013		FY 2014		
	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	
RDTEE																			
PROCUREMENT																			
INSTALLATION KITS																			
A KITS BLUE FORCE TRACKER	154	2.2																	
AAR-47 (V)2 KITS	214	0.2																	
AAR-47 LOOSE WIRE GRP CABLES (SOFSA)	220	*																	
ALR-47 CABLES (NADEP)	36	*																	
ALR-47 KITS	387	2.4																	
ALQ-157 KITS	196	9.3																	
HH-46E SEARCH AND RESCUE (SAR)	3	0.4																	
HYDRAULIC SYSTEM UPGRADE (D-MODEL)	81	1.1																	
HYDRAULIC SYSTEM UPGRADE (E-MODEL)	140	2.1																	
LOWER DUAL BOOST ACTUATOR (E-MODEL)	97	0.5																	
MISSION KITS BLUE FORCE TRACKER	221	2.8																	
NVG COMPATIBLE COCKPIT (D-MODEL)	81	3.0																	
NEW D-AIRFRAME (T58-402) AFC-477	65	0.1																	
NEW D-ENGINE (T58-402) PPC-165	81	0.1																	
NEW E-AIRFRAME (T58-16) AFC-492	200	0.5																	
NEW E-ENGINE (T58-16) PPC-165	687	0.8																	
SLIDING RESCUE HATCH (D/E-MODEL)	66	0.8																	
TACTICAL OPERATING CENTER KITS	130	0.4																	
CDU-7000	330	15.6																	
UTIL. HYDR SYST. AFC-522	187	0.5																	
UTIL. HYDR SYST. RED AFC-521 (E)	179	1.3																	
INSTALLATION KITS N/R		2.7		1.6															
INSTALL EQUIPMENT																			
INSTALL EQUIPMENT N/R																			
ECO																			
MOD/ALQ-157		0.7																	
NRE/NAVICP/ALQ-157		0.8																	
DATA		0.8		*															
TRAINING EQUIP	10	0.1																	
SUPPORT EQUIP		0.4																	
ILS		1.1		0.1															
OTHER SUPPORT		12.3		0.5															
INTERIM CONTRACTOR SUPPORT																			
INSTALLATION COST	1,321	14.3	221	0.1	78				51	1.2									
TOTAL PROCUREMENT		77.3		2.2						1.2									

Notes:
 1. Asterisk (*) indicates amount value less than \$51K
 2. Totals may not add due to rounding.
 3. FY09 installs funded with FY 2007 Supplemental.
 Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: H-46 SERIES MODIFICATION TITLE: AFC-522 Utility Hydraulic System (025-97)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: CONTRACTOR FMT AND CONCURRENT WITH DEPOT LEVEL MAINTENANCE

ADMINISTRATIVE LEADTIME: 1 Months PRODUCTION LEADTIME: 1 Months

CONTRACT DATES: FY 2008 Nov 07 FY 2009 _____ FY 2010 _____

DELIVERY DATE: FY 2008 Dec 07 FY 2009 _____ FY 2010 _____

(\$ in Millions)

Cost:	PRIOR YEARS		FY 2008		FY 2009		FY 2010		FY 2010 OCD		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
FY 2007 & PY (187) kits	148	3.5	39	0.1																	
FY 2008 () kits																					
FY 2009 () kits																					
FY 2010 () kits																					
FY 2011 () kits																					
FY 2012 () kits																					
FY 2013 () kits																					
FY 2014 () kits																					
FY 2015 () kits																					
FY TO COMPLETE () kits																					
Total	148	3.5	39	0.1																	

Installation Schedule

FY2007 & PRIOR	FY 2008				FY 2009				FY 2010				FY 2011				FY 2012				
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
In	148		13	13	13																
Out	148			13	13	13															

	FY 2013				FY 2014				FY 2015				To Complete	Total	
	1	2	3	4	1	2	3	4	1	2	3	4			
In															
Out															

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: H-46 SERIES MODIFICATION TITLE: Safety Improvement Program (Blue Force Tracker A Kits) (025-97)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: CONTRACTOR FMT

ADMINISTRATIVE LEADTIME: 1 Months PRODUCTION LEADTIME: 5 Months

CONTRACT DATES: FY 2008 Mar 08 FY2009 _____ FY2010 _____

DELIVERY DATE: FY 2008 Aug 08 FY2009 _____ FY2010 _____

Cost:	PRIOR YEARS		FY2008		FY2009		FY2010		FY2010 OCO											
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
FY 2007 & PY (154) kits	2	1.8	52		49				51	1.2										
FY 2008 () kits																				
FY 2009 () kits																				
FY 2010 () kits																				
FY 2011 () kits																				
FY 2012 () kits																				
FY 2013 () kits																				
FY 2014 () kits																				
FY 2015 () kits																				
FY TO COMPLETE () kits																				
Total	2	1.8	52		49				51	1.2										

*FY 2007 PROCUREMENT KITS AND FY 2008 AND FY 2009 INSTALLS FUNDED WITH FY 2007 SUPPLEMENTAL
 *QTY OF INSTALLS CHANGED FROM 308 TO 154 TO REFLECT SHIPSET QTY (308 WAS 154 SHIPSETS X 2 PER AIRCRAFT).
 * KITS PROCURED WITH FY07 SUPPLEMENTAL FUNDS AND INSTALLED WITH FY10 SUPPLEMENTAL (INSTALLS IN FY10 DUE TO ISSUES WITH AVAILABILITY OF AIRCRAFT).

Installation Schedule

FY2007 & PRIOR	FY2008				FY2009				FY2010				FY2011				FY2012			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	2		26	26	13	12	12	12	13	13	13	12								
Out	2		26	26	26	13	12	12	12	13	13	13	12							

	FY2013				FY2014				FY2015				To Complete	Total	
	1	2	3	4	1	2	3	4	1	2	3	4			
In															
Out															

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: H-46 SERIES MODIFICATION TITLE: Safety Improvement Program (ALE-47 Expendable PODs) (025-97)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: CONTRACTOR FMT

ADMINISTRATIVE LEADTIME: 1 Months PRODUCTION LEADTIME: 5 Months

CONTRACT DATES: FY 2008 _____ FY2009 _____ FY2010 _____

DELIVERY DATE: FY 2008 _____ FY2009 _____ FY2010 _____

Cost:	PRIOR YEARS		FY2008		FY2009		FY2010		FY2010 OCO											
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
FY 2007 & PY (387) kits	228	7.0	130		29															
FY 2008 () kits																				
FY 2009 () kits																				
FY 2010 () kits																				
FY 2011 () kits																				
FY 2012 () kits																				
FY 2013 () kits																				
FY 2014 () kits																				
FY 2015 () kits																				
FY TO COMPLETE () kits																				
Total	228	7.0	130		29															

*FY 2007 PROCUREMENT KITS AND FY 2008 AND FY 2009 INSTALLS FUNDED WITH FY 2007 SUPPLEMENTAL

Installation Schedule

	FY2007 & PRIOR	FY2008				FY2009				FY2010				FY2011				FY2012			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	228	25	35	35	35	29															
Out	228	25	35	35	35	29															

	FY2013				FY2014				FY2015				To Complete	Total
	1	2	3	4	1	2	3	4	1	2	3	4		
In														
Out														

Exhibit P-3a

MODIFICATION TITLE: LIGHTWEIGHT COCKPIT SEATS (OSIP 011-05)

MODELS OF SYSTEMS AFFECTED: H-46 SERIES TYPE MODIFICATION: SAFETY (HONA Category A)

DESCRIPTION / JUSTIFICATION: The efficiency of the CH-46E to perform the medium lift assault support mission largely depends on aircraft payload. The empty weight of the aircraft has increased significantly over the aircraft's more than 40 years of service, limiting payload and range, and degrading mission performance. The replacement of pilot, co-pilot, crew chief, and aerial observer seats with a non-developmental military qualified/certified, armored, in-production seat is low risk, and will eliminate the need for lengthy nonrecurring engineering and testing. Modern seats would recover up to 250 pounds of payload and provide the latest in survivability technology. Reducing the empty weight of the aircraft is an extremely viable means of restoring mission effectiveness. The seats will be installed on 164 CH-46E aircraft (140 active + 24 reserve).

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES: Nonrecurring engineering for pilot/co-pilot seats is complete. The Critical Design Review (CDR) was conducted 08 Dec 2005. A firm fixed price contract for pilot/co-pilot armored seats awarded 06 Jan 2006, with deliveries starting Jun 2006. Additional National Guard and Reserve Equipment Account (NGREA) funding is buying seats for reserve aircraft. Nonrecurring engineering for aerial observer and crew chief seats is scheduled in FY2006/FY2007 to be followed by contract award for production articles in FY2007 with FY06 supplemental funds.

FINANCIAL PLAN: (TOA, \$ IN MILLIONS)

FISCAL YEAR	PRIOR YEARS		FY 2008		FY 2009		FY 2010		FY 2010 OCO												
	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	
RDT&E																					
PROCUREMENT																					
INSTALLATION KITS																					
AERIAL OBSERVER SEAT KIT (A) SUPP	164	0.4																			
CREW CHIEF SEAT KIT (A) SUPP	164	0.4																			
INSTALLATION KITS N/R		1.4																			
INSTALL EQUIPMENT																					
SEATS EQUIP	448	8.8	20	0.7																	
AERIAL OBSERVER SEATS (P KIT) SUP	164	1.0																			
CREW CHIEF EQUIP SEATS (P KIT) SUP	164	1.0																			
INSTALL EQUIPMENT N/R																					
ECO																					
INSTALLATION HARDWARE CHANGES		1.2		0.7																	
DATA		*																			
TRAINING EQUIP	3	0.1																			
SUPPORT EQUIP		0.1		0.2																	
ILS		*																			
OTHER SUPPORT		0.3		0.1																	
INTERIM CONTRACTOR SUPPORT																					
INSTALLATION COST		0.2			62		80	0.3													
TOTAL PROCUREMENT		15.0		1.7				0.3													

- Notes:
1. Asterisk (*) indicates amount value less than \$51K
 2. Totals may not add due to rounding.
 3. FY 2009 installs (qty of 62 each, includes one trainer install) are funded with FY 2007 supplemental funds and installed in FY 2009.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: H-46 SERIES MODIFICATION TITLE: LIGHTWEIGHT COCKPIT SEATS (OSIP 011-05)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Contractor FMT/Depot Level (Concurrent with Depot Level Maintenance)

ADMINISTRATIVE LEADTIME: 1 Months PRODUCTION LEADTIME: 4 Months

CONTRACT DATES: FY 2008 _____ FY 2009 _____ FY 2010 _____

DELIVERY DATE: FY 2008 _____ FY 2009 _____ FY 2010 _____

(\$ in Millions)

Cost:	PRIOR YEARS		FY 2008		FY 2009		FY 2010		FY 2010 OCO												
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
FY 2007 & PY (165) kits		0.2			62		80	0.3													
FY 2008 () kits																					
FY 2009 () kits																					
FY 2010 () kits																					
FY 2011 () kits																					
FY 2012 () kits																					
FY 2013 () kits																					
FY 2014 () kits																					
FY 2015 () kits																					
FY TO COMPLETE () kits																					
Total		0.2			62		80	0.3													

Note: FY 2009 installations are funded with FY 2007 supplemental funds. FY 2010 installations are for kits that were procured with FY 2007 supplemental funds.

Installation Schedule

	FY 2007 & Prior	FY 2008				FY 2009				FY 2010				FY 2011				FY 2012				
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
In	0					15	15	15	17	20	20	20	20									
Out	0					15	15	15	17	20	20	20	20	20								

	FY 2013				FY 2014				FY 2015				To Complete	Total	
	1	2	3	4	1	2	3	4	1	2	3	4			
In															
Out															

Exhibit P-3a

MODIFICATION TITLE: H-46 GASSP(OSIP 018-07)
 MODELS OF SYSTEMS AFFECTED: H-46 SERIES TYPE MODIFICATION: SAFETY (HONA Category A)

DESCRIPTION / JUSTIFICATION: Provides targeted initiatives to remedy the top age-related safety and reliability issues engineered to address the heavy wear-and-tear effects of high-tempo GWOT operations (400% of planned utilization rate) CH-46 airframes and subsystems in order to ensure safe, reliable and effective aircraft operation throughout the USMC Medium Lift transition period.

This OSIP will execute multiple ECPs, grouped in three sequential Block upgrades (A, B, C). Elements within each Block have been grouped by similar complexities and lead items. Specific ECPs address:

1. Redesigned and modernized wiring harnesses in airframe areas subject to high levels of heat, sand contamination and/or vibration.
2. Redesigned and modernized hydraulics subsystems using common or COTS components.
3. Redesigned and improved portions of airframe structure subject to high levels of fatigue, corrosion and other stress.
4. Improved and modernized critical avionics, aircraft survival equipment (ASE) and other aircraft systems to resolve obsolescence, reliability or safety issues using common, previously qualified or COTS solutions.
5. Infrared Suppression System for the Aircraft.
6. New Ramp Gun Mounts.
7. Wire Strike Protection system.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES: NRE efforts for Block A kits began in FY07. Successful Validation of Block A kits completed in 1st QTR FY08 with initial Block A kit procurements in 2nd Qtr FY-08. Block A production installs began 4th QTR FY08. Contracts for integration testing, prototype kits and production options will be awarded in FY08 and FY09 for Block B efforts. Validation kit installation for Block B changes scheduled for FY09.

FINANCIAL PLAN: (TOA, \$ IN MILLIONS)

FISCAL YEAR	PRIOR YEARS		FY 2008		FY 2009		FY 2010		FY 2010 OCO												
	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	
RDT&E																					
PROCUREMENT																					
INSTALLATION KITS																					
GASSP BLOCK A (A-KIT)	2	1.5	62	7.4	63	8.9	27	2.9													
GASSP BLOCK B (A-KIT)			2	0.4	48	6.2	46	4.5													
GASSP BLOCK C (A-KIT)					2	0.4	47	8.4													
ICS REWIRE					3	0.2	34	3.0													
ENGINE PERF GAUGES					12	0.6	42	1.9													
Provisioning (A-KIT) - IR Suppression	125	0.4																			
Wire Strike (A-KIT)	148	8.1																			
Ramp Mount (A-KIT)	188	0.2																			
INSTALLATION KITS N/R		6.0		1.1		5.0		1.3													
INSTALL EQUIPMENT																					
IR SUPPRESSION P-KIT	42	11.9			32	9.5															
ENGINE PERFORMANCE GAUGE P-KIT					12	0.7	42	0.7													
ENGINE CONDITION CONTROL BOX			500	3.5																	
UPPER DUAL BOOSTER ACUATOR					200	0.9	200	0.8													
EXTENSIBLE LATCH ACTUATOR					200	0.2	200	0.2													
GENERATORS							10	0.6													
ICS REPLACEMENT P-KIT					3	0.1	34	0.7													
MISSION GEAR RAMP MOUNT B-KIT	100	1.6																			
INSTALL EQUIPMENT N/R		8.2																			
ECO		0.3				0.3															
DATA		0.3		*		0.4		0.4													
TRAINING EQUIP					2	0.1	4	0.5													
SUPPORT EQUIP		0.8		0.2		2.8															
ILS		0.8				0.3		0.3													
OTHER SUPPORT		5.2		2.0		3.6		3.2													
INTERIM CONTRACTOR SUPPORT																					
INSTALLATION COST		1.8	21	0.8	221	4.1	184	5.7													
TOTAL PROCUREMENT		47.1		15.4		44.0		35.0													

- Notes:
1. Asterisk (*) indicates amount value less than \$51K
 2. Totals may not add due to rounding.
 3. Two trainer kits are being purchased in FY 2009. Of these two kits, one is for a maintenance trainer and requires depot level installation. The other is for an aircrew procedures trainer and does not require depot level installation.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: H-46 SERIES MODIFICATION TITLE: H-46 GASSP (OSIP 18-07) (BLOCK A INSTALLS)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Contractor FMT & Concurrent with Depot Level Maintenance

ADMINISTRATIVE LEADTIME: 2 Months PRODUCTION LEADTIME: 6 Months

CONTRACT DATES: FY 2008 Dec-07 FY 2009 Dec-08 FY 2010 Dec-09

DELIVERY DATE: FY 2008 Jun 08 FY 2009 Jun-09 FY 2010 Jun-10

Cost:	PRIOR YEARS		FY 2008		FY 2009		FY 2010		FY 2010 OCO													
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
FY 2007 & PY (2) kits		0.6	2	0.1																		
FY 2008 (62) kits			18	0.7	44	1.9																
FY 2009 (63) kits					19	0.8	44	2.2														
FY 2010 (29) kits							18	0.7														
FY 2011 () kits																						
FY 2012 () kits																						
FY 2013 () kits																						
FY 2014 () kits																						
FY 2015 () kits																						
FY TO COMPLETE () kits																						
Total		0.6	20	0.8	63	2.7	62	2.9														

*GASSP Block A Installs (QTY of 156 shipsets - to include 2 trainers) to include the following modifications: Electrical Upgrade (40 hrs), Electric Hydraulic Pump (EHP) (40 hrs), APU Deck (250 hrs), WSPS (80 hrs).
 **Includes WSPS Install costs in FY10 for FY10 installs. FY08 and FY09 WSPS installs are funded by FY07 WSPS Supplemental Funding.

Installation Schedule

FY2007 & PRIOR	FY 2008				FY 2009				FY 2010				FY 2011				FY 2012				
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
In		1	1	18	16	16	16	15	15	16	15	16									
Out		1	1	18	16	16	16	15	15	16	15	16									

	FY 2013				FY 2014				FY 2015				To Complete	Total
	1	2	3	4	1	2	3	4	1	2	3	4		
In														
Out														

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: H-46 SERIES MODIFICATION TITLE: GASSP (OSIP 18-07) (BLOCK B INSTALLS)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Contractor FMT & Concurrent with Depot Level Maintenance

ADMINISTRATIVE LEADTIME: 1 Months PRODUCTION LEADTIME: 3 Months

CONTRACT DATES: FY 2008 Jul 08 FY 2009 Nov-08 FY 2010 Nov-09

DELIVERY DATE: FY 2008 Oct 08 FY 2009 Feb-09 FY 2010 Feb-10

(\$ in Millions)

Cost:	PRIOR YEARS		FY 2008		FY 2009		FY 2010		FY 2010 OCO		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
FY 2007 & PY () kits																					
FY 2008 (2) kits					2	0.1															
FY 2009 (48) kits					25	1.1	23	0.1													
FY 2010 (48) kits							37	1.5													
FY 2011 () kits																					
FY 2012 () kits																					
FY 2013 () kits																					
FY 2014 () kits																					
FY 2015 () kits																					
FY TO COMPLETE () kits																					
Total					27	1.1	60	1.6													

*GASSP Block B Installs (QTY of 127 shipsets - to include 2 trainers) to include the following modifications: Oil tank, Sync Shaft Fairings, Fwd & APT Clamshell.

Installation Schedule

	FY2007 & PRIOR	FY 2008				FY 2009				FY 2010				FY 2011				FY 2012				
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
In					2		10	15	15	15	15	15										
Out					2		10	15	15	15	15	15										

	FY 2013				FY 2014				FY 2015				To Complete	Total
	1	2	3	4	1	2	3	4	1	2	3	4		
In														
Out														

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: H-46 SERIES MODIFICATION TITLE: GASSP (OSIP 18-07) (BLOCK C INSTALLS)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Contractor FMT & Concurrent with Depot Level Maintenance

ADMINISTRATIVE LEADTIME: 2 Months PRODUCTION LEADTIME: 9 Months

CONTRACT DATES: FY 2008 _____ FY 2009 Dec-08 FY 2010 Dec-09

DELIVERY DATE: FY 2008 _____ FY 2009 Sep-09 FY 2010 Sep-10

(\$ in Millions)

Cost:	PRIOR YEARS		FY 2008		FY 2009		FY 2010		FY 2010 OCO												
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
FY 2007 & PY () kits																					
FY 2008 () kits																					
FY 2009 (2) kits																					
FY 2010 (47) kits								2	0.1												
FY 2011 () kits																					
FY 2012 () kits																					
FY 2013 () kits																					
FY 2014 () kits																					
FY 2015 () kits																					
FY TO COMPLETE () kits																					
Total								2	0.1												

*GASSP BLOCK C Installs (QTY of 95 shipsets - to include 2 trainers).

Installation Schedule

	FY2007 & PRIOR	FY 2008				FY 2009				FY 2010				FY 2011				2012				
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
In												1	1									
Out													1	1	1							

	2013				2014				2015				To Complete	Total
	1	2	3	4	1	2	3	4	1	2	3	4		
In														
Out														

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: H-46 SERIES MODIFICATION TITLE: GASSP (OSIP 18-07) (IR SUPPRESSION)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Contractor FMT & Concurrent with Depot Level Maintenance

ADMINISTRATIVE LEADTIME: 1 Months PRODUCTION LEADTIME: 3 Months

CONTRACT DATES: FY 2008 _____ FY 2009 Sep-08 FY 2010 Nov-09

DELIVERY DATE: FY 2008 _____ FY 2009 Jan-09 FY 2010 Feb-10

Cost:	PRIOR YEARS		FY 2008		FY 2009		FY 2010		FY 2010 OCO													
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
FY 2007 & PY (125) kits			1.2	1			124															
FY 2008 () kits																						
FY 2009 () kits																						
FY 2010 () kits																						
FY 2011 () kits																						
FY 2012 () kits																						
FY 2013 () kits																						
FY 2014 () kits																						
FY 2015 () kits																						
FY TO COMPLETE () kits																						
Total			1.2	1			124															

Note: FY07 Supplemental funds funding FY08 & FY09 installs.

Installation Schedule

FY2007 & PRIOR	FY 2008				FY 2009				FY 2010				FY 2011				2012				
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
In				1		41	41	42													
Out				1		41	41	42													

	2013				2014				2015				To Complete	Total
	1	2	3	4	1	2	3	4	1	2	3	4		
In														
Out														

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: H-46 SERIES MODIFICATION TITLE: GASSP (OSIP 18-07) (ICS UPGRADE)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Contractor FMT & Concurrent with Depot Level Maintenance

ADMINISTRATIVE LEADTIME: 1 Months PRODUCTION LEADTIME: 4 Months

CONTRACT DATES: FY 2008 _____ FY 2009 Dec-08 FY 2010 Dec-09

DELIVERY DATE: FY 2008 _____ FY 2009 Apr-09 FY 2010 Apr-10

(\$ in Millions)

Cost:	PRIOR YEARS		FY 2008		FY 2009		FY2010		FY2010 GCO		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
FY 2007 & PY () kits																					
FY 2008 () kits																					
FY 2009 (3) kits					3	0.1															
FY 2010 (34) kits							34	0.7													
FY 2011 () kits																					
FY 2012 () kits																					
FY 2013 () kits																					
FY 2014 () kits																					
FY 2015 () kits																					
FY TO COMPLETE () kits																					
Total					3	0.1	34	0.7													

Installation Schedule

PRIOR YEARS	FY 2008				FY 2009				FY 2010				FY 2011				FY 2012				
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
In							1	2			11	11	12								
Out							1	2			11	11	12								

	FY 2013				FY 2014				FY 2015				To Complete	Total
	1	2	3	4	1	2	3	4	1	2	3	4		
In														
Out														

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: H-46 SERIES MODIFICATION TITLE: GASSP (OSIP 18-07) (ENGINE PERFORMANCE GAUGES)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Contractor FMT & Concurrent with Depot Level Maintenance

ADMINISTRATIVE LEADTIME: 1 Months PRODUCTION LEADTIME: 3 Months

CONTRACT DATES: FY 2008 _____ FY 2009 Dec-08 FY 2010 Dec-09

DELIVERY DATE: FY 2008 _____ FY 2009 Mar-09 FY 2010 Mar-10

(\$ in Millions)

Cost:	PRIOR YEARS		FY 2008		FY 2009		FY2010		FY2010 GCO												
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
FY 2007 & PY () kits																					
FY 2008 () kits																					
FY 2009 (14) kits					4	0.1	10	0.1													
FY 2010 (42) kits							26	0.3													
FY 2011 () kits																					
FY 2012 () kits																					
FY 2013 () kits																					
FY 2014 () kits																					
FY 2015 () kits																					
FY TO COMPLETE () kits																					
Total					4	0.1	36	0.4													

*GASSP Engine Performance Gauges Install Qty of 95 Shipsets - includes 2 trainers in FY 2009).

Installation Schedule

PRIOR YEARS	FY 2008				FY 2009				FY 2010				FY 2011				FY 2012			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In									4	9	9	9								
Out									4	9	9	9								

	FY 2013				FY 2014				FY 2015				To Complete	Total
	1	2	3	4	1	2	3	4	1	2	3	4		
In														
Out														

MODIFICATION TITLE: CH-46 AVIONICS UPGRADE PROGRAM (OSIP 017-08)

MODELS OF SYSTEMS AFFECTED: H-46 SERIES TYPE MODIFICATION: SAFETY (HONA Category A)

DESCRIPTION / JUSTIFICATION: The CH-46E has multiple avionics systems that are in need of upgrade. These systems include the cockpit information displays, the onboard navigation and communication systems and their perspective controls, the instrument flight required situational awareness systems and their associated displays and the survivability systems controls and displays. This modification will be installed in 95 aircraft.

ARC-210: The existing secure communication equipment in the CH-46E is the KY-58. The KY-58 is functionally obsolete. Integration of the ARC-210 ver 1851 Warrior radio provides an integrated KY secure voice communication capability, eliminating the need for the two KY-58 units. The weight savings from removing the KY 58's will provide approximately 40 pounds of additional payload. This latest version offers much improved capabilities beyond the elimination of the KY-58 and it is common to multiple other US Navy platforms.

CDNU: The current CDNU-800 used in the CH-46E lacks the processing power (386 MHz) or the memory (1 MB) to allow the CH-46E to incorporate avionics systems needed to allow for operations in forward operating areas. Fleet impact is that the ARC-210 cannot be integrated into the aircraft. The ARC-210 cannot be installed in the CH-46E because the current CDNU-800 does not have the additional memory or processing power to control or integrate these systems.

ARC-220: Funds for 48 mission kits of Navy-Common AN/ARC-220 Digital HF Radios for installation in deployed CH-46E helicopters operating in support of GWOT from land bases and Marine Expeditionary Units amphibious shipping. CH-46E aircraft perform missions over a wide area where they are outside of Line-Of-Sight (LOS) communication range. Mission changes, threat changes, and emergencies require that the crew have ability to communicate over long distances. ARC-220 provides over the horizon communication capability and mission flexibility.

LAIRCM: Large Aircraft Infrared Counter Measure program (LAIRCM) meets an urgent requirement to improve the survivability of the CH-46E helicopter against infrared guided surface-to-air missiles. LAIRCM is a high-power directional infrared (IR) jammer. It is designed to defeat a wide range of infrared heat seeking missiles. Missile detection and tracking data is provided to the Signal processor by multi-color infrared sensors. The system includes a transformer-rectifier, an embedded GPS inertial navigation system, 5 infrared missile warning sensors and 2 laser jammers.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES: ARC-210 Funds (FY 2008 Supplemental) have been provided. ARC-220: Preliminary Design Review (PDR) is scheduled for Nov 2009. Critical Design Review (CDR) is scheduled for Dec 2009.

FINANCIAL PLAN: (TOA, \$ IN MILLIONS)

FISCAL YEAR	PRIOR YEARS		FY 2008		FY 2009		FY 2010		FY 2010 OCO		QTY	\$	QTY	\$	QTY	\$	QTY	\$
	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$								
RDT&E																		
PROCUREMENT																		
INSTALLATION KITS																		
ARC-210 PRODUCTION A KITS (SOFA)			55	0.8														
ARC-220 PRODUCTION A KITS									48	2.2								
LAIRCM PRODUCTION A KITS																		
INSTALLATION KITS N/R			1	5.9						2.5								
INSTALL EQUIPMENT																		
ARC-210 PRODUCTION KITS SHIP SETS RADIOS (ROCKWELL)			55	10.5														
ARC-220 PRODUCTION KITS									48	4.8								
INSTALL EQUIPMENT N/R				4.6						0.2								
ECO																		
DATA										0.4								
TRAINING EQUIP																		
ARC-220 TRAINER A KITS										*								
ARC-220 TRAINER P KITS										0.2								
SUPPORT EQUIP				0.1														
ILS				0.1						0.8								
OTHER SUPPORT				1.4						3.3								
INTERIM CONTRACTOR SUPPORT																		
INSTALLATION COST				2.0	21			35		2	2.0							
TOTAL PROCUREMENT				25.3						16.3								

Notes:

1. Asterisk (*) indicates amount value less than \$51k
2. Totals may not add due to rounding.
3. FY 2009 and FY 2010 installs are funded with FY 2008 supplemental.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: H-46 SERIES MODIFICATION TITLE: CH-46 AVIONICS UPGRADE PROGRAM (OSIP 017-08) ARC-210

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: GOCO FMT

ADMINISTRATIVE LEADTIME: 2 Months PRODUCTION LEADTIME: 1 Months

CONTRACT DATES: FY 2008 Sep-08 FY 2009 _____ FY 2010 _____

DELIVERY DATE: FY 2008 Oct-08 FY 2009 _____ FY 2010 _____

(\$ in Millions)

Cost:	PRIOR YEARS		FY 2008		FY 2009		FY 2010		FY 2010 OCC										
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
PRIOR YEARS () kits																			
FY 2006 () kits																			
FY 2007 () kits																			
FY 2008 (55) kits				2.0		20			35										
FY 2009 () kits																			
FY 2010 () kits																			
FY 2011 () kits																			
FY 2012 () kits																			
FY 2013 () kits																			
TO COMPLETE () kits																			
Total				2.0		20			35										

FY 2009 INSTALLATIONS ARE FUNDED WITH FY 2008 SUPPLEMENTAL DOLLARS.
ADMINISTRATIVE LEADTIME FROM TIME FUNDS WERE RECEIVED (JULY 2008).

	FY 2007 & Prior	FY 2008				FY 2009				FY 2010				FY 2011				FY 2012			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	0					20				15	20										
Out	0						20				15	20									

	FY 2013				FY 2014				FY 2015				To Complete	Total
	1	2	3	4	1	2	3	4	1	2	3	4		
In														
Out														

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: H-46 SERIES MODIFICATION TITLE: CH-46 AVIONICS UPGRADE PROGRAM (OSIP 017-08) LAIRCM

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: GOCO FMT

ADMINISTRATIVE LEADTIME: _____ Months PRODUCTION LEADTIME: _____ Months

CONTRACT DATES: FY 2008 Jun 09 FY 2009 _____ FY 2010 _____

DELIVERY DATE: FY 2008 Aug 09 FY 2009 _____ FY 2010 _____

(\$ in Millions)

Cost:	PRIOR YEARS		FY 2008		FY 2009		FY 2010		FY 2010 OCC										
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
PRIOR YEARS () kits																			
FY 2006 () kits																			
FY 2007 () kits																			
FY 2008 (1) kits				0.3		1													
FY 2009 () kits																			
FY 2010 () kits																			
FY 2011 () kits																			
FY 2012 () kits																			
FY 2013 () kits																			
TO COMPLETE () kits																			
Total				0.3		1													

FY 2009 INSTALLATIONS ARE FUNDED WITH FY 2008 SUPPLEMENTAL DOLLARS.

	FY 2007 & Prior	FY 2008				FY 2009				FY 2010				FY 2011				FY 2012							
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4				
In	0									1															
Out	0									1															

	FY 2013				FY 2014				FY 2015				To Complete	Total
	1	2	3	4	1	2	3	4	1	2	3	4		
In														
Out														

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: H-46 SERIES MODIFICATION TITLE: CH-46E AVIONICS UPGRADE PROGRAM (OSIP 017-08) LONG RANGE COMM ARC-220

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: GOCO FMT & FRC CONCURRENT IMP

ADMINISTRATIVE LEADTIME: 5 Months PRODUCTION LEADTIME: 4 Months

CONTRACT DATES: FY 2008 _____ FY 2009 _____ FY 2010 Feb-10

DELIVERY DATE: FY 2008 _____ FY 2009 _____ FY 2010 Jun-10

(\$ in Millions)

Cost:	PRIOR YEARS		FY 2008		FY 2009		FY 2010		FY 2010 OCO												
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
PRIOR YEARS () kits																					
FY 2006 () kits																					
FY 2007 () kits																					
FY 2008 () kits																					
FY 2009 () kits																					
FY 2010 (48) kits										2	2.0										
FY 2011 () kits																					
FY 2012 () kits																					
FY 2013 () kits																					
TO COMPLETE () kits																					
Total										2	2.0										

	FY 2007 & Prior	FY 2008				FY 2009				FY 2010				FY 2011				FY 2012							
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4				
In	0											2													
Out	0											2													

	FY 2013				FY 2014				FY 2015				To Complete	Total
	1	2	3	4	1	2	3	4	1	2	3	4		
In														
Out														

Exhibit P-40, BUDGET ITEM JUSTIFICATION								DATE: May 2009			
APPROPRIATION/BUDGET ACTIVITY Aircraft Procurement, Navy/APN-5 Aircraft Modifications							P-1 ITEM NOMENCLATURE 052700, AH-1W SERIES				
Program Element for Code B Items:							Other Related Program Elements				
	Prior Years	ID Code	FY2008	FY2009	FY2010	FY2010 OCO	FY2010 Total				
QTY		A									
COST (In Millions)	487.9	A	33.6	6.4	66.5	0.0	66.5				
<p>DESCRIPTION: This line item funds modifications to the AH-1W aircraft. Modifications prior to FY 1997 were funded in the H-1 Series P-1 line item. In FY10 there are 157 AH-1W's. The AH-1W is a tandem seat, two place (pilot and gunner/co-pilot) attack helicopter designed and built to provide the high speed and maneuverability required by the attack mission. The armament of the AH-1W includes the SIDEWINDER, TOW, and HELLFIRE missile systems, a chin-mounted 20mm turret gun, and wide variety of forward firing and gravity released external stores. The overall goal of the modifications budgeted in FY 2010 is to continue to fulfill the operational requirements to detect, identify and destroy tactical sized armored targets with precision guided munitions during the day, at night, and during adverse weather, as well as providing enhanced conventional weapons delivery by utilizing the system's laser ranging and designating system. Additionally, modifications to eliminate safety hazards and remedy obsolescence issues and improve reliability are part of this program. The specific modifications budgeted and programmed are:</p>											
(TOA, \$ in Millions)											
<u>OSIP No.</u>	<u>Description</u>	<u>Prior Years</u>	<u>FY2008</u>	<u>FY2009</u>	<u>FY2010</u>	<u>FY2010 OCO</u>	<u>FY2010 Total</u>				
008-90	AH-1 NIGHT TARGETING	335.3	3.8	0.0	27.8	0.0	27.8				
016-98	AH-1W APR-39 A(V)2	76.8	1.0	0.3	0.0	0.0	0.0				
013-00	AH-1W A/C & T700 ENG	54.9	28.8	0.0	33.4	0.0	33.4				
002-03	AH-1W 20MM LINKLESS FEED	11.6	0.0	6.1	5.2	0.0	5.2				
	INACTIVE OSIPs	9.3									
Total		487.9	33.6	6.4	66.5	0.0	66.5				
<p>Note: Totals may not add due to rounding.</p>											

Exhibit P-3a

Individual Modification

MODIFICATION TITLE: AH-1W NIGHT TARGETING (OSIP 008-90)

MODELS OF SYSTEMS AFFECTED: AH-1W TYPE MODIFICATION: SAFETY

DESCRIPTION/JUSTIFICATION: The U.S. Marine Corps (USMC) has an operational requirement to detect, identify and destroy tactical sized armored targets with precision guided munitions during day, night and adverse weather conditions. The Night Targeting System (NTS) provides a night/adverse weather and designator TOW and autonomous HELLFIRE capability. In addition, NTS will provide enhanced conventional weapons delivery by utilizing the systems laser ranging system. This modification has two key parts: (1) the modification of the cockpit and the canopy places a radar altimeter in the front cockpit for the first time; and (2) the NTS itself. The Night Vision Goggle Helmet mounted Display and Improved Crew Restraint System completes the NTS modification. NTS will accomplish the USMC requirement for night operations by incorporating a high resolution stabilized forward looking infra-red sensor, changed coupled device camera system, automatic target tracking, and laser range finder/designator into the current M65 telescopic sight unit. Due to changes in the TOW missile control by addition of the NTS, a Buffer Box is being incorporated to ensure proper operation of the TOW missile with the NTS. Additional NTS WRA modifications to improve reliability, maintainability, and systems stabilization including but not limited to a Digital Video Data Recorder will also be incorporated.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: The AH-1W Fleet has been fully outfitted with the Night Targeting System. Upgrades will include, but not limited to replacement of the first generation FLIR with a third generation FLIR, replacing the black and white TV with a color TV, improve bore sight, and continue to look at reliability maintainability and stabilization issues.

FINANCIAL PLAN: (TOA, \$ in Millions)

	Prior Years		FY 2008		FY 2009		FY 2010		FY2010 OCO													
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
RDT&E																						
PROCUREMENT																						
Installation Kits																						
A/F Kits	128	37.5																				
Accelerated Kits	5	2.0																				
NTS Kits	132	129.4																				
NTSU Kits	7	9.3	3	2.9			12	18.0														
Tow Buffer Kits	202	1.8																				
Installation Kits N/R		23.7																				
Installation Equipment																						
ICRS GFE	41	1.8																				
Misc. GFE (Repair/Replace)	1	5.5																				
NTS GFE	79	1.5																				
VCRS (Digital Video Recorder)	137	3.6					12	0.6														
Installation Equipment N/R		2.2																				
Engineering Change Orders		7.5						0.6														
Data		1.5						0.4														
Training Equipment	4	4.5					2	4.2														
Support Equipment	1	15.1																				
ILS		15.1						1.3														
Other Support		28.2		0.9				2.0														
Interim Contractor Support								0.7														
Installation Cost	128	45.1																				
Total Procurement		335.3		3.8				27.8														

Exhibit P-3a

Individual Modification

MODIFICATION TITLE: AH-1W A/C & T700 ENG (OSIP 013-00)

MODELS OF SYSTEMS AFFECTED: AH-1W/AH-1Z TYPE MODIFICATION: SAFETY

DESCRIPTION/JUSTIFICATION: This program is designed to address safety issues, such as mishap casual factors associated with maintaining an older type model series aircraft. The AH-1W helicopter is powered by two General Electric T700-GE-401 turbo shaft engines which are controlled throughout the normal operating range by the Electrical Control Unit (ECU) and the Hydro-Mechanical Unit (HMU). Since 1994, 86 total power loss incidents have occurred with the T700-GE-401; 58 ground flameouts, 7 ground rollbacks, 10 in-flight shut-downs, and 11 in-flight rollbacks. These inadvertent power loss incidents severely jeopardize aircrew safety. Incorporation of a Digital Electronic Control Unit (DECU) with auto-ignition system will reduce the risk of an uncommanded engine flameout and complete power loss. This change will replace the EECU with a DECU which will be carried forward into the AH-1Z. Additional safety programs that will be implemented by this OSIP include, but are not limited to: Dynamic Component Change (DCC) to incorporate new chip detectors on the 42 and 90 degree gear boxes are required to provide improved warning of impending failure, and new filler caps to prevent internal corrosion caused by water intrusion. Equipment introduced by this change will be carried forward into the AH-1Z. Incorporation of Crash Attenuating Seat Cushions, to reduce the likelihood of back injuries to pilots during hard landing or crashes, will be investigated for modifications. Additional A/C fatigue life issues, including but not limited to rotor blades, stub wings and tail boom technology, will be investigated to improve performance and mitigate tail boom fatigue. Tail boom Strake technology will be investigated to improve performance and reduce tail boom fatigue. Reduction of cockpit vertigo inducing problems which include "A" Common Cockpit Processor (CCP), Blue Force Tracker (BFT), Heads-up-display (HUD) Upgrades, Tactile Situation Awareness System (TSAS), Upgrade Transponder (CXP), Tactical Video Data Link (TVDL) system will also be implemented via this OSIP. Additional improvements to increase reliability and reduce maintenance efforts (such as scratch resistant covers, damaged tolerant windscreen and tear-a-way covers, etc.) and mid-air collision avoidance system will also be accomplished. Additional reliability and maintenance upgrades, including replacement of existing Thermal Imaging Recorder (TIR) with a Digital Thermal Imaging Recorder, and Improved Multi-Function Display Unit (MPDU) will also be incorporated. Additional safety improvements to increase aircrew safety and cockpit organization such as storage for personal weapons will be implemented.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: The DECU is a General Electric proprietary, non-developmental item used on the SH-60B and aircraft equipment with T700-GE-401C. Contract awarded 1st quarter FY00. Installation of prototypes were accomplished in 2nd quarter of FY01 which completed verification. Portion of these modifications will carry forward to the AH-1Z.

FINANCIAL PLAN: (TOA, \$ in Millions)

	Prior Years		FY 2008		FY 2009		FY 2010		FY2010 OCO										
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
RDT&E																			
PROCUREMENT																			
Installation Kits																			
AFC XXX DECU Install Kits	175	0.2																	
ANVIS HUD	12	1.2					6	0.9											
CCP (2 per A/C)			6	1.3			6	1.0											
CXP (1 per A/C)	150	5.0																	
DCC XXX 42 & 90 Degree Gearbox	50	0.9																	
Tearaway Windscreen Covers	1	0.7																	
Installation Kits N/R		1.4		22.0				24.0											
Installation Equipment																			
ANVIS HUD	12	3.2					6	1.8											
CXP (1 per A/C) & CCP (1 per A/C)			6	1.5			6	1.1											
Flat Panel Display	1	0.1																	
PPC XXX Kits	392	5.8																	
Installation Equipment N/R		10.4																	
Engineering Change Orders		0.2		0.4															
Data		0.8		0.8															
Training Equipment		1.5																	
Support Equipment		0.9																	
ILS		3.6						0.7											
Other Support		18.5		2.7				2.5											
Interim Contractor Support		0.1																	
Installation Cost		0.5			12		18	1.4											
Total Procurement		54.9		28.8				33.4											

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: AH-1W/AH-1Z

MODIFICATION TITLE: AH-1W A/C & T700 ENG (OSIP 013-00) ANVIS HUD, CCU, TVDL

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: CONTRACTOR FIELD MOD TEAM

ADMINISTRATIVE LEADTIME: 1 Months

PRODUCTION LEADTIME: 3 Months

CONTRACT DATES: FY 2008: N/A FY 2009: N/A FY 2010: Oct-09

DELIVERY DATE: FY 2008: N/A FY 2009: N/A FY 2010: Dec-09

(\$ in Millions)

Cost:	Prior Years		FY 2008		FY 2009		FY 2010		FY 2010 OCO													
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
FY 2007 & PY (12) kits		0.5		1.5	12																	
FY 2008 (6) kits							6															
FY 2009 () kits																						
FY 2010 (12) kits								12	1.4													
FY 2011 () kits																						
FY 2012 () kits																						
FY 2013 () kits																						
FY 2014 () kits																						
FY 2015 () kits																						
To Complete () kits																						
TOTAL		0.5		1.5	12			18	1.4													

Note: FY2009 installs are funded with FY2007 Supplemental funds.

Installation Schedule

FY 2007 & Prior	FY 2008				FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In								12	4	4	5	5												
Out								12	4	4	5	5												

	FY 2014				FY 2015				To Complete	Total
	1	2	3	4	1	2	3	4		
In										
Out										

Exhibit P-3a

Individual Modification

MODIFICATION TITLE: AH-1W 20MM LINKLESS FEED (OSIP 002-03)

MODELS OF SYSTEMS AFFECTED: AH-1W/AH-1Z TYPE MODIFICATION: SURVIVABILITY

DESCRIPTION/JUSTIFICATION: The U.S Marine Corps (USMC) has an operational requirement for conventional weapons delivery. This initiative will replace the current feeder assembly with one that utilizes linkless, bulk 20MM ammunition common to all other DoN 20MM weapons system improvements (F/A-18, F-14, CWIS). The ammo can/feeder assembly is the highest reliability degrader in the gun system. In addition, this OSIP provides for additional modifications, enhanced lubrication system/methodology, laser pointers (including mounting), improved turret test console and improved barrel supports that will significantly increase the accuracy and reliability of this critical weapons system and enhance the survivability of the flight crew. The implementation of this modification will enhance the warfighter's capability to place more rounds on target by eliminating gun jamming significantly increasing reliability. Additionally, improvements to increase reliability and accuracy of AH-1W/AH-1Z mission (to include Joint Air to Ground Missile (JAGM)) and rocket weapons systems (to include Advanced Precision Kill Weapon System (APKWS)) will be incorporated into this OSIP. Portion of these modifications will be carried forward and must be compatible to the AH-1Z.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: This initiative will be implemented by issuance of a new contract based on open competition between several manufacturers of 20MM Weapons System Improvements technology. Contract Awarded 1st quarter of FY07. Production installations, which are O-level installs, are forecasted to commence in the 4th quarter of FY08.

FINANCIAL PLAN: (TOA, \$ in Millions)

	Prior Years		FY 2008		FY 2009		FY 2010		FY2010 OCO														
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
RDT&E																							
PROCUREMENT																							
Installation Kits																							
Installation Kits N/R																							
Installation Equipment																							
Linkless Feed Assembly and Loader	4	4.1			10	2.3	15	3.5															
Installation Equipment N/R		0.6																					
Engineering Change Orders		0.1																					
Data		0.1				0.3		0.1															
Training Equipment		0.1				0.5		0.5															
Support Equipment	3	1.7			5	0.5																	
ILS		1.6				0.5		0.9															
Other Support		3.1				1.9		0.2															
Interim Contractor Support																							
Installation Cost		5	0.2																				
Total Procurement		11.6				6.1		5.2															

Notes:

1. Unit costs based on FY09 contract stepladder prices. System includes (1) LFS Assy. (1) Merger Loader and (1) Feeder Loader.

Exhibit P-40, BUDGET ITEM JUSTIFICATION DATE: **May 2009**

APPROPRIATION/BUDGET ACTIVITY <i>Aircraft Procurement, Navy/APN-5 Aircraft Modifications</i>							P-1 ITEM NOMENCLATURE 0528, H-53 Series				
Program Element for Code B Items:							Other Related Program Elements				
	Prior Years	ID Code	FY2008	FY2009	FY2010	FY2010 OCO	FY2010 Total				
QTY		A									
COST (In Millions)		A	115.9	91.5	68.2	164.7	232.9				

DESCRIPTION: This line item funds modifications to the CH-53D/CH-53E/MH-53E aircraft. The aircraft inventories to be modified vary by OSIP, dependant on kit modification production lead-time. The CH-53E is a seven blade main rotor and a four-blade canted tail rotor helicopter powered by three T64-GE-416A turbo shaft engines while the CH-53D has six main rotor blades and two T64-GE-413 engines. The CH-53D/E aircraft are capable of both land and ship based transport of heavy equipment, supplies, and personnel. The MH-53E is similar to the CH-53E with additional capabilities for Airborne Mine Countermeasures (AMCM), Vertical On-Board Delivery (VOD), and Special Missions which require longer range and more precise navigation than that of the CH-53E. The overall goal of the modifications budgeted in FY10 was increased communication and navigation, integrated mechanical diagnostics, degraded visual environment mitigation, survivability and sustainment initiatives, night vision capability, and fleet operation and safety performance in the H-53 community.

The overall goal of the FY2010 Overseas Contingency Operations (OCO) request is to: Helicopter Night Vision System (HNVS) (12-92) Funds turreted AAQ-29A Forward Looking Infrared (FLIR) kits to equip CH-53E deploying squadrons and replace the existing AAQ16B introduced in the mid 1990s. Operations in the austere mountainous and desert terrain typical of Overseas Contingency Operations (OCO) theaters became extraordinarily hazardous without some means of seeing the terrain. The HNVS provides an improved night/all weather mission capability. Integrated Mechanical Diagnostic System (IMDS) (07-98) Funds procurement and installation of IMDS kits. The system significantly increases operational readiness and support by increasing efficiencies in troubleshooting & maintenance, and forecast of part fatigue failures. Ballistic Protection Systems (BPS) (21-03) Funds the Non-Recurring Engineering (NRE), procurement and installation of BPS. BPS is a mission kit of protective armor panels secured to the cockpit and cargo compartment floor and to the sidewall area around the gunners' doors. This effort provides for improved survivability of crew and passengers against small arms and anti-aircraft fragmentation type threats that the fleet is increasingly exposed to during OCO. Engine Reliability Improvement Program (ERIP) (10-05) The T64 ERIP upgrades top age related engine degraders, fatigue limiters and performance degradation on T64 engines. MH-53 T64-419 Engine Titanium Nitride (TiN) Erosion Resistant Coating effort modifies the T64-GE-419 engine to incorporate erosion-resistant, TiN-coated compressor airfoils. MH-53E engine hardware improvements are needed to counter reliability degraders resulting from the increased operational tempo and austere operating environments associated with OCO. CH-53D T-64 413 Engine TiN Erosion Resistant Coating effort modifies T64-413 engines to incorporate erosion-resistant, TiN-coated compressor airfoils. CH-53D engine hardware improvements are needed to counter reliability degraders resulting from the increased operational tempo and austere operating environments associated with OCO. CH-53E Improved Hot Day Performance effort will procure and install modification kits to improve CH-53 performance at ambient temperatures greater than 75 degrees Fahrenheit and pressure altitudes above sea level. Average high temperatures in Baghdad Iraq are greater than 75 degrees Fahrenheit during seven months of the year. Average high temperatures in June, July, August and September are in excess of 100 degrees Fahrenheit. Medivac (15-05) FBCB2 Compliant Blue Force Tracker (BFT) with Moving Map provides a quick, fielded solution to the H-53 fleet, to provide BFT/Moving Map capability to increase cockpit navigational situational awareness, reduce the chance of friendly fire casualties and aircraft loss, and provide higher headquarters the ability to track H-53 flights in areas of reduced radio reception. Funds incorporation of encryption devices on CH-53E and Tactical Operation Centers and provides for joint component and system level testing on BFT II. Critical Systems Armor (CSA) funding conducts NRE and validation/verification of a lightweight armor system to protect engines and other flight-critical aircraft systems and procures lightweight protective armor system for engines and other flight critical systems. Sustainment (08-06) Engine Air Particle Separator (EAPS) Improvements: Conducts validation/verification of EAPS Improvements to protect engines from Foreign Object Debris (FOD) including dust, dirt and organic debris. Aircraft operating in support of OCO face a significant increase in FOD due to unimproved landing zones. EAPS Improvement Kits for H-53 aircraft will significantly reduce engine vulnerability and allow the H-53 to operate in a wider range of support and OCO. Aircrew Cooling: H-53 aircrew continue to fly in the extreme heat of the desert environment and have been exposed to the subsequent physiological effects of these extreme conditions in support of OCO missions. Mishaps during OIF and HOA in the H-53 community have been attributed to pilot error, not enemy action. Fatigue and the subsequent reduced mental performance enhance and/or increase the chance of pilot error. An aircrew cooling system alleviates the reduced mental acuity and heat fatigue crews experience operating in the high heat environments of OIF and HOA. Kapton Wiring: This wiring, now aged and severely degraded, has been identified by the System Safety Working Group as the # 1 safety issue, and the Fleet OAG as a top ten issue for the H-53. Since 1988, there have been numerous hazreps citing fires, arching and chaffing. The probability of future aircraft fires is considered inevitable and adds a significant risk to both aircraft and personnel. Directed Infrared Countermeasures (DIRCM) (10-08) Currently, the H-53E has only Infrared (IR) detection equipment and rudimentary flares for use as countermeasures. This system will help protect the CH-53 which is highly susceptible to IR seeking manpads, the weapon of choice in all current theaters. Visually Degraded Environment VDE (20-07) VDE is the greatest unmitigated challenge faced by Marine Aviation in its current operating environment. The loss of visual ground reference during night landings to unimproved, dusty landing zones is the greatest safety risk to H-53 aircrew, passengers and aircraft. The H-53 will continue to operate in VDE and continue to endanger flight crews and passengers while flying in a low altitude/low airspeed regime or landing in unimproved landing zones in conditions that may cause loss of a visual reference due to dust, snow, fog, smoke or darkness. A VDE solution will facilitate mission accomplishment in all degraded cueing environments, prevent degraded cueing environment mishaps and subsequent loss of life and assets. H-53 Heads-up Display HUD (20-09) The integration of the HUD system will provide a VDE solution for the CH-53D. As currently fielded, the CH-53D cockpit configuration forces the flying pilot to break their visual scan of objects outside the aircraft in order to view critical flight and mission performance data such as power, altitude, and speed presented only on the instrument panel. With this integrated HUD system, all critical flight parameters are presented to the operator providing the pilot with the capability to continuously keep eyes on the target or landing zone.

(TOA, \$ in Millions)

OSIP No.	Description	Prior Years	FY2008	FY2009	FY2010	FY2010 OCO	FY2010 Total
012-92	HNVS	179.0	0.7	0.7	0.8	25.2	26.0
020-97	ATTEN. TRP SEATS	51.0	0.1	0.3	1.1		1.1
007-98	INTEGRATED MECH DIAG	87.2	9.2	14.7	12.9	2.0	14.9
009-01	NACELLES	14.6	0.5	2.9	2.6		2.6
021-03	H-53 INTERIOR BALLISTIC ARMOR					10.1	10.1
010-05	H-53 ERIP	79.8	30.0	16.2	16.6	22.8	39.4
012-05	H-53 AMARC	12.6	3.4				
015-05	H-53 MEDIVAC	30.3	23.3	11.7	0.3	26.5	26.8
008-06	H-53 A/C SUSTAINMENT	33.2	33.3	23.6	19.1	19.3	38.4
020-07	H-53 VDE	5.3	9.4	3.5	8.7	27.8	36.5
010-08	DIRCM	148.6	6.0	13.0	6.0	6.0	12.0
020-09	H-53 HUD			5.0		25.0	25.0
Total		641.7	115.9	91.5	68.2	164.7	232.9

Note: Totals may not add due to rounding.
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P-1 SHOPPING LIST
ITEM NO. 33 PAGE NO. 1

Exhibit P-3a

Individual Modification

MODIFICATION TITLE: HNVS (OSIP 012-92)

MODELS OF SYSTEMS AFFECTED: CH-53E (152) TYPE MODIFICATION: MISSION/PERFORMANCE ENHANCEMENT

DESCRIPTION/JUSTIFICATION: The Helicopter Night Vision System (HNVS) will provide an infrared night vision system for the CH-53E transport helicopters. The HNVS provides an improved night/all weather mission capability. This OSIP includes integration of the off the shelf APN-217(V)6 Doppler Navigation System and AAQ-16B/29/29A FLIR. Future configuration for CH-53E transport helicopter will be the AAQ-29A FLIR due to obsolescence issues for OEM with AAQ-29. A pilot display unit upgrade is planned in order to put current kneeboard moving map on the PDU, increasing effectiveness and safety, and providing a display that will accomodate a visually degraded environment solution. Program is structured to replace AAQ-16 and AAQ-29 with AAQ-29A to establish a single configuration.

OCO funding: There is a signed requirement in the Department of the Navy ORD # OR-0930-AW Dtd: Apr 1977, for an improved night/adverse weather mission capability. The system must enable the CH-53E to operate more effectively in low light conditions, overcast skies, blowing sand, light fog, and other periods of reduced visibility. The HNVS provides an improved night/all weather mission capability. Funds an additional 42 turreted AAQ-29A Forward Looking Infrared (FLIR) kits to completely equip CH-53E deploying squadrons and replaces the existing AAQ16B introduced in the mid 1990s. The Q16B becomes obsolete in FY16 and cannot be supported for repair at that point. Funding would replace the antiquated Q16B and provide a single configuration. Operations in the austere mountainous and desert terrain typical of OCO theaters became extraordinarily hazardous without some means of seeing the terrain. Feedback from OIF/OEF documents that crews place a high value and level of confidence in the FLIRs ability to save their lives. The image quality of the AAQ-29A makes this mission essential equipment in our current Areas of Responsibility (AORs).

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: The AAQ-16B/29 FLIR is a non-developmental Item (NDI) currently installed on a number of U.S. Army, Air Force, and Navy helicopters. DT-IIIa on the CH-53E/HNVS was completed in the third quarter FY 94. Extension of application for CH-53E was granted first quarter FY 95.

FINANCIAL PLAN: (TOA, \$ in Millions)

	Prior Years		FY 2008		FY 2009		FY 2010		FY2010 OCO													
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
RDT&E																						
PROCUREMENT																						
Installation Kits																						
A-Kits (EER)	156	11.6																				
Installation Kits N/R		3.1																				
Installation Equipment																						
AAQ-29A TFU/SEU	26	14.1			1	0.5	1	0.5														
AAQ-29A TFU/SEU Supp	54	25.3																				
AAQ-29A TFU/SEU - OCO									42	25.2												
CH-53E Installation Equipment	195	18.7																				
CH-53E TFU/SDC AAQ-16B/29	223	72.3																				
Installation Equipment N/R		0.3		0.6																		
Engineering Change Orders																						
Data		1.0																				
Training Equipment		8.4																				
Support Equipment																						
ILS		1.0																				
Other Support		13.8		*		0.2		0.3														
Interim Contractor Support																						
Installation Cost	156	9.5																				
Total Procurement		179.0		0.7		0.7		0.8		25.2												

Notes:

1. Totals may not add due to rounding
2. Asterisk indicates amount less than \$51K

Exhibit P-3a Individual Modification

MODIFICATION TITLE: INTEGRATED MECH DIAG (OSIP 007-98)

MODELS OF SYSTEMS AFFECTED: CH-53E (152), MH-53E (31), 183 Total TYPE MODIFICATION: SAFETY, READINESS AND MAINTAINABILITY

DESCRIPTION/JUSTIFICATION: IMD is a helicopter monitoring and diagnostics system that provides continuous on board monitoring and diagnostics of engine health, gearbox and drive train vibrations, oil debris, rotor track and balance. The crash protected Cockpit Voice and Flight Data recorder (CVFDR), an integral part of the IMD system, will perform the required function of a Flight Incident Recorder (FIR). Full incorporation of IMDS capabilities will allow rapid transition from the current costly philosophies of the 70s to today's costwise initiatives and concepts. Lessons learned from this effort were incorporated into the solicitation for the fleet wide IMD effort with CH/MH-53E aircraft designated as the lead platforms. IMDS produces the aircraft interface required to implement military flight operations quality assurance (MFOQA), a capability designed to provide hazard monitoring and mitigation.

OCO funding: IMDS is the first fully integrated health and usage monitoring system incorporated into USN/USMC helicopters. It continuously monitors the condition of dynamic components in helicopter drive trains and rotor systems. The system enhances safety and reduces life cycle costs for helicopters. Its functions include rotor track and balance, mechanical diagnostics for shafts, gearboxes and bearings, engine power assurance, Naval Aviation Training and Operating Procedures Standardization (NATOPS) exceedance identification, and interface to the Naval Aviation Logistics Command Management Information System (NALCOMIS) maintenance management information system. Its airborne system continuously monitors aircraft performance and vibration parameters in flight and records that data on a removable memory unit. A separate ground-based system analyzes the data recorded in flight to identify health indicators and trends, from which maintenance advisories are generated. The system significantly increases operational readiness and support by increasing efficiencies in troubleshooting & maintenance, and forecast of part fatigue failures.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: The CH-53E IMDS successfully completed operational evaluation (OPEVAL) in October 2005. The Milestone Decision Authority approved full-rate production for CH-53E IMDS in December 2004. MH-53E NRE & installs began FY07 with VAL/VER completion scheduled for 3rd Qtr FY08. Advanced diagnostics enhancements & airframe structural life extension database interfaces are being incorporated to provide comprehensive platform operational & maintenance status awareness to the Squadron Commanders & key decision makers.

FINANCIAL PLAN: (TOA, \$ in Millions)

	Prior Years		FY 2008		FY 2009		FY 2010		FY2010 OCO												
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
RDT&E																					
PROCUREMENT																					
Installation Kits																					
AVC-5102 Panel Lens (LBAD)	1	0.1																			
Accelerometers	2	0.2																			
CH-53E A-Kits	110	33.0	1	0.3	1	0.3	11	3.4													
CH-53E A-Kits - OCO									5	1.5											
CH-53E A-Kits - Cong					22	7.3															
MH-53E Kits (A-kits)	3	0.9					16	5.1													
Installation Kits N/R		5.0				1.2															
Installation Equipment																					
IMDS Ground Equipment		*																			
Installation Equipment N/R																					
Engineering Change Orders																					
Data		0.8		0.2				0.2													
Training Equipment		0.3		0.1			1	0.3													
Support Equipment		1.2		0.3				0.2													
ILS		2.6																			
Other Support		36.2		7.4		4.2		0.8													
Interim Contractor Support																					
Installation Cost	46	6.9	44	0.8	22	1.7	31	3.0	4	0.5											
Total Procurement		87.2		9.2		14.7		12.9		2.0											

Notes:

- Totals may not add due to rounding
- Asterisk indicates amount less than \$51K
- Quantity of 37 kits procured in prior years with supplemental funding are installed in FY08 with prior year supplemental funding.
- Quantity of 22 kits procured in prior years with supplemental funding are installed in FY09 and FY10 with current year funding.
- Quantity of 143 installs includes 1 trainer kit.
- Quantity of 1 kit procured with FY10 supplemental will be installed in FY11.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: CH-53E (136), MH-53E (26), 162 Total MODIFICATION TITLE: INTEGRATED MECH DIAG (OSIP 007-98)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: CONTRACTOR INSTALLED - Field Modification Team

ADMINISTRATIVE LEADTIME: 5 Months PRODUCTION LEADTIME: 6 Months

CONTRACT DATES: FY 2008: Jun-08 FY 2009: Feb-09 FY 2010: Feb-10

DELIVERY DATE: FY 2008: Dec-09 FY 2009: Aug-10 FY 2010: Aug-10

(\$ in Millions)

Cost:	Prior Years		FY 2008		FY 2009		FY 2010		FY2010 OCO												
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
FY 2007 & PY () kits	46	6.9	44	0.8	20	1.5	3	0.7													
FY 2008 () kits					1	0.1															
FY 2009 () kits					1	0.1															
FY 2010 () kits							28	2.3	4	0.5											
FY 2011 () kits																					
FY 2012 () kits																					
FY 2013 () kits																					
FY 2014 () kits																					
FY 2015 () kits																					
To Complete () kits																					
TOTAL	46	6.9	44	0.8	22	1.7	31	3.0	4	0.5											

Installation Schedule

	FY 2007 & Prior	FY 2008				FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	46	8	14	12	10	5	5	6	6			1	34												
Out	46	8	14	12	10	5	5	6	6			1	34												

	FY 2014				FY 2015				To Complete	Total
	1	2	3	4	1	2	3	4		
In										
Out										

Notes:

- Quantity of 37 kits procured in prior years with supplemental funding are installed in FY08 with prior year supplemental funding.
- Quantity of 22 kits procured in prior years with supplemental funding are installed in FY09 and FY10 with current year funding.
- Quantity of 3 MH-53E val/ver kits procured in prior years are installed in FY10.
- Quantity of 1 kit procured with FY10 supplemental will be installed in FY11.

Exhibit P-3a Individual Modification

MODIFICATION TITLE: H-53 INTERIOR BALLISTIC ARMOR (OSIP 21-03)

MODELS OF SYSTEMS AFFECTED: CH-53D (36), CH-53E (152) TYPE MODIFICATION: SAFETY, MISSION/PERFORMANCE ENHANCEMENT

DESCRIPTION/JUSTIFICATION: Ballistic Protection System (BPS) provides increased protection and survivability for H-53 aircrew and passengers against small arms and anti-aircraft fragmentation type threats. BPS is a mission kit of protective armor panels secured to the cockpit and cargo compartment floor and to the sidewall area around the gunners' doors. These panels have been used in OCO and have been subject to extreme wear and tear. There are not enough BPS panels to outfit each airframe and as units continue to rotate in the Areas of Responsibility (AORs), these BPS systems will need to be repaired or replaced. While panels are being repaired and replaced, those aircraft continue to do their mission and the necessity of the BPS panels are critical. The procurement and installation of these BPS panels will allow every aircraft the capability of conducting their missions regardless of whether the panels are being repaired or replaced. This effort provides for improved survivability of crew and passengers against small arms and anti-aircraft fragmentation type threats that the fleet is increasingly exposed to during OCO.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: The BPS production kits were completed for the CH-53E, CH-53D, and MH-53E in Aug 06. Every H-53 received installation provisions (A-Kit). An armor panel set (B-Kit) will go to approximately half of the aircrafts. The BPS can be quickly moved from aircraft to aircraft according to mission needs.

FINANCIAL PLAN: (TOA, \$ in Millions)

	Prior Years		FY 2008		FY 2009		FY 2010		FY2010 OCO												
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
RDT&E																					
PROCUREMENT																					
Installation Kits																					
Installation Kits N/R																					
Installation Equipment																					
CH-53E BPS B-kits									85	8.0											
CH-53D BPS B-kits									22	2.1											
Installation Equipment N/R										*											
Engineering Change Orders																					
Data																					
Training Equipment																					
Support Equipment																					
ILS																					
Other Support																					
Interim Contractor Support																					
Installation Cost																					
Total Procurement										10.1											

- Notes:
1. Totals may not add due to rounding
 2. Asterisk indicates amount less than \$51K

Exhibit P-3a	Individual Modification		
MODIFICATION TITLE:	<u>H-53 ERIP (OSIP 010-05)</u>		
MODELS OF SYSTEMS AFFECTED:	<u>H-53 T64 Turbo-shaft engines</u>	TYPE MODIFICATION:	<u>SAFETY, READINESS AND MAINTAINABILITY</u>
<p>DESCRIPTION/JUSTIFICATION: The T64 Engine reliability Improvement Program upgrades top age related engine degraders, fatigue limiters, and performance degradation on the T64 engine. A concentrated effort is to upgrade the T64-416 engines to the T64-416A configuration by replacing components of the engine with improved hardware designs to increase reliability and reduce logistical requirements by conforming to one configuration. T64 engines will be modified to incorporate titanium nitride-coated compressor airfoils. Titanium nitride coating provides significantly improved durability and reliability for operation in austere environments. Degraded and obsolete peculiar support equipment will also be improved. The Engine Air Particle Separator (EAPS) seals will be improved to reduce the amount of particulate matter that bypasses the EAPS and enters the engine airstream. The current EAPS seal does not provide adequate protection in all operating environments. The improved EAPS seal is expected to eliminate the current sealing issues. The Hot Day Performance effort will improve CH-53 performance at ambient temperatures greater than 75 degrees Fahrenheit and pressure altitudes above sea level. CH-53 modifications are needed to eliminate the performance-reducing effects associated with operating in environments with ambient temperatures in excess of 75 degrees Fahrenheit and pressure altitudes above sea level. Incorporation of hot day performance improvements will ensure the payload carrying capabilities of CH-53 aircraft directly supporting OCO will be sustained during operations in high temperatures and high altitude environments.</p> <p>MH-53E T64-419 Engine Titanium Nitride (TiN) Erosion Resistant Coating OCO funding: This effort will modify the T64-GE-419 engine to incorporate erosion-resistant, TiN-coated compressor airfoils. MH-53E engine hardware improvements are needed to counter reliability degraders resulting from the increased operational tempo and austere operating environments associated with OCO.</p> <p>CH-53D T-64 413 Engine TiN Erosion Resistant Coating OCO funding: This effort will modify T64-413 engines to incorporate erosion-resistant, TiN-coated compressor airfoils. CH-53D engine hardware improvements are needed to counter reliability degraders resulting from the increased operational tempo and austere operating environments associated with OCO.</p> <p>CH-53E Improved Hot Day Performance OCO funding: This effort will procure and install modification kits to improve CH-53 performance at ambient temperatures greater than 75 degrees Fahrenheit and pressure altitudes above sea level. CH-53 modifications are needed to eliminate the performance-reducing effects associated with operating in environments with ambient temperatures in excess of 75 degrees Fahrenheit and pressure altitudes above sea level. Incorporation of hot day performance improvements will ensure the payload carrying capabilities of CH-53 aircraft directly supporting OCO will be sustained during operations in high temperatures and high altitude environments. Average high temperatures in Baghdad Iraq are greater than 75 degrees Fahrenheit during seven months of the year. Average high temperatures in June, July, August and September are in excess of 100 degrees Fahrenheit. During the hottest months, the T64 engine is not able to compensate to maintain CH-53 performance. This effort will assure performance retention beyond 90 degrees Fahrenheit ambient temperature operating conditions.</p> <p>DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: 97 of 462 engines have been upgraded from the T64-416 to T64-416A configuration. T64-416A upgrade kits procured with FY04 Title IX Supplemental funding began installs in FY05. T64-416 and -416A engines began incorporating titanium nitride in FY04. T64-419 engines began incorporating titanium nitride in FY06. T64-413 engines began incorporating titanium nitride in FY07.</p> <p>MH-53E T-64 419 Engine TiN Erosion Resistant Coating OCO funding: All development is complete for this program and hardware is ready for procurement. The modification effort to incorporate titanium nitride on the T64-GE-419 engine began in FY06.</p> <p>CH-53D T-64 413 Engine TiN Erosion Resistant Coating OCO funding: All development is complete for this program and hardware is ready for procurement. FY07 supplemental funding initiated procurement of reliability improvements for T64-413 engines.</p> <p>CH-53E Improved Hot Day Performance OCO funding: Airframe and powerplant changes needed to eliminate the reduction in performance were developed and approved in prior years. Hardware is ready for procurement.</p>			

FINANCIAL PLAN: (TOA, \$ in Millions)

	Prior Years		FY 2008		FY 2009		FY 2010		FY2010 OCO												
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
RDT&E																					
PROCUREMENT																					
Installation Kits																					
Installation Kits N/R																					
Installation Equipment																					
416A CONVERSION KITS	21	2.7																			
416A UPGRADE (GE)	84	12.4																			
AIR STARTER KITS	8	0.2																			
COMPRESSOR ROTOR SET KITS	960	0.7																			
Improved EAPS Seal (ESAD)	370	1.1	165	1.9																	
REL IMPROVEMENT KITS (GE)	38	3.2																			
T2 HOUSING KICKSTAND (GE)	933	0.2																			
T64 Comp Cases - support TIN	5	0.3																			
T64 ERIP Kits	133	22.7	248	9.0	67	10.7	139	13.7													
T64 ERIP Kits (SUPP)	6	1.0																			
TIN SETS (GE)	83	20.4	69	14.2	4	0.9	4	0.9													
VG ACTUATOR KITS	1,100	*																			
EAPS Seal - OCO					72	1.7															
CH-53D TIN Kits									33	6.6											
Hot day fuel control kit									258	3.0											
Hot day fuel control pump									320	0.8											
Hot day fire warning sensors									152	5.8											
MH-53E TIN Kits									33	6.6											
Installation Equipment N/R		3.7																			
Engineering Change Orders																					
Data		1.0		*																	
Training Equipment		*																			
Support Equipment		4.6		1.5		0.3		0.2													
ILS		0.1																			
Other Support		4.7		3.4		1.7		1.8													
Interim Contractor Support																					
Installation Cost	30	0.7	70		354	1.0	18														
Total Procurement		79.8		30.0		16.2		16.6		22.8											

- Notes:
1. Totals may not add due to rounding
 2. Asterisk indicates amount less than \$51K
 3. Quantity of 30 Upgrade Kits were installed in prior years at \$0.525M and do not require install schedule.
 4. Quantity of ERIP kits reflects the various modification requirements for 101 CH-53D engines, 638 CH-53E engines, and 132 MH-53E engines. Quantities reflect total engine inventory.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: H-53 T64 Turbo-shaft engines (370) MODIFICATION TITLE: H-53 ERIP (OSIP 010-05) - EAPS Seal

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Field Modification Team

ADMINISTRATIVE LEADTIME: 5 Months PRODUCTION LEADTIME: 3 Months

CONTRACT DATES: FY 2008: _____ FY 2009: Feb-09 FY 2010: _____

DELIVERY DATE: FY 2008: _____ FY 2009: May-09 FY 2010: _____

(\$ in Millions)

Cost:	Prior Years		FY 2008		FY 2009		FY 2010		FY2010 OCO													
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
FY 2007 & PY (370) kits		0.2	70		282	0.6	18															370
FY 2008 () kits																						
FY 2009 (72) kits					72	0.4																72
FY 2010 () kits																						
FY 2011 () kits																						
FY 2012 () kits																						
FY 2013 () kits																						
FY 2014 () kits																						
FY 2015 () kits																						
To Complete () kits																						
TOTAL		0.2	70		354	1.0	18															442

Installation Schedule

	FY 2007 & Prior	FY 2008				FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In					70	70	71	143	70	18															
Out					70	70	71	143	70	18															

	FY 2014				FY 2015				To Complete	Total
	1	2	3	4	1	2	3	4		
In										
Out										

Note:

- Quantity of 70 kits procured in FY07 with supplemental funding are installed in FY08 with FY07 supplemental funding.
- Quantity of 442 EAPS seal installs reflects 370 seals procured in FY07 and 72 seals procured in FY09.

Exhibit P-3a	Individual Modification		
MODIFICATION TITLE:	<u>H-53 MEDIVAC (OSIP 015-05)</u>		
MODELS OF SYSTEMS AFFECTED:	<u>CH-53D(36), CH-53E(152), MH-53E(31), 219 Total</u>	TYPE MODIFICATION:	<u>SAFETY, READINESS AND MAINTAINABILITY</u>
<p>DESCRIPTION/JUSTIFICATION: This funding effort is established for procurement and integration of survivability systems that will improve H53 aircrew and passengers against hostile threats through more effective self-defense methods. The H53 survivability strategy is to upgrade threat detection ability, increase countermeasure capability, reduce vulnerability, enhance situational awareness by communicating aircraft position to deconflict with friendly forces in the AO, and improve vulnerability to battle damage by better developing protect for both the aircrew and critical components. This increased survivability will protect the H-53 during all aspects of its various missions; assault support, shipboard delivery of cargo, anti-mine warfare, casualty transport/Medivac, and heavy cargo transport.</p>			
<p>FBCB2 Compliant Blue Force Tracker (BFT) with Moving Map OCO funding: H-53s continue to operate in remote locations around the world in joint environments. Operations in mountainous terrain has proven to be a significant challenge to communications with higher headquarters. Situational awareness in these operating theaters is increasingly being done through a BFT system. JROC 12/03 Approved the Joint strategy for convergence of JBFSAs systems to Army led Force XXI Brigade and Below (FBCB2) baseline. This effort continues to provide a quickly, fielded solution to the H-53 fleet, to provide BFT/Digital Moving Map capability to increase cockpit navigational situational awareness, reduce the chance of friendly fire casualties and aircraft loss, and provides higher headquarters the ability to track H-53 flights in areas of reduced radio reception. It is a GPS integrated system that provides two-way location information utilizing FBCB2 (US Army BFT tracking software), while displaying a digital moving map to via individual kneeboards for the pilot and co-pilot. It permits them to quickly see their position relative to the map terrain and automatically passes position, location, and identification information (PLI) to higher headquarters for dissemination to other platforms in the region. At the same time, they will be able to receive PLI information from higher headquarters to track friendly unit movements, and to send and receive VMF messages. This system will also integrate with existing mission planning software (PFPS) to allow for much greater mission planning flexibility for the flight crew, especially during missions of low visibility. Receipt of funds continue integration of KGV-72 encryption devices on CH-53E and in Tactical Operation Centers. Additionally, funds provide for joint component and system level testing on BFT II. Planned upgrades improve FBCB2 applications security, and performance, significantly reduce latency and will allow the USMC to stay compatible with FBCB2 requirement.</p>			
<p>Critical Systems Armor (CSA) OCO funding: Conducts non-recurring engineering (NRE) and validation/verification of a lightweight armor system to protect engines and other flight-critical aircraft systems and procures lightweight protective armor system for engines and other flight critical systems. This effort will equip 152 of 152 CH-53Es and 31 of 31 MH-53Es with "A" kits, and will equip one third of those aircraft with a removable mission "P" kit of protective armor panels. H-53 aircraft supporting OCO are exposed to insurgent threats with a wide range of weapons, including small arms, rocket-propelled grenades, and anti-aircraft type fragmentation missiles. Damage to critical components can render the aircraft unflyable, placing the crew and passengers at extraordinary risk. An armor system would protect engines and other flight-critical aircraft systems from small-arms threats, thereby enhancing the survivability of aircraft operating in high-threat areas.</p>			
<p>DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: Aircraft Survivability Equipment (ASE) Phase I effort (8 aircraft) complete in November 2005, fully equipped aircraft deployed February 2006. ASE Phase II effort (8 aircraft) estimated completion date August 2007. Blue Force Tracker (BFT) fully equipped aircraft deployment scheduled for September 2007. BFT production installation effort will complete in August 2010.</p>			
<p>FBCB2 Compliant BFT with Moving Map OCO funding: Baseline BFT kits are in production and installation. Encryption BFT is in the testing phase. BFT II is in development.</p>			
<p>CSA OCO funding: Statement of Work and specifications for NRE contract have been drafted. Awaiting receipt of funds to continue.</p>			

FINANCIAL PLAN: (TOA, \$ in Millions)

	Prior Years		FY 2008		FY 2009		FY 2010		FY2010 OCO														
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
RDT&E																							
PROCUREMENT																							
Installation Kits																							
BFT A Kits (CH-53)	97	3.1			43	1.0			33	0.3													
BFT A Kits (CH-53) (ESAD)	1	*																					
BFT A Kits (MH-53)	13	0.3																					
BFT A Kits			112	2.3	223	0.5																	
H-53 NVD Kits	355	0.1																					
MH ASE Suite A-Kits	32	2.6																					
MH-53E ASE Prerequisite Kits	20	0.1																					
Engine Armor A-kits			151	1.6																			
CH-53E CSA Val/Ver									2	*													
MH-53E CSA Val/Ver									2	*													
CH-53E CSA A Kits									150	1.2													
MH-53E CSA A Kits									29	0.2													
Installation Kits N/R		*		0.5		0.5				1.9													
Installation Equipment																							
BFT B Kits (CH-53)	113	5.2			43	1.9																	
BFT B Kits (CH-53) (SUPP)	1	0.1																					
BFT B Kits (MH-53)	13	0.6																					
BFT B kits			108	5.6	235	1.4																	
MH AAR-47 (P-Kit)	31	1.5																					
MH ALE-47 (P-Kit)	124	0.6																					
SPARES	10	0.5																					
Engine Armor P-kits			40	4.4																			
BFT L-Band, Crypto upgrade					43	0.5			33	0.5													
BFT TOC kit upgrade					43	1.1			27	1.1													
CH-53E CSA B Kits									92	9.5													
MH-53E CSA B Kits									19	2.0													
Installation Equipment N/R		0.6				0.5																	
Engineering Change Orders						*				*													
Data		1.0		0.2		*				0.2													
Training Equipment		2.2		0.7					3	0.2													
Support Equipment		0.3				0.1				*													
ILS		1.1		0.5		0.3				0.9													
Other Support		6.0		4.3		1.1		0.3		1.4													
Interim Contractor Support						1.5				2.7													
Installation Cost	30	4.5	36	3.2	584	1.2	54		33	4.3													
Total Procurement		30.3		23.3		11.7			0.3	26.5													

Notes:

1. Totals may not add due to rounding
2. Asterisk indicates amount less than \$51K
3. Quantity of 223 BFT A-kits from FY05 - FY08 includes 4 maintainer trainers
4. Quantity of 235 BFT B-kits from FY05 - FY08 includes 4 maintainer trainers and 12 operational trainers.
5. Quantities of 223 BFT A-kits and 235 B-kits in FY09 reflects upgrades to existing kits.
6. Quantity of 151 Engine Armor A-kits includes 3 Val/Ver kits.
7. Quantity of 183 CSA kits procured with FY10 supplemental will be installed in FY11.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: CH-53D(36), CH-53E(152), MH-53E(31), 219 Total MODIFICATION TITLE: H-53 MEDIVAC (OSIP 015-05) - Blue Force Tracker

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Field Modification Teams

ADMINISTRATIVE LEADTIME: 2 Months PRODUCTION LEADTIME: 1 Months

CONTRACT DATES: FY 2008: Nov-07 FY 2009: Nov-08 FY 2010: Nov-09 _____

DELIVERY DATE: FY 2008: Dec-07 FY 2009: Dec-08 FY 2010: Dec-09 _____

(\$ in Millions)

Cost:	Prior Years		FY 2008		FY 2009		FY 2010		FY2010 OCO													
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
FY 2007 & PY () kits	6	2.1	28	0.4	77																	
FY 2008 () kits				1.1	54		54															
FY 2009 () kits					305	1.2																
FY 2010 () kits									33	0.4												
FY 2011 () kits																						
FY 2012 () kits																						
FY 2013 () kits																						
FY 2014 () kits																						
FY 2015 () kits																						
To Complete () kits																						
TOTAL	6	2.1	28	1.5	436	1.2	54		33	0.4												

Installation Schedule

	FY 2007 & Prior	FY 2008				FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	6	2	11	10	5	32	106	106	192	27	27	8	25												
Out	6	2	11	10	5	32	106	106	192	27	27	8	25												

	FY 2014				FY 2015				To Complete	Total
	1	2	3	4	1	2	3	4		
In										
Out										

Notes:

1. Kits procured in prior years with supplemental funding are installed in FY08 and FY09 with supplemental funding.
2. Installs reflect quantity of 219 A-kits. Trainer kit installs (quantity of 4 A-kits and 16 B-kits) are funded by other means.
3. Quantity of 219 installs in FY09 reflects upgrades to existing kits.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: CH-53D(31), CH-53E(137), MH-53E(26), 194 Total MODIFICATION TITLE: H-53 MEDIVAC (OSIP 015-05) - Aircraft Survivability Equipment (ASE) Suite

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Field Modification Teams

ADMINISTRATIVE LEADTIME: 2 Months PRODUCTION LEADTIME: 6 Months

CONTRACT DATES: FY 2008: _____ FY 2009: _____ FY 2010: _____

DELIVERY DATE: FY 2008: _____ FY 2009: _____ FY 2010: _____

(\$ in Millions)

Cost:	Prior Years		FY 2008		FY 2009		FY 2010		FY2010 OCO											
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
FY 2007 & PY () kits	24	2.4	8																	
FY 2008 () kits																				
FY 2009 () kits																				
FY 2010 () kits																				
FY 2011 () kits																				
FY 2012 () kits																				
FY 2013 () kits																				
FY 2014 () kits																				
FY 2015 () kits																				
To Complete () kits																				
TOTAL	24	2.4	8																	

Installation Schedule

FY 2007 & Prior	FY 2008				FY 2009			FY 2010				FY 2011				FY 2012				FY 2013				
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	24	3	2	2	1																			
Out	24	3	2	2	1																			

	FY 2014				FY 2015				To Complete	Total
	1	2	3	4	1	2	3	4		
In										
Out										

Notes:

1. Kits procured in prior years with supplemental funding are installed in FY08 with prior year supplemental funding.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: CH-53D(31), CH-53E(137), MH-53E(26), 194 Total MODIFICATION TITLE: H-53 MEDIVAC (OSIP 015-05) - Engine Armor

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Field Modification Teams

ADMINISTRATIVE LEADTIME: 6 Months PRODUCTION LEADTIME: 6 Months

CONTRACT DATES: FY 2008: Jan-09 FY 2009: _____ FY 2010: Mar-10 _____

DELIVERY DATE: FY 2008: Jun-09 FY 2009: _____ FY 2010: Sep-10 _____

(\$ in Millions)

Cost:	Prior Years		FY 2008		FY 2009		FY 2010		FY2010 OCO													
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
FY 2007 & PY () kits																						
FY 2008 () kits				1.7	148																	
FY 2009 () kits																						
FY 2010 () kits										3.9												
FY 2011 () kits																						
FY 2012 () kits																						
FY 2013 () kits																						
FY 2014 () kits																						
FY 2015 () kits																						
To Complete () kits																						
TOTAL				1.7	148					3.9												

Installation Schedule

FY 2007 & Prior	FY 2008				FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In							74	74																
Out							74	74																

	FY 2014				FY 2015				To Complete	Total
	1	2	3	4	1	2	3	4		
In										
Out										

Notes:

1. Kits procured in FY08 with supplemental funding are installed in FY09 with FY08 supplemental funding.
2. Quantity of 183 CSA kits procured with FY10 supplemental will be installed in FY11. Funding is reflected in FY10.

Exhibit P-3a	Individual Modification		
MODIFICATION TITLE:	<u>H-53 A/C SUSTAINMENT (OSIP 008-06)</u>		
MODELS OF SYSTEMS AFFECTED:	<u>CH-53D, CH-53E, MH-53E</u>	TYPE MODIFICATION:	<u>MISSION/PERFORMANCE SUSTAINMENT</u>
<p>DESCRIPTION/JUSTIFICATION: The H-53 Aircraft are included in the Headquarters Marine Corps Aviation Plan through CY 2025. The H-53 Aircraft Sustainment Strategy targets initiatives to remedy the top age-related maintenance degraders, fatigue life limiters, and safety issues that impede the aircraft's ability to operate into the future. This program implements a concentrated effort to utilize improvements to the H-53 component obsolescence (e.g. Engine Air Particle Separator (EAPS) redesign), structural limitations (e.g. transition bulkhead and station 820 structural improvement), aircrew safety systems and program sustainment support. This effort will sustain the H-53 legacy fleet in an affordable manner until the H-53 follow-on aircraft becomes available.</p>			
<p>EAPS Improvements OCO funding: Conducts validation/verification of Engine Air Particle Separator (EAPS) Improvements to protect engines from Foreign Object Debris (FOD) including dust, dirt and organic debris. This effort will equip 152 of 152 CH-53Es and 31 of 31 MH-53Es with EAPS Improvement Kits. H-53 aircraft supporting OCO are exposed to increased chance of damage to aircraft engines due to unimproved landing zones. Damage to critical engine components can render the aircraft unflyable. The H-53 T64 engine experiences compressor airfoil erosion and performance impacts when operating in sand and dust environments in support of OCO. The current EAPS does not provide adequate protection for the T64 engines in these environments. The EAPS improvements, including the 360° Seal, are expected to greatly reduce or eliminate the current issues between the EAPS barrel and the engine decreasing erosion to blades and vanes, increasing power margins, decreasing unscheduled engine maintenance or removals and increasing availability. Aircraft operating in support of OCO face a significant increase in FOD due to unimproved landing zones. EAPS Improvement Kits for H-53 aircraft will significantly reduce engine vulnerability and allow the H-53 to operate in a wider range of support and contingency operations.</p>			
<p>Aircrew Cooling OCO funding: H-53 aircrew continue to fly in the extreme heat of the desert environment and have been exposed to the subsequent physiological effects of these extreme conditions in support of OCO. The Air Force meteorological web site states that daytime ambient temperatures in Iraq in the summer months average 43° Celsius and peak at over 52° Celsius. During the typical assault support mission, aircrew operate 4-8 hours in this environment wearing flight suits, gloves, ballistic body armor, survival vests and helmets. All of these items act to reduce heat loss from the body and limit the effectiveness of sweat to produce evaporative cooling, as stated in a recent 3rd MAW HAZREP. An aircrew cooling system will alleviate the reduced mental acuity and heat fatigue crews experience operating in the high heat environments of OIF and HOA. Mishaps during OIF and HOA in the H-53 community have been attributed to pilot error, not enemy action. Fatigue and the subsequent reduced mental performance enhance and/or increase the chance of pilot error. Microclimate cooling systems provide continual and consistent cooling effects for aircrew operating in high heat environments. H-53 aircrew operate in these demanding environments daily in support of OIF and HOA related sorties. Funds the procurement and installation of an Microclimate Cooling system for the H-53 aircrew. The effort would equip five aircrew members in 36 CH-53D and 152 CH-53E.</p>			
<p>Kapton Replacement OCO funding: Ninety-seven (97) MH-53E aircraft and seventeen (17) MH-53E aircraft have Kapton wiring harnesses installed which causes a severe problem on helicopters due to environmental conditions, including vibration. This wiring, now aged and severely degraded, has been identified by the System Safety Working Group as the # 1 safety issue, and the Fleet OAG as a top ten issue for the H-53. Since 1988, there have been numerous hazreps citing fires, arching and chaffing. The most recent fire in October 2008 led to a precautionary landing in a remote location. In addition to the documented fire hazard, the degraded wiring consumes significant troubleshooting man-hours, causes replacement of non-failed components and adversely impacts operational readiness. TYCOMs have requested a plan to replace the harnesses. This effort will accomplish the essential engineering effort to enable the replacement of all remaining Kapton harnesses.</p>			
<p>Electronic Systems Obsolescence Non-recurring engineering (NRE) OCO funding: Many of the existing H-53 electronic systems are 1970-vintage electronics and have been a Top-10 maintenance degrader item as experienced in GWOT. This initiative would perform non-recurring engineering to improve depot and intermediate-level repair capabilities so as to reduce repair times and improve reliability of these electronic systems. The effort would perform the NRE at Fleet Repair Center East for development of Gold Disk diagnostics and technical data for improved troubleshooting and repair of obsolete H-53 electronics. This effort will improve obsolete component repair capability, identify alternative parts for those out of production, and improve OCO readiness. These obsolete electronics degrade readiness, and the improved repair capability will benefit readiness and reduce obsolescence related issues during OCO</p>			
<p>DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: The H-53 Sustainment Program Acquisition Strategy was approved by PEO(A) in March 2006, to be executed as four Abbreviated Acquisition Programs (AAPs) for (1) Fatigue, (2) Obsolescence, (3) Readiness, and (4) Safety. Each AAP consists of several independent projects, each of which has an independent platform effectivity, acquisition strategy, production lead time, production rate and quantity, and installation approach. Thus, they are not amenable to a "block upgrade" type approach. Each year of the program will involve non-recurring engineering (NRE) on some projects, leading to production and installation in out-years. Other projects require little or no NRE and can be acquired and installed quickly during maintenance.</p>			
<p>EAPS OCO funding: NRE is ongoing, estimated completion date is Dec 2009.</p>			
<p>Aircrew Cooling OCO funding: NRE was conducted in FY08 and FY09. Kits and installs procured in FY08, FY09, and FY10.</p>			
<p>Kapton Replacement OCO funding: NADEP Cherry Point will order required materials, manufacture replacement harness sets, conduct fit checks, and update the technical data package that would support subsequent harness manufacture and retrofit. A second set of fit-check harnesses will be built to verify second-source manufacturing capability. This is a risk reduction measure that will be required until the CH-53K aircraft has completed fielding (est. 2022).</p>			
<p>Electronic Systems Obsolescence NRE OCO funding: This effort is in the NRE phase in FY10.</p>			

FINANCIAL PLAN: (TOA, \$ in Millions)

	Prior Years		FY 2008		FY 2009		FY 2010		FY2010 OCO												
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
RDT&E																					
PROCUREMENT																					
Installation Kits																					
#2 Engine Backflow (CH/MH-E)					60	1.8		60	1.9												
Aircrew Cooling A-kits			37	0.7																	
Arc Fault Circuit Break (H-53)	30	0.4	189	0.8																	
Common GCU Ship-sets (H-53)					30	0.6		30	0.6												
EAPS Improv Kits (CH/MH-E)					18	0.7		15	0.6												
Emergency Egress Light (H-53)			219	0.2																	
Engine Sling Kits			25	0.4																	
Gyro Replacement (CH-D)	40	1.4																			
Gyro Replacement (CH-D) Supp	32	1.1																			
Kapton Wiring Kits (H-53)	20	2.0						23	8.1												
Kapton Wiring Kits (H-53) Supp			21	7.4	40	6.0															
NGB Improved Seal Kits (H-53)	456	3.2																			
NLG Door Bracket (H-53)	220	0.3																			
Obsolescent Components (H-53)	40	0.3	40	1.1	25	1.2		15	0.9												
Ramp Conversion Kits	35	*																			
Rotor Blade Coating (H-53)																					
Transition Bulkhead (CH/MH-E)	10	0.9	27	2.5	9	0.9		14	1.3												
#6 TRDS Fitting Kit (CH/MH-E)	37	0.1	38	0.1	30	0.1		30	0.1												
Wiring Diagnostics Kits (H-53)	8	1.1	8	1.1	30	0.7		25	0.6												
CH-53E EAPS Seal									152	0.6											
CH-53E EAPS Bypass									79	1.6											
MH-53E EAPS Seal									31	0.1											
MH-53E EAPS Bypass									31	0.6											
CH-53E Aircrew Cooling									45	0.7											
CH-53D Aircrew Cooling									36	0.5											
CH-53E Kapton Val/Ver									4	1.8											
MH-53E Kapton Val/Ver									2	1.3											
Installation Kits N/R		3.6		1.0				0.4	3.8												
Installation Equipment																					
CH-53D HEELS B KITS	2	*																			
CH-53E HEELS B KITS	2	*																			
Aircrew Cooling B-kits			185	1.5																	
Aircrew Cooling Garments			172	0.1																	
Electric Cargo Winch	8	1.4	10	1.8																	
H-53 HEELS B-kits (CONG)	196	1.6	17	0.3																	
MH-53E HEELS B KITS	2	*																			
CH-53E Aircrew Cooling									45	1.4											
CH-53D Aircrew Cooling									36	1.1											
Installation Equipment N/R		0.1				0.5															
Engineering Change Orders																					
Data		0.3		*		0.2		0.1	1.7												
Training Equipment			3	*					0.1												
Support Equipment		0.7		3.8																	
ILS		0.4		0.6		1.0		0.8	0.2												
Other Support		11.4		5.5		7.5		1.9	1.8												
Interim Contractor Support									0.4												
Installation Cost	309	2.7	119	4.6	197	2.4	209	2.0	66	1.7											
Total Procurement		33.2		33.3		23.6		19.1	19.3												

Notes:

1. Totals may not add due to rounding
2. Asterisk indicates amount less than \$51K
3. Quantity of 37 Aircrew Cooling A kits reflects number of deployed aircraft receiving modification. Quantity of 185 Aircrew Cooling B kits reflects 5 kits per aircraft.
4. Quantity of 87 installs funded with FY10 supplemental includes quantities of 81 Aircrew Cooling A-kits and 6 Kapton val/ver installs
5. Quantity of 21 Aircrew Cooling kits procured with FY10 supplemental funding will be installed in FY11.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: CH-53E (136), MH-53E (26), 162 Total MODIFICATION TITLE: #2 Engine Backflow kits

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Field Modification Team

ADMINISTRATIVE LEADTIME: 4 Months PRODUCTION LEADTIME: 10 Months

CONTRACT DATES: FY 2008: _____ FY 2009: Jan-09 FY 2010: Jan-10 _____

DELIVERY DATE: FY 2008: _____ FY 2009: Nov-09 FY 2010: Nov-10 _____

(\$ in Millions)

Cost:	Prior Years		FY 2008		FY 2009		FY 2010		FY2010 OCO												
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
FY 2007 & PY () kits																					
FY 2008 () kits																					
FY 2009 () kits								60	0.3												
FY 2010 () kits																					
FY 2011 () kits																					
FY 2012 () kits																					
FY 2013 () kits																					
FY 2014 () kits																					
FY 2015 () kits																					
To Complete () kits																					
TOTAL								60	0.3												

Installation Schedule

	FY 2007 & Prior	FY 2008				FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In											20	20	20												
Out											20	20	20												

	FY 2014				FY 2015				To Complete	Total
	1	2	3	4	1	2	3	4		
In										
Out										

Notes:

- Quantity of 60 kits procured in FY10 will be installed in FY11.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: CH-53D (36), CH-53E (152), MH-53E (31), 219 Total MODIFICATION TITLE: Aircrew Cooling Kits

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Field Modification Team, Depot level

ADMINISTRATIVE LEADTIME: 2 Months PRODUCTION LEADTIME: 2 Months

CONTRACT DATES: FY 2008: Mar-08 FY 2009: _____ FY 2010: Nov-09 _____

DELIVERY DATE: FY 2008: May-08 FY 2009: _____ FY 2010: Jan-10 _____

(\$ in Millions)

Cost:	Prior Years		FY 2008		FY 2009		FY 2010		FY2010 OCO												
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
FY 2007 & PY () kits																					
FY 2008 () kits			37	0.7																	
FY 2009 () kits																					
FY 2010 () kits									60	1.4											
FY 2011 () kits																					
FY 2012 () kits																					
FY 2013 () kits																					
FY 2014 () kits																					
FY 2015 () kits																					
To Complete () kits																					
TOTAL			37	0.7					60	1.4											

Installation Schedule

	FY 2007 & Prior	FY 2008				FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In				37								24	36												
Out				37								24	36												

	FY 2014				FY 2015				To Complete	Total
	1	2	3	4	1	2	3	4		
In										
Out										

Notes:

- Quantity of 37 installs reflects Aircrew Cooling A kits.
- Quantity of 21 Aircrew Cooling kits procured with FY10 supplemental funding will be installed in FY11.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: CH-53D (36) MODIFICATION TITLE: CH-53D Ramp Conversion Kits

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Field Modification Team and SDLM

ADMINISTRATIVE LEADTIME: 3 Months PRODUCTION LEADTIME: 3 Months

CONTRACT DATES: FY 2008: _____ FY 2009: _____ FY 2010: _____

DELIVERY DATE: FY 2008: _____ FY 2009: _____ FY 2010: _____

(\$ in Millions)

Cost:	Prior Years		FY 2008		FY 2009		FY 2010		FY2010 OCO											
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
FY 2007 & PY () kits	18	0.7	10	0.1																
FY 2008 () kits																				
FY 2009 () kits																				
FY 2010 () kits																				
FY 2011 () kits																				
FY 2012 () kits																				
FY 2013 () kits																				
FY 2014 () kits																				
FY 2015 () kits																				
To Complete () kits																				
TOTAL	18	0.7	10	0.1																

Installation Schedule

	FY 2007 & Prior	FY 2008				FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	18	5	5																						
Out	18	5	5																						

	FY 2014				FY 2015				To Complete	Total
	1	2	3	4	1	2	3	4		
In										
Out										

Notes:

1. Of the 35 kits procured in FY07, 28 installs are funded. The remaining installs were funded by other means.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: CH-53E (136), MH-53E (26), 162 Total MODIFICATION TITLE: EAPS Improvement Kits

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Field Modification Team

ADMINISTRATIVE LEADTIME: 4 Months PRODUCTION LEADTIME: 5 Months

CONTRACT DATES: FY 2008: _____ FY 2009: Jan-09 FY 2010: Jan-10 _____

DELIVERY DATE: FY 2008: _____ FY 2009: May-09 FY 2010: May-10 _____

(\$ in Millions)

Cost:	Prior Years		FY 2008		FY 2009		FY 2010		FY2010 OCO												
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
FY 2007 & PY () kits																					
FY 2008 () kits																					
FY 2009 () kits					18	0.3															
FY 2010 () kits							15	0.3													
FY 2011 () kits																					
FY 2012 () kits																					
FY 2013 () kits																					
FY 2014 () kits																					
FY 2015 () kits																					
To Complete () kits																					
TOTAL					18	0.3	15	0.3													

Installation Schedule

	FY 2007 & Prior	FY 2008				FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In								9	9			8	7												
Out								9	9			8	7												

	FY 2014				FY 2015				To Complete	Total
	1	2	3	4	1	2	3	4		
In										
Out										

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: **CH-53D (36), CH-53E (152), MH-53E (31), 219 Total** MODIFICATION TITLE: Emergency Egress Lighting

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Field Modification Team

ADMINISTRATIVE LEADTIME: 4 Months PRODUCTION LEADTIME: 10 Months

CONTRACT DATES: FY 2008: Jan-08 FY 2009: _____ FY 2010: _____

DELIVERY DATE: FY 2008: Nov-08 FY 2009: _____ FY 2010: _____

(\$ in Millions)

Cost:	Prior Years		FY 2008		FY 2009		FY 2010		FY2010 OCO										
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
FY 2007 & PY () kits		0.1	6	1.2	62		68												
FY 2008 () kits																			
FY 2009 () kits																			
FY 2010 () kits																			
FY 2011 () kits																			
FY 2012 () kits																			
FY 2013 () kits																			
FY 2014 () kits																			
FY 2015 () kits																			
To Complete () kits																			
TOTAL		0.1	6	1.2	62		68												

Installation Schedule

	FY 2007 & Prior	FY 2008				FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In				1	5		28	17	17	17	17	17	17												
Out				1	5		28	17	17	17	17	17	17												

	FY 2014				FY 2015				To Complete	Total
	1	2	3	4	1	2	3	4		
In										
Out										

Notes:

- Quantities reflect HEELS B kits.
- Quantity of 6 Val/Ver kits procured with FY06 Congressional Add are installed in FY08 with FY07 Congressional Add funding.
- Quantity of 130 kits procured with FY07 Congressional Add are installed in FY09 and FY10 with FY08 Congressional Add funding.
- Quantity of 66 kits procured with FY07 Congressional Add are installed in FY11 and FY12 with current year baseline funding.
- Quantity of 17 kits procured with FY08 Congressional Add are installed in FY12 with current year baseline funding.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: CH-53D (19), CH-53E (136), MH-53E (26), 181 Total MODIFICATION TITLE: Kapton Wiring

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Field Modification Team, IMC

ADMINISTRATIVE LEADTIME: 4 Months PRODUCTION LEADTIME: 10 Months

CONTRACT DATES: FY 2008: _____ FY 2009: Jan-09 FY 2010: Jan-10 _____

DELIVERY DATE: FY 2008: _____ FY 2009: Jul-09 FY 2010: Nov-10 Jul-09 _____

(\$ in Millions)

Cost:	Prior Years		FY 2008		FY 2009		FY 2010		FY2010 OCO										
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
FY 2007 & PY () kits					20	1.1													
FY 2008 () kits			1.7		21														
FY 2009 () kits																			
FY 2010 () kits									6	0.2									
FY 2011 () kits																			
FY 2012 () kits																			
FY 2013 () kits																			
FY 2014 () kits																			
FY 2015 () kits																			
To Complete () kits																			
TOTAL				1.7	41	1.1			6	0.2									

Installation Schedule

	FY 2007 & Prior	FY 2008				FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In						14	14	13				6													
Out						14	14	13				6													

	FY 2014				FY 2015				To Complete	Total
	1	2	3	4	1	2	3	4		
In										
Out										

Notes:

- Quantity of 21 kits procured with FY08 supplemental funding are installed in FY09 with FY08 supplemental funding.
- Quantity of 23 kits procured in FY10 with baseline funding will be installed in FY11 with FY11 funding.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: **CH-53D (19), CH-53E (136), MH-53E (26), 181 Total** MODIFICATION TITLE: Obsolescent Components

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Numerous types of kits will be procured. Each has it own unique installation method.

ADMINISTRATIVE LEADTIME: 4 Months PRODUCTION LEADTIME: 10 Months

CONTRACT DATES: FY 2008: _____ FY 2009: Jan-09 FY 2010: Jan-10 _____

DELIVERY DATE: FY 2008: _____ FY 2009: Nov-09 FY 2010: Nov-10 _____

(\$ in Millions)

Cost:	Prior Years		FY 2008		FY 2009		FY 2010		FY2010 OCO												
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
FY 2007 & PY () kits	185	0.1																			
FY 2008 () kits																					
FY 2009 () kits							25	0.8													
FY 2010 () kits																					
FY 2011 () kits																					
FY 2012 () kits																					
FY 2013 () kits																					
FY 2014 () kits																					
FY 2015 () kits																					
To Complete () kits																					
TOTAL	185	0.1					25	0.8													

Installation Schedule

	FY 2007 & Prior	FY 2008				FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	185								6	6	6	7													
Out	185								6	6	6	7													

	FY 2014				FY 2015				To Complete	Total
	1	2	3	4	1	2	3	4		
In										
Out										

Notes:

- Quantities include 185 software kits in prior years and exclude 40 kits each procured in FY07 and FY08 which were installed at O-level.
- Quantity of 15 kits procured in FY10 will be installed in FY11

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: CH-53E (130), MH-53E (26), 156 Total MODIFICATION TITLE: Transition Bulkhead

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: IMC

ADMINISTRATIVE LEADTIME: 6 Months PRODUCTION LEADTIME: 19 Months

CONTRACT DATES: FY 2008: Mar-08 FY 2009: Mar-09 FY 2010: Mar-10

DELIVERY DATE: FY 2008: Oct-09 FY 2009: Oct-10 FY 2010: Oct-11

(\$ in Millions)

Cost:	Prior Years		FY 2008		FY 2009		FY 2010		FY2010 OCO										
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
FY 2007 & PY () kits	6	0.3	4	0.2															
FY 2008 () kits			5	0.3	15	0.8	7	0.5											
FY 2009 () kits																			
FY 2010 () kits																			
FY 2011 () kits																			
FY 2012 () kits																			
FY 2013 () kits																			
FY 2014 () kits																			
FY 2015 () kits																			
To Complete () kits																			
TOTAL	6	0.3	9	0.5	15	0.8	7	0.5											

Installation Schedule

	FY 2007 & Prior	FY 2008				FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	6			4	5		5	5	5			4	3												
Out	6			4	5		5	5	5			4	3												

	FY 2014				FY 2015				To Complete	Total
	1	2	3	4	1	2	3	4		
In										
Out										

Notes:

- Quantity of 9 kits procured in FY09 will be installed in FY11.
- Quantity of 14 kits procured in FY10 will be installed in FY12.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: CH-53E (136), MH-53E (26), 162 Total MODIFICATION TITLE: #6 Tail Rotor Drive Shaft (TRDS)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: IMC

ADMINISTRATIVE LEADTIME: 4 Months PRODUCTION LEADTIME: 10 Months

CONTRACT DATES: FY 2008: Jan-08 FY 2009: Jan-09 FY 2010: Jan-10

DELIVERY DATE: FY 2008: Nov-08 FY 2009: Nov-09 FY 2010: Nov-10

(\$ in Millions)

Cost:	Prior Years		FY 2008		FY 2009		FY 2010		FY2010 OCO										
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
FY 2007 & PY () kits			24	0.0	13	0.0													
FY 2008 () kits					38	0.1													
FY 2009 () kits							30	0.1											
FY 2010 () kits																			
FY 2011 () kits																			
FY 2012 () kits																			
FY 2013 () kits																			
FY 2014 () kits																			
FY 2015 () kits																			
To Complete () kits																			
TOTAL			24	0.0	51	0.1	30	0.1											

Installation Schedule

	FY 2007 & Prior	FY 2008				FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In			12	12		13	13	13	12		10	10	10												
Out			12	12		13	13	13	12		10	10	10												

	FY 2014				FY 2015				To Complete	Total
	1	2	3	4	1	2	3	4		
In										
Out										

Notes:

- Quantity of 30 kits procured in FY10 will be installed in FY11.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: CH-53E (137), MH-53E (26), 163 Total MODIFICATION TITLE: Station 820 Bulkhead

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Field Modification Team, IMC

ADMINISTRATIVE LEADTIME: N/A Months PRODUCTION LEADTIME: N/A Months

CONTRACT DATES: FY 2008: _____ FY 2009: _____ FY 2010: _____

DELIVERY DATE: FY 2008: _____ FY 2009: _____ FY 2010: _____

(\$ in Millions)

Cost:	Prior Years		FY 2008		FY 2009		FY 2010		FY2010 OCO												
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
FY 2007 & PY () kits	100	1.3	33	0.4	10	0.1	4	*													
FY 2008 () kits																					
FY 2009 () kits																					
FY 2010 () kits																					
FY 2011 () kits																					
FY 2012 () kits																					
FY 2013 () kits																					
FY 2014 () kits																					
FY 2015 () kits																					
To Complete () kits																					
TOTAL	100	1.3	33	0.4	10	0.1	4	0.0													

Installation Schedule

	FY 2007 & Prior	FY 2008				FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	100		13	10	10			5	5			4													
Out	100		13	10	10			5	5			4													

	FY 2014				FY 2015				To Complete	Total
	1	2	3	4	1	2	3	4		
In										
Out										

Note:

1. Station 820 kits were procured with other prior year funding. Installation costs are funded in this OSIP.

Exhibit P-3a

Individual Modification

MODIFICATION TITLE: VISUALLY DEGRADED ENVIRONMENT (OSIP 020-07)

MODELS OF SYSTEMS AFFECTED: CH-53E (96) TYPE MODIFICATION: SAFETY/PERFORMANCE

DESCRIPTION/JUSTIFICATION: VDE is the greatest unmitigated challenge faced by Marine Aviation in its current operating environment. The loss of visual ground reference during night landings to unimproved, dusty landing zones is the greatest safety risk to H-53 aircrew, passengers and aircraft. The H-53 will continue to operate in VDE and continue to endanger flight crews and passengers while flying in a low altitude/low airspeed regime or landing in unimproved landing zones in conditions that may cause loss of a visual reference due to dust, snow, fog, smoke or darkness. A VDE solution will facilitate mission accomplishment in all degraded cueing environments, prevent degraded cueing environment mishaps and subsequent loss of life and assets. Reference: CH-53 Zero Visibility Landing System UNS # 06069UB, approved 27 Feb 06.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: PMA-261 is currently supporting development efforts underway at Marine Corps Warfighting Laboratory and the Office of Naval Research. Ongoing development efforts have resulted in testing of Engineering Development Models (EDM) on a non-government owned H-1 aircraft. Continuing development efforts supported by PMA-261 will result in EDMs being flown on a government owned CH-53E aircraft for demonstration purposes and refinement of follow-on VDE requirements.

FINANCIAL PLAN: (TOA, \$ in Millions)

	Prior Years		FY 2008		FY 2009		FY 2010		FY2010 OCO										
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
RDT&E																			
PROCUREMENT																			
Installation Kits																			
VDE A-Kits							24	1.9											
VDE CNS/ATM Kits									9	12.9									
Installation Kits N/R																			
Installation Equipment																			
VDE B-Kits							24	4.3											
VDE CNS/ATM B-Kits			5	6.1															
Installation Equipment N/R		0.7		1.9															
Engineering Change Orders																			
Data				0.4															
Training Equipment		3.5			3.5	1	0.5	3	8.7										
Support Equipment																			
ILS																			
Other Support		1.1		1.0				0.1											
Interim Contractor Support																			
Installation Cost							24	1.9	9	6.3									
Total Procurement		5.3		9.4		3.5		8.7		27.8									

Notes:

- Totals may not add due to rounding

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: CH-53E (96) MODIFICATION TITLE: VISUALLY DEGRADED ENVIRONMENT (OSIP 020-07)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Field Modification Teams

ADMINISTRATIVE LEADTIME: 2 Months PRODUCTION LEADTIME: 3 Months

CONTRACT DATES: FY 2008: _____ FY 2009: _____ FY 2010: Nov-09 _____

DELIVERY DATE: FY 2008: _____ FY 2009: _____ FY 2010: Feb-10 _____

(\$ in Millions)

Cost:	Prior Years		FY 2008		FY 2009		FY 2010		FY2010 OCO														
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
FY 2007 & PY () kits																							
FY 2008 () kits																							
FY 2009 () kits																							
FY 2010 () kits								24	1.9	9	6.3												
FY 2011 () kits																							
FY 2012 () kits																							
FY 2013 () kits																							
FY 2014 () kits																							
FY 2015 () kits																							
To Complete () kits																							
TOTAL								24	1.9	9	6.3												

Installation Schedule

	FY 2007 & Prior	FY 2008				FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In											11	11	11												
Out											11	11	11												

	FY 2014				FY 2015				To Complete	Total
	1	2	3	4	1	2	3	4		
In										
Out										

Exhibit P-3a	Individual Modification																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
MODIFICATION TITLE:	<u>DIRCM (OSIP 010-08)</u>																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
MODELS OF SYSTEMS AFFECTED:	<u>CH-53D (36), CH-53E (152), 188 Total</u> TYPE MODIFICATION: <u>MISSION/PERFORMANCE SUSTAINMENT</u>																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
<p>DESCRIPTION/JUSTIFICATION: Currently, the H-53E has only IR detection equipment and rudimentary flares for use as CM. This funding is for ECP development, A-kit procurement and installation of a DIRCM system for CH-53Es. This system will help protect the CH-53E which is highly susceptible to IR seeking manpads, the weapon of choice in all current theaters. This system has been found effective against fourth generation IR manpads, and is extremely effective earlier generation manpads.</p> <p>OCO funding: As the threat of roadside improvised explosive devices (IEDs) continues unabated and logistic lines of communication and supply are stretched, theater commanders are relying more and more on airborne transport. With the large number of troops that the CH-53 can carry making it the choice aircraft for theater commanders, the large Infrared (IR) signature also makes it a lucrative target to insurgents. Where the current Aircraft Survivability Equipment suite is only moderately effective, the Directed Infrared Countermeasures (DIRCM) system that is being procured is highly effective against all generations of manpads. Currently, the H-53E has only IR detection equipment and rudimentary flares for use as countermeasures. This system will help protect the CH-53 which is highly susceptible to IR seeking manpads, the weapon of choice in all current theaters. The DIRCM system has been found effective against fourth generation IR manpads, and is extremely effective against earlier generation manpads. Employment of this DIRCM system will give the CH-53 a distinct advantage over threats in contingency operations.</p> <p>DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: Non-Recurring engineering for the CH-53E began in May 07 and concluded with a completed and verified TD in early FY09. T&E for the CH-53E began with risk-reduction testing in April 08 and will conclude with IOT&E in late FY09, reports for that testing is in work. Critical to early fielding was the Quick reaction assessment, completed in Aug 08 which lead to an Early Operational Capability decision in Nov 08. Validation & verification were conducted for the CH-53E between May - Sep 08. Non-Recurring engineering for the CH-53D began in May 08 and will conclude with a completed and verified TD in early FY10. T&E for the CH-53D will take place in late FY09/FY10. Fielding for the CH-53D will begin in FY10. DIRCM is being procured as a mission kit by PMA-272. All CH-53Ds & CH-53Es must be modified with an A-kit to accept the mission kit. Installations will surge in FY09 to achieve an EOC and then continue through FY14..</p>																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
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(Phase II)</td> <td>16</td><td>5.7</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>DIRCM A Kits (Phase III)</td> <td>16</td><td>4.2</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>Installation Kits N/R</td> <td></td><td>7.6</td><td></td><td></td><td></td><td>1.1</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>Installation Equipment</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>DIRCM B Kits (Phase I)</td> <td>16</td><td>56.5</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>DIRCM B Kits (Phase II)</td> <td>16</td><td>48.1</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>DIRCM B Kits (EGI)</td> <td>16</td><td>5.0</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>Installation Equipment N/R</td> 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<td></td><td>3.0</td><td>24</td><td>2.7</td><td>46</td><td>3.7</td><td>11</td><td>1.9</td><td>11</td><td>1.9</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>Total Procurement</td> <td></td><td>148.6</td><td></td><td>6.0</td><td></td><td>13.0</td><td></td><td>6.0</td><td></td><td>6.0</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> </tbody> </table>		Prior Years		FY 2008		FY 2009		FY 2010		FY2010 OCO														Qty	\$	RDT&E																								PROCUREMENT																								Installation Kits																								DIRCM A Kits			14	2.9	22	6.1	11	3.1																DIRCM A Kits - OCO									11	3.1														DIRCM A Kits (Phase I)	16	5.7																						DIRCM A Kits (Phase II)	16	5.7																						DIRCM A Kits (Phase III)	16	4.2																						Installation Kits 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Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: CH-53D (36), CH-53E (152), 188 Total MODIFICATION TITLE: DIRCM (OSIP 010-08)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Field Modification Teams

ADMINISTRATIVE LEADTIME: 2 Months PRODUCTION LEADTIME: 3 Months

CONTRACT DATES: FY 2008: _____ FY 2009: Nov-08 FY 2010: Nov-09 _____

DELIVERY DATE: FY 2008: _____ FY 2009: Feb-09 FY 2010: Feb-10 _____

(\$ in Millions)

Cost:	Prior Years		FY 2008		FY 2009		FY 2010		FY2010 OCO													
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
FY 2007 & PY () kits		3.0	24	2.7	24																	
FY 2008 () kits					14	1.4																
FY 2009 () kits					22	2.3																
FY 2010 () kits							11	1.9	11	1.9												
FY 2011 () kits																						
FY 2012 () kits																						
FY 2013 () kits																						
FY 2014 () kits																						
FY 2015 () kits																						
To Complete () kits																						
TOTAL		3.0	24	2.7	60	3.7	11	1.9	11	1.9												

Installation Schedule

	FY 2007 & Prior	FY 2008				FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In		8	8	8	8	8	8	26	18		6	5	11												
Out			8	8	8	8	8	26	18		6	5	11												

	FY 2014				FY 2015				To Complete	Total
	1	2	3	4	1	2	3	4		
In										
Out										

Notes:

1. Kits procured in FY07 are installed in FY08 and FY09 with Supplemental funding.

Exhibit P-3a Individual Modification

MODIFICATION TITLE: H-53 HUD (OSIP 20-09)

MODELS OF SYSTEMS AFFECTED: CH-53D (36), CH-53E (152), 188 Total TYPE MODIFICATION: MISSION/PERFORMANCE SUSTAINMENT

DESCRIPTION/JUSTIFICATION: OCO funding: The integration of the ANVS Heads-up Display (HUD) system will provide a Visually Degraded Environment (VDE) solution for the CH-53D. As currently fielded, the CH-53D cockpit configuration forces the flying pilot to break their visual scan of objects outside the aircraft in order to view critical flight and mission performance data such as power, altitude, and speed presented only on the instrument panel. With this integrated HUD system, all critical flight parameters are presented to the operator providing the pilot with the capability to continuously keep eyes on the target or landing zone. Additionally, with the integration of the Directed Infrared Counter Measures (DIRCM) system, the associated Embedded GPS / INS Laser Rin Gyro (EGI) will provide real-time velocity and acceleration data. This data, when presented on the HUD, will significantly enhance operator situational awareness in the low airspeed flight regime – the flight condition where Degraded Visual Environments are encountered.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: OCO funding: The ANVS HUD has been installed on the CH-53E for a decade. This will fund the Non-recurring engineering (NRE) required to modify the CH-53E AFC to include the CH-53D as well as the A and B kits required for installation.

FINANCIAL PLAN: (TOA, \$ in Millions)

	Prior Years		FY 2008		FY 2009		FY 2010		FY2010 OCO													
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
RDT&E																						
PROCUREMENT																						
Installation Kits																						
Day HUD Kit					254	4.8																
CH-53D HUD Kit									36	0.3												
Installation Kits N/R											1.2											
Installation Equipment																						
ANVIS-24 HUD P-kits									36	21.8												
Installation Equipment N/R											0.8											
Engineering Change Orders																						
Data										0.1												
Training Equipment																						
Support Equipment																						
ILS										0.2												
Other Support						0.2																
Interim Contractor Support																						
Installation Cost										0.6												
Total Procurement						5.0				25.0												

Notes:

1. Totals may not add due to rounding
2. Quantity of 254 Day HUD kits in FY09 reflects 2 kits per aircraft for all fully mission capable CH-53E aircraft.
3. Quantity of 36 kits procured with FY10 supplemental will be installed in FY11.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: CH-53D (36) MODIFICATION TITLE: H-53 HUD (OSIP 20-09)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Field Modification Teams

ADMINISTRATIVE LEADTIME: 2 Months PRODUCTION LEADTIME: 10 Months

CONTRACT DATES: FY 2008: _____ FY 2009: _____ FY 2010: Nov-09 _____

DELIVERY DATE: FY 2008: _____ FY 2009: _____ FY 2010: Sep-10 _____

(\$ in Millions)

Cost:	Prior Years		FY 2008		FY 2009		FY 2010		FY2010 OCO												
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
FY 2007 & PY () kits																					
FY 2008 () kits																					
FY 2009 () kits																					
FY 2010 () kits										0.6											0.6
FY 2011 () kits																					
FY 2012 () kits																					
FY 2013 () kits																					
FY 2014 () kits																					
FY 2015 () kits																					
To Complete () kits																					
TOTAL										0.6											0.6

Installation Schedule

FY 2007 & Prior	FY 2008				FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In																								
Out																								

	FY 2014				FY 2015				To Complete	Total
	1	2	3	4	1	2	3	4		
In										
Out										

Notes:

- Quantity of 36 kits procured with FY10 supplemental will be installed in FY11.

Exhibit P-40, BUDGET ITEM JUSTIFICATION							DATE: May 2009				
APPROPRIATION/BUDGET ACTIVITY Aircraft Procurement, Navy/APN-5 Aircraft Modifications						P-1 ITEM NOMENCLATURE 053000, SH-60 SERIES					
Program Element for Code B Items:						Other Related Program Elements					
	Prior Years	ID Code	FY2008	FY2009	FY2010	FY2010 OCO	FY2010 Total				
QTY											
COST (In Millions)	260.5	A	52.1	72.3	82.3	11.2	93.4				
<p>DESCRIPTION: This line item funds modifications to H-60 series aircraft. The H-60 series program of record for modification is comprised of: 30 HH-60H, 138 SH-60B, 65 SH-60F, 173 MH-60S, 84 MH-60R. The HH-60H is a Combat Search and Rescue (CSAR) and Special Warfare Support (SWS) helicopter assigned to carrier airwings aboard Carrier Vessels (CV) and also in two reserve squadrons. The primary missions of the SH-60B are Anti-Submarine (ASW) and Surface Warfare (SUW). The SH-60F is an ASW, dipping sonar helicopter assigned to carrier airwings based aboard aircraft carriers (CV). The SH-60F primary mission is protection of the CV inner zone. The MH-60S is the Fleet Combat Support (HC) Helicopter. The primary missions of the MH-60S are Vertical Replenishment (VERTREP), Search and Rescue (SAR), Organic AMCM (OAMCM), Surface Warfare (SUW), Extended Maritime Interdiction Operations (EMIO), and Navy Organic Combat Search and Rescue (CSAR). The MH-60R is the Multi-Mission Helicopter. The primary missions of the MH-60R are Under Sea Warfare (USW) and Surface Warfare (SUW). The overall goal of the modifications budgeted is for the Integrated Mechanical Diagnostic System (IMDS), Safety Related Systems Upgrade, AMCM/Armed Helo (Correction of Deficiencies) for the MH-60S, Armed Block I Upgrade for the MH-60R, H-60 Helicopter Visit, Board, Search, and Seizure (HVBSS), H-60 Overland Missions, SH-60B KG-45A, MH-60S Warfighting Capability, SH-60B Datalink (KuBand), MH-60R/S Crew Workload - Operator System Interface (OSI), and Automatic Radar Periscope Detection Discrimination (ARPD). The specific modifications budgeted and programmed are:</p>											
OSIP No./Description	Prior Years	FY2008	FY2009	FY2010	FY2010 OCO	FY2010 Total					
017-00 HEL0 INTG MECH DIAGN (IMDS)	26.6	0.3	0.5	0.3		0.3					
009-03 SAFETY RELATED SYSTEM UPGRADE	32.8	3.4	2.7	5.2		5.2					
016-04 MH-60S AMCM/ARMED HELO	19.9	3.5	7.2	3.8		3.8					
001-06 MH-60R ARMED BLOCK I UPGRADE	10.1	22.4	23.3	31.0		31.0					
008-07 H-60 HVBSS	8.1	1.8	1.9		11.2	11.2					
009-07 MH-60S WARFIGHTING CAPABILITY	0.7	15.2	26.3	28.6		28.6					
023-08 H-60 OVERLAND MISSIONS		4.5									
024-08 SH-60B KG-45A		1.1									
008-09 SH-60B DATALINK			4.9	5.8		5.8					
009-09 MH-60R/S CREW WORKLOAD - OSI			5.6	7.6		7.6					
INACTIVE OSIPS	162.2										
Total	260.4	52.1	72.3	82.3	11.2	93.4					
Note: Totals may not add due to rounding											

Exhibit P-3a	Individual Modification																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
MODIFICATION TITLE:	<u>SAFETY RELATED SYSTEM UPGRADE (OSIP 009-03)</u>																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
MODELS OF SYSTEMS AFFECTED:	<u>SH-60B, SH-60F, HH-60H, MH-60R, MH-60S</u>																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
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<p>DESCRIPTION/JUSTIFICATION: (ALL TMS): Safety Related Systems Upgrade funds modifications to improve the safety of operating H-60 Series aircraft in all operations. In addition to those modifications specifically cited below, this OSIP provides the vehicle to expeditiously fund and correct H-60 Series airframe and avionics safety-related deficiencies (HRI 1-10). T700 Engine Safety Improvements (New White Harness) funds ECPs to provide encapsulated (waterproof) engine wire harness. In addition, troubleshoots T700 Engine problems unique to H-60 community and find fixes. The New White Harness will be installed two (2) per aircraft. Wide Field of Vision (FOV) Night Vision Device increases nighttime situational awareness and improving safety-of-forces. Emergency Locator Transmitter (ELT) Electro Magnetic Interference (EMI) Sleeves are required to protect the transmitters from inadvertent activation, which prevents a delay in rescue response time to a helicopter crash.</p> <p>DESCRIPTION / JUSTIFICATION (SH-60B, SH-60F, HH-60H): Stabilator Control System Redesign solved problems of uncommanded runaway without caution alerts. H-60 Lighted RAST Probe provides a luminescent messenger cable. Fast Tactical Imaging (FTI) Terminals and Imaging and Communications Environment (ICE) software allow H-60 H/B aircraft to link imagery and target data with Carrier Strike Group and Joint Special Operations forces, increasing battlefield situational awareness, improving safety-of-forces, and enhancing precision strike capability in close-air-support of Special Warfare forces. GAU-17 Weapon Assembly Mod funds (15) A-kits for HH-60H aircraft. Force XXXI Battle Command Brigade and Below (FBCB2) Blue Force Tracker (BFT) is a current theatre requirement for overland helicopter missions. FBCB2 BFT provides two-way, near-real-time friendly force and threat location and display, two-way text messaging, and tactical operation center support. System is designed to improve Commander and cockpit situational awareness and mitigate fratricide risks.</p> <p>DESCRIPTION / JUSTIFICATION (MH-60S, MH60R): - The Ground Proximity Warning System (GPWS) will be a software-based system that takes existing aircraft data and calculates a recovery profile to the above ground attitude of the aircraft. If the recovery profile (plus a suitable buffer) intercepts this ground height, GPWS will generate a warning to the pilot. Other means of generating a warning may also be used to ensure maximum detection with minimum nuisance cues. Force XXXI Battle Command Brigade and Below (FBCB2) Blue Force Tracker (BFT) is a current theatre requirement for overland helicopter missions. FBCB2 BFT provides two-way, near-real-time friendly force and threat location and display, two-way text messaging, and tactical operation center support. System is designed to improve Commander and cockpit situational awareness to improve combat effectiveness and mitigate fratricide risks.</p> <p>DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: No development required. METHOD OF IMPLEMENTATION: New White Harness, Fast Tactical Imaging are "O" Level Installs.</p>																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
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	<table border="1" style="width:100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th rowspan="2"></th> <th colspan="2">Prior Years</th> <th colspan="2">FY 2008</th> <th colspan="2">FY 2009</th> <th colspan="2">FY 2010</th> <th colspan="2">FY2010 OCO</th> <th colspan="2"></th> <th colspan="2"></th> <th colspan="2"></th> <th colspan="2"></th> <th colspan="2"></th> </tr> <tr> <th>Qty</th> <th>\$</th> </tr> </thead> <tbody> <tr><td>RDT&E</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>PROCUREMENT</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>Installation Kits</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>H-60 HIGH SPEED SHAFT (ALL TMS)</td><td>685</td><td>8.4</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>H-60 LIGHTED RAST PROBE(SH-60B/F/HH-60H)</td><td>202</td><td>0.1</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>HH-60H GAU-17 Weapon Assembly Mod</td><td>15</td><td>0.2</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>HH-60H GUNNER BELTS (Webbing Retractors)</td><td>120</td><td>0.2</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>MH-60S GUNNER BELTS (Webbing Retractors)</td><td>116</td><td>0.2</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>NEW WHITE HARNESS (ALL TMS)</td><td>151</td><td>1.1</td><td>257</td><td>1.9</td><td>25</td><td>0.2</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>SH-60B GUNNER BELTS (Webbing Retractors)</td><td>160</td><td>0.3</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>SH-60F GUNNER BELTS (Webbing Retractors)</td><td>222</td><td>0.4</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>WHITE HARNESS (ALL TMS)</td><td>548</td><td>0.2</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>BLUE FORCE TRACKER (BFT)</td><td>36</td><td>0.7</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>Installation Kits N/R</td><td></td><td>2.2</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>Installation Equipment</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>HH-60H/SH-60B FAST TACTICAL IMAGING</td><td>54</td><td>0.5</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>MH-60S GPWS CARDS</td><td>128</td><td>0.7</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>MH-60S/MH-60R GUNNER BELTS</td><td>104</td><td>0.3</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>SH-60B/SH-60F/HH-60H GUNNER BELTS</td><td>78</td><td>0.2</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>SH-60B/SH-60F/HH-60H LIGHTED RAST PROBE</td><td>1</td><td>0.1</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>WIDE FOV NVG (ALL TMS)</td><td></td><td></td><td>4</td><td>0.2</td><td>19</td><td>1.1</td><td>62</td><td>3.3</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>BLUE FORCE TRACKER (BFT)</td><td>36</td><td>1.8</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>EMI SLEEVE (ALL TMS)</td><td></td><td></td><td>412</td><td>*</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>Installation Equipment N/R</td><td></td><td>3.1</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>Engineering Change Orders</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>SAFETY RELATED ECO</td><td></td><td>*</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>Data</td><td></td><td>1.5</td><td></td><td></td><td></td><td></td><td></td><td>0.2</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>Training Equipment</td><td></td><td>0.4</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>Support Equipment</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>ILS</td><td></td><td>0.6</td><td></td><td></td><td></td><td></td><td>0.3</td><td>0.4</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>Other Support</td><td></td><td>8.4</td><td></td><td>1.2</td><td></td><td>1.2</td><td>1.3</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>Interim Contractor Support</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>Installation Cost</td><td>248</td><td>** 0.8</td><td>** 4</td><td></td><td>** 32</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>Total Procurement</td><td></td><td>32.8</td><td></td><td>3.4</td><td></td><td>2.7</td><td></td><td>5.2</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </tbody> </table>		Prior Years		FY 2008		FY 2009		FY 2010		FY2010 OCO												Qty	\$	RDT&E																						PROCUREMENT																						Installation Kits																						H-60 HIGH SPEED SHAFT (ALL TMS)	685	8.4																				H-60 LIGHTED RAST PROBE(SH-60B/F/HH-60H)	202	0.1																				HH-60H GAU-17 Weapon Assembly Mod	15	0.2																				HH-60H GUNNER BELTS (Webbing Retractors)	120	0.2																				MH-60S GUNNER BELTS (Webbing Retractors)	116	0.2																				NEW WHITE HARNESS (ALL TMS)	151	1.1	257	1.9	25	0.2																SH-60B GUNNER BELTS (Webbing Retractors)	160	0.3																				SH-60F GUNNER BELTS (Webbing Retractors)	222	0.4																				WHITE HARNESS (ALL TMS)	548	0.2																				BLUE FORCE TRACKER (BFT)	36	0.7																				Installation Kits N/R		2.2																				Installation Equipment																						HH-60H/SH-60B FAST TACTICAL IMAGING	54	0.5																				MH-60S GPWS CARDS	128	0.7																				MH-60S/MH-60R GUNNER BELTS	104	0.3																				SH-60B/SH-60F/HH-60H GUNNER BELTS	78	0.2																				SH-60B/SH-60F/HH-60H LIGHTED RAST PROBE	1	0.1																				WIDE FOV NVG (ALL TMS)			4	0.2	19	1.1	62	3.3														BLUE FORCE TRACKER (BFT)	36	1.8																				EMI SLEEVE (ALL TMS)			412	*																		Installation Equipment N/R		3.1																				Engineering Change Orders																						SAFETY RELATED ECO		*																				Data		1.5						0.2														Training Equipment		0.4																				Support Equipment																						ILS		0.6					0.3	0.4														Other Support		8.4		1.2		1.2	1.3															Interim Contractor Support																						Installation Cost	248	** 0.8	** 4		** 32																	Total Procurement		32.8		3.4		2.7		5.2																															
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HH-60H GUNNER BELTS (Webbing Retractors)	120	0.2																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
MH-60S GUNNER BELTS (Webbing Retractors)	116	0.2																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
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SH-60B GUNNER BELTS (Webbing Retractors)	160	0.3																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
SH-60F GUNNER BELTS (Webbing Retractors)	222	0.4																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
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HH-60H/SH-60B FAST TACTICAL IMAGING	54	0.5																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
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3. ** FY07 BFT OCO (Overseas Contingency Operations) funding will be applied to FY08 & FY09 Installations																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: HH-60H, MH-60S MODIFICATION TITLE: BLUE FORCE TRACKER (OSIP 09-03)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: CONTRACTOR FIELD MOD

ADMINISTRATIVE LEADTIME: 2 Months PRODUCTION LEADTIME: 3 Months

CONTRACT DATES: FY 2008: _____ FY 2009: _____ FY 2010: _____

DELIVERY DATE: FY 2008: _____ FY 2009: _____ FY 2010: _____

(\$ in Millions)

Cost:	Prior Years		FY 2008		FY 2009		FY 2010		FY2010.OCO		FY 2011		FY 2012		FY 2013		FY 2014	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
FY 2007 & PY (36) kits			0.3	** 4	** 32													
FY 2008 () kits																		
FY 2009 () kits																		
FY 2010 () kits																		
FY 2011 () kits																		
FY 2012 () kits																		
FY 2013 () kits																		
FY 2014 () kits																		
FY 2015 () kits																		
To Complete () kits																		
TOTAL			0.3	** 4	** 32													

Notes:

1. **FY07 BFT OCO funding will be applied to FY08 & FY09 Installations

Installation Schedule

	FY 2007 & Prior	FY 2008				FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In				4	12	12	8																		
Out				4	12	12	8																		

	FY 2014				FY 2015				To Complete	Total
	1	2	3	4	1	2	3	4		
In										
Out										

Exhibit P-3a	Individual Modification																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
MODIFICATION TITLE:	<u>MH-60S AMCM/ARMED HELO (OSIP 016-04)</u>																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
MODELS OF SYSTEMS AFFECTED:	<u>MH-60S</u> TYPE MODIFICATION: <u>OPERATIONAL ENHANCEMENT</u>																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
<p>DESCRIPTION/JUSTIFICATION: Based on Developmental and Operational testing, Fleet aircraft require modifications to correct identified deficiencies incorporated in production aircraft. These modifications include corrections to Common Cockpit Avionics, Auxiliary Fuel System, High Maintenance Battery, Search and Rescue Equipment, Rotor System and Airframe, Night Vision Device Exterior Lighting and AMCM Mission Equipment. Current retrofit plan is as follows: The Aux Tank A kit will be retrofit on 50 aircraft. Aux Tank B kits (two tanks per kit) and AMCM Mission Equipment are not procured on a one for one basis with the A kit modifications. No install required. The Bifilar B Kit and Ultra Low Maintenance Battery will be retrofit as an "O" Level install on 50 aircraft. Night Vision Device Capable Aircraft Lighting will be retrofit on 137 Aircraft.</p> <p>DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: The MH-60S aircraft completed OPEVAL in Mar 2002; MS III was completed 12 Aug 2002. The validation of the Aux Tank capability was completed in the second quarter of FY 2005.</p>																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
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ECP 4000 Retrofit	31	8.0			8	2.3																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
NVD KITS	8	0.4			34	1.6	33	1.6																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
ULMB	26	0.6																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
Installation Kits N/R		3.5																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
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AMCM MISSION EQUIP MODS	5	1.7	4	1.4	2	0.7																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
ARMED HELO KIT MODS	22	0.2																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
AUX TANKS	20	2.8																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
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Support Equipment																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
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Other Support		0.1		0.1		0.1		0.1																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
Interim Contractor Support																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
Installation Cost			6	2.1	31	2.5	46	2.1																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
Total Procurement		19.9		3.5		7.2		3.8																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
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1. Totals may not add due to rounding																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: MH-60S MODIFICATION TITLE: ECP 4000 kits (OSIP 016-04)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Contractor Field Mod Team

ADMINISTRATIVE LEADTIME: 3 Months PRODUCTION LEADTIME: 11 Months

CONTRACT DATES: FY 2008: _____ FY 2009: Dec-08 FY 2010: Dec-09

DELIVERY DATE: FY 2008: _____ FY 2009: Nov-09 FY 2010: Nov-10

(\$ in Millions)

Cost:	Prior Years		FY 2008		FY 2009		FY 2010		FY2010 OCO													
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
FY 2007 & PY (29) kits			6	2.1	19	2.3	4	0.5														
FY 2008 () kits																						
FY 2009 (8) kits							8	1.0														
FY 2010 () kits																						
FY 2011 () kits																						
FY 2012 () kits																						
FY 2013 () kits																						
FY 2014 () kits																						
FY 2015 () kits																						
To Complete () kits																						
TOTAL			6	2.1	19	2.3	12	1.5														

Installation Schedule

	FY 2007 & Prior	FY 2008				FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In				2	4	4	5	5	5	3	3	3	3												
Out				1	4	4	5	5	5	4	3	3	3												

	FY 2014				FY 2015				To Complete	Total
	1	2	3	4	1	2	3	4		
In										
Out										

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: MH-60S MODIFICATION TITLE: NVD Lighting (OSIP 016-04)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Contractor Field Mod Team

ADMINISTRATIVE LEADTIME: 3 Months PRODUCTION LEADTIME: 8 Months

CONTRACT DATES: FY 2008: _____ FY 2009: Dec-08 FY 2010: Dec-09

DELIVERY DATE: FY 2008: _____ FY 2009: Aug-09 FY 2010: Aug-10

(\$ in Millions)

Cost:	Prior Years		FY 2008		FY 2009		FY 2010		FY2010 OCO													
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
FY 2007 & PY (8) kits					8	0.1																
FY 2008 () kits																						
FY 2009 (34) kits					4	0.1	30	0.6														
FY 2010 (4) kits							4	0.1														
FY 2011 () kits																						
FY 2012 () kits																						
FY 2013 () kits																						
FY 2014 () kits																						
FY 2015 () kits																						
To Complete () kits																						
TOTAL					12	0.2	34	0.6														

Notes:
1. Totals may not add due to rounding

Installation Schedule

	FY 2007 & Prior	FY 2008				FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In						4	4	4	8	9	9	8													
Out						4	4	4	8	9	9	8													

	FY 2014				FY 2015				To Complete	Total
	1	2	3	4	1	2	3	4		
In										
Out										

Exhibit P-3a Individual Modification

MODIFICATION TITLE: MH-60R ARMED BLOCK I UPGRADE (OSIP 001-06)

MODELS OF SYSTEMS AFFECTED: MH-60R TYPE MODIFICATION: OPERATIONAL ENHANCEMENT

DESCRIPTION/JUSTIFICATION: This line item funds modifications to the MH-60R series aircraft. The modifications are part of the P3I effort that includes GPS SAASM, CDL HAWKLINK, IMDS, AVC, ACOUSTIC PROCESSOR, and LINK-16 for LRIP I Aircraft and subsequent. Global Positioning System (GPS) upgrade includes Selective Availability Anti-Spoofing Module (SAASM) and GAS-1 antenna upgrade. SAASM is a set of functional security requirements used to design and build a secure GPS receiver. Use of GPS SAASM security architecture significantly enhances the pilot's ability to use the GPS Precise Positioning, velocity, time, and other GPS sensor information in all environments. GAS-1 antenna upgrade to the GPS system improves susceptibility performance. Link 16 supports the exchange of C4I data that is required to operate in a Joint and NATO Battlespace. Link 16 is designed to support the exchange of formatted data messages rather than the "raw" data exchange that the existing C-Band Hawklink and Common Data Link (CDL) Hawklink will support. CDL Hawklink is an update to the current C-Band Hawklink that allows for an increase in bandwidth with the ability to transfer additional data. MH-60R is required to be backward-compatible with both legacy Surface Fleet Combat Systems and forward-compatible with new and under-development Surface Fleet Combat Systems at relatively long-range of not only voice and video information, but large amounts of sensor and tactical data. It is compliant with the Assistant Secretary of Defense C3I Letter dated 18 October 2004 directing commonality and interoperability between all DOD airborne sensor platforms and meets the mandate for a common standard for transmission of unprocessed sensor information. The Integrated Mechanical Diagnostic System (IMDS) will improve aircraft performance and vibration parameters in flight. GPS SAASM, Link 16, KUBAND and IMDS are a part of the MH-60R Block Upgrades as specified in the evolutionary acquisition strategy for the program. The Acoustic Subsystem is a key component to meeting H60R ASW mission requirements. This OSIP includes updates to obsolete components of the Acoustic Subsystem. Sonar Transducer Receiver (ST/R) will be modified to solve obsolescence issues.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: SAASM Joint Common System (JCS) Instruction CDCSI 6140.01, issued 15 November 1998, mandates that all Precise Position Systems (i.e. Global Positioning System (GPS) used on the MH-60R) users field SAASM-based user equipment and use black keys after 01 October 2002.

FINANCIAL PLAN: (TOA, \$ in Millions)

	Prior Years		FY 2008		FY 2009		FY 2010		FY2010 OCO												
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
RDT&E																					
PROCUREMENT																					
Installation Kits																					
ACOUSTICS TECH INSERT KITS			7	0.5	7	0.5	8	0.5													
AVC KITS					2	1.2	5	2.9													
GPS SAASM KITS	8	0.1	5	0.1																	
IMDS KITS	1	0.2	1	0.2	10	2.3	7	1.6													
CDL HAWKLINK KITS					7	9.2	11	12.8													
LINK-16 KITS	14	7.2	1	3.3																	
SONAR TRANSDUCER RECEIVER (ST/R)					21	2.4	12	1.4													
Installation Kits N/R		0.4		10.1																	
Installation Equipment																					
GPS SAASM KITS	1	0.1																			
ACOUSTICS TECH INSERT KITS			7	3.5	7	3.5	8	3.9													
Installation Equipment N/R																					
Engineering Change Orders																					
Data		0.2		0.5																	
Training Equipment																					
Support Equipment																					
ILS		0.4		0.5		0.2		0.2													
Other Support		0.6		2.6		2.0		1.3													
Interim Contractor Support																					
Installation Cost	12	0.9	15	1.1	4	1.9	25	6.4													
Total Procurement		10.1		22.4		23.3		31.0													

Notes:
1. Totals may not add due to rounding

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: MH-60R MODIFICATION TITLE: AVC KITS (OSIP 001-06)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: CONTRACTOR FIELD MOD

ADMINISTRATIVE LEADTIME: 1 Months PRODUCTION LEADTIME: 3 Months

CONTRACT DATES: FY 2008: _____ FY 2009: Apr-09 FY 2010: Nov-09 _____

DELIVERY DATE: FY 2008: _____ FY 2009: Jul-09 FY 2010: Feb-10 _____

(\$ in Millions)

Cost:	Prior Years		FY 2008		FY 2009		FY 2010		FY2010 OCO		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
FY 2007 & PY () kits																					
FY 2008 () kits																					
FY 2009 (2) kits					2	0.9															
FY 2010 (5) kits							5	2.1													
FY 2011 () kits																					
FY 2012 () kits																					
FY 2013 () kits																					
FY 2014 () kits																					
FY 2015 () kits																					
To Complete () kits																					
TOTAL					2	0.9	5	2.1													

Installation Schedule

	FY 2007 & Prior	FY 2008				FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In									2			2	3												
Out									2			2													

	FY 2014				FY 2015				To Complete	Total
	1	2	3	4	1	2	3	4		
In										
Out										

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: MH-60R MODIFICATION TITLE: ACOUSTICS TECH INSERT KITS (OSIP 001-06)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: CONTRACTOR FIELD MOD

ADMINISTRATIVE LEADTIME: 1 Months PRODUCTION LEADTIME: 18 Months

CONTRACT DATES: FY 2008: Sep-08 FY 2009: Nov-08 FY 2010: Nov-09

DELIVERY DATE: FY 2008: Mar-10 FY 2009: May-10 FY 2010: May-11

(\$ in Millions)

Cost:	Prior Years		FY 2008		FY 2009		FY 2010		FY2010 OCO														
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
FY 2007 & PY () kits																							
FY 2008 (7) kits								7	2.7														
FY 2009 (7) kits								2	0.8														
FY 2010 (8) kits																							
FY 2011 () kits																							
FY 2012 () kits																							
FY 2013 () kits																							
FY 2014 () kits																							
FY 2015 () kits																							
To Complete () kits																							
TOTAL								9	3.4														

- Notes:
 1. Totals may not add due to rounding
 2. 1 Val/Ver Kit

Installation Schedule

	FY 2007 & Prior	FY 2008				FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In											3	3	3												
Out											2	3													

	FY 2014				FY 2015				To Complete	Total
	1	2	3	4	1	2	3	4		
In										
Out										

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: MH-60R MODIFICATION TITLE: LINK-16 KITS (OSIP 001-06)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: CONTRACTOR FIELD MOD

ADMINISTRATIVE LEADTIME: 5 Months PRODUCTION LEADTIME: 9 Months

CONTRACT DATES: FY 2008: Feb-08 FY 2009: _____ FY 2010: _____

DELIVERY DATE: FY 2008: Nov-08 FY 2009: _____ FY 2010: _____

(\$ in Millions)

Cost:	Prior Years		FY 2008		FY 2009		FY 2010		FY2010 OCO		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
FY 2007 & PY (14) kits	4	0.8	10	1.0																
FY 2008 (1) kits					1	1.0														
FY 2009 () kits																				
FY 2010 () kits																				
FY 2011 () kits																				
FY 2012 () kits																				
FY 2013 () kits																				
FY 2014 () kits																				
FY 2015 () kits																				
To Complete () kits																				
TOTAL	4	0.8	10	1.0	1	1.0														

Installation Schedule

	FY 2007 & Prior	FY 2008				FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	4			5	5			1																	
Out	4			5	5			1																	

	FY 2014				FY 2015				To Complete	Total
	1	2	3	4	1	2	3	4		
In										
Out										

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: MH-60R MODIFICATION TITLE: IMDS KITS (OSIP 001-06)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: CONTRACTOR FIELD MOD

ADMINISTRATIVE LEADTIME: 2 Months PRODUCTION LEADTIME: 11 Months

CONTRACT DATES: FY 2008: May-08 FY 2009: Jan-09 FY 2010: Dec-09

DELIVERY DATE: FY 2008: Nov-09 FY 2009: Dec-09 FY 2010: Nov-10

(\$ in Millions)

Cost:	Prior Years		FY 2008		FY 2009		FY 2010		FY2010 OCO		FY 2011		FY 2012		FY 2013		FY 2014	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
FY 2007 & PY (1) kits					1	0.1												
FY 2008 (1) kits							1	0.1										
FY 2009 (10) kits							10	0.8										
FY 2010 (7) kits																		
FY 2011 () kits																		
FY 2012 () kits																		
FY 2013 () kits																		
FY 2014 () kits																		
FY 2015 () kits																		
To Complete () kits																		
TOTAL					1	0.1	11	0.8										

Notes:

- 1. Totals may not add due to rounding

Installation Schedule

	FY 2007 & Prior	FY 2008				FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In						1					2	4	5												
Out						1					2	1	4												

	FY 2014				FY 2015				To Complete	Total
	1	2	3	4	1	2	3	4		
In										
Out										

Exhibit P-3a Individual Modification

MODIFICATION TITLE: H-60 HVBSS (OSIP 008-07)

MODELS OF SYSTEMS AFFECTED: SH-60B, SH-60F, HH-60H, MH-60R, MH-60S TYPE MODIFICATION: OPERATIONAL ENHANCEMENT

DESCRIPTION/JUSTIFICATION: Extended Maritime Interdiction by Helicopter Visit, Board, Search, and Seizure (HVBSS) tactics require Naval Helicopters be compatible with rapid insertion of Special Warfare forces. This OSIP includes all modifications that increase reliability, maintainability and/or mission capability for conduct of the EMIO mission. These modifications include but are not limited to: Fast Tactical imaging systems kits (44), which includes embedded Automated Identification System capability, will be procured for improved battlefield situational awareness for Command and Direct Action elements. Close Air Support improvements for accompanying assault SH-60B and HH-60H helicopters include (62) M240 7.62mm machine gun kits, replacing aging M-60D gun systems. Additional area suppression close air support improvements include (38) GAU-17 weapon kits and corresponding depot level airframe modifications to integrate the GAU-17 into the remaining HH-60H aircraft. Precise weapon aiming required to employ crew-served weapons in close quarters require the coincident procurement of (3) aiming laser systems to kit with each weapon. AAR-47A(V)2 Missile Warning Systems will be installed on SH-60B aircraft as an update to the current AAR-47(V), which will incorporate a new laser warning functionality. A modification to the aircraft must be made to allow for the installation of the new Control Indicator (CI), which will display the laser warning by angle of arrival.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: GAU-17/A, M-240D, Fast Tactical Imaging (FTI) SYSTEMS, IZLID-200 aiming lasers are systems integrated on other H-60 helicopter platforms and are off-the-shelf procurements. Lead time for all systems 30-90 days. TD for HH-60H modifications (AAC 993) signed 30 June 1994. AFC for O-level and D-level mods for SH-60B require 3-month development including prototyping.

FINANCIAL PLAN: (TOA, \$ in Millions)

	Prior Years		FY 2008		FY 2009		FY 2010		FY2010 OCO										
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
RDT&E																			
PROCUREMENT																			
Installation Kits																			
GAU-17 CABIN MOD (HH-60H)	7	0.1							22	3.9									
FTI/AIS (SH-60B/F, HH-60H, MH-60R/S)	70	0.8							43	1.0									
AAR-47A(V)2 (SH-60B)			117	0.2															
Installation Kits N/R		3.8								2.5									
Installation Equipment																			
AIMING LASER (IZLID-200) (SH-60B,HH-60H)	3	*																	
FTI/AIS (SH-60B/F, HH-60H, MH-60R/S)	70	1.1							58	1.3									
GAU-17 (HH-60H)	13	0.5	25	0.8					18	0.8									
M240 (SH-60B)	62	0.9																	
Installation Equipment N/R				0.7															
Engineering Change Orders																			
Data		0.2								0.2									
Training Equipment																			
Support Equipment																			
ILS																			
Other Support		0.1		0.1		0.1				0.1									
Interim Contractor Support																			
Installation Cost	7	** 0.6			163	1.8	** 24		65	1.3									
Total Procurement		8.1		1.8		1.9				11.2									

- Notes:
1. Totals may not add due to rounding
 2. **FY07 AIS OCO funding will be applied to FY10 Installations

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: SH-60B MODIFICATION TITLE: FTI/AIS (OSIP 008-07)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: CONTRACTOR FIELD MOD

ADMINISTRATIVE LEADTIME: 9 Months PRODUCTION LEADTIME: 3 Months

CONTRACT DATES: FY 2008: _____ FY 2009: _____ FY 2010: _____

DELIVERY DATE: FY 2008: _____ FY 2009: _____ FY 2010: _____

(\$ in Millions)

Cost:	Prior Years		FY 2008		FY 2009		FY 2010		FY2010 OCO													
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
FY 2007 & PY (70) kits		** 0.5			46	1.0	** 24															
FY 2008 () kits																						
FY 2009 () kits																						
FY 2010 () kits																						
FY 2011 () kits																						
FY 2012 () kits																						
FY 2013 () kits																						
FY 2014 () kits																						
FY 2015 () kits																						
To Complete () kits																						
TOTAL		** 0.5			46	1.0	** 24															

Notes:
1. **FY07 AIS OCO funding will be applied to FY10 Installations

Installation Schedule

FY 2007 & Prior	FY 2008				FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In					11	11	12	12	12	12														
Out					11	11	12	12	12	12														

	FY 2014				FY 2015				To Complete	Total
	1	2	3	4	1	2	3	4		
In										
Out										

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: SH-60B, HH-60H, SH-60F, MH-60R, MODIFICATION TITLE: AAR-47 (OSIP 008-07)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: CONTRACTOR FIELD MOD

ADMINISTRATIVE LEADTIME: 9 Months PRODUCTION LEADTIME: 3 Months

CONTRACT DATES: FY 2008: Aug-08 FY 2009: _____ FY 2010: _____

DELIVERY DATE: FY 2008: Nov-08 FY 2009: _____ FY 2010: _____

(\$ in Millions)

Cost:	Prior Years		FY 2008		FY 2009		FY 2010		FY2010 OCO													
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
FY 2007 & PY () kits																						
FY 2008 (117) kits					117	0.8																
FY 2009 () kits																						
FY 2010 () kits																						
FY 2011 () kits																						
FY 2012 () kits																						
FY 2013 () kits																						
FY 2014 () kits																						
FY 2015 () kits																						
To Complete () kits																						
TOTAL					117	0.8																

Installation Schedule

FY 2007 & Prior	FY 2008				FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In					29	29	29	30																
Out					29	29	29	30																

	FY 2014				FY 2015				To Complete	Total
	1	2	3	4	1	2	3	4		
In										
Out										

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: HH-60H, SH-60F MODIFICATION TITLE: AIS (OSIP 008-07)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: CONTRACTOR FIELD MOD

ADMINISTRATIVE LEADTIME: 1 Months PRODUCTION LEADTIME: 3 Months

CONTRACT DATES: FY 2008: _____ FY 2009: _____ FY 2010: Nov-09 _____

DELIVERY DATE: FY 2008: _____ FY 2009: _____ FY 2010: Feb-10 _____

(\$ in Millions)

Cost:	Prior Years		FY 2008		FY 2009		FY 2010		FY2010 OCO		FY 2011		FY 2012		FY 2013	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
FY 2007 & PY () kits																
FY 2008 () kits																
FY 2009 () kits																
FY 2010 (58) kits									43	0.9						
FY 2011 () kits																
FY 2012 () kits																
FY 2013 () kits																
FY 2014 () kits																
FY 2015 () kits																
To Complete () kits																
TOTAL										0.9						

Installation Schedule

FY 2007 & Prior	FY 2008				FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In									13	15	15													
Out									13	15														

	FY 2014				FY 2015				To Complete	Total
	1	2	3	4	1	2	3	4		
In										
Out										

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: HH-60H MODIFICATION TITLE: GAU-17 (OSIP 008-07)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: CONTRACTOR FIELD MOD

ADMINISTRATIVE LEADTIME: 1 Months PRODUCTION LEADTIME: 3 Months

CONTRACT DATES: FY 2008: _____ FY 2009: _____ FY 2010: Nov-09 _____

DELIVERY DATE: FY 2008: _____ FY 2009: _____ FY 2010: Feb-10 _____

(\$ in Millions)

Cost:	Prior Years		FY 2008		FY 2009		FY 2010		FY2010 OCO		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
FY 2007 & PY () kits																					
FY 2008 () kits																					
FY 2009 () kits																					
FY 2010 (22) kits									22	0.4											
FY 2011 () kits																					
FY 2012 () kits																					
FY 2013 () kits																					
FY 2014 () kits																					
FY 2015 () kits																					
To Complete () kits																					
TOTAL										0.4											

Installation Schedule

FY 2007 & Prior	FY 2008				FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In										6	8	8												
Out										6	8	8												

	FY 2014				FY 2015				To Complete	Total
	1	2	3	4	1	2	3	4		
In										
Out										

Exhibit P-3a	Individual Modification																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
MODIFICATION TITLE:	<u>MH-60S WARFIGHTING CAPABILITY (OSIP 009-07)</u>																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
MODELS OF SYSTEMS AFFECTED:	<u>MH-60S</u> TYPE MODIFICATION: <u>OPERATIONAL ENHANCEMENT</u>																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
<p>DESCRIPTION/JUSTIFICATION: Provides for the retrofit of ECP 4034 which includes two phases: AMCM Block 2B (AMNS &ALMDS) & full 3B P3I effort includes: Link-16, DALs, SASSM, GAS-1, APCM, IFF and communication upgrades, airframe provisions into 67 Block 2A aircraft; ECP 4034 P3I Lite includes Communications Upgrades on 50 Block 1 aircraft; ECP-4015/Armed Helo Block 3A weapons airframe provision into 30 Block 2A aircraft. This OSIP also provides the retrofit of ECP 4012 and 4039 required for the aircraft structural loads imposed by the addition of the AMCM and Armed Helo capabilities. OSIP also provides retrofit of Active Vibration Control (AVC) in 137 MH-60S aircraft and Integrated Mechanical Diagnostics System (IMDS) in 127 MH-60S aircraft to achieve a common configuration for vibration and IMD. IMDS includes a crash survivable flight data recorder capability as well as the building block for Military Flight Operations Quality Assurance (MFOQA) capability.</p>																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
<p>DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: The MH-60S Aircraft completed MS III in August 2002. Armed Helo achieved IOC June 2007.</p>																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
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	<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th rowspan="2"></th> <th colspan="2">Prior Years</th> <th colspan="2">FY 2008</th> <th colspan="2">FY 2009</th> <th colspan="2">FY 2010</th> <th colspan="2">FY2010 OCO</th> <th colspan="2"></th> <th colspan="2"></th> <th colspan="2"></th> <th colspan="2"></th> <th colspan="2"></th> </tr> <tr> <th>Qty</th> <th>\$</th> </tr> </thead> <tbody> <tr> <td>RDT&E</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>PROCUREMENT</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>Installation Kits</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td> ECP 4015 - Block 3A**</td> <td></td><td></td><td>10</td><td>4.8</td><td>9</td><td>6.7</td><td>8</td><td>5.9</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td> ECP 4034</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td> Block 2B/Block 3B full P3I</td> <td></td><td></td><td></td><td></td><td>16</td><td>7.1</td><td>8</td><td>3.5</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td> Block 3B P3I Lite</td> <td></td><td></td><td></td><td></td><td>20</td><td>3.0</td><td>8</td><td>1.2</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td> ECP 4012**</td> <td></td><td></td><td></td><td></td><td></td><td></td><td>22</td><td>0.1</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td> ECP 4039</td> <td></td><td></td><td></td><td></td><td></td><td></td><td>4</td><td>0.3</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td> AVC</td> <td></td><td></td><td></td><td></td><td>10</td><td>2.2</td><td>9</td><td>1.9</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td> IMDS</td> <td></td><td></td><td></td><td></td><td>18</td><td>4.1</td><td>9</td><td>2.0</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td> Installation Kits N/R</td> <td></td><td></td><td>0.7</td><td></td><td>9.4</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td> Installation Equipment</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td> Installation Equipment N/R</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td> Engineering Change Orders</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td> Data</td> <td></td><td></td><td>*</td><td></td><td></td><td>0.1</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td> Training Equipment</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td> Support Equipment</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td> ILS</td> <td></td><td></td><td></td><td></td><td></td><td>0.2</td><td></td><td>0.1</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td> Other Support</td> <td></td><td></td><td></td><td></td><td></td><td>0.4</td><td></td><td>0.1</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td> Interim Contractor Support</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td> Installation Cost</td> <td></td><td></td><td></td><td>4</td><td>1.0</td><td>16</td><td>2.5</td><td>94</td><td>13.5</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>Total Procurement</td> <td></td><td></td><td>0.7</td><td>15.2</td><td>26.3</td><td>28.6</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> </tbody> </table>		Prior Years		FY 2008		FY 2009		FY 2010		FY2010 OCO												Qty	\$	RDT&E																						PROCUREMENT																						Installation Kits																						ECP 4015 - Block 3A**			10	4.8	9	6.7	8	5.9														ECP 4034																						Block 2B/Block 3B full P3I					16	7.1	8	3.5														Block 3B P3I Lite					20	3.0	8	1.2														ECP 4012**							22	0.1														ECP 4039							4	0.3														AVC					10	2.2	9	1.9														IMDS					18	4.1	9	2.0														Installation Kits N/R			0.7		9.4																	Installation Equipment																						Installation Equipment N/R																						Engineering Change Orders																						Data			*			0.1																Training Equipment																						Support Equipment																						ILS						0.2		0.1														Other Support						0.4		0.1														Interim Contractor Support																						Installation Cost				4	1.0	16	2.5	94	13.5													Total Procurement			0.7	15.2	26.3	28.6																																	
	Prior Years		FY 2008		FY 2009		FY 2010		FY2010 OCO																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
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Installation Cost				4	1.0	16	2.5	94	13.5																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
Total Procurement			0.7	15.2	26.3	28.6																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
<p>Notes:</p> <ol style="list-style-type: none"> Totals may not add due to rounding Asterisk indicates amount less than \$51K ** (6) ECP 4015 install and (34) 4012 installs do not require kit procurements 																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: MH-60S MODIFICATION TITLE: ECP 4015 Block 3A A-KITS (OSIP 009-07)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Contractor Field Mod Team

ADMINISTRATIVE LEADTIME: 2 Months PRODUCTION LEADTIME: 11 Months

CONTRACT DATES: FY 2008: Sep-08 FY 2009: Dec-08 FY 2010: Dec-09

DELIVERY DATE: FY 2008: Aug-09 FY 2009: Nov-09 FY 2010: Nov-10

(\$ in Millions)

Cost:	Prior Years		FY 2008		FY 2009		FY 2010		FY2010 OCO													
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
FY 2007 & PY () kits *			4	1.0	2	0.5																
FY 2008 (10) kits					6	1.5	4	1.0														
FY 2009 (9) kits							8	2.1														
FY 2010 (8) kits																						
FY 2011 () kits																						
FY 2012 () kits																						
FY 2013 () kits																						
FY 2014 () kits																						
FY 2015 () kits																						
To Complete () kits																						
TOTAL			4	1.0	8	2.0	12	3.1														

Notes:

1. * Prior Year Kits available for 08 installs from missed Production installs - not procured with APN-5

Installation Schedule

	FY 2007 & Prior	FY 2008				FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In				4	1	1			6	3	3	3	3												
Out				4	1	1			3	5	4	3	3												

	FY 2014				FY 2015				To Complete	Total
	1	2	3	4	1	2	3	4		
In										
Out										

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: MH-60S MODIFICATION TITLE: ECP 4034 - BLOCK 2B/3B Full P3I (OSIP 009-07)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Contractor Field Mod Team

ADMINISTRATIVE LEADTIME: 4 Months PRODUCTION LEADTIME: 11 Months

CONTRACT DATES: FY 2008: _____ FY 2009: Feb-09 FY 2010: Dec-09

DELIVERY DATE: FY 2008: _____ FY 2009: Jan-10 FY 2010: Nov-10

(\$ in Millions)

Cost:	Prior Years		FY 2008		FY 2009		FY 2010		FY 2010 OCO		FY 2011		FY 2012		FY 2013		FY 2014		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
FY 2007 & PY () kits																			
FY 2008 () kits																			
FY 2009 (16) kits **							12	5.1											
FY 2010 (8) kits **																			
FY 2011 () kits																			
FY 2012 () kits																			
FY 2013 () kits																			
FY 2014 () kits																			
FY 2015 () kits																			
To Complete () kits																			
TOTAL							12	5.1											

Notes:

1. ** FY09 and FY10 kits will be installed beyond FY10

Installation Schedule

	FY 2007 & Prior	FY 2008				FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In										4	4	4													
Out										2	4	4													

	FY 2014				FY 2015				To Complete	Total
	1	2	3	4	1	2	3	4		
In										
Out										

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: MH-60S MODIFICATION TITLE: ECP 4034 - Block 3B Partial P3I (OSIP 009-07)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Contractor Field Mod Team

ADMINISTRATIVE LEADTIME: 4 Months PRODUCTION LEADTIME: 11 Months

CONTRACT DATES: FY 2008: _____ FY 2009: Jan-09 FY 2010: Dec-09 _____

DELIVERY DATE: FY 2008: _____ FY 2009: Dec-09 FY 2010: Nov-10 _____

(\$ in Millions)

Cost:	Prior Years		FY 2008		FY 2009		FY 2010		FY2010 OCO		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
FY 2007 & PY () kits																					
FY 2008 () kits																					
FY 2009 (20) kits							20	1.6													
FY 2010 (8) kits																					
FY 2011 () kits																					
FY 2012 () kits																					
FY 2013 () kits																					
FY 2014 () kits																					
FY 2015 () kits																					
To Complete () kits																					
TOTAL							20	1.6													

Installation Schedule

	FY 2007 & Prior	FY 2008				FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In										2	6	6	6												
Out										2	6	6	6												

	FY 2014				FY 2015				To Complete	Total
	1	2	3	4	1	2	3	4		
In										
Out										

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: MH-60S MODIFICATION TITLE: IMDS A kits (OSIP 009-07)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Contractor Field Mod team

ADMINISTRATIVE LEADTIME: 2 Months PRODUCTION LEADTIME: 11 Months

CONTRACT DATES: FY 2008: _____ FY 2009: Jan-09 FY 2010: Dec-09 _____

DELIVERY DATE: FY 2008: _____ FY 2009: Dec-09 FY 2010: Nov-10 _____

(\$ in Millions)

Cost:	Prior Years		FY 2008		FY 2009		FY 2010		FY2010 OCO		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
FY 2007 & PY () kits																					
FY 2008 () kits																					
FY 2009 (18) kits							16	0.9													
FY 2010 (9) kits																					
FY 2011 () kits																					
FY 2012 () kits																					
FY 2013 () kits																					
FY 2014 () kits																					
FY 2015 () kits																					
To Complete () kits																					
TOTAL							16	0.9													

Installation Schedule

	FY 2007 & Prior	FY 2008				FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In										3	4	4	5												
Out										3	4	4	5												

	FY 2014				FY 2015				To Complete	Total
	1	2	3	4	1	2	3	4		
In										
Out										

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: MH-60S MODIFICATION TITLE: AVC A-KITS (OSIP 009-07)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Contractor Field Mod Team

ADMINISTRATIVE LEADTIME: 2 Months PRODUCTION LEADTIME: 11 Months

CONTRACT DATES: FY 2008: _____ FY 2009: Dec-08 FY 2010: Dec-09 _____

DELIVERY DATE: FY 2008: _____ FY 2009: Nov-09 FY 2010: Nov-10 _____

(\$ in Millions)

Cost:	Prior Years		FY 2008		FY 2009		FY 2010		FY 2010 OCO		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
FY 2007 & PY () kits																					
FY 2008 () kits																					
FY 2009 (10) kits							10	1.6													
FY 2010 (9) kits																					
FY 2011 () kits																					
FY 2012 () kits																					
FY 2013 () kits																					
FY 2014 () kits																					
FY 2015 () kits																					
To Complete () kits																					
TOTAL							10	1.6													

Installation Schedule

	FY 2007 & Prior	FY 2008				FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In										2	2	3	3												
Out										2	2	3	3												

	FY 2014				FY 2015				To Complete	Total
	1	2	3	4	1	2	3	4		
In										
Out										

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: MH-60S MODIFICATION TITLE: ECP 4012 (OSIP 009-07)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Contractor Field Mod team

ADMINISTRATIVE LEADTIME: 2 Months PRODUCTION LEADTIME: 11 Months

CONTRACT DATES: FY 2008: _____ FY 2009: _____ FY 2010: Dec-09

DELIVERY DATE: FY 2008: _____ FY 2009: _____ FY 2010: Nov-10

(\$ in Millions)

Cost:	Prior Years		FY 2008		FY 2009		FY 2010		FY2010 OCO														
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
FY 2007 & PY () kits																							
FY 2008 () kits					8	0.4																	
FY 2009 () kits							24	1.2															
FY 2010 (22) kits																							
FY 2011 () kits																							
FY 2012 () kits																							
FY 2013 () kits																							
FY 2014 () kits																							
FY 2015 () kits																							
To Complete () kits																							
TOTAL					8	0.4	24	1.2															

Notes:
1. * (34) 4012 installs do not require kit procurements

Installation Schedule

	FY 2007 & Prior	FY 2008				FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In							4	4	6	6	6	6													
Out							4	4	6	6	6	6													

	FY 2014				FY 2015				To Complete	Total
	1	2	3	4	1	2	3	4		
In										
Out										

Exhibit P-3a Individual Modification

MODIFICATION TITLE: SH-60B DATALINK (OSIP 008-09)

MODELS OF SYSTEMS AFFECTED: SH-60B TYPE MODIFICATION: OPERATIONAL ENHANCEMENT

DESCRIPTION/JUSTIFICATION: The SH-60B currently has a C-Band data link (Hawklink) to transmit data between aircraft and ship. The Littoral Combat Ship (LCS) will be built with a new data link system, Ku Band, which is not compatible with the C-Band. The installation of the Tactical Common Data Link (TCDL) kits on SH-60B aircraft are required to support the LCS during a limited time-frame - from FY09 to FY13 - after which, it is expected that the MH-60R aircraft will be available to support the LCS. The SH-60B TC DL will support the relatively short-range transmission of voice and video information with a limited amount of tactical data. The funding in this OSIP will provide the procurement of 30 SH-60B Ku Band A-kit modifications and 15 B-kits to be compatible and interoperable with LCS. The new Ku Band data link will transfer data from the SH-60B to the LCS to meet LCS Anti-Submarine Warfare (ASW) and Surface Warfare (SUW) mission requirements.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

FINANCIAL PLAN: (TOA, \$ in Millions)

	Prior Years		FY 2008		FY 2009		FY 2010		FY2010 OCO												
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
RDT&E																					
PROCUREMENT																					
Installation Kits																					
Common Data Link (CDL)					10	2.8	14	3.7													
Installation Kits N/R																					
Installation Equipment																					
Fast Tactical Imaging (FTI)					5	0.2	5	0.2													
Installation Equipment N/R																					
Engineering Change Orders																					
Data																					
Training Equipment							0.2		0.1												
Support Equipment																					
ILS							0.9		0.6												
Other Support							0.1		0.2												
Interim Contractor Support																					
Installation Cost					10	0.7	14	1.0													
Total Procurement						4.9		5.8													

Notes:
1. Totals may not add due to rounding

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: SH-60B MODIFICATION TITLE: SH-60B DATALINK (OSIP 008-09)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: CONTRACTOR FIELD MOD TEAM

ADMINISTRATIVE LEADTIME: 1 Months PRODUCTION LEADTIME: 6 Months

CONTRACT DATES: FY 2008: _____ FY 2009: Nov-08 FY 2010: Nov-09 _____

DELIVERY DATE: FY 2008: _____ FY 2009: May-09 FY 2010: May-10 _____

(\$ in Millions)

Cost:	Prior Years		FY 2008		FY 2009		FY 2010		FY2010 OCO													
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
FY 2007 & PY () kits																						
FY 2008 () kits																						
FY 2009 (10) kits					10	0.7																
FY 2010 (14) kits							14	1.0														
FY 2011 () kits																						
FY 2012 () kits																						
FY 2013 () kits																						
FY 2014 () kits																						
FY 2015 () kits																						
To Complete () kits																						
TOTAL					10	0.7	14	1.0														

Installation Schedule

	FY 2007 & Prior	FY 2008				FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In							4	6		8		6													
Out							4	6		8		6													

	FY 2014				FY 2015				To Complete	Total
	1	2	3	4	1	2	3	4		
In										
Out										

Exhibit P-3a	Individual Modification																																																																																																																																																																																																																																																																																																																																																																																																																																
MODIFICATION TITLE:	<u>MH-60R/S CREW WORKLOAD - OPERATOR SYSTEM INTERFACE (OSIP 009-09)</u>																																																																																																																																																																																																																																																																																																																																																																																																																																
MODELS OF SYSTEMS AFFECTED:	<u>MH-60R, MH-60S</u>	TYPE MODIFICATION: <u>OPERATIONAL ENHANCEMENT</u>																																																																																																																																																																																																																																																																																																																																																																																																																															
<p>DESCRIPTION/JUSTIFICATION: This effort reduces crew Operator System Interface (OSI) workload issues for MH-60R and MH-60S aircraft by replacing operator keysets with Control Display Units (CDU's) and hand controllers in addition to upgrading OSI software to a Windows-like system. The OSI kit includes a CDU, Pointing Device, and Interface Cabling Kit. This effort corrects deficiencies identified during OPEVAL of the MH-60R. MH-60R requires 3 OSI kits per aircraft and MH-60S requires 2 OSI kits per aircraft.</p> <p>DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: MH-60S aircraft completed OPEVAL in Mar 2002 and MS III in Aug 2002. MH-60R completed OPEVAL in Sep 2005 and MS III in Mar 06. NRE for Production incorporation of the OSI was funded in FY07, with production cut-in LOT 12 for MH-60S and LOT 7 for MH-60R.</p> <p>METHOD OF IMPLEMENTATION: OSI is an "O" Level Install.</p> <p>FINANCIAL PLAN: (TOA, \$ in Millions)</p>																																																																																																																																																																																																																																																																																																																																																																																																																																	
	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2"></th> <th colspan="2">Prior Years</th> <th colspan="2">FY 2008</th> <th colspan="2">FY 2009</th> <th colspan="2">FY 2010</th> <th colspan="2">FY2010 OCO</th> <th colspan="2"></th> <th colspan="2"></th> <th colspan="2"></th> <th colspan="2"></th> <th colspan="2"></th> </tr> <tr> <th>Qty</th> <th>\$</th> </tr> </thead> <tbody> <tr> <td>RDT&E</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>PROCUREMENT</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td> Installation Kits</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td> Installation Kits N/R</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td> Installation Equipment</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td> MH-60R</td> <td></td><td></td><td></td><td></td><td>42</td><td>2.0</td><td>62</td><td>2.9</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td> MH-60S</td> <td></td><td></td><td></td><td></td><td>60</td><td>2.8</td><td>92</td><td>4.4</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td> Installation Equipment N/R</td> <td></td><td></td><td></td><td></td><td></td><td>0.6</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td> Engineering Change Orders</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td> Data</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td> Training Equipment</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>0.1</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td> Support Equipment</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td> ILS</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td> Other Support</td> <td></td><td></td><td></td><td></td><td></td><td></td><td>0.2</td><td>0.2</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td> Interim Contractor Support</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td> Installation Cost</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>Total Procurement</td> <td></td><td></td><td></td><td></td><td></td><td>5.6</td><td>7.6</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> </tbody> </table>			Prior Years		FY 2008		FY 2009		FY 2010		FY2010 OCO												Qty	\$	RDT&E																						PROCUREMENT																						Installation Kits																						Installation Kits N/R																						Installation Equipment																						MH-60R					42	2.0	62	2.9														MH-60S					60	2.8	92	4.4														Installation Equipment N/R						0.6																Engineering Change Orders																						Data																						Training Equipment								0.1														Support Equipment																						ILS																						Other Support							0.2	0.2														Interim Contractor Support																						Installation Cost																						Total Procurement						5.6	7.6																																
	Prior Years			FY 2008		FY 2009		FY 2010		FY2010 OCO																																																																																																																																																																																																																																																																																																																																																																																																																							
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<p>Notes:</p> <p>1. Totals may not add due to rounding</p>																																																																																																																																																																																																																																																																																																																																																																																																																																	

Exhibit P-40, BUDGET ITEM JUSTIFICATION								DATE: May 2009			
APPROPRIATION/BUDGET ACTIVITY Aircraft Procurement, Navy/APN-5 Aircraft Modifications							P-1 ITEM NOMENCLATURE 053200, H-1 SERIES				
Program Element for Code B Items:							Other Related Program Elements				
	Prior Years	ID Code	FY2008	FY2009	FY2010	FY2010 OCO	FY2010 Total				
QTY		A									
COST (In Millions)	182.1	A	45.1	8.9	20.0	11.2	31.3				
<p>DESCRIPTION: There are 70 H-1N's in the UH configuration and 3 H-1N's in the HH configuration for a total of 73. The UH-1N provides command and control and combat assault support under day/night and adverse weather conditions. Additional UH-1N missions include special operations support, controls/coordination/guidance of supporting fire and aeromedical evacuation. The overall goal of the modifications budgeted in FY2010 is to eliminate safety hazards, remedy obsolescence and maintain significant mission capability until the planned retirement date. The HH configured aircraft provide local civilian and military search and rescue support, as well as augmenting Department of Homeland Security resources. Additionally, the UH-1Y will upgrade the current Navigational Thermal Imaging System (NTIS) starting in FY09.</p>											
(TOA, \$ in Millions)											
OSIP No.	Description	Prior Years	FY2008	FY2009	FY2010	FY2010 OCO	FY2010 Total				
031-92	UH-1 NTIS	143.7	44.9	7.9	19.5	0.0	19.5				
018-98	H-1N SAFETY UPGRADES	30.5	0.2	0.2	0.3	0.0	0.3				
021-07	CRITICAL SYSTEMS IMPROVEMENT PROG	0.8	0.0	0.8	0.2	11.2	11.5				
	INACTIVE OSIPs	7.1									
Total		182.1	45.1	8.9	20.0	11.2	31.3				
Note: Totals may not add due to rounding.											

Exhibit P-3a

Individual Modification

MODIFICATION TITLE: UH-1 NTIS (OSIP 031-92)

MODELS OF SYSTEMS AFFECTED: UH-1N/UH-1Y, ASSOCIATED TRAINERS AND LABS TYPE MODIFICATION: SAFETY

DESCRIPTION/JUSTIFICATION: Solution Planning Directive (serial number C14, dated 26 June 2007) and Capabilities Production Document (CPD) (approved 11 June 2007, JROCM 138-07) states that the UH-1N requires a Navigational Thermal Imaging System (NTIS) to provide the U.S. Marine Corps with a night/day warfighting capability in the NOE/smoke/dust/haze environment. This capability reduces the safety risk by allowing the aircrew to see and avoid flight obstructions and locate targets that might not be visible with the naked eye or night vision goggles. The AN/AAQ-22 is a low cost, stabilized system which provides the required capability in the form of high quality real time imagery displayed into the UH-1N aircraft cockpit. The NTIS System is comprised of 5 components: Turret FLIR Unit (TFU), Central Electronics Units (CEU), Hand Control Unit (HCU), Thermal Image Recorder (TIR), and the Video Display Unit (VDU). The NTIS is installed only in the UH-1N aircraft by AFC-278. The system also includes a Laser Range Finder (LRF) to determine the range to landmarks, targets, and tactical points of interest. Beginning FY97, the NTIS was upgraded from 1st generation to 3rd generation Forward Looking Infrared (FLIR) technology. The COTS Star SAFIRE modification consisted of a 3-5 micron focal plane array detector, an eye safe LRF and new optics. Additionally, the NTIS will be upgraded with a new Thermal Imaging Recorder (TIR) with mount and a Flat Panel Display replacement for the VDU due to a fire hazard. Additional modifications to the NTIS are being incorporated in order to add a COTS Laser Designator/Laser Pointer capability (BRITE Star I/II). Laser designator capability is a threshold requirement. BRITE Star I/II "P" Kits are "O" level installed mission kits. Additional reliability and maintenance upgrades, including replacement of existing TIR with a Digital Thermal Imaging Recorder, to the NTIS components and VDU will also be incorporated. BRITE Star Block II integration in to the UH-1Y will start in FY08.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: The NTIS is a commercial off-the-shelf (COTS) item. MIL-STD-810C testing is complete. DT-III testing was completed in the fourth quarter FY94 and FOT&E was completed in the second quarter of FY96. Additional testing occurred during fourth quarter FY98 for NTIS upgrade. The completion of COTS post Milestone II testing of Laser Designator (BRITE Star) completed in FY03. Initial fielding of BRITE Star I completed in FY06. BRITE Star II development and test complete in FY07/08.

FINANCIAL PLAN: (TOA, \$ in Millions)

	Prior Years		FY 2008		FY 2009		FY 2010		FY2010 OCO												
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
RDT&E																					
PROCUREMENT																					
Installation Kits																					
AFC-278 A KIT (CONTRACTOR)	105	2.6																			
AFC-334 TIR	105	0.1																			
AFC-364 (BRITE Star)	99	0.4																			
AFC-396 (UH-1Y)	16	0.3	30	0.5	9	0.1	14	0.3													
Installation Kits N/R		5.6		0.2		0.2		0.3													
Installation Equipment																					
BRITE Star I	38	24.1																			
BRITE Star II (UH-1Y)	28	32.6	34	37.6	5	5.3	15	13.2													
Flat Panel Display	91	0.9																			
NTIS System (GFE)	84	29.7																			
NTIS Upgrade	90	29.3																			
TIR (GFE)	107	1.0																			
Installation Equipment N/R		0.6						0.6													
Engineering Change Orders																					
Data		0.5				0.2		0.2													
Training Equipment	7	1.7	1	1.1			2	2.2													
Support Equipment	3	1.1	1	0.2																	
ILS		0.4						0.2													
Other Support		9.5		5.0		1.9		2.3													
Interim Contractor Support																					
Installation Cost	191	3.5	30	0.4	9	0.1	14	0.3													
Total Procurement		143.7		44.9		7.9		19.5													

Notes:

- AFC-396 UH-1Y will be configured to fly with any of the three existing sensors; STAR Safire, BRITE Star Block I or BRITE Star Block II.
- AFC-396 UH-1Y under installation kits and BRITE Star II (UH-1Y) under installation equipment include both the UH-1N's and UH-1Y's.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: UH-1N/UH-1Y, ASSOCIATED TRAINERS AND LABS MODIFICATION TITLE: BRITE STAR II/UH-1Y (OSIP 031-92)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: CONTRACTOR FIELD MOD TEAM

ADMINISTRATIVE LEADTIME: 0 Months PRODUCTION LEADTIME: 0 Months

CONTRACT DATES: FY 2008: N/A FY 2009: Oct-08 FY 2010: Oct-09

DELIVERY DATE: FY 2008: N/A FY 2009: Oct-08 FY 2010: Oct-09

(\$ in Millions)

Cost:	Prior Years		FY 2008		FY 2009		FY 2010		FY 2010 OCO													
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
FY 2007 & PY (16) kits	16																					
FY 2008 (30) kits			30	0.4																		
FY 2009 (9) kits					9	0.1																
FY 2010 (14) kits							14	0.3														
FY 2011 () kits																						
FY 2012 () kits																						
FY 2013 () kits																						
FY 2014 () kits																						
FY 2015 () kits																						
To Complete () kits																						
TOTAL	16		30	0.4	9	0.1	14	0.3														

Installation Schedule

FY 2007 & Prior	FY 2008				FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	16	7	7	8	8	2	2	2	3	2	4	4	4											
Out	16		7	7	8	8	2	2	2	3	2	4	4											

	FY 2014				FY 2015				To Complete	Total
	1	2	3	4	1	2	3	4		
In										
Out										

Exhibit P-3a

Individual Modification

MODIFICATION TITLE: H-1 CRITICAL SYSTEMS IMPROVEMENT PROGRAM (OSIP 021-07)

MODELS OF SYSTEMS AFFECTED: UH-1Y/AH-1Z TYPE MODIFICATION: READINESS IMPR./SAFETY OF FLT COMBAT EFF

DESCRIPTION/JUSTIFICATION: The purpose of this program is to incorporate a number of cost effective changes to the UH-1Y and AH-1Z helicopters, specifically targeting improvements to safety of flight, maintenance, obsolescence, and readiness degrader items. These improvements are a vital element of the H-1 Upgrades program, significantly enhancing the strategy of a more ready, more capable H-1 force to accomplish the successful fielding of this new capability to the Warfighter in support of the Global War on Terrorism. The increased readiness and capabilities that will be realized support the tenets of Sea Power 21, specifically operational availability, enhanced capabilities, and interoperability. Planned improvements under this OSIP cover airframe, propulsion, helmet, weapons systems, survivability, reliability & maintainability, weight & balance, and avionics related subsystems. The OSIP intends to utilize upgrades to existing technology to the maximum extent practicable to minimize development and procurement costs, and to reduce the time to field the improved systems. The system identified for improvement in the OSIP are the Command and Control which provide robust communications capabilities required for UH-1Y mission essential tasks, External airborne antennas are required to provide adequate extended range communication for Ground Combat Element (GCE) Marines and their communications equipment to ensure the embarked commander maintains battlefield situational awareness and organic and joint connectivity. Also included in this OSIP is SATCOM antenna which will provide a clear line-of-sight to the satellite allowing the range and capability of onboard communications equipment which provide over-the-horizon communication increasing the range of the UH-1Y and the nature of future operating concepts. Digital Map, ARC-210 Radio, Blue Force Tracker, Software Configuration Set 07 and Correction Deficiencies, SATCOM Antenna Placement and Rocket Envelope Expansion are also included in the OSIP. Additionally, systems being evaluated for replacement include Helmet Mounted Sight Display (HMSD), support equipment, avionics subsystems, sensors, Data Link, armor, communication systems, Missile Warning and Radar Detection Systems, a Directed Infrared Counter Measures survivability system, Gen II Mission Computer, and increased aircraft electrical power availability system.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: This modification makes maximum use of existing technologies that have been installed on the AH-1W and HH/UH-1N platforms, or other fielded USN or USMC platforms.

FINANCIAL PLAN: (TOA, \$ in Millions)

	Prior Years		FY 2008		FY 2009		FY 2010		FY2010 OCO												
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
RDT&E																					
PROCUREMENT																					
Installation Kits																					
Antenna Relocation Wiring/Hardware					12	0.1			30	4.2											
Command and Control									39	0.7											
Installation Kits N/R																					
Installation Equipment																					
Command and Control									39	0.7											
SATCOM Antenna AV2091					12	0.1			30	4.2											
Redesign Slipping and Standpipe					12	0.4															
Installation Equipment N/R										*											
Engineering Change Orders		0.1																			
Data																					
Training Equipment	2	0.6																			
Support Equipment																					
ILS																					
Other Support						0.3		0.1		0.4											
Interim Contractor Support																					
Installation Cost	2	0.1					12	0.1	30	1.0											
Total Procurement		0.8				0.8		0.2		11.2											

- Notes:
- Totals may not add due to rounding
 - Asterisk indicates amount less than \$51K
 - Command and Control is an "O level install"; no schedule needed.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: UH-1Y MODIFICATION TITLE: H-1 SYSTEM IMPROVEMENT PROGRAM (OSIP 021-07) SATCOM ANTENNA RELOCATION

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: CONTRACTOR FIELD MOD TEAM

ADMINISTRATIVE LEADTIME: 3 Months PRODUCTION LEADTIME: 12 Months

CONTRACT DATES: FY 2008: N/A FY 2009: Dec-08 FY 2010: N/A

DELIVERY DATE: FY 2008: N/A FY 2009: Dec-09 FY 2010: N/A

(\$ in Millions)

Cost:	Prior Years		FY 2008		FY 2009		FY 2010		FY 2010 OCO													
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
FY 2007 & PY (2) kits	2	0.1																				
FY 2008 () kits																						
FY 2009 (12) kits							12	0.1														
FY 2010 (30) kits									30	0.1												
FY 2011 () kits																						
FY 2012 () kits																						
FY 2013 () kits																						
FY 2014 () kits																						
FY 2015 () kits																						
To Complete () kits																						
TOTAL	2	0.1					12	0.1	30	0.1												

Installation Schedule

FY 2007 & Prior	FY 2008				FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	2								3	3	3	3	8	8	7	7								
Out	2								3	3	3	3	8	8	7	7								

	FY 2014				FY 2015				To Complete	Total
	1	2	3	4	1	2	3	4		
In										
Out										

Exhibit P-40, BUDGET ITEM JUSTIFICATION							DATE: May 2009				
APPROPRIATION/BUDGET ACTIVITY Aircraft Procurement, Navy / APN5 Aircraft Modifications							P-1 ITEM NOMENCLATURE 053700, EP-3 SERIES				
Program Element for Code B Items:							Other Related Program Elements				
	PRIOR YEARS	ID Code	FY 2008	FY 2009	FY 2010	OCO FY 2010	Total FY 2010				
QTY											
COST (In Millions)	629.6	A	85.6	64.5	92.5						
<p>DESCRIPTION:</p> <p>This line item funds modifications to the EP-3E aircraft. The EP-3E is a land based, long range aircraft, with electronic intercept devices for detection and tracking of enemy RADARs and communications.</p> <p>In OSIP 11-01, the Spiral 1 kit improves operational capability and aircrew productivity by expanding the Electronic Support Measures (ESM) frequency coverage, applying state-of-the-art signal exploitation/processing/display techniques, expanding Direction Finding (DF) frequency coverage, off-board classified communication, and expanding special signal processing capability. In OSIP 007-09 Recapitalization Capabilities Migration (RCM) funds procure capabilities to ensure EP-3E relevance beyond FY20 and procures follow-on capabilities to be migrated to the recap platform. OSIP 014-05 responds to the current, immediate demand for electronic attack capabilities on the EP-3E in Overseas Continengy Operations (OCO) and has been funded via the Emergency Supplemental Appropriation for Defense (ESAD).</p> <p>Research and Development is funded with National Security Agency (NSA) Military Intelligence Program (MIP) funds. This OSIP provides the procurement tail for RDT&E funds from the Navy's Advanced Signal Recognition project (PE 0305206N). The NSA RDT&E line for the Navy Airborne Sensor System Improvements funds sensor improvements with application for the EP-3E. MIP RDT&E funds are responsible for the development and acquisition of EP-3E sensors, data links, data relays and ground stations to achieve and maintain interoperability with Defense-wide airborne reconnaissance assets. Active Primary Aircraft Authorization (PAA) inventory is 12 with a Backup Aircraft Authorization (BAA) inventory of 4 for a total of 16 aircraft with the completion of OSIP 29-00. Funds budgeted in FY2010 are to continue EP-3E Joint Airborne Signal Intelligence (SIGINT) Architecture (JASA) Modification (JMOD) Common Configuration (JCC) Program. The EP-3E has an average service life of 34.8 years. The EP-3E service life will be managed through Special Structural Inspection - Kits (SSI-Ks) in the P3 Series Modification program (OSIP 005-05).</p>											
(TOA, \$ in Millions)											
<u>OSIP No. / DESCRIPTION</u>	<u>PRIOR YEARS</u>		<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2010 OCO</u>	<u>FY 2010 Total</u>				
011-01 JSAF MODIFICATION (JMOD)	285.9		46.5	29.8	34.7						
007-09 EP-3E RECAPITALIZATION CAPABILITIES MIGRATION				34.7	57.9						
014-05 EP-3E INFO OPERATIONS	25.1		39.1								
INACTIVE OSIPS	318.6										
TOTAL	629.6		85.6	64.5	92.5						
Note: Totals may not add due to rounding.											

Exhibit P-3a

Individual Modification

MODIFICATION TITLE: JSAF MODIFICATION (JMOD)(OSIP 011-01)

MODELS OF SYSTEMS AFFECTED: EP-3E TYPE MODIFICATION: Operational Improvement/Modernization

DESCRIPTION / JUSTIFICATION:

The EP-3E JASA Modification (JMOD) Program began as an upgrade to the capabilities of the Sensor System Improvement Program (SSIP) configuration of the EP-3E. This OSIP responds to Operational Requirement Document (ORD) #571-78-01 and the CAPSTONE ORD (CAF-002-88). JMOD was designed as an evolutionary acquisition program consisting of three block mods. MOD 1 updated the EP-3E infrastructure, improved auto-ESM with the Story Finder system, incorporated Joint Signal Processor (JSP), incorporated SSIP corrections, and incorporated Quick Response Capabilities (QRC) (including the Single Channel Ground and Airborne Radio Systems (SINCGARS) upgrade and Infra-Red (IR) Strobes modifications) into JMOD. A Baseline Update to MOD 1 was required to ensure the JMOD Trial Kit Installation (TKI) aircraft had the same baseline configuration and capabilities as SSIP and QRC fleet assets. The twelve EP-3E aircraft (PAA) will be managed through Special Structural Inspections (SSI-Ks) beyond JMOD Baseline Full Operational Capability (FOC).

In OSIP 11-01, the Spiral 1 kit improves operational capability and aircrew productivity by expanding the ESM frequency coverage, applying state-of-the-art signal exploitation/processing/display techniques, expanding Direction Finding (DF) frequency coverage, off-board classified communication, and expanding special signal processing capability. FY2007-FY2008 includes ECO funding to replace subsystem obsolescence to ensure EP-3E viability until aircraft recapitalization. FY2010 includes non-recurring engineering and support of Spiral 3 (Spiral 2 delayed) improvements to the Low Band Communications systems, the Environmental Control System (ECS), and the replacement of aging and obsolescent antennae.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

Increment 1 (the JMOD baseline configuration) Milestone III decision occurred 4th Qtr FY04 based on completion of Operational Test (OT), demonstration of Key Performance Parameters (KPP's) and a Developmental Test (DT) Assist on the Story Finder subsystem. The ForceNet Spiral 1 LRIP decision was approved as planned on 06 June 2005 based on successful completion of its Design Readiness Reviews (DRR) and applicable contractor aircraft flight tests. Spiral 1 completed OT 2nd Qtr of FY06 with the associated Full Rate Production decision and contract awarded 4th Qtr of FY06.

	PRIOR YEARS		FY 2008		FY 2009		FY 2010		OCO FY 2010		Qty	\$											
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$													
RDT&E																							
PROCUREMENT																							
INSTALLATION KITS																							
PRIOR YEAR INSTALL KITS	44	17.0																					
JMOD Common SP1	6	4.8																					
INSTALLATION KITS N/R		7.9		2.8		8.9		3.4															
INSTALL EQUIPMENT																							
PRIOR YEAR INSTALL EQUIP	74	77.3																					
JMOD Common SP1	6	25.0																					
INSTALL EQUIPMENT N/R		30.0		1.7		6.9		5.6															
ECO																							
JCC Obsolescence		14.8		22.0																			
DATA		5.4		1.9		1.4		1.5															
TRAINING EQUIP		6.2		1		1.5		5.7															
SUPPORT EQUIP		2.0		0.2		0.7		4.0															
ILS		14.1		1.5		2.3		6.9															
OTHER SUPPORT		46.6		10.0		8.1		7.5															
INTERIM CONTRACTOR SUPPORT																							
INSTALLATION COST	15	34.9		6.5																			
TOTAL PROCUREMENT		285.9		46.5		29.8		34.7															

1. FY09 NRE increase for significant SP3 tooling/setup of install kits and equipment manufacturing.
2. FY10 increase to support logistic, training, and support equipment for SP3 procurement.
3. Totals may not add due to rounding.

Exhibit P-3a

Individual Modification

MODIFICATION TITLE: EP-3E RECAPITALIZATION CAPABILITIES MIGRATION(OSIP 007-09)

MODELS OF SYSTEMS AFFECTED: EP-3E TYPE MODIFICATION: Operational Improvement/Modernization

DESCRIPTION / JUSTIFICATION:

Funding was added in FY09-FY10 to procure EP-3E capabilities to ensure mission relevance beyond FY20 that may be migrated to the recapitalization platform. RCM funding broken down via dRADAR / EO/IR Kit that addresses RADAR, Identification Friend or Foe (IFF), Radio Frequency (RF) path procurements and a Signals Migration Kit that addresses special SIGINT signal procurements. Moved JCC obsolescence for FY09-FY10 and QRC's for FY10 from OSIP 11-01 to OSIP 007-09 . The QRC funds address mission avionics system obsolescence and emerging requirements from national and theater commanders in response to rapidly evolving Overseas Contingency Operations (OCO) threats.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES: The EP-3E sustainment ECO procurement commences in FY09 to ensure mission system viability beyond FY20.

FINANCIAL PLAN: (TOA, \$ IN MILLIONS)

	PRIOR YEARS		FY 2008		FY 2009		FY 2010		OCO FY 2010		Qty	\$											
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$													
RDT&E																							
PROCUREMENT																							
INSTALLATION KITS																							
INSTALLATION KITS N/R																							
INSTALL EQUIPMENT																							
INSTALL EQUIPMENT N/R																							
ECO																							
OBSOLESCENCE							15.4	14.8															
QRC								3.6															
DATA							0.5	0.6															
TRAINING EQUIP							3.0	15.0															
SUPPORT EQUIP							2.4	4.1															
ILS							7.7	4.2															
OTHER SUPPORT							3.0	3.5															
INTERIM CONTRACTOR SUPPORT																							
INSTALLATION COST							2.7	12.1															
TOTAL PROCUREMENT							34.7	57.9															

1. Totals may not add due to rounding

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: EP-3E Mission Avionics Systems MODIFICATION TITLE: EP-3E Recapitalization Capabilities Migration (RCM) (OSIP 007-09)

INSTALLATION INFORMATION: Quick Response Capabilities (QRC)

METHOD OF IMPLEMENTATION: Navy Field Mod Team

ADMINISTRATIVE LEADTIME: 2 Months PRODUCTION LEADTIME: 2 Months

CONTRACT DATES: FY 2008 _____ FY 2009 _____ FY 2010 Dec-09 _____

DELIVERY DATE: FY 2008 _____ FY 2009 _____ FY 2010 Feb 10 _____

(\$ in Millions)

Cost:	Prior years		FY 2008		FY 2009		FY 2010		OCO FY 2010														
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
FY 2007 & PY () kits																							
FY 2008 () kits																							
FY 2009 () kits																							
FY 2010 () kits								2.8															
FY 2011 () kits																							
FY 2012 () kits																							
FY 2013 () kits																							
FY 2014 () kits																							
FY 2015 () kits																							
To Complete () kits																							
TOTAL								2.8															

Installation Schedule

FY 2007 & Prior	FY 2008				FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In																								
Out																								

	FY 2014				FY 2015				To Complete	Total
	1	2	3	4	1	2	3	4		
In										
Out										

Note: FY10 quantities vary due to emergent threat requirements.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: EP-3E Mission Avionics Systems MODIFICATION TITLE: EP-3E Recapitalization Capabilities Migration (RCM) (OSIP 007-09)

INSTALLATION INFORMATION: Obsolescence ECPs
 METHOD OF IMPLEMENTATION: Navy Field Mod Team

ADMINISTRATIVE LEADTIME: 2 Months PRODUCTION LEADTIME: 2 Months

CONTRACT DATES: FY 2008 _____ FY 2009 Dec-08 FY 2010 Dec-09 _____

DELIVERY DATE: FY 2008 _____ FY 2009 Feb 09 FY 2010 Feb 10 _____

(\$ in Millions)

Cost:	Prior years		FY 2008		FY 2009		FY 2010														
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
FY 2007 & PY () kits																					
FY 2008 () kits																					
FY 2009 () kits						2.7															
FY 2010 () kits								9.3													
FY 2011 () kits																					
FY 2012 () kits																					
FY 2013 () kits																					
FY 2014 () kits																					
FY 2015 () kits																					
To Complete () kits																					
TOTAL						2.7		9.3													

Installation Schedule

FY 2007 & Prior	FY 2008				FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In																								
Out																								

	FY 2014				FY 2015				To Complete	Total
	1	2	3	4	1	2	3	4		
In										
Out										

Note: FY09 through FY10 Obsolescence quantities vary due to emergent threat requirements.

BUDGET ITEM JUSTIFICATION SHEET											DATE:	
P-40											May 2009	
APPROPRIATION/BUDGET ACTIVITY							P-1 ITEM NOMENCLATURE					
Aircraft Procurement, Navy / APN5 Aircraft Modifications							053800, P-3 SERIES					
Program Element for Code B Items:							Other Related Program Elements					
	PRIOR YEARS	ID Code	FY 2008	FY 2009	FY 2010	OCO FY2010	Total FY2010					
QUANTITY												
COST (In Millions)	3057.8	A	558.0	290.0	485.2	74.9	560.1					

DESCRIPTION:

This line item funds modifications to P-3 aircraft. The P-3 Orion is a 4 engine, long-range maritime surveillance aircraft which performs Under Sea Warfare (USW), Surface Warfare (SUW) and Intelligence, Surveillance and Reconnaissance (ISR) in support of battle group and littoral operations in direct support of Sea Shield and Forcenet pillars of Seapower 21.

As a direct result of the 7 June 2003 Maritime Patrol and Reconnaissance (MPRA) offsite, the P-3 Sustainment Bridge was approved by the CNO. This resulted in P-3C inventory levels being reduced from 227 to 148. The foundational element of this bridge was optimizing the P-3 fleet by investing manpower, AVDLR and Flying Hour Program (FHP) savings into the resulting smaller P-3 force to produce a better productive ratio of aircraft. This investment allows the P-3 force to be smaller, more ready and more capable. A key investment area is P-3 Mod Programs. Funding for these programs support a multitude of obsolescence, structural, sustainment, training/logistics and warfighting capability upgrades that are key in keeping the P-3 platform relevant through Multi-mission Maritime Aircraft (MMA) Initial Operational Capability (IOC) of 2013 and until the projected MMA Full Operational Capability (FOC) of 2019 (and beyond for Block Mod Upgrade Program (BMUP) and EP-3 configurations). P-3 aircraft mods funded under the APN line have heavily supported recent and current Operation Enduring Freedom (OEF), Operation Iraqi Freedom (OIF) and Overseas Contingency Operations (OCO). Without key technology upgrades and aggressive obsolescence management, P-3 aircraft will be unable to meet Fleet Response Plan (FRP) requirements, leaving key Seapower 21 capabilities in support of the Combatant Commanders at risk. This P-3 Sustainment Bridge provides a roadmap ensuring sufficient P-3 assets for Fleet and Combatant Commanders to fulfill operational and training/readiness requirements.

The overall goal of the modifications budgeted in FY2010 is to continue aircraft sustainment, including: USQ-78 improvements (part of Update III), comm/nav/surveillance weapon system improvements, upgrades/modifications to airframe components/ systems (including outer wing replacements), safety improvements and key system obsolescence upgrades. The specific modifications budgeted and programmed are:

PRIOR

OSIP No. / DESCRIPTION	YEARS	FY 2008	FY 2009	FY 2010	OCO FY2010	Total FY2010
080-84 UPDT III BLK UPRDE	1190.4	29.6	25.3	21.1	0.0	21.1
053-85 CRITICAL SYSTEMS IMPROVEMENTS	38.4	0.4	0.4	0.4	0.0	0.4
029-94 ASUW IMPROV. PROG.	1303.5	24.9	45.8	46.3	0.0	46.3
013-01 CNS-ATM	100.9	15.4	16.9	17.2	0.0	17.2
004-04 P-3 READINESS IMPROVEMENT	107.1	34.5	40.6	38.5	0.0	38.5
005-05 SSI-K	189.4	445.5	142.5	349.6	74.9	424.5
005-07 PROJECT K-0416	2.7	2.3	2.4	2.1	0.0	2.1
006-08 P-3 MISSION SYSTEMS		5.5	16.1	9.8	0.0	9.8
INACTIVE OSIPS	125.4					
TOTAL	3057.8	558.0	290.0	485.2	74.9	560.1

MODIFICATION TITLE: UPDT III BLK UPRGRDE(OSIP 080-84)

MODELS OF SYSTEMS AFFECTED: P-3C TYPE MODIFICATION: Operational Improvement

DESCRIPTION / JUSTIFICATION: The Update III Block Upgrade program provides an improved P-3 anti-submarine warfare (ASW) capability required to neutralize current and emerging littoral and open ocean submarine threats in support of Sea Shield/Sea Power 21.

The program initially establishes a common configuration of AN/USQ-78(V) acoustic processors, acoustic data recorders, sonobuoy receivers, and other acoustic subsystem components for all P-3C Mission Aircraft. Follow-on program efforts continuously modernize this common acoustic subsystem baseline to address COTS component obsolescence, accomplish periodic COTS technology insertions, and provide functional improvements via an Air Acoustic Rapid COTS Insertion (Air ARCI) process. These common configuration efforts and follow-on technology insertion efforts are accomplished with AN/USQ-78(V) Air ARCI upgrade funding.

FY09 thru FY13 objectives of the Update III Block Upgrade Program are to provide improved ASW capability through a series of Air ARCI Technology Insertions/Refreshes to the Acoustic Receiver, Acoustic Processor, and the Acoustic System. These Tech Insertions/Refreshes will: (1) increase digital sonobuoy monitoring capacity and improve acoustic subsystem maintainability by replacing the analog ARR-78 sonobuoy receiver with a digital Software Defined Sonobuoy Receiver (SDSR); (2) increase system openness by eliminating the analog signal conditioning and MIL-unique interface cards; (3) increase processing growth to meet emerging under-sea threats and Fleet ASW requirements for multi-static acoustic sensor processing (e.g., Extended Echo Ranging [EER] family), active acoustic sensor processing (e.g., DICASS) and passive acoustic sensor processing (e.g., ADR, DIFAR) by incrementally upgrading system memory and processing capacity with the latest commercial variants of COTS single board computers and digital signal processors; (4) provide additional on going non-recurring engineering (NRE) solutions to support continuous technology insertions/Refreshes and COTS obsolescence mitigation on a regular cycle via an ARCI Tech Refresh process to the USQ78(B) system.

The Update III Common Configuration program is based on Decision Coordinating Paper W-080-AS and the Program Management Plan #0526 serial 902D/6U324405. Up to 97 aircraft and 10 trainers to be modified to a common baseline configuration, then continuously upgraded via an ARCI process.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES: The original Update III variant received approval for limited production in December 1983 and December 1984. Approval for full production was received in January 1986. The basis of the currently planned common configuration is an AN/USQ-78(V) variant that received approval for full production in February 2002.

FINANCIAL PLAN: (TOA, \$ IN MILLIONS)

FISCAL YEAR	PRIOR YEARS		FY 2008		FY 2009		FY 2010		OCO FY 2010		QTY	\$									
	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$											
RDT&E																					
PROCUREMENT																					
INSTALLATION KITS																					
PRIOR YEAR KITS	658	98.8																			
INSTALLATION KITS N/R		64.5																			
INSTALL EQUIPMENT																					
DASD/DASD DOCKS	310	2.6					42	0.3													
PRIOR YEAR EQUIPMENT	1,895	567.6																			
USQ-78A/CHRDS	97	126.9																			
USQ78 APTR RETROFIT CARD SETS								21	9.9												
USQ78 APTR UPGRADE KITS						16	8.4														
USQ78 ASTR RETROFIT CARD SETS																					
USQ78 SONO RECEIVER UPGRADE	42	20.4	23	11.6																	
USQ78 APTR UPGRADE KITS																					
INSTALL EQUIPMENT N/R		93.1		12.2		8.6		2.0													
ECO																					
ECO				0.1		0.1		0.1													
USQ-78B SYSTEM CONTROLLER ECP		1.6																			
USQ7-78 SONO RECEIVER ECP		5.3																			
DATA		17.1		0.1		0.1		0.3													
TRAINING EQUIP	47	20.2				10	1.1	2	0.3												
SUPPORT EQUIP		1.6																			
ILS		3.6																			
OTHER SUPPORT		131.6		4.6		3.1		2.1													
INTERIM CONTRACTOR SUPPORT																					
INSTALLATION COST	564	35.5	15	1.0	36	4.0	64	6.2													
TOTAL PROCUREMENT		1,190.4		29.6		25.3		21.1													

Note: The cost of "A" and "B" kits for USQ-78 are not separately priced.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: P-3C MODIFICATION TITLE: Update III Block Upgrade (OSIP 80-84) USQ-78V CHRDS

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Installation will be accomplished on the SMIP contract OR on the SMIP contract and NADEP Jax

ADMINISTRATIVE LEADTIME: 11 Months PRODUCTION LEADTIME: 18 Months

CONTRACT DATES: FY 2008: FY 2009: FY 2010:

DELIVERY DATE: FY 2008: FY 2009: FY 2010:

(\$ in Millions)

Cost:	Prior Years		FY 2008		FY 2009		FY 2010		OCO FY 2010													
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
FY 2007 & PY (97) kits	63	3.9	15	1.0	8	.6	11	1.3														
FY 2008 () kits																						
FY 2009 () kits																						
FY 2010 () kits																						
FY 2011 () kits																						
FY 2012 () kits																						
FY 2013 () kits																						
FY 2014 () kits																						
FY 2015 () kits																						
To Complete () kits																						
TOTAL	63	3.9	15	1.0	8	.6	11	1.3														

Installation Schedule

	FY 2007 & Prior	FY 2008				FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	63	4	4	4	3	3	3	2		4	4	3													
Out	63	4	4	4	3	3	3	2		4	4	3													

	FY 2014				FY 2015				To Complete	TOTAL
	1	2	3	4	1	2	3	4		
In										97
Out										97

Completions same as inductions; one week effort.

The last 11 USQ78s were modified in plant to include the SONO Receiver upgrade

All 97 USQ78s have been procured

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: P-3C MODIFICATION TITLE: Update III Block Upgrade (OSIP 80-84) SONO RECEIVER (Acoustic Receiver Tech Refresh)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Installation will be accomplished at NADEP Jacksonville, on the MIP contract, and on-site by a contractor field team

ADMINISTRATIVE LEADTIME: 6 Months PRODUCTION LEADTIME: 18 Months

CONTRACT DATES: FY 2008: 7/08 FY 2009: FY 2010:

DELIVERY DATE: FY 2008: 1/10 FY 2009: FY 2010:

(\$ in Millions)

Cost:	Prior Years		FY 2008		FY 2009		FY 2010		OCO FY 2010													
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
FY 2007 & PY (42) kits					28	3.4	14	1.4														
FY 2008 (23) kits							23	2.3														
FY 2009 () kits																						
FY 2010 () kits																						
FY 2011 () kits																						
FY 2012 () kits																						
FY 2013 () kits																						
FY 2014 () kits																						
FY 2015 () kits																						
To Complete () kits																						
TOTAL					28	3.4	37	3.7														

NOTE: FY06 was procured with the FY-07 LOT

Installation Schedule

	FY 2007 & Prior	FY 2008				FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In								14	14	11	14	12													
Out								14	14	11	14	12													

	FY 2014				FY 2015				To Complete	TOTAL
	1	2	3	4	1	2	3	4		
In										65
Out										65

Completions same as inductions; two week effort.
The last 11 USQ78s were modified in plant to include the SONO Receiver upgrade

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: P-3C MODIFICATION TITLE: Update III Block Upgrade (OSIP 80-84) SONO RECEIVER (Acoustic Processor Tech Refresh)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Installation will be accomplished at NADEP Jacksonville, on the MIP contract, and on-site by a contractor field team

ADMINISTRATIVE LEADTIME: 3 Months PRODUCTION LEADTIME: 14 Months

CONTRACT DATES: FY 2008: _____ FY 2009: 1/09 FY 2010: _____

DELIVERY DATE: FY 2008: _____ FY 2009: 3/10 FY 2010: _____

(\$ in Millions)

Cost:	Prior Years		FY 2008		FY 2009		FY 2010		OCO FY 2010														
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
FY 2007 & PY () kits																							
FY 2008 () kits																							
FY 2009 (16) kits								16	1.2														
FY 2010 () kits																							
FY 2011 () kits																							
FY 2012 () kits																							
FY 2013 () kits																							
FY 2014 () kits																							
FY 2015 () kits																							
To Complete () kits																							
TOTAL								16	1.2														

Installation Schedule

FY 2007 & Prior	FY 2008				FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In									5	5	6													
Out									5	5	6													

	FY 2014				FY 2015				To Complete	TOTAL
	1	2	3	4	1	2	3	4		
In										16
Out										16

Completions same as inductions; two week effort.
 The last 11 USQ78s were modified in plant to include the SONO Receiver upgrade

Exhibit P-3a

MODIFICATION TITLE: ASUW IMPROV. PROG.(OSIP 029-94)

MODELS OF SYSTEMS AFFECTED: P-3C TYPE MODIFICATION: Operational Improvement

DESCRIPTION / JUSTIFICATION:

The Navy's Maritime Patrol and Reconnaissance Force (primarily P-3C Orion aircraft) provides three deliverables to Navy and joint commanders worldwide: Undersea warfare; Intelligence Surveillance, and Reconnaissance; and Maritime Surveillance Targeting. The ASUW Improvement Program meets the Navy's requirement to rapidly provide a significant increase in the current P-3's ability to perform Anti-Submarine Warfare (ASW), Anti-Surface Warfare (ASUW), Over-the-Horizon Targeting (OTH-T), and Command, Control, Communications, Computers, and Intelligence (C4I). The target aircraft for this modification are P-3C Update II/II.5 and Update III. This modification focuses on improving the weapon system's capability for standoff targeting and classification. Significant sensorimprovements and capabilities are provided by the APS-137D (V) 5 imaging radar, the Advanced Imaging Multi-Spectral Sensor (AIMS) electro optical/infrared system, and ESM upgrades that include SpecificEmiter Identification (SEI), SEI Utility Improvement, ALR-95, improved pulse processing, and DF accuracy. C4I is improved with a DAMA Satcom radio suite and Multi-mission Advanced Tactical Terminal (MATT) that can receive the Officer in Tactical Command Information Exchange System (OTCIXS), and other fleet broadcasts. Additional planned Phased Capability Upgrade (PCU) improvements include the Maritime Surveillance Targeting (MST) capability as well as Tactical Common Data Link (TCDL). Survivability enhancements include the ALE-47/AAR-47 missile warning countermeasures, explosive suppressant foam, and small circular area of probability weapon system (Maverick, SLAM, SLAM-ER, and provisions to carry and launch all Mil Std 1760 Digital weapons. Additional funding in FY1995 and FY1996 was utilized to meet an urgent fleet requirement to upgrade 17 Pre-AIP aircraft with Maverick armament control kits. FY2005 Emergency Supplemental Appropriation for Defense (ESAD) funds were provided to procure and install additional TCDL systems. The P3 AIP operational requirement document (ORD) is Ser # 355-88-94. Future Engineering Change Proposals (ECPs) are anticipated for the existing systems including APS 137 radar:AIMS EO/IR; MATT; Link 16; Global Communication & Control System - Maritime (GCCS-M); Precision Targeting Workstation (PTW); OASIS:Video Distribution Controller (VDC); Tactical Mission Computer; ALR-95 ESM:DAMA Satcom; MST; TCDL; Recorders including the High Resolution Digital Recorder; ALE47/AAR47; Digital Stores Management System (DSMS); all weapon systems including missiles, torpedoes, mines, as well as acoustic system upgrades. The ASW Maritime Improvement Program (AMP) will provide for Mission System Sustainment, ASW improvements and improved C4I systems including INMARSAT /Integrated Tactical Picture(ITP), and High Frequency Internet Protocol (HFIP).

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES: This modification makes maximum use of previously developed subsystems.

FINANCIAL PLAN: (TOA, \$ IN MILLIONS)

FISCAL YEAR	PRIOR YEARS		FY 2008		FY 2009		FY 2010		OCO FY 2010		QTY	\$											
	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$													
RDT&E																							
PROCUREMENT																							
INSTALLATION KITS																							
PRIOR YEAR KITS	88	384.3																					
TCDL A-KIT	25	0.8																					
DIGITAL STORES MGT SYSTEM	2	0.4			7	1.4	12	2.5															
INSTALLATION KITS N/R		42.1																					
INSTALL EQUIPMENT																							
BMUP ASE FOAM KITS	4	0.2																					
C4 FOR ASW LINK16			3	0.9	11	3.2	15	4.5															
C4 FOR ASW (INMARSAT/ITP)		1.9	3	2.7	11	8.9	15	12.3															
Digital Stores Management	2	0.7			7	2.3	12	4.0															
GPE SENSORS AND AVIONICS		287.0																					
HIGH RESOLUTION DIGITAL RECORDER		0.8																					
HFIP			9	0.9	26	2.6	26	2.7															
PHASED CAPABILITY UPGRADE (MST)	60	42.8	14	2.8																			
PRIOR YEAR EQUIPMENT		9.5																					
TCDL B-KIT	26	10.8																					
INSTALL EQUIPMENT N/R		88.5		5.3		5.7		1.2															
ECO																							
ALR-95 UPGRADES		0.3																					
DIGITAL STORES MANAGEMENT SYSTEM		9.4				0.5		0.3															
SLAM-ER		23.8																					
C4 FOR ASW				2.0				1.9															
DATA		16.7		0.1		1.0		0.3															
TRAINING EQUIP		65.1		4.6		11.0		5.0															
SUPPORT EQUIP		13.1				1.1		0.3															
ILS		16.2		0.1		0.5		0.3															
OTHER SUPPORT		151.7		5.0		6.3		5.5															
INTERIM CONTRACTOR SUPPORT																							
INSTALLATION COST	105	137.3	26	0.4	85	1.3	57	5.6															
TOTAL PROCUREMENT		1,303.5		24.9		45.8		46.3															

Asterisk (*) indicates amount value less than \$51k

1. The cost of "A" and "B" kits for all kits (except TCDL) not separately priced.
2. AIP prior year TCDL kits funded with Congressional Add and ESAD funds.
3. Phased Capability Upgrade (MST) prior year kits include two (2) lab assets.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED:

P-3C MODIFICATION TITLE: Anti-Surface Warfare (ASUW) Improvement Program (OSIP 29-94) TCDL Installations

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION:

Contractor Field Mod Team

ADMINISTRATIVE LEADTIME:

10 Months PRODUCTION LEADTIME: 10 Months

CONTRACT DATES:

FY 2008: _____ FY 2009: _____ FY 2010: _____

DELIVERY DATE:

FY 2008: _____ FY 2009: _____ FY 2010: _____

Cost:	Prior Years		FY 2008		FY 2009		FY 2010		OCO FY 2010													
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
FY 2007 & PY (74) kits**	51	4.1	10	*	13	*																
FY 2008 () kits																						
FY 2009 () kits																						
FY 2010 () kits																						
FY 2011 () kits																						
FY 2012 () kits																						
FY 2013 () kits																						
FY 2014 () kits																						
FY 2015 () kits																						
To Complete () kits																						
TOTAL	51	4.1	10	*	13	*																

* Install provided at no cost to Gov't
 ** Two of the FY07 funded kits are for trainers; one is for PHIC lab which does not require installation.

Installation Schedule

	FY 2007 & Prior	FY 2008				FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	51			4	6	6	6	1																	
Out	51			4	6	6	6	1																	

	FY 2014				FY 2015				To Complete	TOTAL
	1	2	3	4	1	2	3	4		
In										74
Out										74

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: P-3C MODIFICATION TITLE: Anti-Surface Warfare (ASUW) Improvement Program (OSIP 29-94) AIS Installations/PCU/MST

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Contractor Field Mod Team

ADMINISTRATIVE LEADTIME: 6 Months PRODUCTION LEADTIME: 15 Months

CONTRACT DATES: FY 2008: 04/08 FY 2009: FY 2010:

DELIVERY DATE: FY 2008: 07/09 FY 2009: FY 2010:

Cost:	Prior Years		FY 2008		FY 2009		FY 2010		FY 2010 OCO													
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
FY 2007 & PY (61) kits ***	**	1.8	12	*	46	**																
FY 2008 (14) kits					2	.1	12	.4														
FY 2009 () kits																						
FY 2010 () kits																						
FY 2011 () kits																						
FY 2012 () kits																						
FY 2013 () kits																						
FY 2014 () kits																						
FY 2015 () kits																						
To Complete () kits																						
TOTAL	*	1.8	12	*	48	.1	12	.4														

*FY07 Congressional Add funds 37 installs (12 installs in FY08 and 25 installs in FY09).

** FY07 Title IX funds 21 installs (21 kits in FY09).

*** 1 Prior Year kit was installed in the lab and 2 Prior Year kits are being installed in trainers.

(1) lab kit procured under NRE.

Installation Schedule

	FY 2007 & Prior	FY 2008			FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
		2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In				12	12	12	12	12	12															
Out					12	12	12	12	12	12														

	FY 2014				FY 2015				To Complete	TOTAL
	1	2	3	4	1	2	3	4		
In										72
Out										72

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED:

P-3C MODIFICATION TITLE: Anti-Surface Warfare (ASUW) Improvement Program (OSIP 29-94) C4 for ASW (INMARSAT/ITPLink-16) Installations

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION:

Contractor Field Mod Team

ADMINISTRATIVE LEADTIME:

2 Months PRODUCTION LEADTIME: 9 Months

CONTRACT DATES:

FY 2008: 12/08 FY 2009: 12/08 FY 2010: 12/09

DELIVERY DATE:

FY 2008: 09/09 FY 2009: 09/09 FY 2010: 09/10

Cost:	Prior Years		FY 2008		FY 2009		FY 2010		FY 2010 OCO												
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
FY 2007 & PY () kits																					
FY 2008 (3) kits *					2	.3	1	.1													
FY 2009 (11) kits							11	1.6													
FY 2010 (15) kits																					
FY 2011 () kits																					
FY 2012 () kits																					
FY 2013 () kits																					
FY 2014 () kits																					
FY 2015 () kits																					
To Complete () kits																					
TOTAL					2	.3	12	1.7													

* FY08 Kits Procured With Cong Add

Installation Schedule

	FY 2007 & Prior	FY 2008				FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In									2	3	3	3	3												
Out										2	3	3	3	3											

	FY 2014				FY 2015				To Complete	TOTAL
	1	2	3	4	1	2	3	4		
In										14
Out										14

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED:

P-3C MODIFICATION TITLE: Anti-Surface Warfare (ASUW) Improvement Program (OSIP 29-94) Digital Stores Management

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION:

Contractor Field Mod Team

ADMINISTRATIVE LEADTIME:

3 Months PRODUCTION LEADTIME: 9 Months

CONTRACT DATES:

DELIVERY DATE: FY 2008: _____ FY 2009: 01/09 FY 2010: 01/10 _____
 FY 2008: _____ FY 2009: 10/09 FY 2010: 10/10 _____

Cost:	Prior Years		FY 2008		FY 2009		FY 2010		FY 2010 OCO													
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
FY 2007 & PY (2) kits			1	.4	1	.2																
FY 2008 () kits																						
FY 2009 (7) kits								7	1.4													
FY 2010 (12) kits																						
FY 2011 () kits																						
FY 2012 () kits																						
FY 2013 () kits																						
FY 2014 () kits																						
FY 2015 () kits																						
To Complete () kits																						
TOTAL			1	.4	1	.2	7	1.4														

Installation Schedule

	FY 2007 & Prior	FY 2008				FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In		1						1		1	2	2	2												
Out			1						1		1	2	2	2											

	FY 2014				FY 2015				To Complete	TOTAL
	1	2	3	4	1	2	3	4		
In									9	
Out									9	

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: P-3C MODIFICATION TITLE: Anti-Surface Warfare (ASUW) Improvement Program (OSIP 29-94) BMUP SURVIVABILITY

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Contractor Field Mod Team

ADMINISTRATIVE LEADTIME: 10 Months PRODUCTION LEADTIME: 11 Months

CONTRACT DATES: FY 2008: _____ FY 2009: _____ FY 2010: _____

DELIVERY DATE: FY 2008: _____ FY 2009: _____ FY 2010: _____

Cost:	Prior Years		FY 2008		FY 2009		FY 2010		FY 2010 OCO													
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
FY 2007 & PY (15) kits *		4.3	3	**	12	**																
FY 2008 () kits																						
FY 2009 () kits																						
FY 2010 () kits																						
FY 2011 () kits																						
FY 2012 () kits																						
FY 2013 () kits																						
FY 2014 () kits																						
FY 2015 () kits																						
To Complete () kits																						
TOTAL		4.3	3	**	12	**																

*FY07 B-Kits funded with JIEDDO (other customer funds)
 * *ESAD funds 3 in FY08 & 12 installs in FY09

Installation Schedule

	FY 2007 & Prior	FY 2008				FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In				3	3	3	3	3																	
Out					3	3	3	3	3																

	FY 2014				FY 2015				To Complete	TOTAL
	1	2	3	4	1	2	3	4		
In										15
Out										15

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: P-3C MODIFICATION TITLE: Anti-Surface Warfare (ASUW) Improvement Program (OSIP 29-94) High Frequency Internet Protocol (HFIP)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Contractor Field Mod Team

ADMINISTRATIVE LEADTIME: 3 Months PRODUCTION LEADTIME: 9 Months

CONTRACT DATES: FY 2008: 09/08 FY 2009: 01/09 FY 2010: 01/10

DELIVERY DATE: FY 2008: 06/09 FY 2009: 10/09 FY 2010: 10/10

Cost:	Prior Years		FY 2008		FY 2009		FY 2010		FY 2010 OCO													
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
FY 2007 & PY () kits																						
FY 2008 (9) kits*					9	.7																
FY 2009 (26) kits							26	2.1														
FY 2010 (26) kits																						
FY 2011 () kits																						
FY 2012 () kits																						
FY 2013 () kits																						
FY 2014 () kits																						
FY 2015 () kits																						
To Complete () kits																						
TOTAL					9	.7	26	2.1														

* Two kits are to be installed in trainers & one in the PHIC

Installation Schedule

	FY 2007 & Prior	FY 2008				FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In							4	5	6	6	7	7													
Out								4	5	6	6	7	7												

	FY 2014				FY 2015				To Complete	TOTAL
	1	2	3	4	1	2	3	4		
In										35
Out										35

MODIFICATION TITLE: CNS-ATM(OSIP 013-01)

MODELS OF SYSTEMS AFFECTED: P-3C/EP-3 TYPE MODIFICATION: Operational Improvement/Safety

DESCRIPTION / JUSTIFICATION: P-3C aircraft have a requirement for a Communications, Navigation and Surveillance/ Air Traffic Management (CNS/ATM) upgrades to meet expanding CNS/ATM requirements and ensure global access to commercial airspace. The CNS/ATM requirements consist of various avionics systems upgrades/replacements which currently include; VHF radio with 8.33 kHz channel spacing, IFF (Mode S and Mode 5), protected ILS/VOR with FM Immunity, and an upgraded GPS to provide increased navigation accuracy (RNP5, BRNAV, RVSM) with the capability to be upgraded to meet Automatic Dependent Surveillance Broadcast (ADS-B), Next Generation Communications (NEXCOM), Joint Precision Approach and Landing System (JPALS), Precision Area Navigation (PRNAV), Navigation Warfare (NAVWAR) and Joint Tactical Radio System (JTRS) requirements. Successful integration of any or all of these capabilities, and any future Federal Aviation Administration (FAA) or International Civil Aviation Organization (ICAO) mandates, requires an Flight Management System (FMS) which provides for growth and interface flexibility. This OSIP provides non-recurring engineering for the development of the CNS/ATM architecture for the P-3 aircraft which includes a FMS/CDU, digital air data computer (DADC) and an Electronic Flight Display Systems (EFDS). This modification program provides CNS/ATM upgrades for 132 P-3C aircraft and 16 EP-3 aircraft. RNAV/ MODE S Kit (JAX ECP P3-828) includes FMS/CDU 7000, Digital Air Data Computer, APX-118 (IFF/MODE S) and RINU-G. EFDS (JAX ECP P3-491), MMR (JAX ECP P3-826 & ARC-210 (8.33kHz) (Jax ECP P3-827) are Stand-Alone ECPs that will be installed separately or in conjunction with RNAV/Mode S ECP. Joint Mission Planning System (JMPS) Unique Planning Component (UPC) is required to replace the flight and mission planning elements (Flight Planning, ASW Mission Planning, SLAM-ER planning) that presently reside in TAMPS, which will be replaced by JMPS. The JMPS UPC will reside on laptop computers to be procured for 97 aircraft (72 AIP/25 BMUP). There is no kit or install associated with this effort.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES: Acquisition Strategy approved 21 Nov 03/ACAT IV/M. Preliminary Design Review for RNAV Mode S completed 16 Jun 04. Began transition of ARC-210 (8.33kHz) Radio and MLR-2020 (P-ILS) from Roll-On/Roll-Off to permanent installation in FY-05 (PMA-209 funded). Milestone C/ Full Rate Production approved on 23 August 2006.

FINANCIAL PLAN: (TOA, \$ IN MILLIONS)

FISCAL YEAR	PRIOR YEARS		FY 2008		FY 2009		FY 2010		OCO FY 2010		QTY	\$											
	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$													
RDT&E																							
PROCUREMENT																							
INSTALLATION KITS																							
5VAC RED LIGHTING BUS	52	0.1	34	0.1	26	*	20	*															
8.33kHz VHF RADIO	28	0.1		***		***		***															
ARC-197/210 KIT	28	0.5																					
EFDS	146	9.1			2	0.2	6	0.7															
MLR-2020 (P-ILS)	75	0.3		***		***		***															
MLR-2020 (PERMANENT)	20	0.1																					
RNAV/MODE S	54	3.8	15	1.3	23	1.7	20	1.5															
INSTALLATION KITS N/R		11.0																					
INSTALL EQUIPMENT																							
8.33kHz (ARC-210)	54	1.8		***		***		***															
APX-118 (IFF/MODE S)	5	0.1		***		***		***															
DIGITAL ADC	134	3.3	30	0.8	52	1.3	34	0.9															
EFDS	159	12.9			2	0.3	4	0.6															
FMS/CDU 7000 (3 per A/C)	212	9.2	45	2.1	49	2.2	60	3.0															
JMPS UPC							6	*															
MLR-2020 (P-ILS) (2 PER A/C)	148	6.1		***		***		***															
MLR-2020A-1 UPGRADES	40	0.2		***		***		***															
RINU-G (RNP 4/5) (2 PER A/C)	8	0.1		***		***		***															
INSTALL EQUIPMENT N/R		13.3		0.3		2.1		2.7															
ECO																							
ADDU MOD FOR OP TRAINERS		0.1		0.1																			
CDU 7000 SERVICE BULLETINS		0.1																					
JMPS SOFTWARE				0.7		0.1		0.1															
DATA		1.2		0.7																			
TRAINING EQUIP	11	0.8	5	0.3	4	0.3	2	0.2															
SUPPORT EQUIP																							
ILS		2.1		0.5		0.4		0.4															
OTHER SUPPORT		14.3		2.5		1.8		2.2															
INTERIM CONTRACTOR SUPPORT																							
INSTALLATION COST	218	10.6	75	6.3	68	6.4	51	5.0															
TOTAL PROCUREMENT		100.9		15.4		16.9		17.2															

Asterisk (*) indicates amount value less than \$51K

** 60 EFDS funded under GSP OSIP 28-92.

*** Beginning in FY-04, PMA-209 funded NRE, equipment and installs for ARC-210 VHF radio, APX-118, MLR-2020 and RINU-G.

NOTE: APX-118 and RINU-G funding in FY04 is for TKIs.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: P-3C/EP-3/Derivatives MODIFICATION TITLE: CNS/ATM (OSIP 13-01) RNAV MODE S

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Contractor Field Team

ADMINISTRATIVE LEADTIME: 4 Months PRODUCTION LEADTIME: 11 Months

CONTRACT DATES: FY 2008: 05/08 FY 2009: 03/09 FY 2010: 02/10

DELIVERY DATE: FY 2008: 03/09 FY 2009: 01/10 FY 2010: 01/11

(\$ in Millions)

Cost:	Prior Years		FY 2008		FY 2009		FY 2010		OCO FY 2010											
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
FY 2007 & PY (54) kits	15	2.9	23	3.7	16	3.1														
FY 2008 (15) kits					6	1.5	9	1.8												
FY 2009 (23) kits							14	2.5												
FY 2010 (20) kits																				
FY 2011 () kits																				
FY 2012 () kits																				
FY 2013 () kits																				
FY 2014 () kits																				
FY 2015 () kits																				
To Complete () kits																				
TOTAL	15	2.9	23	3.7	22	4.6	23	4.4												

P-3C Prototype NRE, prototype kit and prototype installation funded in FY02 with Congressional Plus-Up.
 RNAV MODE S installs begin in FY05 and consist of FMS/CDU 7000, Digital Air Data Computer (DADC/ADDU), CXP and RINU-G. CXP & RINU-G Funded by PMA-209
 * 9 FY-06 Funded RNAV Mode S Kits procured in FY-07, Installs Extend into FY-08.

**Installs include trainers.

Installation Schedule

	FY 2007	FY 2008				FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
	& PRIOR	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	15	5	6	6	6	8	8	4	2	9	5	5	4												
Out	7	8	5	6	6	6	8	8	4	2	9	5	5	4											

	FY 2014				FY 2015				To Complete	TOTAL
	1	2	3	4	1	2	3	4		
In										83
Out										83

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: P-3C/EP-3/Derivatives MODIFICATION TITLE: CNS/ATM (OSIP 13-01) Electronic Flight Display Systems (EFDS)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Contractor Field Team

ADMINISTRATIVE LEADTIME: 3 Months PRODUCTION LEADTIME: 8 Months

CONTRACT DATES: FY 2008: 01/08 FY 2009: 01/09 FY 2010: 01/10 _____

DELIVERY DATE: FY 2008: 9/08 FY 2009: 9/09 FY 2010: 09/10 _____

(\$ in Millions)

Cost:	Prior Years		FY 2008		FY 2009		FY 2010		OCO FY 2010												
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
FY 2007 & PY (146) kits	117 *	7.5	17	2.5	12	1.8															
FY 2008 () kits																					
FY 2009 (2) kits							2	.5													
FY 2010 (6) kits																					
FY 2011 () kits																					
FY 2012 () kits																					
FY 2013 () kits																					
FY 2014 () kits																					
FY 2015 () kits																					
To Complete () kits																					
TOTAL	117	7.5	17	2.5	12	1.8	2	.5													

Note: Will conduct stand-alone EFDS installations in FY01-07 to meet immediate requirements. EFDS will be installed stand-alone or concurrent with CNS/ATM Architecture installs beginning in FY08. Installs include trainers.

* 60 Prior year EFDS funded kits under GPS OSIP 29-92

** Six (6) of the FY-06 Funded EFDS Kits procured in FY-07 and will be installed in FY-08.

Installation Schedule

	FY 2007 & PRIOR	FY 2008				FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	117	7	3	4	3	3	3	3	3	1		1													
Out	111	6	7	3	4	3	3	3	3	3	1		1												

	FY 2014				FY 2015				To Complete	TOTAL
	1	2	3	4	1	2	3	4		
In										148
Out										148

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: P-3C/EP-3/Derivatives MODIFICATION TITLE: CNS/ATM (OSIP 13-01) 5V LIGHTING CB

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Contractor Field Team

ADMINISTRATIVE LEADTIME: 5 Months PRODUCTION LEADTIME: 6 Months

CONTRACT DATES: FY 2008: 03/08 FY 2009: 03/09 FY 2010: 03/10

DELIVERY DATE: FY 2008: 09/08 FY 2009: 09/09 FY 2010: 09/10

(\$ in Millions)

Cost:	Prior Years		FY 2008		FY 2009		FY 2010		OCO FY 2010													
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
FY 2007 & PY (52) kits	17	*	35	.1																		
FY 2008 (34) kits					34	.1																
FY 2009 (26) kits							26	.1														
FY 2010 (20) kits																						
FY 2011 () kits																						
FY 2012 () kits																						
FY 2013 () kits																						
FY 2014 () kits																						
FY 2015 () kits																						
To Complete () kits																						
TOTAL	17	*	35	.1	34	.1	26	.1														

Asterisk (*) indicates amount value less than 51K.

Installation Schedule

	FY 2007 & PRIOR	FY 2008				FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	17	8	9	9	9	8	8	9	9	7	7	6	6												
Out	17	8	9	9	9	8	8	9	9	7	7	6	6												

	FY 2014				FY 2015				To Complete	TOTAL
	1	2	3	4	1	2	3	4		
In										112
Out										112

CLASSIFICATION: **UNCLASSIFIED**

Exhibit P-3a

MODIFICATION TITLE: P-3 READINESS IMPROVEMENT(OSIP 004-04)

MODELS OF SYSTEMS AFFECTED: P-3/EP-3 TYPE MODIFICATION: Readiness Improvement

DESCRIPTION / JUSTIFICATION: The purpose of this program is to incorporate a number of cost effective changes to the P-3/EP-3 weapon system, specifically targeting improvements to high cost and maintenance and obsolete readiness degrader items. These improvements are a vital element of the P-3/EP-3 sustainment bridge, significantly enhancing the strategy of a smaller, more ready, more capable P-3/EP-3 force during the bridge to the P-8A Multi-Mission Maritime Aircraft (MMA). The increased readiness and capabilities that will be realized, support the foundational sustainment bridge elements, specifically operational availability and common configuration. Planned improvements under this OSIP cover airframe, propulsion and avionics related subsystems, utilizing Commercial Off-The-Shelf Systems (COTS) technology to the maximum extent practicable to minimize development and procurement costs, and to reduce the time to field the improved systems. The systems identified for replacement include HF Radio, Data Link, InfraRed Detection System, Autopilot, Inter Communication System, Magnetic Anomaly Detector (MAD), and Radar. Additionally, systems being evaluated for replacement include IFF Interrogator Set, and Magnetic Tape Recorder/Reproducer.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES: The COP NPDM authorizing MS-C / LRIP was approved 26 March 2004. The COP ADM authorizing FRP was approved 15 March 2006.

FINANCIAL PLAN: (TOA, \$ IN MILLIONS)

FISCAL YEAR	PRIOR YEARS		FY 2008		FY 2009		FY 2010		OCO FY 2010		QTY	\$											
	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$													
RDT&E																							
PROCUREMENT																							
INSTALLATION KITS																							
AUTO-PILOT KIT	50	3.1	26	1.5	32	2.0	32	2.1															
DIGITAL MAD SYSTEM KIT			3	0.2	6	0.5	11	0.8															
HF RADIO/DATA LINK KIT	42	3.1	26	1.4	32	1.7	32	1.8															
INFRARED DETECTION KIT (EO/IR)	46	0.8	10	0.2																			
INTER COMMUNICATIONS KIT	12	0.7																					
RADAR/INTEROGATOR																							
INSTALLATION KITS N/R		2.6				0.5		0.5															
INSTALL EQUIPMENT																							
AUTO-PILOT SYSTEM	50	14.0	26	6.1	32	8.3	32	8.5															
DIGITAL MAD SYSTEM			3	0.8	6	1.9	11	3.4															
HF RADIO/DATA LINK SYSTEM	42	15.6	26	8.5	32	10.5	32	10.7															
INFRARED DETECTION SYSTEM (EO/IR)	46	16.9	10	3.7																			
INTER COMMUNICATIONS SYSTEM	12	3.9																					
RADAR/INTEROGATOR																							
INSTALL EQUIPMENT N/R		15.9		1.0		0.7		0.4															
ECO						0.1		0.1															
DATA		4.1		1.3		1.0		1.0															
TRAINING EQUIP		7.9		0.9		2.0		0.3															
SUPPORT EQUIP		0.7		0.5		0.6		0.2															
ILS		3.3		1.5		1.6		0.8															
OTHER SUPPORT		11.1		3.7		3.6		2.8															
INTERIM CONTRACTOR SUPPORT																							
INSTALLATION COST	68	3.4	48	3.2	90	5.7	70	5.1															
TOTAL PROCUREMENT		107.1		34.5		40.6		38.5															

Note: HF-IP transferred to OSIP 29-94

Exhibit P-3a
 MODELS OF SYSTEMS AFFECTED: P-3/EP-3 MODIFICATION TITLE: P-3 Critical Obsolescence Program (OSIP 04-04) HF Radio / Data Link

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Installation will be accomplished by contractor mod teams.

ADMINISTRATIVE LEADTIME: 3 Months PRODUCTION LEADTIME: 12 Months

CONTRACT DATES: FY 2008: 02/08 FY 2009: 01/09 FY 2010: 01/10

DELIVERY DATE: FY 2008: 03/09 FY 2009: 01/10 FY 2010: 01/11

(\$ in Millions)

Cost:	Prior years		FY 2008		FY 2009		FY 2010		FY 2010 OCO													
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
FY 2007 & PY (42) kits	12	.2	5	1.6	25	1.6																
FY 2008 (26) kits					26	1.7																
FY 2009 (32) kits							32	2.1														
FY 2010 (32) kits																						
FY 2011 () kits																						
FY 2012 () kits																						
FY 2013 () kits																						
FY 2014 () kits																						
FY 2015 () kits																						
To Complete () kits																						
TOTAL	12	.2	5	1.6	51	3.3	32	2.1														

Installation Schedule

	FY 2007 & Prior	FY 2008				FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	12				5	12	13	13	13		11	11	10												
Out	9	3				5	12	13	13	13		11	11	11	10										

	FY 2014				FY 2015				To Complete	TOTAL
	1	2	3	4	1	2	3	4		
In										100
Out										100

Exhibit P-3a
 MODELS OF SYSTEMS AFFECTED: P-3 MODIFICATION TITLE: P-3 Critical Obsolescence Program (OSIP 04-04) Infrared Detection (EO/IR)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Installation will be accomplished by contractor mod teams.

ADMINISTRATIVE LEADTIME: 5 Months PRODUCTION LEADTIME: 10 Months

CONTRACT DATES: FY 2008: 04/08 FY 2009: _____ FY 2010: _____

DELIVERY DATE: FY 2008: 02/09 FY 2009: _____ FY 2010: _____

(\$ in Millions)

Cost:	Prior years		FY 2008		FY 2009		FY 2010		FY 2010 OCO													
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
FY 2007 & PY (46) kits	28	.4	18	.5																		
FY 2008 (10) kits					10	.3																
FY 2009 () kits																						
FY 2010 () kits																						
FY 2011 () kits																						
FY 2012 () kits																						
FY 2013 () kits																						
FY 2014 () kits																						
FY 2015 () kits																						
To Complete () kits																						
TOTAL	28	.4	18	.5	10	.3																

Installation Schedule

	FY 2007 & Prior	FY 2008				FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	28		6	6	6		5	5																	
Out	22	6	6	6	6		5	5																	

	FY 2014				FY 2015				To Complete	TOTAL
	1	2	3	4	1	2	3	4		
In										56
Out										56

Exhibit P-3a
 MODELS OF SYSTEMS AFFECTED: P-3/EP-3 MODIFICATION TITLE: P-3 Critical Obsolescence Program (OSIP 04-04) Auto-Pilot

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Installation will be accomplished by contractor mod teams.

ADMINISTRATIVE LEADTIME: 3 Months PRODUCTION LEADTIME: 12 Months

CONTRACT DATES: FY 2008: 10/07 FY 2009: 01/09 FY 2010: 01/10

DELIVERY DATE: FY 2008: 12/08 FY 2009: 01/10 FY 2010: 01/11

(\$ in Millions)

Cost:	Prior Years		FY 2008		FY 2009		FY 2010		FY 2010 OCO													
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
FY 2007 & PY(50) kits*	25	1.1	25	1.2																		
FY 2008 (26) kits					26	1.7																
FY 2009 (32) kits							32	2.1														
FY 2010 (32) kits																						
FY 2011 () kits																						
FY 2012 () kits																						
FY 2013 () kits																						
FY 2014 () kits																						
FY 2015 () kits																						
To Complete () kits																						
TOTAL	25	1.1	25	1.2	26	1.7	32	2.1														

*Six (6) of the 22 installs in FY07 are funded with FY05 Congressional Adds.

Installation Schedule

	FY 2007 & Prior	FY 2008				FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	25		10	10	5		9	9	8		11	11	10												
Out	19	6		10	10	5		9	9	8		11	11	10											

	FY 2014				FY 2015				To Complete	TOTAL
	1	2	3	4	1	2	3	4		
In										108
Out										108

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: P-3 MODIFICATION TITLE: P-3 Critical Obsolescence Program (OSIP 04-04) Inter Communications System

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Installation will be accomplished by contractor mod teams.

ADMINISTRATIVE LEADTIME: 3 Months PRODUCTION LEADTIME: 12 Months

CONTRACT DATES: FY 2008: _____ FY 2009: _____ FY 2010: _____

DELIVERY DATE: FY 2008: _____ FY 2009: _____ FY 2010: _____

(\$ in Millions)

Cost:	Prior years		FY 2008		FY 2009		FY 2010		FY 2010 OCO													
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
FY 2007 & PY (12) kits	3	1.8																				
FY 2008 () kits																						
FY 2009 () kits																						
FY 2010 () kits																						
FY 2011 () kits																						
FY 2012 () kits																						
FY 2013 () kits																						
FY 2014 () kits																						
FY 2015 () kits																						
To Complete () kits																						
TOTAL	3	1.8																				

Note: *To date, 3 TKI systems have been installed. Remaining kits will not be installed pending decision by N88 as to the disposition.
Installation Schedule

	FY 2007 & Prior	FY 2008				FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	3																								
Out	1	1	1																						

	FY 2014				FY 2015				To Complete	TOTAL
	1	2	3	4	1	2	3	4		
In										3
Out										3

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: P-3 MODIFICATION TITLE: P-3 Critical Obsolescence Program (OSIP 04-04) Digital MAD System

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Installation will be accomplished by contractor mod teams.

ADMINISTRATIVE LEADTIME: 3 Months PRODUCTION LEADTIME: 12 Months

CONTRACT DATES: FY 2008: 06/08 FY 2009: 01/09 FY 2010: 01/10

DELIVERY DATE: FY 2008: 06/09 FY 2009: 01/10 FY 2010: 01/11

(\$ in Millions)

Cost:	Prior years		FY 2008		FY 2009		FY 2010		OCO FY 2010													
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
FY 2007 & PY () kits																						
FY 2008 (3) kits					3	.4																
FY 2009 (6) kits								6	.8													
FY 2010 (11) kits																						
FY 2011 () kits																						
FY 2012 () kits																						
FY 2013 () kits																						
FY 2014 () kits																						
FY 2015 () kits																						
To Complete () kits																						
TOTAL					3	.4		6	.8													

Installation Schedule

	FY 2007 & Prior	FY 2008				FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In							1	2		2	2	2													
Out								1	2		2	2	2	2											

	FY 2014				FY 2015				To Complete	TOTAL
	1	2	3	4	1	2	3	4		
In										9
Out										9

Exhibit P-3a

MODIFICATION TITLE: SSI-K(OSIP 005-05)

MODELS OF SYSTEMS AFFECTED: All P-3 T/M/S TYPE MODIFICATION: Sustainment

DESCRIPTION / JUSTIFICATION: The Special Structural Inspection - Kits Program is an Operational Safety Improvement Program (OSIP) that will capture the P-3/EP-3 aircraft's test demonstrated fatigue life by replacing airframe structural components in fatigue life limiting critical regions of the P-3/EP-3 aircraft to enable the airframe to fully reach its designed service life but will not extend the fatigue life of those aircraft.

Unchecked, these problem areas collectively will result in significant loss of aircraft from the operational inventory due to operational and support funding limitations. SSI-K will manufacture and install a structural mod / replacement kit for P-3 outer wing, center box and other components. Aircraft that have received an Enhanced Special Structural Inspection (ESSI) require only the Center Box subset of an SSI-K. These Center Box subset install kits are shown separately.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES: Program is in full rate production.

FINANCIAL PLAN: (TOA, \$ IN MILLIONS)

FISCAL YEAR	PRIOR YEARS		FY 2008		FY 2009		FY 2010		OCO FY 2010		QTY	\$											
	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$													
RDT&E																							
PROCUREMENT																							
INSTALLATION KITS																							
CENTER BOX KIT	24	5.7			10	3.3	3	1.0															
ZONE 5 MITIGATION KIT	24	12.6	8	4.0	4	2.0	6	3.1															
OUTER WING REPLACEMENT KIT			17	153.2			18	224.7															
Rotable Pool Outer Wing Kit	7	13.5																					
SSI-K KIT (A-Kits)	46	30.1	24	30.7	12	17.2																	
INSTALLATION KITS N/R		7.7		42.1																			
INSTALL EQUIPMENT																							
INSTALL EQUIPMENT N/R																							
ECCO																							
CENTER WING FABRICATION				0.1		0.1		0.1															
SSI-K KIT ECP				0.4				0.3															
OUTER WING KIT ECP				9.0																			
DATA		1.4		2.5		0.2		0.2															
TRAINING EQUIP																							
SUPPORT EQUIP		1.1		1.9		0.5		0.2															
ILS		1.3		4.8		0.5		0.2															
OTHER SUPPORT		17.4		11.8		9.7		8.2															
INTERIM CONTRACTOR SUPPORT																							
INSTALLATION COST	27	98.5	27	185.1	51	109.0	33	111.7	8	74.9													
TOTAL PROCUREMENT		189.4		445.5		142.5		349.6		74.9													

1. No Install Costs associated with Rotable Pool Outer Wing Kits
2. EP SSI-K Kits and Rotable Pool have been included in SSI-K Kit Line and Zone 5 Mitigation Kit Line
3. FY-10 OCO funds (8) installs in FY-10 and (9) installs in FY-11.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: All P-3 T/M/S MODIFICATION TITLE: P-3 / EP-3 Special Structural Inspection - Kits (SSI-K) (OSIP 05-05)

INSTALLATION INFORMATION: _____

METHOD OF IMPLEMENTATION: Installation will be accomplished by contractor mod teams.

ADMINISTRATIVE LEADTIME: 5 Months PRODUCTION LEADTIME: 17 Months

CONTRACT DATES: FY 2008: 12/07 FY 2009: 3/09 FY 2010: _____

DELIVERY DATE: FY 2008: 4/09 FY 2009: 8/10 FY 2010: _____

(\$ in Millions)

Cost:	Prior Years		FY 2008		FY 2009		FY 2010		OCO FY 2010											
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
FY 2007 & PY (46) kits	21	90.5	16	81.6	9	52.5														
FY 2008 (24) kits*					7	41.4	15	89.2												
FY 2009 (12) kits**																				
FY 2010 () kits																				
FY 2011 () kits																				
FY 2012 () kits																				
FY 2013 () kits																				
FY 2014 () kits																				
FY 2015 () kits																				
To Complete () kits																				
TOTAL	21	90.5	16	81.6	16	93.9	15	89.2												

*Remaining 2 Kits in FY08 will be installed in FY-11
 **12 Kits in FY-09 will be installed in FY-11 and FY-12
 ****12 SSI-K Installs are for EP-3 aircraft

Installation Schedule

	FY 2007 & Prior	FY 2008				FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	21	4	4	4	4	4	5	4	3	4	4	4	3												
Out	21			4	4	4	4	4	5	4	3	4	4	4	3										

	FY 2014				FY 2015				To Complete	TOTAL
	1	2	3	4	1	2	3	4		
In										68
Out										68

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: All P-3 T/M/S MODIFICATION TITLE: P-3/EP-3 Special Structural Inspection - Kits (SSI-K) (OSIP 05-05) Center Box

INSTALLATION INFORMATION: _____

METHOD OF IMPLEMENTATION: Installation will be accomplished by contractor mod teams.

ADMINISTRATIVE LEADTIME: 4 Months PRODUCTION LEADTIME: 12 Months

CONTRACT DATES: FY 2008: _____ FY 2009: 2/09 FY 2010: 2/10 _____

DELIVERY DATE: FY 2008: _____ FY 2009: 2/10 FY 2010: 2/11 _____

(\$ in Millions)

Cost:	Prior Years		FY 2008		FY 2009		FY 2010		OCO FY 2010													
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
FY 2007 & PY (24) kits	6	8.1	6	*	8	4.4	4	2.2														
FY 2008 () kits																						
FY 2009 (10) kits							10	5.6														
FY 2010 (3) kits																						
FY 2011 () kits																						
FY 2012 () kits																						
FY 2013 () kits																						
FY 2014 () kits																						
FY 2015 () kits																						
To Complete () kits																						
TOTAL	6	8.1	6	*	8	4.4	14	7.8														

* Installs for Center wings procured with FY06 Title IX Supplemental funding occur in FY07 and FY08 and remaining installs will occur in FY09 and FY10 with program funds.

Installation Schedule

	FY 2007 & Prior	FY 2008				FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	6	1	2	1	2	2	2	2	2	3	3	4	4		1	1									
Out	6				1	2	1	2	2	2	2	2	3	3	4	4		1	1						

	FY 2014				FY 2015				To Complete	TOTAL
	1	2	3	4	1	2	3	4		
In										36
Out										36

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: All P-3 T/M/S MODIFICATION TITLE: P-3 / EP-3 Outer Wing Replacement Kits (OSIP 05-05)

INSTALLATION INFORMATION: _____

METHOD OF IMPLEMENTATION: Installation will be accomplished by contractor mod teams.

ADMINISTRATIVE LEADTIME: 3 Months PRODUCTION LEADTIME: 21 Months

CONTRACT DATES: FY 2008: 8/8 FY 2009: _____ FY 2010: 1/10 _____

DELIVERY DATE: FY 2008: 5/10 FY 2009: _____ FY 2010: 10/11 _____

(\$ in Millions)

Cost:	Prior years		FY 2008		FY 2009		FY 2010		OCO FY 2010														
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
FY 2007 & PY () kits																							
FY 2008 (17) kits/**									8	74.9													
FY 2009 () kits																							
FY 2010 (18) kits																							
FY 2011 () kits																							
FY 2012 () kits																							
FY 2013 () kits																							
FY 2014 () kits																							
FY 2015 () kits																							
To Complete () kits																							
TOTAL									8	74.9													

*Notes
 *FY08 Outer Wing Kits procured with FY08 OCO Funds
 **FY-10 OCO Funds (8) installs in FY-10 and (9) installs in FY-11

Installation Schedule

	FY 2007 & Prior	FY 2008				FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In												4	4												
Out															4	4									

	FY 2014				FY 2015				To Complete	TOTAL
	1	2	3	4	1	2	3	4		
In										8
Out										8

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: All P-3 T/M/S MODIFICATION TITLE: P-3 / EP-3 Zone 5 Mitigation Kits (OSIP 05-05)

INSTALLATION INFORMATION: _____

METHOD OF IMPLEMENTATION: Installation will be accomplished by contractor mod teams.

ADMINISTRATIVE LEADTIME: 3 Months PRODUCTION LEADTIME: 10 Months

CONTRACT DATES: FY 2008: 1/08 FY 2009: 1/09 FY 2010: 1/10

DELIVERY DATE: FY 2008: 5/09 FY 2009: 11/09 FY 2010: 11/10

(\$ in Millions)

Cost:	Prior years		FY 2008		FY 2009		FY 2010		OCO FY 2010													
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
FY 2007 & PY (24) kits			5	85.6	19	*																
FY 2008 (8) kits			*	17.9	8	10.8																
FY 2009 (4) kits **								4	14.7													
FY 2010 (6) kits																						
FY 2011 () kits																						
FY 2012 () kits																						
FY 2013 () kits																						
FY 2014 () kits																						
FY 2015 () kits																						
To Complete () kits																						
TOTAL			5	103.5	27	10.8	4	14.7														

*Notes

*27 Zone 5 Installs funded with FY08 OCO; 3 in FY08 and 24 in FY09

**12 Zone 5 Installs are for EP-3 aircraft

Installation Schedule

	FY 2007 & Prior	FY 2008				FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In					5	7	7	7	6	1	1	1	1												
Out								5	7	7	7	6	1	1	1	1									

	FY 2014				FY 2015				To Complete	TOTAL
	1	2	3	4	1	2	3	4		
In										36
Out										36

Exhibit P-3a

MODIFICATION TITLE: P-3 MISSION SYSTEMS(OSIP 006-08)
 MODELS OF SYSTEMS AFFECTED: P-3C TYPE MODIFICATION: Operational Improvement

DESCRIPTION / JUSTIFICATION: The Navy's Maritime Patrol and Reconnaissance Force (primarily P-3C Orion aircraft) provides three deliverables to Navy and Joint commanders worldwide: Undersea warfare; Intelligence Surveillance, and Reconnaissance; and Maritime Surveillance Targeting. The P-3C Mission Systems Sustainment program will ensure that the P-3C aircraft continues to meet the Navy's requirement to perform Anti-Submarine Warfare (ASW), Anti-Surface Warfare (ASUW), Over-the-Horizon Targeting (OTH-T), and Command, Control, Communications, Computers, and Intelligence (C4I) until Full Operational Capability (FOC) of MMA is achieved (2019). Sustaining the sensor capabilities provided by the APS-137D (V) 5 imaging radar, the Advanced Imaging Multi-Spectral Sensor (AIMS) electro optical/infrared system, ALR 95 ESM, Tactical Common Data Link (TCDL), small circular area of probability weapon system (Maverick, SLAM, SLAM-ER, provisions to carry and launch all Mil Std 1760 Digital weapons with Digital Stores Management System, ALE-47/AAR-47 missile warning countermeasures due to obsolescence is essential in order to maintain these vital capabilities. Additional systems and capabilities may be required in order to remain effective in the Sea Power 21 Construct. These systems include: APS 137 radar; Acoustic systems, AIMS EO/IR; MATT; Link 16; Global Communication & Control System - Maritime (GCCS-M); Integrated Tactical Picture (ITP); INMARSAT; Precision Targeting Workstation (PTW); OASIS; Video Distribution Controller (VDC); Tactical Mission Computer; ALR-95 ESM; DAMA Satcom; MST; TCDL; Recorders including the High Resolution Digital Recorder; ALE47/AAR47; Digital Stores Management System (DSMS), Advanced Data Storage System (ADSS); all weapon systems including missiles, torpedoes, mines, as well as acoustic system upgrades. These improvements are a vital element of the P-3 sustainment bridge for mission aircraft, including AIP and BMUP, significantly enhancing the strategy of a smaller, more ready, more capable P-3 force during the bridge to Multi-Mission Maritime Aircraft (MMA). P-3 C Mission Systems Sustainment is a branch of the ASW Maritime Improvement program (AMIP) to provide for obsolescence, technology refresh and technology insertion to P-3C mission systems.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES: This modification makes maximum use of previously developed subsystems.

FINANCIAL PLAN: (TOA, \$ IN MILLIONS)

FISCAL YEAR	PRIOR YEARS		FY 2008		FY 2009		FY 2010		FY 2010 OCO													
	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$
RTDLE																						
PROCUREMENT																						
INSTALLATION KITS																						
INSTALLATION KITS N/R																						
INSTALL EQUIPMENT																						
BMUP TECH REFRESH/INSERTION																						
ADSS w/OASIS FUNCTIONALITY								17	4.3													
APS 137 RADAR TECH REFRESH/INSERTION																						
VIDEO DISTRIBUTION CONTROLLER								1	*													
TACTICAL MISSION COMPUTER																						
MATT TECH REFRESH/INSERTION						55	1.7	17	0.5													
TCDL TECH REFRESH/INSERTION																						
AIRBORNE ADV DIGITAL NETWORK SYSTEM								1	*													
INMARSAT								1	*													
INTEGRATED TACTICAL PICTURE								1	*													
INSTALL EQUIPMENT N/R				3.3			11.1		1.6													
ECO				0.3			0.6		0.5													
DATA				0.1			0.1		0.2													
TRAINING EQUIP				0.2			0.1		0.8													
SUPPORT EQUIP							0.1		0.1													
ILS							0.3		0.1													
OTHER SUPPORT				1.7			2.2		1.5													
INTERIM CONTRACTOR SUPPORT																						
TOTAL PROCUREMENT				5.5			16.1		9.8													

Asterisk (*) indicates amount value less than \$51K

1. No install Schedule is depicted because the system are form fit functions done at an Organization Level.

BUDGET ITEM JUSTIFICATION SHEET										DATE:	
P-40										May 2009	
APPROPRIATION/BUDGET ACTIVITY							P-1 ITEM NOMENCLATURE				
Aircraft Procurement, Navy / APN5 Aircraft Modifications							054100, S-3 SERIES				
Program Element for Code B Items:							Other Related Program Elements				
	PRIOR YEARS	ID Code	FY 2008	FY 2009	FY 2010	OCO FY2010	Total FY2010				
QUANTITY											
COST (In Millions)	412.7	A	0.5								

DESCRIPTION: This line item funds modifications to S-3 aircraft. The S-3B is a carrier based, all weather, high wing, high subsonic, twin engine, multi-mission aircraft capable of Anti-Surface Warfare (ASUW) operations and tanking. The overall goal of modifications budgeted in FY2008 was to provide funding to implement Engineering Change Proposals (ECPs) and Engineering Change Orders (ECOs) for flight critical S-3B systems that are essential to the continued safe operational employment and support of the S-3B aircraft. The S-3B will reach end of service in 2009. The specific modifications budgeted and programmed are:

OSIP No. / DESCRIPTION	PRIOR YEARS	FY 2008	FY 2009	FY 2010	OCO FY2010	Total FY2010
004-06 FLIGHT CRITICAL SYSTEM SUSTAINMENT	1.4	0.5				
Inactive OSIPs	411.3					
TOTAL	412.7	0.5				

MODIFICATION TITLE: FLIGHT CRITICAL SYSTEM SUSTAINMENT(OSIP 004-06)

MODELS OF SYSTEMS AFFECTED: S-3B TYPE MODIFICATION: Safety

DESCRIPTION / JUSTIFICATION: The purpose of this program is to provide funding to implement airframe and avionic modifications to flight critical S-3B systems that are essential to the continued safe operational employment and support of the S-3B aircraft. These include but are not limited to airframe changes to inner and outer wing spars discovered during the Full Scale Fatigue test and are required to safely operate the aircraft until FY2009, and replacement of Kapton wiring harness's to Critical Avionics equipment.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES: The modifications identified are minor and do not require approval for full production.

FINANCIAL PLAN: (TOA, \$ IN MILLIONS)

FISCAL YEAR	PRIOR YEARS		FY 2008		FY 2009		FY 2010		FY 2010 OCO	FY 2010 Total								
	QTY	\$	QTY	\$	QTY	\$	QTY	\$										
RDT&E																		
PROCUREMENT																		
INSTALLATION KITS																		
CRITICAL AVIONICS WIRING	15	0.1																
INSTALLATION KITS N/R		0.1																
INSTALL EQUIPMENT																		
INSTALL EQUIPMENT N/R																		
ECO		*																
DATA																		
TRAINING EQUIP																		
SUPPORT EQUIP																		
ILS		0.3		0.1														
OTHER SUPPORT		0.9		0.4														
INTERIM CONTRACTOR SUPPORT																		
TOTAL PROCUREMENT	15	1.4		.5														

Asterisk (*) indicates amount value less than \$51K

NOTE: Installation for kits is "O" level.

BUDGET ITEM JUSTIFICATION SHEET											DATE:	
P-40											May 2009	
APPROPRIATION/BUDGET ACTIVITY							P-1 ITEM NOMENCLATURE					
Aircraft Procurement, Navy / APN5 Aircraft Modifications							054400, E-2 SERIES					
Program Element for Code B Items:							Other Related Program Elements					
	PRIOR YEARS	ID Code	FY2008	FY2009	FY2010	OCO FY2010	Total FY2010					
QUANTITY												
COST (In Millions)	1210.4	A	10.2	27.4	22.9	17.2	40.1					

DESCRIPTION:

This line item funds modifications to the E-2 aircraft. The E-2 is an all weather, carrier based, airborne early warning and command and control aircraft that extends task force defense perimeters by providing early warning of approaching enemy units and by vectoring interceptors into attack position. Additionally, the E-2 Hawkeye provides strike control, radar surveillance, search and rescue assistance, communications relay and automatic tactical data exchange. The E-2 aircraft design service life is 10,000 flight hours with an average service life remaining through FY2020. The E-2 is a critical element of the Navy's Cooperative Engagement Capability (CEC).

The Structural Enhancements OSIP (121-87) provides for procurement and installation of the new eight (8) bladed propeller. The Block II Upgrade (74-88) funds commercial technology, E-2 Warning Detection System, Radar Obsolescence, Vapor Cycle and Engine Turbine Blade reliability improvements and emerging safety of flight items such as parachute survival ensemble (PSE), cockpit lighting, and flight instruments. As the result of technological advancements, the Commercial-Off-The-Shelf (COTS) hardware/software of the Mission Computer (MCU) will change or become obsolete in the very near future. The Technology Insertion OSIP (5-01) supports assembly, validation and configuration management of COTS hardware and software of the MCU. The Outer Wing Panel (OWP) OSIP (87-88), funds OWP enhancements. The E-2 Core Open Architecture (OA) OSIP (5-09), provides core hardware and software architecture upgrades to reduce cost of future requirements integration. The Reliability Enhancements OSIP (22-09) funds radar reliability improvement, cockpit lighting and radar altimeter improvements. High Frequency Internet-Protocol (HFIP) OSIP (2-10) provides Internet-Protocol Networking capability to 31 E-2C (Hawkeye 2000/MCU) aircraft, utilizing existing High Frequency radio set and new airborne Advanced Digital Networking System (ADNS) Internet Protocol router/gateway. The Critical Avionics OSIP (12-10) funds the obsolescence and hazard mitigation efforts for all primary and secondary sensors, communication media and basic navigation aids. The TE-2C Conversion OSIP (15-10) provides for mission essential equipment installs into TE-2C aircraft to convert them to the E-2C Hawkeye 2000 configuration. The Automatic Identification System (AIS) OSIP (2-11), will integrate this system into the E-2 mission computer and provide for a means to transfer AIS data from the aircraft to the warships inflight. The Radar Improvement program OSIP (5-11) supports portions of it's APS-145 Radar architecture dated from the 1960s and serious obsolescence issues are expected to disrupt normal operations if left unmitigated. The E-2 In-Flight Refueling (IFR) OSIP (3-12), provides extended range and longer endurance for Battlespace Surveillance, Management, and Targeting for 24/7 operations. The Dual Transmit Satellite Communications OSIP (1-13), provides the E-2 with an additional SATCOM radio satisfying a capability gap that is identified in Operation Enduring Freedom. The MODE 5/S OSIP (2-13) replaces the National Security Administration (NSA) de-certified Mode 4 Identification Friend or Foe (IFF) capability, which is no longer effective or suitable for modern military operations. Mode 5/S will support the Joint Initial Operational Capability (IOC) as defined by the Joint Requirements Oversight Council (JROC).

The specific modifications budgeted and programmed are:

OSIP No. / DESCRIPTION	PRIOR YEARS	FY2008	FY2009	FY2010	OCO FY2010	Total FY2010
121-87 STRUCTURAL ENHANCEMENTS	569.5	0.2				
074-88 BLOCK UPGRADE II	423.7	0.1				
087-88 OUTER WING PANELS	119.6	0.3	0.3	0.3		0.3
005-01 TECHNOLOGY INSERTION	57.8	9.6	9.6	9.4		9.4
005-09 E-2 CORE OA/IP INFRASTRUCTURE & EXPERIMENTATION			1.5			
022-09 RELIABILITY ENHANCEMENTS			16.0			
002-10 HIGH FREQUENCY INTERNET PROTOCOL				0.3		0.3
012-10 CRITICAL AVIONICS				12.8		12.8
015-10 TE-2C CONVERSION					17.2	17.2
INACTIVE OSIPS	39.9					
TOTAL	1,210.4	10.2	27.4	22.9	17.2	40.1

MODIFICATION TITLE: TECHNOLOGY INSERTION(OSIP 005-01)

MODELS OF SYSTEMS AFFECTED: E-2C

TYPE MODIFICATION: Mission Performance Enhancement

DESCRIPTION / JUSTIFICATION:

Commercial technology obsolescence drives hardware and software changes in Computing Resources for the E-2 Aircraft. Funding is required to support capability for assembly, validation, and configuration management of Commercial Off-The-Shelf (COTS) hardware/software provided to fleet squadrons and updated on a 4-year technology cycle. Specific examples include video boards, memory boards, CPU cards, compilers, middleware, backplanes, and operating systems that will change or become obsolete.

Global War On Terrorism (GWOT) effort: "E-2C Maritime Automatic Identification System (\$5M)" was added to Installation Kits, Data and Other Support in FY06. A/S is an O-Level install.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

The E-2 Program Support Activity (PSA) will insure software is upgraded, revised, and integrated so it functions with the versions of the COTS hardware and software delivered. The integration effort must start no less than one year prior to the delivery.

FINANCIAL PLAN: (TOA, \$ IN MILLIONS)

FISCAL YEAR	PRIOR YEARS		FY 2008		FY 2009		FY 2010		OCO FY 2010		QTY	\$									
	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$											
RDT&E																					
PROCUREMENT																					
INSTALLATION KITS																					
GWOT - MARITIME AUTOMATIC IDEN SYS	*42	0.7																			
INSTALLATION KITS N/R																					
GWOT - MARITIME AUTOMATIC IDEN SYS		0.1																			
INSTALL EQUIPMENT																					
INSTALL EQUIPMENT N/R																					
ECO																					
DATA		0.3		*	0.2		*														
TRAINING EQUIP																					
SUPPORT EQUIP																					
ILS		2.9		0.3	0.1		0.3														
OTHER SUPPORT		53.8		9.3	9.2		9.1														
INTERIM CONTRACTOR SUPPORT																					
TOTAL PROCUREMENT		57.8		9.6	9.6		9.4														

Asterisk (*) indicates amount value less than \$5K

* 2 of the 42 kits are Validation and Verification Kits

MODIFICATION TITLE: HIGH FREQUENCY INTERNET PROTOCOL (OSIP 002-10)

MODELS OF SYSTEMS AFFECTED: E-2C TYPE MODIFICATION: Mission Performance Enhancements

DESCRIPTION / JUSTIFICATION:

This funding will integrate and test the High Frequency (HF) radio and Mission Computer hardware and software modifications and additions to provide an E-2 HF digital data communications path, allowing for E-2 connectivity with other HF Internet Protocol (IP) users.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES: Not Applicable

FINANCIAL PLAN: (TOA, \$ IN MILLIONS)

FISCAL YEAR	PRIOR YEARS		FY 2008		FY 2009		FY 2010		FY 2010 OCO		QTY												
	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	
RDT&E																							
PROCUREMENT																							
INSTALLATION KITS																							
High Frequency Internet Protocol							6	0.1															
INSTALLATION KITS N/R																							
INSTALL EQUIPMENT							6	0.1															
INSTALL EQUIPMENT N/R																							
ECO																							
DATA									*														
TRAINING EQUIP																							
SUPPORT EQUIP																							
ILS									*														
OTHER SUPPORT									*														
INTERIM CONTRACTOR SUPPORT																							
INSTALLATION COST							6	*															
TOTAL PROCUREMENT								0.3															

Asterisk (*) indicates amount value less than \$51K

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: E-2C MODIFICATION TITLE: HIGH FREQUENCY INTERNET PROTOCOL (OSIP 002-10)

INSTALLATION INFORMATION: High Frequency Internet Protocol

METHOD OF IMPLEMENTATION: Depot Field Mod Team

ADMINISTRATIVE LEADTIME: 2 Months PRODUCTION LEADTIME: 2 Months

CONTRACT DATES: FY 2008 _____ FY 2009 _____ FY 2010 Nov 09 _____

DELIVERY DATE: FY 2008 _____ FY 2009 _____ FY 2010 Jan 10 _____

(\$ in Millions)

Cost:	PRIOR YEARS		FY 2008		FY 2009		FY 2010		FY 2010 OCO														
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
FY 2007 & FY () kits																							
FY 2008 () kits																							
FY 2009 () kits																							
FY 2010 (6) kits								6	*														
FY 2011 () kits																							
FY 2012 () kits																							
FY 2013 () kits																							
FY 2014 () kits																							
FY 2015 () kits																							
TO COMPLETE () kits																							
Total								6	*														

Installation Schedule

FY2007 & Prior	FY 2008				FY 2009				FY 2010				FY 2011				FY 2012						
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4			
In																							
Out										2	4												

	FY 2013				FY 2014				FY 2015				To Complete	Total	
	1	2	3	4	1	2	3	4	1	2	3	4			
In														6	
Out														6	

MODIFICATION TITLE: CRITICAL AVIONICS (OSIP 012-10)

MODELS OF SYSTEMS AFFECTED: E-2C

TYPE MODIFICATION: Mission Performance Enhancements

DESCRIPTION / JUSTIFICATION:

Critical Avionics addresses E-2 avionics obsolescence, reliability, functionality and hazard mitigation efforts for primary and secondary sensors, communication, and navigation systems. Improves the reliability and functionality of the current E-2 fixed wire HF antenna which supports only a single radio and breaks often, creating safety and operational impacts by upgrading to an antenna suite which is more reliable, capable and provides multiple transmission paths on and off the aircraft. Addresses obsolescence and improves the reliability and functionality of the current HF radio set by upgrading to a more capable and reliable radio suite which includes automatic link establishment, secure data and voice capability and additional voice and data channels. Addresses obsolescence and improves the reliability and functionality of the current SATCOM receive system (MATT) radio by upgrading to a radio which can receive current and future broadcast waveforms, can communicate using current and future cryptographic algorithms and can be integrated with the E-2 weapons systems more effectively, reducing startup, load, and setup time and reducing operator workload and troubleshooting requirements. Addresses obsolescence and improves the reliability and functionality of the current V/UHF radios by incorporating an improved ARC-210 radio which includes secure data and voice capability using current and future cryptographic algorithms and which includes a growth path to future applications such as JPALS. Addresses obsolescence and improves the reliability and functionality of the current KY-58 COMSEC device by upgrading to a system which provides voice and data encryption using current and future cryptographic algorithms. Improves the CEC system reliability which addressing significant obsolescence and crypto upgrade issues by replacement of four WRAs (3 processors and the receiver synthesizer) with a single WRA combining these functions. The replacement WRA will be common to E-2D, surface combatants and USMC deployed versions of CEC.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES: Not Applicable

FINANCIAL PLAN: (TOA, \$ IN MILLIONS)

FISCAL YEAR	PRIOR YEARS		FY 2008		FY 2009		FY 2010		OCO FY 2010		QTY	\$											
	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$													
RDT&E																							
PROCUREMENT																							
INSTALLATION KITS																							
MATT REPLACEMENT								1	*														
KY-58																							
HF ANTENNA								1	*														
HF RADIO								1	*														
ARC-210								1	*														
CEC																							
INSTALLATION KITS N/R									3.8														
INSTALL EQUIPMENT																							
MATT REPLACEMENT								1	0.2														
KY-58																							
HF ANTENNA								1	*														
HF RADIO								1	0.1														
ARC-210								1	0.3														
CEC								1	0.2														
INSTALL EQUIPMENT N/R																							
ECO																							
DATA									1.3														
TRAINING EQUIP																							
SUPPORT EQUIP									0.4														
ILS									1.6														
OTHER SUPPORT									4.9														
INTERIM CONTRACTOR SUPPORT																							
INSTALLATION COST																							
TOTAL PROCUREMENT									12.8														

Asterisk (*) indicates amount value less than \$51K

Exhibit P-3a

MODIFICATION TITLE: TE-2C CONVERSION (OSIP 015-10)

MODELS OF SYSTEMS AFFECTED: TE-2C and E-2C TYPE MODIFICATION: Mission Critical

DESCRIPTION / JUSTIFICATION:

FY 2010 Overseas Contingency Operations (OCO) funding provides for mission essential equipment installs into TE-2C aircraft to convert them to the current E-2C Hawkeye 2000 configuration. The conversion of two TE-2C aircraft is required to address higher optempo requirements in addition to supplementing the Periodic Maintenance Interval (PMI) pipeline for the E-2C Hawkeye 2000.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

FINANCIAL PLAN: (TOA, \$ IN MILLIONS)

FISCAL YEAR	PRIOR YEARS		FY 2008		FY 2009		FY 2010		OCO FY 2010													
	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$
RD&E																						
PROCUREMENT																						
INSTALLATION KITS									2	16.4												
INSTALLATION KITS N/R																						
INSTALL EQUIPMENT																						
INSTALL EQUIPMENT N/R																						
ECO																						
DATA (ECP/TD)										0.1												
TRAINING EQUIP																						
SUPPORT EQUIP																						
ILS										0.1												
OTHER SUPPORT										0.6												
INTERIM CONTRACTOR SUPPORT																						
INSTALLATION COST																						
TOTAL PROCUREMENT										17.2												

CLASSIFICATION: **UNCLASSIFIED**

Exhibit P-40, BUDGET ITEM JUSTIFICATION							DATE: May 2009					
APPROPRIATION/BUDGET ACTIVITY <i>Aircraft Procurement, Navy/APN-5 Aircraft Modifications</i>							P-1 ITEM NOMENCLATURE <i>054900, TRAINER A C SERIES</i>					
Program Element for Code B Items:							Other Related Program Elements					
	Prior Years	ID Code	FY2008	FY2009	FY2010	FY 2010 OCO	FY 2010 Total					
QTY												
COST (In Millions)	85.1	A	20.1	22.1	20.9							
<p>DESCRIPTION: This line item funds modifications to a group of trainer aircraft which includes T-34C, T-39, T-44A/C, TH-57, T-38, and TC-12. The trainer aircraft are described as follows: The T-34C is a single engine turbo-prop, multi-seat aircraft produced by Beech Aircraft used to train student pilots and flight officers in aircraft flight; the T-39 is a dual-engine, multi-purpose aircraft used to train undergraduate flight officers; the T-44 and TC-12 are twin-engine, multi-seat aircraft produced by Beech Aircraft used to train for operation of multi engine aircraft, specifically the P-3; the TH-57 and TH-6 are a single-engine, multi-seat rotary wing aircraft used for helicopter training. The T-38 is a two seat twin-engine supersonic jet aircraft utilized the US Navy Test Pilot School to train pilots, test flight officers, and test engines. The overall goal of the modification is to maintain safe and reliable operation of the trainer aircraft through the timely installation of necessary changes.</p> <p>The specific modifications budgeted and programmed are:</p>												
(TOA, \$ in Millions)												
OSIP No.	Description	Prior Years	FY2008	FY2009	FY2010							
005-04	T-44 AVIONICS	37.3	7.3	15.0	10.1							
015-04	T-38 A/C CONVE	21.2	5.7									
006-05	TRAINER LEGACY	1.2	*									
006-07	TH-57 SAFETY U	2.2	6.2	6.4	10.1							
007-07	T44 WING WIRIN	0.2	0.9	0.7	0.7							
*Inactive OSIPs		23.0										
Total		85.1	20.1	22.1	20.9							
Note: Totals may not add due to rounding.												

Exhibit P-3a Individual Modification

MODIFICATION TITLE: T-44 AVIONICS OBSOLESCENCE (OSIP 005-04)

MODELS OF SYSTEMS AFFECTED: T-44A/C TYPE MODIFICATION: Safety

DESCRIPTION / JUSTIFICATION: The T-44A Avionics are becoming non-supportable due to non-availability of parts. The following avionics systems require replacement: NCS-31A Area Navigation/Control System, AP-106 Autopilot, Flight Director and the RDR-130 Weather Radar. Avionics are being returned from the repair vendor Beyond Economical Repair (BER) due to non-availability of parts. Spare units are not available in the commercial market. Following these Avionics Upgrade the aircraft are designated T-44C IMPACT: As avionics become BER due to lack of parts, spares are being depleted. Lack of avionics will ground aircraft and severely degrade CNATRA's ability to meet Pilot Training Requirements. Current plans call for T-44 to fly its training mission until 2025. There are 54 T-44A in the inventory and all 54 will receive this modification.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES: The T-44 Avionics Obsolescence (OSIP 05-04) non-recurring engineering occurred in FY04. Commercially available Non-Development Item (NDI) kit procurement and installations began in FY05.

FINANCIAL PLAN: (TOA, \$ in Millions)

	Prior Years		FY 2008		FY 2009		FY 2010		FY 2010 OCO												
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
RDT&E																					
PROCUREMENT																					
Installation Kits																					
Install Kits	19	8.7	12	0.9	12	1.7	8	0.8													
Installation Kits N/R	3	4.7																			
Installation Equipment																					
Installation Equipment (B Kits)	17	13.8	12	4.4	12	7.5	8	3.6													
Installation Equipment N/R																					
Engineering Change Orders																					
Data		0.3																			
Training Equipment	4	8.3	1	0.2	2	3.8	2	4.1													
Support Equipment																					
ILS																					
Other Support		*																			
Interim Contractor Support																					
Installation Cost	9	1.4	14	1.7	14	2.0	14	1.5													
Total Procurement		37.3		7.3		15.0		10.1													

Notes:
 1. Totals may not add due to rounding.
 2. Asterisk indicates amount less than \$51K.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: T-44A/C MODIFICATION TITLE: T-44 AVIONICS OBSOLESCENCE (OSIP 005-04)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Contractor Field Mod Team

ADMINISTRATIVE LEADTIME: 1 Months PRODUCTION LEADTIME: 6 Months

CONTRACT DATES: FY 2008: Nov 07 FY 2009: Nov 08 FY 2010: Nov 09

DELIVERY DATE: FY 2008: May 08 FY 2009: May 09 FY 2010: May 10

(\$ in Millions)

Cost:	Prior Years		FY 2008		FY 2009		FY 2010		FY 2010 OCO													
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
FY 2007 & PY (22) kits	9	1.4	7	0.9	6	0.8																
FY 2008 (12) kits			7	0.9	3	0.4	2	0.2														
FY 2009 (12) kits					5	0.7	7	0.8														
FY 2010 (8) kits							5	0.5														
FY 2011 () kits																						
FY 2012 () kits																						
FY 2013 () kits																						
FY 2014 () kits																						
FY 2015 () kits																						
TO COMPLETE () kits																						
TOTAL	9	1.4	14	1.7	14	2.0	14	1.5														

Installation Schedule

	FY 2007 & Prior	FY 2008				FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	9	4	3	4	3	4	3	4	3	4	3	4	3												
Out	9	4	3	4	3	4	3	4	3	4	3	4	3												

	FY 2014				FY 2015				To Complete	Total
	1	2	3	4	1	2	3	4		
In										51
Out										51

Exhibit P-3a Individual Modification

MODIFICATION TITLE: TH-57 SAFETY UPGRADE(OSIP 006-07)

MODELS OF SYSTEMS AFFECTED: TH-57B/C TYPE MODIFICATION: Conversion/Safety

DESCRIPTION / JUSTIFICATION: The TH-57 is the sole platform for primary helicopter flight training for student aviators (USN, USMC, USCG) and foreign military pilots. This modernization effort capitalizes on technology improvements by increasing aircrew survivability and situational awareness while providing a fleet representative digital cockpit configuration.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES: The components of this block upgrade will be COTS as turnkey items. ACI by the commercial contractor.

FINANCIAL PLAN: (TOA, \$ in Millions)

	Prior Years		FY 2008		FY 2009		FY 2010		FY 2010 OCO														
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
RDT&E																							
PROCUREMENT																							
Installation Kits																							
Install Kits			2	1.5	10	2.9	18	5.7															
Installation Kits N/R		2.0		0.9																			
Installation Equipment																							
Equipment			2	*	10	*	18	0.1															
Installation Equipment N/R																							
Engineering Change Orders																							
Data				0.1		*		*															
Training Equipment				2.7		2.1		2.1															
Support Equipment																							
ILS																							
Other Support		0.2		0.8		0.6		0.9															
Interim Contractor Support																							
Installation Cost			2	0.2	10	0.7	18	1.4															
Total Procurement		2.2		6.2		6.4		10.1															

Notes:

1. Totals may not add due to rounding
2. Asterisk indicates amount less than \$51K

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: TH-57B/C MODIFICATION TITLE: TH-57 SAFETY UPGRADE(OSIP 006-07)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Contractor Field Mod Team

ADMINISTRATIVE LEADTIME: 1 Months PRODUCTION LEADTIME: 3 Months

CONTRACT DATES: FY 2008: Oct 07 FY 2009: Oct 08 FY 2010: Oct 09

DELIVERY DATE: FY 2008: Jan 08 FY 2009: Jan 09 FY 2010: Jan 10

(\$ in Millions)

Cost:	Prior Years		FY 2008		FY 2009		FY 2010		FY 2010 OCO														
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
FY 2007 & PY () kits																							
FY 2008 (2) kits			2	0.2																			
FY 2009 (10) kits					10	0.7																	
FY 2010 (18) kits							18	1.4															
FY 2011 () kits																							
FY 2012 () kits																							
FY 2013 () kits																							
FY 2014 () kits																							
FY 2015 () kits																							
TO COMPLETE () kits																							
TOTAL			2	0.2	10	0.7	18	1.4															

Installation Schedule

FY 2007 & Prior	FY 2008				FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In		2				3	3	4		6	6	6												
Out		2				3	3	4		6	6	6												

	FY 2014				FY 2015				To Complete	Total
	1	2	3	4	1	2	3	4		
In										30
Out										30

BUDGET ITEM JUSTIFICATION SHEET											DATE:	
P-40											May 2009	
APPROPRIATION/BUDGET ACTIVITY							P-1 ITEM NOMENCLATURE					
Aircraft Procurement, Navy / APN5 Aircraft Modifications							055600, C-2A					
Program Element for Code B Items:							Other Related Program Elements					
	PRIOR YEARS	ID Code	FY2008	FY2009	FY2010	OCO FY2010	Total FY2010					
QUANTITY												
COST (In Millions)	336.2	A	32.398	22.1	21.3	14.1	35.4					

DESCRIPTION:

The C-2A(R) Greyhound is a high wing monoplane, twin engine turbo-prop aircraft capable of operating from both a shore base and all operational USN aircraft carrier classes. The mission of the C-2A(R) is to provide rapid response Carrier Onboard Delivery (COD) of fleet essential supplies, repair parts, and personnel to sustain at sea operations of deployed battle groups. In addition, the C-2A(R) provides airdrop delivery and mobilization support for special operations forces from land bases and carriers. The design service life of the C-2A(R) is 10,000 flight hours with 15,000 landings. Service Life Extension Program (SLEP) OSIP (024-94) modifications increase the service life to 15,000 flight hours and 36,000 landings, remove and replace all aircraft wiring and install various upgrades to allow C-2A(R) to meet requirements into the next decade. The overall goal of the modifications is to continue procurement efforts for the C-2A(R) SLEP and the Critical Components Program. Critical Components OSIP (11-07) is composed of Alighting & Landings, Avionics Upgrades, Engine Power & Propulsion, Hydraulic's, and Structural/Pressurization Engineering Change Proposals (ECPs). The C-2 Greyhound AIC-14A Internal Comms System OSIP (16-10) provides for redesign of the of the C-2A's AN/AIC-14A C-2645C Internal Comms System Control Panel. The C-2 Greyhound Iridium Phone System OSIP (17-10) will ensure that the C-2A has a modem and compatible communications links with key stakeholders in the C-2A mission.

OSIP No. / DESCRIPTION	PRIOR YEARS	FY2008	FY2009	FY2010	OCO FY2010	Total FY2010
024-94 C-2A SLEP	332.8	30.2	19.9	18.6		18.6
011-07 CRITICAL COMPONENTS	3.4	2.2	2.1	2.7		2.7
016-10 C-2 AIC-14A INTERNAL COMMS SYS					3.5	3.5
017-10 C-2 IRIDIUM PHONE SYSTEM					10.6	10.6
TOTAL	336.2	32.4	22.1	21.3	14.1	35.4

Exhibit P-3a

MODIFICATION TITLE: C-2A(R) Blk Upgrade/Service Life Extension Program (SLEP) (OSIP 024-94)

MODELS OF SYSTEMS AFFECTED: C-2A(R) Aircraft TYPE MODIFICATION: MISSION PERFORMANCE ENHANCEMENTS

DESCRIPTION / JUSTIFICATION:

The C-2A(R) Block Upgrade/Service Life Extension Program (SLEP) extends the Navy's Carrier Onboard Delivery (COD) capability beyond current projected service life. Efforts funded in this OSIP include Structural Enhancements, Aircraft Rewiring, L-Probe Kit, CAINS II, ARC-210 Radios, Trim Actuators, Outer Wing Panel Enhancements, and NP-2000 (8 bladed propeller).

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

Development and Operational Testing (DT and OT) have been completed for the Structures and Rewire efforts included in this OSIP. Aircraft Rewire effort experienced technical difficulties during initial validation process and program was restructured resulting in a 2 year slip. Procurement of Rewire kits commenced in FY06. NP2000 has also experienced delays due to test article issues related to the program. It has also experienced a two year slip and has been restructured. DT and OT for NP2000 completed in 1st Qr FY 2008.

FINANCIAL PLAN: (TOA, \$ IN MILLIONS)

FISCAL YEAR	PRIOR YEARS		FY 2008		FY 2009		FY 2010		OCO FY 2010		QTY		QTY		QTY		QTY		
	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	\$	\$	\$	\$	\$	\$	\$	\$	
RDT&E																			
PROCUREMENT																			
INSTALLATION KITS																			
ARC-210	35	3.0																	
CAINS II (AFC-156)	36	2.3																	
INTERIM AFC	5	0.3																	
INTERIM AFC-DERF	2	0.1																	
L-PROBE (AFC-161)	36	0.3																	
NP2000	6	1.0	1	0.1	2	0.1	2	0.2											
OWP CONVERSION (AYC-A)	19	3.1																	
OWP ENHANCEMENT (AFC-378)	57	6.0	9	*	2	*	2	*											
OWP ENHANCEMENT (AFC-Y)	4	10.8																	
REWIRE (AFC-162)	18	13.7	6	3.3	4	2.1	4	2.2											
REWIRE (AFC-162)-DERF	2	1.7																	
STRUCTURE (AFC-171)-DERF	1	0.4																	
STRUCTURE KIT (AFC-171)	26	8.7	4	0.2	3	0.2													
TRIM ACTUATOR	70	0.2																	
INSTALLATION KITS N/R	6	45.3																	
INSTALL EQUIPMENT																			
CAINS II B KITS	50	6.1																	
INSTALL EQUIPMENT N/R		4.2																	
ECO																			
DATA		16.1		0.3		*	*												
TRAINING EQUIP		6.6		1.1		0.3	0.5												
SUPPORT EQUIP		3.9		0.7		0.1													
ILS		6.0		0.5		0.3	0.3												
OTHER SUPPORT		133.3		9.0		3.3	3.7												
INTERIM CONTRACTOR SUPPORT																			
INSTALLATION COST	317	59.7	21	14.9	20	13.5	11	11.6											
TOTAL PROCUREMENT		336.2		30.2		19.9		18.6											

Asterisk (*) indicates amount value less than \$51K

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: C-2A(R) Aircraft MODIFICATION TITLE: C-2A(R) Blk Upgrade/Service Life Extension Program (SLEP) (OSIP 024-94) - Structures Kits (AFC-171)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Concurrent w/PMI

ADMINISTRATIVE LEADTIME: 1 Months PRODUCTION LEADTIME: 10 Months

CONTRACT DATES: FY 2008 Oct 07 FY 2009 Oct 08 FY 2010 _____

DELIVERY DATE: FY 2008 Aug 08 FY 2009 Aug 09 FY 2010 _____

(\$ in Millions)

Cost:	PRIOR YEARS		FY 2008		FY 2009		FY 2010		OCO FY 2010													
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
FY 2007 & PY (26) kits	22	25.1	4	4.6																		
FY 2008 (4) kits					4	4.7																
FY 2009 (3) kits							3	3.6														
FY 2010 () kits																						
FY 2011 () kits																						
FY 2012 () kits																						
FY 2013 () kits																						
FY 2014 () kits																						
FY 2015 () kits																						
TO COMPLETE () kits																						
Total	22	25.1	4	4.6	4	4.7	3	3.6														

Installation Schedule

	2007 & PRIOR	FY 2008				FY 2009				FY 2010				FY 2011				FY 2012				
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
In	22	1	1	1	1	1	1	1	1	1	1	1										
Out	17	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1						

	FY 2013				FY 2014				FY 2015				To Complete	Total
	1	2	3	4	1	2	3	4	1	2	3	4		
In														33
Out														33

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: C-2A(R) Aircraft

MODIFICATION TITLE: C-2A(R) Blk Upgrade/Service Life Extension Program (SLEP) (OSIP 024-94) - Rewire

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Concurrent w/PMI & Field Mod Team

ADMINISTRATIVE LEADTIME: 1 Months PRODUCTION LEADTIME: 14 Months

CONTRACT DATES: FY 2008 Oct 07 FY 2009 Oct 08 FY 2010 Oct 09

DELIVERY DATE: FY 2008 Dec 08 FY 2009 Dec 09 FY 2010 Dec 10

(\$ in Millions)

Cost:	PRIOR YEARS		FY 2008		FY 2009		FY 2010		OCO FY 2010													
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
2007 & PRIOR (18) kits *	**13	12.0	5	8.5																		
FY 2008 (6) kits					6	7.1																
FY 2009 (4) kits							4	7.3														
FY 2010 (4) kits																						
FY 2011 () kits																						
FY 2012 () kits																						
FY 2013 () kits																						
FY 2014 () kits																						
FY 2015 () kits																						
TO COMPLETE () kits																						
Total	13	12.0	5	8.5	6	7.1	4	7.3														

*2 Kits purchased in prior years were installed yet no longer reflect current design and could not be used
 **3 Kits were used for Prototype, Validation and Verification

Installation Schedule

	2007 & PRIOR	FY 2008				FY 2009				FY 2010				FY 2011				FY 2012				
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
In	13	1	1	1	2	1	1	2	2	1	1	1	1									
Out	8	1	1	1	2	1	1	1	2	1	1	2	2	1	1	1	1	1				

	FY 2013				FY 2014				FY 2015				To Complete	Total
	1	2	3	4	1	2	3	4	1	2	3	4		
In														28
Out														28

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: C-2A(R) Aircraft MODIFICATION TITLE: C-2A(R) Blk Upgrade/Service Life Extension Program (SLEP) (OSIP 024-94) - Outer Wing Panel Enhancement

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Navy Forced Retrofit Component

ADMINISTRATIVE LEADTIME: 1 Months PRODUCTION LEADTIME: 4 Months

CONTRACT DATES: FY 2008 Oct 07 FY 2009 Oct 08 FY 2010 Oct 09

DELIVERY DATE: FY 2008 Feb 08 FY 2009 Feb 09 FY 2010 Feb 10

(\$ in Millions)

Cost:	PRIOR YEARS		FY 2008		FY 2009		FY 2010		OCO FY 2010													
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
2007 & PRIOR (57) kits	51	11.7	6	0.8																		
FY 2008 (9) kits			4	0.6	5	0.7																
FY 2009 (2) kits					2	0.3																
FY 2010 (2) kits							2	0.3														
FY 2011 () kits																						
FY 2012 () kits																						
FY 2013 () kits																						
FY 2014 () kits																						
FY 2015 () kits																						
TO COMPLETE () kits																						
Total	51	11.7	10	1.4	7	1.0	2	0.3														

Installation Schedule

	2007 & PRIOR	FY 2008				FY 2009				FY 2010				FY 2011				FY 2012				
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
In	51	3	3	2	2	1	2	2	2	1	1											
Out	49	2	3	3	2	2	1	2	2	2	1	1										

	FY 2013				FY 2014				FY 2015				To Complete	Total
	1	2	3	4	1	2	3	4	1	2	3	4		
In														70
Out														70

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: C-2A(R) Aircraft MODIFICATION TITLE: C-2A(R) Blk Upgrade/Service Life Extension Program (SLEP) (OSIP 024-94) - NP2000

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Concurrent w/FMI Drive in Mod

ADMINISTRATIVE LEADTIME: 1 Months PRODUCTION LEADTIME: 12 Months

CONTRACT DATES: FY 2008 Oct 07 FY 2009 Oct 08 FY 2010 _____

DELIVERY DATE: FY 2008 Oct 08 FY 2009 Oct 09 FY 2010 _____

(\$ in Millions)

Cost:	PRIOR YEARS		FY 2008		FY 2009		FY 2010		OCO FY 2010													
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
2007 & PRIOR (6) kits	*2		2	0.4	2	0.4																
FY 2008 (1) kits					1	0.2																
FY 2009 (2) kits								2	0.4													
FY 2010 (2) kits																						
FY 2011 () kits																						
FY 2012 () kits																						
FY 2013 () kits																						
FY 2014 () kits																						
FY 2015 () kits																						
TO COMPLETE () kits																						
Total	2		2	0.4	3	0.6	2	0.4														

* Prototype Kit / Kit was Validation & Verification Kit

Installation Schedule

	2007 & PRIOR	FY 2008				FY 2009				FY 2010				FY 2011				FY 2012				
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
In	2	1		1		1		1	1	1	1											
Out	2	1	1	1	1	1	1	1	1	1	1											

	FY 2013				FY 2014				FY 2015				To Complete	Total
	1	2	3	4	1	2	3	4	1	2	3	4		
In														9
Out														9

CLASSIFICATION: **UNCLASSIFIED**

Exhibit P-3a

MODIFICATION TITLE: C-2 Greyhound AIC-14A Internal Comms System (OSIP 016-10)

MODELS OF SYSTEMS AFFECTED: C-2A(R) Aircraft TYPE MODIFICATION: Mission Critical

DESCRIPTION / JUSTIFICATION:

FY 2010 Overseas Contingency Operations (OCO) funding provides for redesign of the C-2A's AN/AIC-14A C-2645E/D/C-2645C Internal Comms System (ICS) Control Panel (4/aircraft + trainers and inventory). Maintains form, fit, function, transparent to aircrew & maintainers, utilizes new Amplifiers (Better Thermal Performance) and replace wires with circuit cards. This is an identified solution using mature technology. O-Level installation. This upgrade will increase C-2A readiness and sortie completion rate by 7%, increasing COD support of deployed (Carrier) CV Battle Groups engaged in OIF/OEF operations. Will decrease direct maintenance man hours and depot repair funds by increasing reliability - allows those resources to be reprogrammed to higher priority tasking.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

FINANCIAL PLAN: (TOA, \$ IN MILLIONS)

FISCAL YEAR	PRIOR YEARS		FY 2008		FY 2009		FY 2010		OCO FY 2010		QTY	\$											
	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$													
RDT&E																							
PROCUREMENT																							
INSTALLATION KITS									140	1.5													
INSTALLATION KITS N/R										0.1													
INSTALL EQUIPMENT																							
INSTALL EQUIPMENT N/R																							
ECO																							
DATA (ECP/TD)										0.3													
TRAINING EQUIP									6	0.6													
SUPPORT EQUIP																							
ILS										0.3													
OTHER SUPPORT										0.5													
INTERIM CONTRACTOR SUPPORT										0.2													
INSTALLATION COST																							
TOTAL PROCUREMENT										3.5													

CLASSIFICATION: **UNCLASSIFIED**

Exhibit P-3a

MODIFICATION TITLE: C-2 Greyhound Iridium Phone System (OSIP 017-10)

MODELS OF SYSTEMS AFFECTED: C-2A(R) Aircraft TYPE MODIFICATION: Mission Critical

DESCRIPTION / JUSTIFICATION:

FY 2010 Overseas Contingency Operations (OCO) funding provides for retrofit of the C-2A fleet with with logistically supportable integrated terrestrial phone links. Allows C-2 Greyhounds in remote, deployed locations to coordinate, real time, high-priority cargo/passenger requirements and airspace control constraints/diplomatic clearances in support of the fluid, ever changing Carrier On-Board Delivery mission. Deployed in remote and unimproved locations with a single High Frequency (HF) radio and single Military Satellite Communications (SATCOM) radio, the C-2A Greyhound is ill-equipped to communicate with the modern in-theater airborne logistics resupply command and control structure and the international civil airspace controllers/schedules for airspace coordination both on deck and while airborne. This logistically supportable terrestrial phone link will ensure the C-2A Greyhound has modern and compatible communications links with these key stakeholders in the C-2A mission.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

FINANCIAL PLAN: (TOA, \$ IN MILLIONS)

FISCAL YEAR	PRIOR YEARS		FY 2008		FY 2009		FY 2010		FY 2010 OCO		QTY	\$											
	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$													
RDT&E																							
PROCUREMENT																							
INSTALLATION KITS									36	2.3													
INSTALLATION KITS N/R										3.0													
INSTALL EQUIPMENT																							
INSTALL EQUIPMENT N/R																							
ECO																							
DATA (ECP/TD)										0.7													
TRAINING EQUIP									3	0.2													
SUPPORT EQUIP																							
ILS										0.9													
OTHER SUPPORT										2.1													
INTERIM CONTRACTOR SUPPORT										0.2													
INSTALLATION COST									39	1.2													
TOTAL PROCUREMENT										10.6													

Exhibit P-40, BUDGET ITEM JUSTIFICATION							DATE: May 2009																																																																																																			
APPROPRIATION/BUDGET ACTIVITY Aircraft Procurement, Navy/APN-5 Aircraft Modifications							P-1 ITEM NOMENCLATURE 056000, C-130 Series																																																																																																			
Program Element for Code B Items:							Other Related Program Elements																																																																																																			
	Prior Years	ID Code	FY2008	FY2009	FY2010	OCO FY2010	Total FY2010																																																																																																			
QTY		A																																																																																																								
COST (In Millions)	154.5	A	29.3	6.4	22.4	52.3	74.8																																																																																																			
<p>DESCRIPTION:</p> <p>This item funds modifications to C/KC-130 aircraft. The Lockheed C/KC-130 aircraft is a four engine, high-wing, all metal, long range, land based monoplane capable of all weather transport of cargo or personnel and in-flight refueling. There are currently 98 aircraft in the Navy and Marine Corps inventory (50 active and 48 reserve). The expected Service Life is as follows:</p> <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>T/M/S</th> <th>Service Date</th> <th>Service Life</th> <th>Expected Life</th> </tr> </thead> <tbody> <tr> <td>C-130T</td> <td>10/91 - 11/95</td> <td>450 mos.</td> <td>2028-2032</td> </tr> <tr> <td>KC-130F</td> <td>03/60 - 11/62</td> <td>600 Mos.</td> <td>2010-2012</td> </tr> <tr> <td>KC-130R</td> <td>09/75 - 06/78</td> <td>480 mos.</td> <td>2015-2018</td> </tr> <tr> <td>KC-130T</td> <td>04/84 - 02/96</td> <td>450 mos.</td> <td>2021-2033</td> </tr> <tr> <td>KC-130J</td> <td>09/00 - 10/13</td> <td>450 mos.</td> <td>2037-2048</td> </tr> </tbody> </table> <p style="text-align: right;">(TOA, \$ in Millions)</p> <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>OSIP No.</th> <th>Description</th> <th>Prior Years</th> <th>FY2008</th> <th>FY2009</th> <th>FY2010</th> <th>OCO FY2010</th> <th>Total FY2010</th> </tr> </thead> <tbody> <tr> <td>020-03</td> <td>Aircraft Survivability Equip</td> <td>94.4</td> <td>5.5</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>010-06</td> <td>C-130J CNS/ATM</td> <td>24.5</td> <td></td> <td>4.9</td> <td>21.3</td> <td></td> <td>21.3</td> </tr> <tr> <td>022-07</td> <td>KC-130 ISR / Weapons Mission Kit</td> <td></td> <td></td> <td></td> <td></td> <td>52.3</td> <td>52.3</td> </tr> <tr> <td>007-08</td> <td>KC-130 Vairable Speed Drogue</td> <td></td> <td>1.0</td> <td>1.5</td> <td>1.1</td> <td></td> <td>1.1</td> </tr> <tr> <td>015-08</td> <td>Navigation Enhancements</td> <td></td> <td>21.8</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>022-08</td> <td>Aircraft Health Monitoring System</td> <td></td> <td>1.0</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>XXX-XX</td> <td>Inactive OSIPs</td> <td>35.6</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Total</td> <td></td> <td>154.5</td> <td>29.3</td> <td>6.4</td> <td>22.4</td> <td>52.3</td> <td>74.8</td> </tr> </tbody> </table> <p>Note: Totals may not add due to rounding.</p> <p>RESERVE FUNDING INCLUDED IN TOTAL 22.8</p>											T/M/S	Service Date	Service Life	Expected Life	C-130T	10/91 - 11/95	450 mos.	2028-2032	KC-130F	03/60 - 11/62	600 Mos.	2010-2012	KC-130R	09/75 - 06/78	480 mos.	2015-2018	KC-130T	04/84 - 02/96	450 mos.	2021-2033	KC-130J	09/00 - 10/13	450 mos.	2037-2048	OSIP No.	Description	Prior Years	FY2008	FY2009	FY2010	OCO FY2010	Total FY2010	020-03	Aircraft Survivability Equip	94.4	5.5					010-06	C-130J CNS/ATM	24.5		4.9	21.3		21.3	022-07	KC-130 ISR / Weapons Mission Kit					52.3	52.3	007-08	KC-130 Vairable Speed Drogue		1.0	1.5	1.1		1.1	015-08	Navigation Enhancements		21.8					022-08	Aircraft Health Monitoring System		1.0					XXX-XX	Inactive OSIPs	35.6						Total		154.5	29.3	6.4	22.4	52.3	74.8
T/M/S	Service Date	Service Life	Expected Life																																																																																																							
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022-07	KC-130 ISR / Weapons Mission Kit					52.3	52.3																																																																																																			
007-08	KC-130 Vairable Speed Drogue		1.0	1.5	1.1		1.1																																																																																																			
015-08	Navigation Enhancements		21.8																																																																																																							
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XXX-XX	Inactive OSIPs	35.6																																																																																																								
Total		154.5	29.3	6.4	22.4	52.3	74.8																																																																																																			

Exhibit P-3a

Individual Modification

MODIFICATION TITLE: C-130J CNS/ATM (OSIP 010-06)

MODELS OF SYSTEMS AFFECTED: KC-130J, KC-130T, C-130T TYPE MODIFICATION: Safety

DESCRIPTION/JUSTIFICATION: Objective of the Communication Navigation Surveillance/Air Traffic Management (CNS/ATM) OSIP is to preserve utilization of current KC-130J capabilities world-wide by meeting International Civil Aviation Organization (ICAO) Air Traffic Management mandates through a series of commercial procurements and post-production retrofit installations. ICAO mandates enhanced Mode-S and Required Navigation Performance/Area Navigation (RNP/RNAV) capabilities in the European Flight Information Region (FIR) started in FY06, followed by the requirement of enhanced Mode-S, which is the Automatic Dependent Surveillance-Broadcast (ADS-B) comm-link component of Mode-S, and will be required in FY07. The USMC has determined that re-joining with the C-130J Co-Operative Software and Systems Upgrade Requirements Management (COSSURM) Block Upgrade Community to be the most expedient and cost-effective means to meet CNS/ATM Mandates as well as incorporate other mission critical software changes through spiral upgrade initiatives or "Blocks". This OSIP will upgrade the KC-130J to enhanced Mode-S and RNP/RNAV through two separate initiatives. The first and least intensive, Block 6.5 which includes enhanced Mode-S, began in FY06. The second and extremely complex Block 7.0 which includes the RNP/RNAV solution to begin in FY09. This OSIP is required in order to avoid airspace utilization limitations, ranging from usage restrictions to total airspace exclusion, as well as ensuring continuous KC-130J transport of personnel, material and aerial refueling services within and through these FIRS. Major DoD logistic hubs supporting Operation Enduring Freedom/Operation Iraqi Freedom (OEF/OIF) are located the European FIR. This OSIP affects all 51 KC-130J aircraft. Future Blocks (8.0, 9.0, and 10.0) are being developed which will include additional CNS/ATM requirements as mandated by the ICAO.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: Lockheed Martin was tasked to deliver, by November 2005, an ECP to incorporate Mode S & 8.33 KHZ into Military Baseline 5.4 Software already developed for the USAF on C-130J aircraft. The new software version was planned to be become available in FY07 as Block 5.5 but was superseded by Block 6.5 which became available in FY06. Through incorporation of Block 6.5 the USMC KC-130J aircraft will be postured to re-enter the COSSURM Community in a common configuration. This allows the USMC to step into Block 7.0 with the USAF and COSSURM which includes RNP/RNAV and the civil component of Receiver Autonomous Integrity Monitoring (RAIM). Block 8.0 will incorporate Military Embedded GPS Inertial (EGI) with Selective Availability Anti Spoofing Module (SAASM) and the military component of Receiver Autonomous Integrity Monitoring (RAIM).

FINANCIAL PLAN: (TOA, \$ in Millions)

	Prior Years		FY 2008		FY 2009		FY 2010		OCO FY 2010													
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
RDT&E																						
PROCUREMENT																						
Installation Kits																						
RNP/RNAV System block 7.0							6	4.9														
Installation Kits N/R																						
Installation Equipment																						
Mode (S) System Block 6.5		13.0																				
Mode (S) C/KC-130T	48	3.0																				
Installation Equipment N/R		1.7				3.5		7.4														
Engineering Change Orders																						
Data		0.1				0.1		0.3														
Training Equipment								7.0														
Support Equipment								0.5														
ILS		0.1				0.1		0.1														
Other Support		6.6				1.2		1.1														
Interim Contractor Support																						
Installation Cost																						
Total Procurement		24.5				4.9		21.3														

- Notes:
1. Totals may not add due to rounding.
 2. Asterisk indicates amount less than \$51K.

Exhibit P-3a Individual Modification

MODIFICATION TITLE: C/KC-130 ISR / WEAPONS MISSION KIT (022-07)

MODELS OF SYSTEMS AFFECTED: C/KC-130T/J TYPE MODIFICATION: PERFORMANCE ENHANCEMENT

DESCRIPTION/JUSTIFICATION:

The objective of this effort is to integrate an ISR (Intelligence, Surveillance & Reconnaissance) Weapon System Kit into the KC-130J aircraft which provides an armed capability to provide intra-theatre suppressive fire support for ground troops as well as intelligence and reconnaissance capability for theatre commanders. The new KC-130J is a force multiplier. The J tanker is capable of refueling both fixed wing and rotary wing aircraft, as well as conducting rapid ground refueling. KC-130Js have been continuously deployed in support of world-wide combat operations providing multi-mission, tactical aerial refueling, and fixed-wing assault support. This added capability will provide the MAGTF commander increased capability for real time intelligence gathering and an armed capability for targets of opportunity and suppressive fire-support. The ISR/Weapon System Kit will consist of a target sight sensor, rapid fire 30mm cannon, wing mounted air-to-ground missiles and air-to-ground precision guided munitions delive via the aft cargo door. The system will be configured as a Roll-On/Roll-Off capability to allow for rapid deployment. The program will leverage off of current technology/fielded systems to provide rapid integration of this new capability. Future capabilities will include door modifications to allow the 30mm cannon to be able to fire with the door in the closed position, capability to launch precision guided munitions from within the aircraft while pressurized and moving the Hellfire launch rack from the 330 wing-station to the 430 wing-station.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

FINANCIAL PLAN: (TOA, \$ in Millions)

	Prior Years		FY 2008		FY 2009		FY 2010		OCO FY2010														
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
RDT&E																							
PROCUREMENT																							
Installation Kits																							
A Kit									6	2.8													
Installation Kits N/R																							
Installation Equipment																							
TSS Sensor									6	19.8													
30mm Gun									6	6.0													
FCS									6	1.5													
Hellfire									6	8.8													
BMS									6	6.7													
Installation Equipment N/R																							
Engineering Change Orders																							
XXX Kit ECO XXX																							
XXX Equip ECO XXX																							
Data										0.9													
Training Equipment																							
Support Equipment																							
ILS										0.4													
Other Support										0.6													
Interim Contractor Support																							
Installation Cost									6	4.8													
Total Procurement									6	52.3													

- Notes:
1. Totals may not add due to rounding
 2. Asterisk indicates amount less than \$51K

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: C/KC-130TJ MODIFICATION TITLE: C/KC-130 ISR / Weapons Mission Kit (022-07)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Field Mod Team

ADMINISTRATIVE LEADTIME: 1 Months PRODUCTION LEADTIME: 6 Months

CONTRACT DATES: FY 2008: _____ FY 2009: _____ FY 2010: Nov-09 _____

DELIVERY DATE: FY 2008: _____ FY 2009: _____ FY 2010: May-10 _____

(\$ in Millions)

Cost:	Prior Years		FY 2008		FY 2009		FY 2010		OCO FY 2010														
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
FY 2007 & PY () kits																							
FY 2008 () kits																							
FY 2009 () kits																							
FY 2010 (6) kits										6	4.8												
FY 2011 () kits																							
FY 2012 () kits																							
FY 2013 () kits																							
FY 2014 () kits																							
FY 2015 () kits																							
To Complete () kits																							
TOTAL										6	4.8												

Installation Schedule

	FY 2007 & Prior	FY 2008				FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In												3	3												
Out												3	3												

	FY 2014				FY 2015				To Complete	Total
	1	2	3	4	1	2	3	4		
In										6
Out										6

CLASSIFICATION: **UNCLASSIFIED**

Exhibit P-40, BUDGET ITEM JUSTIFICATION							DATE: May 2009				
APPROPRIATION/BUDGET ACTIVITY Aircraft Procurement, Navy/APN-5 Aircraft Modifications							P-1 ITEM NOMENCLATURE 056100, Fleet Electronic Warfare Support Group (FEWSG)				
Program Element for Code B Items:							Other Related Program Elements				
	Prior Years	ID Code	FY2008	FY2009	FY2010	OCO FY2010	Total FY2010				
QTY											
COST (In Millions)	64.0	A	4.6	0.7	9.5		9.5				
<p>DESCRIPTION: This line item funds modifications to avionics equipment used for Fleet Operational Forces and Adversary Air Electronic Warfare (EW) training exercises . The overall goal of the budgeted modification is to accurately simulate the known and postulated electronic warfare characteristics and tactics of various radar and jammer threats for fleet training. OSIP 119-83 FEWSG equipment, AN/ALQ-167, AN/AST-4/6/9(V), AN-DLQ-3, AN/ULQ-21/24, & ALE-43 had been installed and/or carried aboard the EA-6B, F-4, F14, EP-3J, EC-24A and KC-135 aircraft, prior to deactivation. Current equipment, AN/ALQ-167 pod variants and their internal avionics, AN/ULQ-21/24, as well as AN/AST-6 are installed and/or carried aboard the F/A-18, Lear Jet, Kfir (F-21), Hawker/Hunter (F-58) and Gulfstream (G-1) aircraft. AN/AST-4 was replaced by AN/AST-6. AN/AST-6(V) will be phased out of service and replaced by AN/AST-9 by FY11. ALE-43 pods have been transitioned from fleet training use to tactical use. No new ALE-43 nor AST-6 pods or pod modifications are being funded via this OSIP. \$3.922M BTR received in FY 08 and currently requested FY 10 funding addresses Adversary Air requirement for advanced capability pods per NSAWC Urgent Operational Need Statement.</p>											
(TOA, \$ in Millions)											
<u>OSIP No.</u>	<u>Description</u>	<u>Prior Years</u>	<u>FY2008</u>	<u>FY2009</u>	<u>FY2010</u>	<u>OCO FY2010</u>	<u>Total FY2010</u>				
119-83	AN/AST-4/6/9(V), AN-DLQ-3, AN/ULQ-21/24, ALE-43 & AN/ALQ-167	64.0	4.6	0.7	9.5		9.5				
Total		64.0	4.6	0.7	9.5		9.5				
Note: Totals may not add due to rounding.											

Exhibit P-3a Individual Modification

MODIFICATION TITLE: AN/AST-4/6/9(V), AN-DLQ-3, AN/ULQ-21/24, ALE-43 & AN/ALQ-167 (OSIP 119-83)

MODELS OF SYSTEMS AFFECTED: NOT APPLICABLE TYPE MODIFICATION: RELIABILITY, MAINTAINABILITY, CAPABILITY

DESCRIPTION/JUSTIFICATION:
 The AN/ALQ-167 pods electronically simulate threat airborne radar jamming systems. The AN/ALQ-167 pod components can also be installed internally in aircraft. When these components are utilized in this type of configuration, they are nomenclatured AN/DLQ-3 and AN/ULQ-21/24. AN/AST-4 was replaced by AN/AST-6. The AN/AST-6(V) pod electronically simulates several types of threat anti-ship missile seeker and air-to-air missile systems. Original variants of these podded devices were first introduced into the fleet in 1980 and proved exceptionally useful in readiness exercises and for tactical contingencies. Subsequent variants were developed to meet the technology advances of the threat systems. The tactical contingency pods were removed from fleet service in FY2002 and returned to the pod depot for component reuse. This program provides for the procurement and continued support of additional quantities of these pods or conversion of older pod variants and/or contingency pods to newer variants for use by Fleet Area Control and Surveillance Facility (FACSFAC) in support of operational fleet training and for TopGun/Adversary Squadrons in support of adversary exercises.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:
 The objective for the AN/ALQ-167 was 186 pods. Prior to the tactical contingency pod divestiture, inventory was 146. The AN/ALQ-167 pods avionics are being upgraded to provide increased performance/advanced capability utilizing Digital Radio Frequency Memory (DRFM) technology. Internal installations of the DRFM avionics in aircraft, are nomenclatured AN/ULQ-21/24. Current pod inventory is 41 with a goal of converting one pod per year to DRFM configuration. There are 20 AN/AST-6(V) production assets. AN/AST-6(V) will be phased out of service and replaced by AN/AST-9 by FY11. ALE-43 pods have been transitioned from fleet training use to tactical use. No new AST-6 or ALE-43 pods or pod modifications are being funded via this OSIP.

FINANCIAL PLAN: (TOA, \$ in Millions)

	Prior Years		FY 2008		FY 2009		FY 2010		FY 2010 OCO										
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
RDT&E																			
PROCUREMENT																			
Installation Kits																			
B Kit																			
Installation Kits N/R																			
Installation Equipment																			
Install Equip (B Kits)	1019	51.6	1	0.4	1	0.5	9	8.1											
Installation Equipment N/R		0.6	*		*			0.4											
Engineering Change Orders		2.9																	
Data		0.2	*		*			0.1											
Training Equipment		0.6		3.9	*			0.2											
Support Equipment		5.4	*					0.1											
ILS		1.0	*		*			0.2											
Other Support		1.7		0.1		0.1		0.4											
Interim Contractor Support																			
Installation Cost																			
Total Procurement		64.0		4.6		0.7		9.5											

- Notes:
- Totals may not add due to rounding.
 - Asterisk indicates amount less than \$51K.
 - \$3.922M BTR'd in FY 08 appropriation.
 - Total Qty is inclusive of pod systems/variants that were procured, deployed and retired and no longer in inventory. Additionally, the yearly quantity of two has been in many cases, modification of pods vice new production, therefore total quantity shown does not reflect current inventory.
 - FY10 Install Equipment (B Kits) consist of the updated ALQ-167 Pod that enhances threat capabilities. This new pod unit cost has increased significantly, \$3.922M BTR received in FY 08 and increased funding in FY 10 addresses Adversary Air requirement for advanced capability pods per NSAWC Urgent Operational Need Statement.

CLASSIFICATION: UNCLASSIFIED

Exhibit P-40, BUDGET ITEM JUSTIFICATION							DATE: May 2009																																																				
APPROPRIATION/BUDGET ACTIVITY Aircraft Procurement, Navy/APN-5 Aircraft Modifications							P-1 ITEM NOMENCLATURE 056200, CARGO TRASPOT A C SERIES																																																				
Program Element for Code B Items:							Other Related Program Elements																																																				
	Prior Years	ID Code	FY2008	FY2009	FY2010	OCO FY2010	Total FY2010																																																				
QTY		A																																																									
COST (In Millions)	130.5	A	20.8	16.2	19.4																																																						
<p>DESCRIPTION:</p> <p>This line item funds modifications to the following cargo and transport aircraft: (C-9B/DC-9B, C-40A, C-20A/D/G, C-37A/B, UC-35C/D, RC-12F/M, UC-12B/F/M, NC-12B and C/EC/RC-26D).</p> <p>The C-9B/DC-9B Skytrain II, C-40A Clipper, C-20A/D/G Gulfstream IV, C-37A/B Gulfstream V and UC-35C/D Cessna Citation, are commercial twin jet transport aircraft that provide time-critical medium lift logistic support for the fleet combatant commanders. C-9/DC-9 is capable of carrying up to 32,000 pounds of cargo and personnel for over 3,300 nautical miles at a maximum speed of 430+ knots. C-40 can accommodate 121 passengers, or 8 pallets of cargo, or a combination configuration of 3 pallets and 70 passengers with a range of 3,400 nautical miles. C-20D/G is capable of high-speed transport of 13 passengers or cargo over a range of 4,100 nautical miles at 437 knots. C-20A and C-37 provides worldwide executive transport to SECNAV, CNO, CMC, and Fleet Commanders. C-35 provides transport for high priority passenger/cargo missions with time, place or mission sensitive requirements. C-35 can accommodate six passengers or 1,200 pounds of cargo with a range of 1,300 nautical miles at 234 knots. The C-12 King Air and C-26 Metro variants are commercial twin turbo-prop aircraft that provide shorter-range light lift passenger/cargo transport and range control missions. C-12 is capable of carrying six passengers c maximum cargo capacity of 2,850 pounds, 1,075 nautical miles at 225 knots. C-26 is capable of carrying 19 passengers 1,300 nautical miles at 234 knots.</p> <p style="text-align: center;">(TOA, \$ in Millions)</p> <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">OSIP No.</th> <th style="text-align: left;">Description</th> <th style="text-align: right;">Prior Years</th> <th style="text-align: right;">FY2008</th> <th style="text-align: right;">FY2009</th> <th style="text-align: right;">FY2010</th> <th style="text-align: right;">OCO FY 2010</th> <th style="text-align: right;">Total FY2010</th> </tr> </thead> <tbody> <tr> <td>071-86</td> <td>FAA CONFIGURATION UPDATES</td> <td style="text-align: right;">20.8</td> <td style="text-align: center;">*</td> <td style="text-align: center;">*</td> <td style="text-align: center;">*</td> <td></td> <td style="text-align: center;">*</td> </tr> <tr> <td>012-04</td> <td>CNS/ATM</td> <td style="text-align: right;">60.3</td> <td style="text-align: right;">20.7</td> <td style="text-align: right;">16.2</td> <td style="text-align: right;">16.7</td> <td></td> <td style="text-align: right;">16.7</td> </tr> <tr> <td>010-10</td> <td>SFAR 88</td> <td></td> <td></td> <td></td> <td style="text-align: right;">2.7</td> <td></td> <td style="text-align: right;">2.7</td> </tr> <tr> <td></td> <td>Inactive OSIP's</td> <td style="text-align: right;">49.4</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Total</td> <td></td> <td style="text-align: right;">130.5</td> <td style="text-align: right;">20.8</td> <td style="text-align: right;">16.2</td> <td style="text-align: right;">19.4</td> <td></td> <td style="text-align: right;">19.4</td> </tr> </tbody> </table> <p>Note: Totals may not add due to rounding. Asterisk indicates amount less than \$51k RESERVE FUNDING INCLUDED IN TOTAL</p>												OSIP No.	Description	Prior Years	FY2008	FY2009	FY2010	OCO FY 2010	Total FY2010	071-86	FAA CONFIGURATION UPDATES	20.8	*	*	*		*	012-04	CNS/ATM	60.3	20.7	16.2	16.7		16.7	010-10	SFAR 88				2.7		2.7		Inactive OSIP's	49.4						Total		130.5	20.8	16.2	19.4		19.4
OSIP No.	Description	Prior Years	FY2008	FY2009	FY2010	OCO FY 2010	Total FY2010																																																				
071-86	FAA CONFIGURATION UPDATES	20.8	*	*	*		*																																																				
012-04	CNS/ATM	60.3	20.7	16.2	16.7		16.7																																																				
010-10	SFAR 88				2.7		2.7																																																				
	Inactive OSIP's	49.4																																																									
Total		130.5	20.8	16.2	19.4		19.4																																																				

Exhibit P-3a

Individual Modification

MODIFICATION TITLE: CNS/ATM (OSIP 012-04)

MODELS OF SYSTEMS AFFECTED: CARGO TRANSPORT A C SERIES TYPE MODIFICATION: SAFETY/RELIABILITY

DESCRIPTION/JUSTIFICATION: World-wide airspace congestion and communication bandwidth saturation has lead the International Civil Aviation Organization (ICAO) to restructure the world-wide airspace structure to improve safety through a series of equipment and performance mandates implemented by regional authorities. The Type/Models/Series cited below will be required to comply with the following mandates to retain the Navy's capability to operate these aircraft worldwide. Failure to comply with these time-phased mandates will result in being denied access to high-volume airspace (routing and altitudes) and airfields, or at a minimum resulting in circuitous routing and sub optimal altitudes for fuel consumption. The following CNS-ATM mandates will be implemented in post production aircraft in this OSIP: Communications - 8.33Khz VHF channel spacing, SATCOM voice and data, Controller Pilot Data Link Communications (CPDLC), Automatic Dependent Surveillance ADS-B. Navigation – Required Navigation Performance (RNP) 10NM, 5NM, 4NM, 2NM, 1 NM and less than NM; Reduced Vertical Separation Minimum (RVSM); Protected-ILS; and digital navigation databases. Navigational accuracy mandate progressively tightens over time until GPS based aircraft routing, Standard Instrument Departures (SID) and Standard Terminal Arrival Routes (STARs) are implemented worldwide. This will result in a series of equipment changes. Surveillance – Enhanced Terrain Awareness Warning System (TAWS), Traffic Alert and Collision Avoidance System (TCAS), Automatic Dependent Surveillance ADS-B, Emergency Locator Transmitter (ELT) and Mode S Transponder.

To minimize the impact of successive modifications and maximize aircraft availability, a block upgrade approach has been taken during this budget submit. C-20D, C-12 and C-26 expenditures in FY04 and prior years comprise part of Block 1 as noted below by an *. Block upgrades have been prioritized and phased to meet regional mandates' just in time' to ensure that commercial CNS-ATM solutions are available off the shelf to minimize non-reoccurring engineering associated with FAA supplemental type certification. In order to incorporate CNS-ATM mandates several older aircraft (C-20D, C-35C, all C-26 and C-12) required the installation of a digital flight management and communication system.

CNS-ATM capabilities associated with each Block Upgrade listed below:

- C-9 C-9B: Block 1 - Mode S, Flight Management System upgrade, and ELT; Block 2 – CPDLC, ADS-B, Mode 5, 3 frequency GPS antenna and GLS. No Block 3
- C-40 C-40A: Block 1 – Mode S, and TAWS Upgrade; Block 2 – CPDLC and GLS, Block 3 - ADS-B, Mode 5 and 3 frequency GPS antenna
- C-20 C-20A: Block 1 – Mode S, ELT, TAWS upgrade, and CPDLC, No block 2 or 3. C-20D – Block 1 Avionics Upgrade* HF Radio Upgrade*, Mode S, ELT, TAWS upgrade; Block 2 – CPDLC; Block – 3 ADS-B, Mode 5 and 3 frequency GPS antenna; C-20G –Block 1 Mode S and TAWS upgrade; Block 2 – CPDLC; Block 3 – ADS-B, Mode 5 and 3 frequency GPS antenna;
- C-37 C-37A: Block 1 – Mode S, upgrade; Block 2 – CPDLC, TAWS upgrade; Block 3 – ADS-B, Mode 5 and 3 frequency GPS antenna; C-37B – No Block 1 Block 2 –CPDLC, ADS-B, Mode 5 and 3 frequency GPS antenna;
- C-35 C-35C: Block 1 – 2nd Flight Management System, Mode S upgrade, and ELT, Block 2 – CPDLC, ADS-B, Mode 5 and 3 frequency GPS antenna; C-35D Block 1 – 2nd Flight Management System and Mode S upgrade, Block 2 – CPDLC; Block 3 – ADS-B, Mode 5 and 3 frequency GPS antenna;
- C-26 EC/RC/UC-26D: Block 1 – TAWS* and TCAS-II*; Block 2 – RNP-1, Flight Management System, RVSM and Pro-Line 21 Upgrade; Block 3 – CPDLC, ADS-B, Mode 5 and 3 frequency GPS antenna;
- C-12 C-12B: Block 1 – P-ILS*, 8.33 KHz VHF Channel Spacing*; Block 2 – Pro-Line 21 Upgrade C-12F 8.33 KHz VHF Channel Spacing*, P-ILS*, Block 1 – Pro-Line 21 Upgrade, SATCOM, RVSM, ELT and Mode S upgrade; Block 2 –CPDLC; Block 3 – ADS-B, Mode 5 and 3 frequency GPS antenna; C-12M Block 1 – 8.33 KHz VHF Channel Spacing*, Block 2 – ELT, Pro-Line 21 Upgrade, and RVSM; Block 3 – CPDLC, ADS-B, Mode 5 and 3 frequency GPS antenna.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

FINANCIAL PLAN: (TOA, \$ in Millions)

	Prior Years		FY 2008		FY 2009		FY 2010		FY2010 OCO										
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
RDT&E																			
PROCUREMENT																			
Installation Kits																			
8.33 KHZ	16	0.7																	
AVIONICS UPGRADE C-20D	1	2.4																	
BLOCK 1	19	4.6			8	1.9	5	1.7											
BLOCK 2			2	0.5			14	1.3											
BLOCK 3																			
DATA LINK	7	0.6																	
HF RADIO UPGRADE C-20A	1	0.2	1	0.5															
P-ILS	42	0.5																	
Installation Kits N/R		20.9		3.3		0.8		2.7											
Installation Equipment																			
AVIONICS UPGRADE C-20D			1	0.1	1	0.1													
BLOCK 1	36	16.6	10	4.0	8	5.0	5	4.1											
BLOCK 2			12	1.9			14	1.7											
BLOCK 3																			
HF RADIO UPGRADE C-20A			1	0.5															
Installation Equipment N/R		0.8		0.5		0.2		0.3											
Engineering Change Orders				0.2		*													
Data		2.2		0.7		0.5		0.6											
Training Equipment		0.5		0.3		0.4		0.1											
Support Equipment		*		*		0.1		0.1											
ILS		0.6		0.6		0.7		0.6											
Other Support		2.1		0.8		0.5		0.4											
Interim Contractor Support																			
Installation Cost	70	7.5	11	4.4	19	5.8	21	3.2											
Total Procurement		60.3		20.7		16.2		16.7											

Notes:

1. Totals may not add due to rounding.
2. Asterisk indicates amount less than \$51K.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: C-40A/C-9 MODIFICATION TITLE: CNS/ATM (OSIP 012-04)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: DEPOT CONTRACTOR

ADMINISTRATIVE LEADTIME: 3 Months PRODUCTION LEADTIME: 1 Months

CONTRACT DATES: FY 2008: Dec-07 FY 2009: N/A FY 2010: N/A

DELIVERY DATE: FY 2008: Jan-08 FY 2009: N/A FY 2010: N/A

(\$ in Millions)

Cost:	Prior Years		FY 2008		FY 2009		FY 2010		FY2010 OCO													
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
FY 2007 & PY (*) kits	*																					
FY 2008 (12) kits					8	3.1	4	1.0														
FY 2009 () kits																						
FY 2010 () kits																						
FY 2011 () kits																						
FY 2012 () kits																						
FY 2013 () kits																						
FY 2014 () kits																						
FY 2015 () kits																						
To Complete () kits																						
TOTAL					8	3.1	4	1.0														

NOTE: * PRIOR YEAR (FY2006) 8 KITS WERE INSTALLED AT THE ORGANIZATIONAL LEVEL. NO INSTALLATION COST TO BE INCURRED.

Installation Schedule

	FY 2007 & Prior	FY 2008				FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In																									
Out							3	3	2		2	2													

	FY 2014				FY 2015				To Complete	Total
	1	2	3	4	1	2	3	4		
In										12
Out										12

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: UC-35 MODIFICATION TITLE: CNS/ATM (OSIP 012-04)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: DEPOT CONTRACTOR

ADMINISTRATIVE LEADTIME: 3 Months PRODUCTION LEADTIME: 1 Months

CONTRACT DATES: FY 2008: Dec-07 FY 2009: Dec-08 FY 2010: Dec-09

DELIVERY DATE: FY 2008: Jan-08 FY 2009: Jan-09 FY 2010: Jan-10

(\$ in Millions)

Cost:	Prior Years		FY 2008		FY 2009		FY 2010		FY2010 OCO												
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
FY 2007 & PY (3) kits	3	1.5																			
FY 2008 (1) kits			1	0.4																	
FY 2009 (1) kits					1	0.4															
FY 2010 (1) kits							1	0.5													
FY 2011 () kits																					
FY 2012 () kits																					
FY 2013 () kits																					
FY 2014 () kits																					
FY 2015 () kits																					
To Complete () kits																					
TOTAL	3	1.5	1	0.4	1	0.4	1	0.5													

Installation Schedule

	FY 2007 & Prior	FY 2008				FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	3		1				1				1														
Out	3	1				1				1															

	FY 2014				FY 2015				To Complete	Total
	1	2	3	4	1	2	3	4		
In										6
Out										6

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: C-20 MODIFICATION TITLE: CNS/ATM (OSIP 012-04)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: DEPOT CONTRACTOR

ADMINISTRATIVE LEADTIME: 3 Months PRODUCTION LEADTIME: 1 Months

CONTRACT DATES: FY 2008: Dec-07 FY 2009: Dec-08 FY 2010: Dec-09

DELIVERY DATE: FY 2008: Jan-08 FY 2009: Jan-09 FY 2010: Jan-10

(\$ in Millions)

Cost:	Prior Years		FY 2008		FY 2009		FY 2010		FY2010 OCO												
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
FY 2007 & PY (2) kits	2	0.1																			
FY 2008 (4) kits			2	1.2	2	0.2															
FY 2009 (2) kits					2	0.2															
FY 2010 (4) kits							4	0.6													
FY 2011 () kits																					
FY 2012 () kits																					
FY 2013 () kits																					
FY 2014 () kits																					
FY 2015 () kits																					
To Complete () kits																					
TOTAL	2	0.1	2	1.2	4	0.5	4	0.6													

Installation Schedule

	FY 2007 & Prior	FY 2008				FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	2		2				4				4														
Out	2	2				4				4															

	FY 2014				FY 2015				To Complete	Total
	1	2	3	4	1	2	3	4		
In										12
Out										12

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: C-12 MODIFICATION TITLE: CNS/ATM (OSIP 012-04)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: DEPOT CONTRACTOR

ADMINISTRATIVE LEADTIME: 3 Months PRODUCTION LEADTIME: 1 Months

CONTRACT DATES: FY 2008: Dec-07 FY 2009: Dec-08 FY 2010: Dec-09

DELIVERY DATE: FY 2008: Jan-08 FY 2009: Jan-09 FY 2010: Jan-10

(\$ in Millions)

Cost:	Prior Years		FY 2008		FY 2009		FY 2010		FY2010 OCO												
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
FY 2007 & PY (66) kits *	66	3.2																			
FY 2008 (5) kits			3	2.0	2	0.6															
FY 2009 (4) kits					3	0.9	1	0.1													
FY 2010 (11) kits							11	1.1													
FY 2011 () kits																					
FY 2012 () kits																					
FY 2013 () kits																					
FY 2014 () kits																					
FY 2015 () kits																					
To Complete () kits																					
TOTAL	66	3.2	3	2.0	5	1.5	12	1.2													

* Qty of 16 8.33 Khz radios were installed concurrently with the 42 P-ILS systems

Installation Schedule

	FY 2007 & Prior	FY 2008				FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	66		2	1			3	2			6	6													
Out	66		2	1			3	2			6	6													

	FY 2014				FY 2015				To Complete	Total
	1	2	3	4	1	2	3	4		
In										86
Out										86

Exhibit P-3a Individual Modification

MODIFICATION TITLE: C-40A FEDERAL AVIATION ADMINISTRATION (FAA) REGULATION SPECIAL FEDERAL AVIATION REGULATIONS (SFAR) 88 (OSIP 010-10)

MODELS OF SYSTEMS AFFECTED: C-40A TYPE MODIFICATION: SAFETY/RELIABILITY

DESCRIPTION/JUSTIFICATION: The 1996 TWA Flight 800 accident resulted in an extensive review of aircraft by an AIA/ATA safety team. Results of this review, in addition to other center wing tank explosions (1990 Philippine Airlines 737 and 2001 Thai Airlines 737) in which the ignition source could not be identified, precipitated new FAA requirements to preclude ignition sources in fuel tanks. SFAR 88 is a FAA requirement to ensure ignition sources are not present in or near fuel tanks and fuel lines.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

FINANCIAL PLAN: (TOA, \$ in Millions)

	Prior Years		FY 2008		FY 2009		FY 2010		FY2010 OCO												
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
RDT&E																					
PROCUREMENT																					
Installation Kits																					
SFAR 88							* 9	2.7													
Installation Kits N/R																					
Installation Equipment																					
XXX Equip																					
Installation Equipment N/R																					
Engineering Change Orders																					
XXX Kit ECO XXX																					
XXX Equip ECO XXX																					
Data																					
Training Equipment																					
Support Equipment																					
ILS																					
Other Support																					
Interim Contractor Support																					
Installation Cost																					
Total Procurement								2.7													

- Notes:
1. Totals may not add due to rounding.
 2. Asterisk indicates 9 kits to be installed at the organizational level; no installation cost to be incurred.

Exhibit P-40, BUDGET ITEM JUSTIFICATION							DATE: May 2009				
APPROPRIATION/BUDGET ACTIVITY Aircraft Procurement, Navy/APN-5 Aircraft Modifications							P-1 ITEM NOMENCLATURE 056400, E-6 SERIES				
Program Element for Code B Items:							Other Related Program Elements 0101402N				
	Prior Years	ID Code	FY2008	FY2009	FY2010	OCO FY2010	Total FY2010				
QTY		A									
COST (In Millions)	968.9	A	84.6	88.6	102.6		102.6				
<p>DESCRIPTION:</p> <p>This line item funds modifications to E-6 "Take Charge and Move Out", TACAMO aircraft. All sixteen (16) aircraft in the TACAMO fleet will receive each modification. The E-6 TACAMO is a manned airborne communications relay platform designed to provide a survivable, reliable, enduring airborne Command and Control Communications link between the President, Secretary of Defense and U.S. strategic and non-strategic forces. E-6 Mission Support (OSIP 007-02) will procure various ground support and Peculiar Support Equipment (PSE) for the E-6B aircraft and will upgrade the aircraft Frequency Reference Auto Paralleling Unit (FRAPU) to allow proper power transfer from/to ground/aircraft power. Safety Deficiencies (OSIP 008-02) addresses emerging safety issues and includes replacement of aircraft Kapton wiring; installation of the Crash Survivable Flight Incident Recorder (CSFIR); replacement of the Fuel Quantity Indicating System (FQIS); replacement of the aircraft thermal blankets, life rafts and seat pins and installs ARC 210 radio filters, a High Power Transmit Set (HPTS) fire port and the Enhanced Smoke Detection System (ESDS). Tech Insertion (OSIP 003-04) addresses obsolescence, supportability, new technologies, systems updates and interoperability issues in the area of the Secure Telephone Unit (STU), Mission Computer Set (MCS), Flight Management Computer System (FMCS), Standard Distribution Switching Unit (SDSU), existing KG-3X crypto and the Aircraft Systems Block Modification (ACSBM). Communications (IP/T3) Upgrade (OSIP 012-07) increases communications bandwidth to support battlestaff command and control and first responder operations. Service Life Extension Program (SLEP) (OSIP 003-07) is designed to extend the service life of the E-6B aircraft to 2040+. E-6 Block I (OSIP 008-10) installs an Open System Architecture (OSA) that will allow low cost modifications for emerging requirements, updates the Internal Communications System (ICS); replaces the Mission Computer Set with the Mission Avionics Processor System (MAPS); adds operator work stations; replaces the UHF C3 modem and addresses cooling and electrical power system requirements to meet updated equipment demands. Block Recapture (Block IA) (OSIP 002-12) installs a new Auxiliary Power Unit (APU) to meet mission requirements and replaces the VLF Transmit Terminal and High Power Transmit Set (HPTS) subsystems due to obsolescence. Block II (OSIP 013-10) replaces obsolete MILSTAR terminals with Advanced Extremely High Frequency (AEHF) Family of Advanced Beyond-Line-of-Sight Terminals (FAB-T), and installs the Multi-Role Tactical Common Data Link (MR-TCDL) to support USSTRATCOM's migration to a distributed National C2 system.</p>											
(TOA, \$ in Millions)											
OSIP No.	Description	Prior Years	FY2008	FY2009	FY2010	OCO FY2010	Total FY2010				
007-02	E-6 MISSION SUPPORT	12.2	2.2		2.4		2.4				
008-02	SAFETY DEFICIENCIES	11.0	13.9	11.5	10.9		10.9				
003-04	TECH INSERTION	30.9	17.8	7.1	1.6		1.6				
003-07	SLEP	0.5	7.6	16.8	12.5		12.5				
012-07	COM (IP/T3) UPGRADE	33.2	43.2	53.2	20.5		20.5				
008-10	E-6 BLOCK I				46.1		46.1				
002-12	BLOCK RECAPTURE										
013-10					8.5		8.5				
XXX-INACTIVE OSIPs		881.0									
Total		968.9	84.6	88.6	102.6		102.6				
Note: Totals may not add due to rounding.											

Classification: UNCLASSIFIED

Exhibit P-3a

Individual Modification

MODIFICATION TITLE: E-6 MISSION SUPPORT (OSIP 007-02)

MODELS OF SYSTEMS AFFECTED: E-6 SERIES TYPE MODIFICATION: Capability

DESCRIPTION / JUSTIFICATION:

The Mission Support program upgrades the Frequency Referencing Auto Parallel Unit (FRAPU) to provide uninterrupted transfer of power from aircraft to ground systems. Existing power carts do not provide adequate ground power causing system shutdown and failure of critical system components during aircraft startup. FRAPU will prevent system shutdown and failure of critical system components during transfer from aircraft to ground power systems. The program also procures various ground support and Peculiar Support Equipment (PSE) for the E-6B aircraft.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

Peculiar Support Equipment (PSE) procured in FY07 and FY08. FRAPU NRE and purchase of 16 aircraft kits in FY10 with the installation of all kits in FY10.

FINANCIAL PLAN: (TOA, \$ in Millions)

	Prior Years		FY 2008		FY 2009		FY 2010		OCO FY2010														
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
RDT&E																							
PROCUREMENT																							
Installation Kits																							
FRAPU								16	0.4														
Installation Kits N/R									0.0														
Installation Equipment																							
FRAPU								16	1.1														
ACS Obsolescence																							
Installation Equipment N/R																							
Engineering Change Orders																							
Data				*																			
Training Equipment								1	0.1														
Support Equipment	26	11.2	3	2.1																			
ILS																							
Other Support		1.1		0.2																			
Interim Contractor Support																							
Installation Cost								17	0.7														
Total Procurement		12.2		2.2					2.4														

- Notes:
1. Totals may not add due to rounding.
 2. Asterisk indicates amount less than \$51K.

Exhibit P-3a Individual Modification

MODIFICATION TITLE: SAFETY DEFICIENCIES(OSIP 008-02)

MODELS OF SYSTEMS AFFECTED: E-6 SERIES TYPE MODIFICATION: Capability

DESCRIPTION / JUSTIFICATION:

The Safety program corrects safety deficiencies and addresses emerging safety issues in order to protect personnel and equipment. FAA APA 19-98 requires a smoke detection system in the aircraft lower avionics bays and replaces aircraft Kapton wiring and the Fuel Quantity Indicating System (FQIS) to comply with FAA SFAR 88 requirements. Safety installs the Crash Survivable Flight Incident Recorder (CSFIR) to meet DoD requirements and replaces the aircraft acoustic thermal blankets to meet FAA requirements. Safety also installs ARC-210 filters to prevent flight deck radio interference and replaces seat pins to prevent uncontrolled reclining of aircraft seats to address safety of flight issues; installs a High Power Transmit Set (HPTS) fire port for rapid access to the HPTS for fire suppression and replaces the unsupported life rafts. The safety program leverages available and emerging commercial technology for crew/aircraft safety.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

Smoke detector installation completed in FY07. ARC-210 filters, HPTS fire ports, Seat Pins and Life Raft installation complete FY08. Aircraft Kapton Wiring Phase 1A (A/C wheel wells) NRE and NRE kit buy and installation complete in FY08 with production kit buys and installs in FY08-09. CSFIR NRE and NRE kit buy and installation complete FY08 with production kit buys and installs in FY09-10. FQIS NRE in FY09 with NRE kit buy and installation in FY09 and production kit buys and installs in FY09-FY10. Aircraft acoustic thermal blanket NRE in FY09-10 with NRE kit buy and installation in FY10 and production kit buys and installs starting in FY10.

FINANCIAL PLAN: (TOA, \$ in Millions)

	Prior Years		FY 2008		FY 2009		FY 2010		OCO FY2010												
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
RDT&E																					
PROCUREMENT																					
Installation Kits																					
A/C BATTERY	16	*																			
APU	16	0.4																			
ESDS																					
KAPTON 1B																					
BLANKETS								3	0.1												
CSFIR			1	*	9	0.3	6	0.2													
FQIS					9	0.2	7	0.2													
FUEL BOOST PUMPS	16	0.8																			
KAPTON WIRE			8	0.3	8	0.3															
SMOKE DETECTOR	16	0.3																			
Installation Kits N/R		1.5		6.2		1.6		0.8													
Installation Equipment																					
A/C BATTERY	16	0.7																			
APU																					
ESDS																					
ARC 210			16	0.7																	
LIFE RAFTS			16	0.3																	
HPTS FIRE PORT			16	0.0																	
SEAT PINS			16	0.1																	
BLANKETS							3	0.3													
CSFIR			1	0.1	9	0.5	6	0.3													
INERTIA REELS	16	0.4																			
HPTS CAD CUTTERS	16	0.1																			
FQIS					9	0.6	7	0.5													
FUEL BOOST PUMPS	16	0.6																			
KAPTON WIRE																					
SMOKE DETECTOR	16	0.3																			
Installation Equipment N/R		1.3		1.4																	
Engineering Change Orders																					
Data		0.1																			
Training Equipment	1	*	3	0.8	1	0.4		0.2													
Support Equipment																					
ILS				0.9		0.3															
Other Support		3.4		1.6		2.2		2.4													
Interim Contractor Support																					
Installation Cost	49	1.0	43	1.5	27	5.0	17	6.0													
Total Procurement		11.0		13.9		11.5		10.9													

- Notes:
1. Totals may not add due to rounding
 2. Asterisk indicates amount less than \$51K
 3. Life Raft, Seat Pins, Fire Port, ARC-210, No Install Kit Required

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: E-6 SERIES

MODIFICATION TITLE: SAFETY DEFICIENCIES(OSIP 008-02)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Contractor Field Modification

ADMINISTRATIVE LEADTIME: Various Months

PRODUCTION LEADTIME: Various Months

CONTRACT DATES: FY 2008: Various FY 2009: Various FY 2010: Various

DELIVERY DATE: FY 2008: Various FY 2009: Various FY 2010: Various

(\$ in Millions)

Cost:	Prior Years		FY 2008		FY 2009		FY 2010		OCO FY2010													
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
FY 2007 & PY (48) kits	48	1.0																				
FY 2008 (41) kits			40	1.2	1	0.4																
FY 2009 (26) kits					25	4.4	1	0.5														
FY 2010 (16) kits							16	5.5														
FY 2011 () kits																						
FY 2012 () kits																						
FY 2013 () kits																						
FY 2014 () kits																						
FY 2015 () kits																						
To Complete () kits																						
TOTAL	48	1.0	40	1.2	26	4.8	17	6.0														

Does not include 5 trainers.

No Cost to Install Life Rafts and Seat Pins

PY Kits include 16 Smoke Detectors, 16 Cad Cutters and 16 Aircraft Batteries

Installation Schedule: Kapton 1B

FY 2007 & Prior	FY 2008				FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In																								
Out																								

	FY 2014				FY 2015				To Complete	Total
	1	2	3	4	1	2	3	4		
In										
Out										

Installation Schedule: CSFIR

FY 2007 & Prior	FY 2008				FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In						2	3	4	3	3	1													
Out						1	3	4	3	3	2													

	FY 2014				FY 2015				To Complete	Total
	1	2	3	4	1	2	3	4		
In										16
Out										16

Installation Schedule: FQIS

	FY 2007 & Prior	FY 2008				FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In						3	3	3	3	3	3	1													
Out						2	3	3	3	3	3	2													

	FY 2014				FY 2015				To Complete	Total
	1	2	3	4	1	2	3	4		
In										16
Out										16

Installation Schedule: KAPTON Wire

	FY 2007 & Prior	FY 2008				FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In				4	4	4	4	4																	
Out				2	4	4	4	2																	

	FY 2014				FY 2015				To Complete	Total
	1	2	3	4	1	2	3	4		
In										16
Out										16

Installation Schedule: ESDS

	FY 2007 & Prior	FY 2008				FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In																									
Out																									

	FY 2014				FY 2015				To Complete	Total
	1	2	3	4	1	2	3	4		
In										
Out										

Installation Schedule: BLANKETS

	FY 2007 & Prior	FY 2008				FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In																									
Out												2	1												

	FY 2014				FY 2015				To Complete	Total
	1	2	3	4	1	2	3	4		
In										3
Out										3

Installation Schedule: ARC-210																									
	FY 2007 & Prior	FY 2008				FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In					16																				
Out					16																				

	FY 2014				FY 2015				To Complete	Total
	1	2	3	4	1	2	3	4		
In										16
Out										16

Installation Schedule: HPTS Fire Port																									
	FY 2007 & Prior	FY 2008				FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In					16																				
Out					16																				

	FY 2014				FY 2015				To Complete	Total
	1	2	3	4	1	2	3	4		
In										16
Out										16

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Exhibit P-3a Individual Modification

MODIFICATION TITLE: SLEP(OSIP 003-07)

MODELS OF SYSTEMS AFFECTED: E-6 SERIES TYPE MODIFICATION: Capability

DESCRIPTION / JUSTIFICATION:

The Service Life Extension Program (SLEP) extends the E-6B service life to 2040+, based on extensive engineering analysis using modern analytic tools (Service Life Assessment Program – SLAP.) FY08 and FY09 NRE for the Individual Aircraft Tracking System (IATS) and ECP generation. The IATS will enable the fleet and program office to track the fatigue life expended on each E-6B aircraft. This tracking capability will identify the next critical fatigue damaged component that will need repair. It will also generate cost savings by allowing future modifications to be tailored to meet each aircraft's need, increasing E-6B fleet availability for operational use. Current E-6B usage indicates modification must commence in FY10 to prevent the E-6B from being unable to perform its mission with the downing of more than two aircraft in 2016. There is a potential safety of flight issue due to unknown rate of deterioration of the E-6B airframe

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:

SLEP NRE in FY08-FY09 with prototype installation in FY10. SLEP full rate production and installation starts in FY10.

FINANCIAL PLAN: (TOA, \$ in Millions)

	Prior Years		FY 2008		FY 2009		FY 2010		OCO FY2010										
	Qty	\$	Qty	\$	Qty	\$	Qty	\$											
RDT&E		10.7																	
PROCUREMENT																			
Installation Kits							3	4.2											
Step Kits																			
Installation Kits N/R			6.7		15.2														
Installation Equipment																			
Step Kits																			
Installation Equipment N/R																			
Engineering Change Orders																			
Data																			
Training Equipment																			
Support Equipment																			
ILS																			
Other Support		0.5		0.9		1.7		1.7											
Interim Contractor Support																			
Installation Cost							2	6.6											
Total Procurement		0.5		7.6		16.8		12.5											

1. Totals may not add due to rounding
 2. Asterisk indicates amount less than \$51K

UNCLASSIFIED

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: E-6 SERIES MODIFICATION TITLE: SLEP(OSIP 003-07)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Contractor Drive-in Modification

ADMINISTRATIVE LEADTIME: 1 Months PRODUCTION LEADTIME: 5 Months

CONTRACT DATES: FY 2008: N/A FY 2009: N/A FY 2010: Nov-09

DELIVERY DATE: FY 2008: N/A FY 2009: N/A FY 2010: Apr-10

(\$ in Millions)

Cost:	Prior Years		FY 2008		FY 2009		FY 2010		OCO FY2010													
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
FY 2007 & PY () kits																						
FY 2008 () kits																						
FY 2009 () kits																						
FY 2010 (2) kits								2	6.6													
FY 2011 () kits																						
FY 2012 () kits																						
FY 2013 () kits																						
FY 2014 () kits																						
FY 2015 () kits																						
To Complete () kits																						
TOTAL								2.0	6.6													

Installation Schedule: SLEP

FY 2007 & Prior	FY 2008				FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
	1	2	3	4	1	2	3	4	1	2	3	4												
In											1	1												
Out												1			1									

	FY 2014				FY 2015				To Complete	Total
	1	2	3	4	1	2	3	4		
In										2
Out										2

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Exhibit P-3a	Individual Modification																			
MODIFICATION TITLE:	<u>COMMUNICATIONS (IP/T3) UPGRADE(OSIP 012-07)</u>																			
MODELS OF SYSTEMS AFFECTED:	<u>E-6 SERIES</u>	TYPE MODIFICATION:	<u>Capability</u>																	
<p>DESCRIPTION / JUSTIFICATION: OSD PDM III directs funding to establish and maintain Internet Protocol (IP) connectivity using various wideband communications links in support of command and control operations onboard the E-6B aircraft. The IP effort installs International Marine/Maritime Satellite (INMARSAT) commercial satellite access for global communications connectivity (Phase 1); removes the Utility Trailing Wire Antenna (UTWA) to provide weight and space margin for aircraft modifications (Phase 3); and provides the Northstar Digital Ground Entry Point (GEP) capability for high speed UHF Line of Sight (LOS) communications (Phase 4).</p>																				
<p>DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES: Phase 1 INMARSAT NRE in FY08-FY09 with NRE kit buy complete in FY08 and installation in FY09 and Phase 3 UTWA removal NRE and NRE kit buy complete in FY08 with installation in FY09. Phase 1 and 3 aircraft production kit buys start in FY09 with installs starting in FY10.</p>																				
FINANCIAL PLAN: (TOA, \$ in Millions)																				
	Prior Years		FY 2008		FY 2009		FY 2010		OCO FY2010											
	Qty	\$	Qty	\$	Qty	\$	Qty	\$												
RDT&E																				
PROCUREMENT																				
Installation Kits																				
Lab Kits	1	0.5	2	0.9																
Phase One Kits	1	0.5			3	1.5	2	1.0												
Phase Three Kits			1	0.6	3	1.8	2	1.2												
Phase Four Kits			2	0.6	14	4.1														
Installation Kits N/R		21.3		22.9		8.8														
Installation Equipment																				
Lab Kits	1	0.6	2	0.7																
Phase One Kits	1	0.6			3	1.7	2	1.1												
Phase Three Kits			1	0.6	3	1.7	2	1.1												
Phase Four Kits			2	0.3	14	2.1														
Installation Equipment N/R																				
Engineering Change Orders																				
Data				0.6		0.9		0.4												
Training Equipment		0.8		1.1	8	6.5	7	3.8												
Support Equipment																				
ILS		1.5		3.0		0.1														
Other Support		7.5		12.0		9.4		5.1												
Interim Contractor Support																				
Installation Cost					7	14.7	29	6.8												
Total Procurement		33.2		43.2		53.2		20.5												
Notes:																				
1. Totals may not add due to rounding																				
2. Asterisk indicates amount less than \$51K																				

UNCLASSIFIED

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: E-6 SERIES MODIFICATION TITLE: COMMUNICATIONS (IP/T3) UPGRADE(OSIP 012-07)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Contractor Drive-in Modification

ADMINISTRATIVE LEADTIME: Various Months PRODUCTION LEADTIME: Various Months

CONTRACT DATES: FY 2008: N/A FY 2009: N/A FY 2010: N/A FY 2011: N/A

DELIVERY DATE: FY 2008: N/A FY 2009: N/A FY 2010: N/A FY 2011: N/A

(\$ in Millions)

Cost:	Prior Years		FY 2008		FY 2009		FY 2010		OCO FY2010												
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
FY 2007 & PY () kits					1	6.7															
FY 2008 () kits					3	6.9															
FY 2009 () kits							18	4.9													
FY 2010 () kits																					
FY 2011 () kits																					
FY 2012 () kits																					
FY 2013 () kits																					
FY 2014 () kits																					
FY 2015 () kits																					
To Complete () kits																					
TOTAL					4	13.6	18	4.9													

Does not include 3 labs and 11 trainers

Installation Schedule: Phase One

	FY 2007 & Prior	FY 2008				FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In							1				1	1													
Out										1		1	1												

	FY 2014				FY 2015				To Complete	Total
	1	2	3	4	1	2	3	4		
In										3
Out										3

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Installation Schedule: Phase Three

	FY 2007 & Prior	FY 2008				FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In							1				1	1													
Out										1	1	1													

	FY 2014				FY 2015				To Complete	Total
	1	2	3	4	1	2	3	4		
In										3
Out										3

Installation Schedule: Phase Four

	FY 2007 & Prior	FY 2008				FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In							1		1	4	5	5													
Out							1		1	4	5	5													

	FY 2014				FY 2015				To Complete	Total
	1	2	3	4	1	2	3	4		
In										16
Out										16

UNCLASSIFIED

Exhibit P-3a Individual Modification

MODIFICATION TITLE: E-6 MISSION DEFICIENCIES IMPROVEMENTS (BLOCK I) (OSIP 008-10)

MODELS OF SYSTEMS AFFECTED: E-6 SERIES TYPE MODIFICATION: Capability

DESCRIPTION / JUSTIFICATION:
 The Block I Modification corrects ABNCP FOT&E deficiencies and replaces equipment that is obsolete or degrades mission performance. The modification installs an Open Systems Architecture (OSA), updates the Internal Communications System (ICS); replaces the Mission Computer Set with the Mission Avionics Processor System (MAPS); adds operator work stations; replaces the UHF C3 modem and addresses cooling and electrical power system requirements to meet updated equipment demands.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:
 MS B FY04. MS C and Low Rate Initial Production (LRIP) of 1 kit buy in FY10.

FINANCIAL PLAN: (TOA, \$ in Millions)

	Prior Years		FY 2008		FY 2009		FY 2010		OCO FY2010										
	Qty	\$	Qty	\$	Qty	\$	Qty	\$											
PROCUREMENT																			
Installation Kits																			
Block One Kits							1	3.3											
Lab Kit																			
Installation Kits N/R																			
Installation Equipment																			
Block One Kits							1	14.5											
Lab Kit																			
Installation Equipment N/R																			
Engineering Change Orders																			
Data								0.5											
Training Equipment							6	13.5											
Support Equipment							1	3.9											
ILS								2.1											
Other Support								8.4											
Interim Contractor Support																			
Installation Cost																			
Total Procurement								46.1											

- Notes:
1. Totals may not add due to rounding.
 2. Asterisk indicates amount less than \$51K.

Exhibit P-3a Individual Modification

MODIFICATION TITLE: BLOCK II (OSIP 013-10)

MODELS OF SYSTEMS AFFECTED: E-6 SERIES TYPE MODIFICATION: Capability

DESCRIPTION / JUSTIFICATION:
 PDM III directed funding to replace obsolete MILSTAR terminals with Advanced Extremely High Frequency (AEHF) Family of Advanced Beyond-Line-of-Sight Terminals (FAB-T), as well as integrate the systems required to provide a T-3 capability to support USSTRATCOM's migration to a distributed National C2 system. Block II will leverage the Army lead Multi-Role Tactical Common Data Link (MR-TCDL) program to meet the T-3 capability.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES:
 Navy integration of production systems from existing programs: FAB-T (Air Force lead) achieved KDP-C in 2Q FY09. Air Force to provide FAB-T equipment; MR-TCDL currently in production. Block II contract award FY10. NRE starts in FY10.

FINANCIAL PLAN: (TOA, \$ in Millions)

	Prior Years		FY 2008		FY 2009		FY 2010		OCO FY2010										
	Qty	\$	Qty	\$	Qty	\$	Qty	\$											
PROCUREMENT																			
Installation Kits																			
AEHF																			
MRTCDL																			
Lab Kit							1	1.2											
Installation Kits N/R								2.6											
Installation Equipment																			
AEHF																			
MRTCDL																			
Lab Kit							1	2.2											
Installation Equipment N/R																			
Engineering Change Orders																			
Data																			
Training Equipment								0.5											
Support Equipment																			
ILS								0.5											
Other Support								1.6											
Interim Contractor Support																			
Installation Cost																			
Total Procurement								8.5											

Notes:
 1. Totals may not add due to rounding
 Air Force providing AEHF Installation Equipment for Aircraft & Lab.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: E-6 SERIES MODIFICATION TITLE: BLOCK II (OSIP 013-10)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Contractor Drive In Modification

ADMINISTRATIVE LEADTIME: 1 Months PRODUCTION LEADTIME: 12 Months

CONTRACT DATES: FY 2008: N/A FY 2009: N/A FY 2010: Nov-09

DELIVERY DATE: FY 2008: N/A FY 2009: N/A FY 2010: Dec-10

(\$ in Millions)

Cost:	Prior Years		FY 2008		FY 2009		FY 2010		OCO FY2010													
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
FY 2007 & PY () kits																						
FY 2008 () kits																						
FY 2009 () kits																						
FY 2010 (1) kits																						
FY 2011 () kits																						
FY 2012 () kits																						
FY 2013 () kits																						
FY 2014 () kits																						
FY 2015 () kits																						
To Complete () kits																						
TOTAL																						

AEHF Installation Schedule

FY 2007 & Prior	FY 2008				FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In																								
Out														1										

	FY 2014				FY 2015				To Complete	Total
	1	2	3	4	1	2	3	4		
In									1	
Out									1	

MRTCDL Installation Schedule

FY 2007 & Prior	FY 2008				FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In																								
Out																								

	FY 2014				FY 2015				To Complete	Total
	1	2	3	4	1	2	3	4		
In										
Out										

BUDGET ITEM JUSTIFICATION SHEET							DATE:				
P-40							May 2009				
APPROPRIATION/BUDGET ACTIVITY							P-1 ITEM NOMENCLATURE				
Aircraft Procurement, Navy / APN5 Aircraft Modifications							056600, EXECUTIVE HELICOPTERS SERIES				
Program Element for Code B Items:							Other Related Program Elements				
	PRIOR YEARS	ID Code	FY 2008	FY 2009	FY 2010	FY 2010	FY 2010				
						OCO	Total				
QUANTITY											
COST (In Millions)	259.7	A	47.9	51.7	42.5						

DESCRIPTION: This line item funds modifications to the (11) VH-3D and (8) VH-60N. These aircraft are assigned to Marine Helicopter Squadron One to support the President of the United States. The VH-60N Cockpit Upgrade consists of an upgrade to all-glass instrumentation. The Communication Suite Upgrade consists of DAMA SATCOM radio upgrade, Digital FM radio upgrade, HF radio upgrade, the Presidential redundant secure communications upgrade, Data Transfer capability upgrade, and Crypto Modernization Upgrade. The VH-3D Lift Improvement program consists of the operational level installation of 55 composite main rotor blades on all eleven VH-3Ds. Eight of the fifty five blades were provided by a no cost blade exchange agreement with the legacy blades. The Structural Enhancement Program consists of the efforts to increase the maximum operating weight of the VH-3D, replace critical aircraft structure on the VH-60N, replace the VIP seats on the VH-3D, upgrade the safety of the fuel system on the VH-3D, and a Service Life Extension on the VH-60N. The Obsolescence Management Program will manage impending Executive Helicopter obsolescence issues. A variety of factors will be addressed including communication, navigation, and engine upgrades to remain mission relevant. The overall goal of the modifications budgeted in FY 2010 is to continue procurement efforts in accordance with the procurement strategy to maintain the VH-3D and VH-60N.

The specific modifications budgeted and programmed are:

OSIP No. / DESCRIPTION	PRIOR YEARS	FY 2008	FY 2009	FY 2010	FY 2010	FY 2010
					OCO	Total
009-02 VH-60N COCKPIT UPGRADE	71.7	13.3	16.9	15.1		
014-02 VH COMM UPGRADE	39.2	4.8	4.1	9.3		
DERF (non add)	10.1					
011-06 VH-3D LIFT IMPROVEMENTS	21.6	14.9	12.4			
016-08 VH STRUCTURAL ENHANCEMENTS		14.9	10.4	14.4		
023-09 OBSOLESCENCE MANAGEMENT PROGRAM			7.9	3.7		
Inactive OSIPs	127.2					
TOTAL	259.7	47.9	51.7	42.5		

Exhibit P-3a

MODIFICATION TITLE: VH-60N COCKPIT UPGRADE (OSIP 009-02)

MODELS OF SYSTEMS AFFECTED: VH-60N TYPE MODIFICATION: SAFETY

DESCRIPTION / JUSTIFICATION: In order to meet the requirement of providing safe and timely transportation for the President, Vice President, and other parties as directed by the Director of the White House Military Office (WHMO), and in support of the alert and contingency mission requirement of the WHMO Operations Plan, the VH-60N aircraft cockpit must be upgraded to provide enhanced communication, navigation, and survivability capabilities while reducing pilot workload. The cockpit upgrade will be an all-glass instrumentation built around pilot, co-pilot, and Communications Systems Operator (CSO) Multi-Function Displays (MFD) and Control Display Units (CDU). A moving map display complete with terrain database will be incorporated, while maintaining the current capabilities of TACAN, VOR, ILS, ADF, TCAS, CSFR, FM Immunity, Mode S IFF, ALE-47 and ALC-144. The Survivability capabilities will provide a countermeasure dispenser and an infrared countermeasure system interface. The navigation system should include laser ring gyro Inertial Navigation Systems (INS) with embedded Global Positioning System (GPS)-(EG) that has integrity monitoring/IFR. A color weather radar will be incorporated. Communication capabilities must be consistent with White House Communications Agency (WHCA) planning and National Security Agency (NSA) requirements. Three UHF/VHF/FM radios (ARC-210s) shall be included. Four FM radios and the HF with ALE currently on the VH-60N must be maintained. A coupled autopilot function shall be incorporated into the cockpit management system. Preplanned Product Improvement (P3) will include Digital Map, Ground Proximity Warning System (GPWS), Communication, Navigation and Surveillance/ Air Traffic Management (CNS/ATM), and GPS Non-precision approach (RNP/RNAV).

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES: This ACAT IV-T program was approved in July 2001. Milestone B was approved November 2003. The program was re-designated as ACAT IV-M in November 2003. Milestone C was approved April 2006. Test bed aircraft modification and first kit procurement began in FY 2006. Installation of 1st production kit began in FY 2007. Development Testing is scheduled for FY 2007/8. Initial Operating Capability is scheduled for FY 2009. Preplanned Product Improvement efforts begin in FY 09.

FINANCIAL PLAN: (TOA, \$ IN MILLIONS)

FISCAL YEAR	PRIOR YEARS		FY 2008		FY 2009		FY 2010		FY 2010 OCO												
	QTY	\$	QTY	\$	QTY	\$	QTY	\$													
RDT&E																					
PROCUREMENT																					
INSTALLATION KITS																					
VH-60N Cockpit Upgrade Kit	2	2.1	2	2.2	2	1.4	2	1.3													
INSTALLATION KITS N/R		29.3						2.2													
INSTALL EQUIPMENT																					
Production		2.7		2.6		2.7		2.7													
INSTALL EQUIPMENT N/R		20.0		1.3				1.1													
ECO - Preplanned Prod Improvement							3.9	1.1													
Engineering Change Orders		0.6																			
DATA				2.3				*													
TRAINING EQUIP		1.2		*	1	0.6															
SUPPORT EQUIP																					
ILS				0.5																	
OTHER SUPPORT		10.9		4.2		2.3		2.2													
INTERIM CONTRACTOR SUPPORT						0.5															
INSTALLATION COST	1	4.9	1		3	5.5	2	4.5													
TOTAL PROCUREMENT		71.7		13.3		16.9		15.1													

Asterisk (*) indicates amount value less than \$51K

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: VH-60N MODIFICATION TITLE: VH-60N COCKPIT UPGRADE (OSIP 009-02)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: INSTALLATION OF COCKPIT UPGRADE DURING SPAR

ADMINISTRATIVE LEADTIME: 3 Months PRODUCTION LEADTIME: 13 Months

CONTRACT DATES: FY 2008 May 08 FY 2009 Dec 08 FY 2010 Dec 09

DELIVERY DATE: FY 2008 Jun 09 FY 2009 Jan 10 FY 2010 Jan 11

(\$ in Millions)

Cost:	PRIOR YEARS		FY 2008		FY 2009		FY 2010		FY 2010 OCO		FY 2011		FY 2012		FY 2013		FY 2014		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
FY 2007 & FY (2) kits	1	4.9	1	**															
FY 2008 (2) kits					2	4.5													
FY 2009 (3) kits					1	1.0	2	4.5											
FY 2010 (2) kits																			
Total	1	4.9	1		*3	5.5	2	4.5											

* Total quantity includes 1 trainer.

** One install budgeted for in FY07 occurred in FY08 due to dependence on the SPAR schedule

Installation Schedule

FY 2007 & Prior	FY 2008				FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	1			1			1	1		1		1												
Out			1				1			1	1													

	FY 2014				FY 2015				To Complete	Total
	1	2	3	4	1	2	3	4		
In										
Out										

Exhibit P-3a

MODIFICATION TITLE: VH COMM UPGRADE (OSIP 014-02)
 MODELS OF SYSTEMS AFFECTED: VH-60N/VH-3D TYPE MODIFICATION: SAFETY

DESCRIPTION / JUSTIFICATION:

The White House Military Office (WHMO) has directed the upgrade to the data transfer computer and printer on board the VH-60N, which is required to transmit, receive, and print secure data files via the SATCOM and HF radios. Satisfaction of the Data Transfer Computer/Printer requirement will require the procurement of a compatible TEMPEST certified data transfer computer and printer. WHMO has also directed that VHF FM radios operate in the APCO-25 digital mode. New radios must be procured in order to meet this requirement. JCS Directive MJCS-63-89 states that all users of UHF SATCOM shall have demand assigned multiple access (DAMA) capability. The White House Communication Agency (WHCA) has directed that all White House Military Organization (WHMO) elements be connected and have the ability to operate in the DAMA mode by 2005. Satisfaction of the DAMA SATCOM requirement will require the incorporation of two DAMA capable radios in each aircraft to satisfy the need for full duplex communication. An install kit will be built to house the radio, amplifier, and aircraft interface module, and then it will be installed in the aircraft as one unit. WHCA has also directed that all WHMO elements have the ability to operate in the High Frequency/Automatic Link Establishment (HF/ALE) mode by 2007. To meet the HF/ALE requirement, software modifications to the OFP must be completed to fully utilize all automatic link establishment (ALE) capabilities of the current HF radio. OFP software will be modified by NAWC-AD to allow new systems to work in the aircraft. The FM (YZ) radio replacement is required in order to have a redundant secure voice capability due to the obsolescence of the YZ radio system employed by White House Communication Agency (WHCA). An upgrade to all radios is required to maintain crypto security requirements. Required upgrades vary from software/firmware mods to the replacement of multiple radios on the VH-3D/VH-60N.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES: This program was approved as an Abbreviated Acquisition Program in July 2001. Program was upgraded to ACAT IV-M in March 2003. Digital FM capability was performed between FY 2003 through FY 2005, with a VAL/VER in FY 2004. The Data Transfer Computer/Printer capability modification has been performed between FY 2003 through FY 2005 with a VAL/VER in FY 2006. DAMA SATCOM upgrade will be performed between FY 2002 through FY 2009. DAMA SATCOM installations are performed in conjunction with scheduled depot maintenance. VAL/VER was performed on the delivery of the VH-3D (2005) and VH-60N (2006) DAMA SATCOM modifications. The HF/ALE modification will be performed between FY 2005 through FY 2009 with a VAL/VER completed in FY 2007. FM radio replacement did occur in FY 2008. The crypto modernization effort for both aircraft will begin in FY 2010. All performance testing and EMC/EMI testing will be performed by NAWC-AD. VAL/VER will be performed by HMX-1 to ensure interoperability with all WHMO elements.

FINANCIAL PLAN: (TOA, \$ IN MILLIONS)

FISCAL YEAR	PRIOR YEARS		FY 2008		FY 2009		FY 2010		FY 2010 OCO										
	QTY	\$	QTY	\$	QTY	\$	QTY	\$											
RD&E																			
PROCUREMENT																			
INSTALLATION KITS																			
CRYPTO - ARC-231 VH-3D/60N							2	*											
CRYPTO - ARC-210 VH-60N							1	*											
CRYPTO - ARC-210 VH-3D							1	*											
CRYPTO - HF CRYPTO VH-3D/60N																			
FM Radio Replacement (O-level)			19	0.4															
SATCOM (O-level)	4	0.5																	
VH Digital FM	28	1.0																	
VH-3D SATCOM	11	0.6																	
VH-60 SATCOM	8	1.3																	
INSTALLATION KITS N/R		18.4		0.4				6.0											
INSTALL EQUIPMENT																			
CRYPTO - ARC-231 VH-3D/60N								2	.2										
CRYPTO - ARC-210 VH-60N								1	.5										
CRYPTO - ARC-210 KITS VH-3D								1	.5										
CRYPTO - HF CRYPTO VH-3D/60N																			
Data Transfer Computer/ Printer	8	0.2																	
Digital FM	21	0.3																	
FM Radio Replacement			19	0.1															
SATCOM	27	1.9																	
INSTALL EQUIPMENT N/R		5.8		0.6				.5											
ECO																			
Crypto								1											
Data Transfer		0.3																	
Digital FM		0.7																	
FM Radio Replacement							0.2												
SATCOM																			
DATA		3.7		0.4		0.5		.3											
TRAINING EQUIP	5	0.7																	
SUPPORT EQUIP		2.1																	
ILS																			
OTHER SUPPORT		8.4		2.2		2.6		1.1											
INTERIM CONTRACTOR SUPPORT																			
INSTALLATION COST	14	3.5	3	0.7	2	0.8													
TOTAL PROCUREMENT		49.3		4.8		4.1		9.3											

Asterisk (*) indicates amount value less than \$51K.

Note: FM Radio Replacement kits will be installed at the O level.

Note: All Crypto installed at O level except ARC-210 for the VH-3D.

Exhibit P-3a

MODIFICATION TITLE: VH-3D LIFT IMPROVEMENTS (OSIP 011-06)

MODELS OF SYSTEMS AFFECTED: VH-3D TYPE MODIFICATION: SAFETY

DESCRIPTION / JUSTIFICATION: The VH-3D Lift Improvement program consists of the operational level install of 55 composite main rotor blades on all eleven VH-3D aircraft. These blades will improve performance allowing increased passengers and fuel loads. Composite blades reduce the torque required to hover and for level flight. Composite blades reduce vibrations and structural loads. The VH-3D is the only aircraft in the inventory using metal blades.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES: Flight Test for the procurement of the VH-3D composite main rotor blades did take place in the 1st and 2nd quarter of FY 2008. Procurement and operational install of these blades did take place in 4th quarter of FY 2008. The blades are being individually procured vice procured as entire shipsets. Eight of the fifty five blades were provided by a no cost blade exchange agreement with the legacy blades.

FINANCIAL PLAN: (TOA, \$ IN MILLIONS)

FISCAL YEAR	PRIOR YEARS		FY 2008		FY 2009		FY 2010		FY 2010 OCO												
	QTY	\$	QTY	\$	QTY	\$	QTY	\$													
RDTE&E																					
PROCUREMENT																					
INSTALLATION KITS																					
INSTALL KITS (A Kits)	6	0.1	41	0.5		11.9															
INSTALLATION KITS N/R																					
INSTALL EQUIPMENT																					
INSTALL EQUIP (B Kits)	6	0.8	41	5.3																	
INSTALL EQUIPMENT N/R		19.5		0.9																	
ECO																					
DATA	6	1.0	41	6.8																	
TRAINING EQUIP		*		0.1																	
SUPPORT EQUIP																					
ILS				0.1																	
OTHER SUPPORT		0.3		1.2		0.5															
INTERIM CONTRACTOR SUPPORT																					
TOTAL PROCUREMENT	18	21.6		14.9		12.4															

Asterisk (*) indicates amount value less than \$51K
 Note: Blades are installed at O level.
 Note: (A Kits) in FY 09 includes \$11.9M Congressional Add

Exhibit P-3a

MODIFICATION TITLE: VH STRUCTURAL ENHANCEMENTS (OSIP 016-08)

MODELS OF SYSTEMS AFFECTED: VH-60N TYPE MODIFICATION: SAFETY

DESCRIPTION / JUSTIFICATION: The VH Structural Enhancement Program consists of the efforts to replace critical aircraft structure on the VH-60N, replace the VIP seats on the VH-3D, and upgrade the safety of the fuel system on the VH-3D. VH-60N airframe cracks have been identified and repaired by depot contractor both during scheduled Special Progressive Aircraft Rework (SPAR) and unscheduled/unplanned maintenance at HMX-1. These cracks and the required repairs will significantly extend aircraft out of service time, reducing aircraft availability and impacting HMX-1's ability to support White House Military Office missions.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES: Non-recurring engineering began in the 3rd quarter of FY 2008. Kit procurement will commence in time to meet the installations, which will be performed in conjunction with planned SPAR periods starting in the 3rd quarter of FY 2009. Installation of VH-3D VIP seats will begin in FY 2009 and will be complete by FY 2010. VH-3D fuel system upgrades will begin in FY 2009.

FINANCIAL PLAN: (TOA, \$ IN MILLIONS)

FISCAL YEAR	PRIOR YEARS		FY 2008		FY 2009		FY 2010		FY 2010 OCO														
	QTY	\$	QTY	\$	QTY	\$	QTY	\$															
RDT&E																							
PROCUREMENT																							
INSTALLATION KITS																							
VH-60N TOP DECK KITS			2	5.5	2	2.2	2	2.3															
VH-3D SEAT KITS					7	0.7	4	0.4															
VH-3D FUEL SURVIVABILITY KITS					3	0.8	6	1.4															
VH-60N SLEP KITS																							
INSTALLATION KITS N/R				7.1																			
INSTALL EQUIPMENT																							
VH-3D SEATS					7	2.5	4	1.4															
VH-60 SLEP																							
INSTALL EQUIPMENT N/R																							
ECO																							
Engineering Change Orders						0.3		0.6															
DATA				0.6		0.2		0.6															
TRAINING EQUIP																							
SUPPORT EQUIP																							
ILS				1.6		0.2		0.1															
OTHER SUPPORT				0.2		1.2		1.1															
INTERIM CONTRACTOR SUPPORT																							
INSTALLATION COST					9	2.4	11	6.6															
TOTAL PROCUREMENT				14.9		10.4		14.4															

Exhibit P-3a

MODIFICATION TITLE: OBSOLESCENCE MANAGEMENT PROGRAM (OSIP 023-09)

MODELS OF SYSTEMS AFFECTED: VH-3D/VH-60N TYPE MODIFICATION: SAFETY

DESCRIPTION / JUSTIFICATION: This OSIP provides for the readiness of the VH-3D and VH-60N Helicopters. Funds will be utilized to manage and prepare, process, and incorporate Engineering Change Proposals and implement changes to sustain and improve all Executive Helicopter Series system readiness including safety, mission availability, structural integrity, and component (avionics/systems) reliability, maintainability, and obsolescence conditions as they arise. This program contains the following efforts: Convert the VH-60N T700-GE-401 engine to the T700-401C engine configuration. Non-recurring efforts will include multiple Engineering Change Proposals for integration testing and ILS updates. Recurring efforts include engine conversion kit costs, airframe integration kits and installations. Replace/upgrade the Integrated Logistics Support Avionics test benches used to support VH unique avionics. Effort will install new operating systems, replace obsolete core computers, test equipment and basic test program hardware.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES: NRE for the VH-60N T700-401C engine conversions will begin in FY 10. This modification will cover 16 engine upgrades for 8 installations on VH-60N helicopters. 2 T700-401C engines are required per aircraft.

FINANCIAL PLAN: (TOA, \$ IN MILLIONS)

FISCAL YEAR	PRIOR YEARS		FY 2008		FY 2009		FY 2010		FY 2010 OCO										
	QTY	\$	QTY	\$	QTY	\$	QTY	\$											
RDT&E																			
PROCUREMENT																			
INSTALLATION KITS																			
A Kit - Engines																			
A Kit - Avionics																			
INSTALLATION KITS N/R								1.3											
INSTALL EQUIPMENT																			
B Kit - Engines																			
B Kit - Avionics																			
INSTALL EQUIPMENT N/R								0.6											
ECO																			
ENGINEERING CHANGE ORDERS						1.6													
DATA								1.2											
TRAINING EQUIP						4.0		0.4											
SUPPORT EQUIP																			
ILS						2.4		0.2											
OTHER SUPPORT																			
INTERIM CONTRACTOR SUPPORT																			
INSTALLATION COST																			
ACTIVE																			
TOTAL PROCUREMENT						7.9		3.7											

Note: Avionics kits will be installed at the O level.

Note: FY 09 reflects \$7.9M Congressional Add

Exhibit P-40, BUDGET ITEM JUSTIFICATION	DATE: May 2009
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APPROPRIATION/BUDGET ACTIVITY Aircraft Procurement, Navy / APN5 Aircraft Modifications	P-1 ITEM NOMENCLATURE 056700, SPECIAL PROJECT AIRCRAFT
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Program Element for Code B Items:	Other Related Program Elements
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	PRIOR YEARS	ID Code	FY 2008	FY 2009	FY 2010	OCO FY2010	Total FY2010				
QUANTITY											
COST (In Millions)	237.9	A	25.2	102.7	14.9		14.9				

DESCRIPTION:
 The Special Projects program modifies and/or replaces obsolete special mission equipment and integrates Quick Reaction Capability as required in (6) P-3 aircraft. Procurements vary in each fiscal year and include common Navy systems for increased capability, reduced operator workload and common logistics, as well as procurement of special mission equipment as directed by the Chief of Naval Operations. Active PAA inventory is 4 with additional 2 BAA aircraft in the Special Mission inventory.

The specific modifications budgeted and programmed are:

(TOA, \$ in Millions)

<u>OSIP No. / DESCRIPTION</u>	<u>PRIOR YEARS</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>OCO FY2010</u>	<u>Total FY2010</u>
019-97 INTELLIGENCE SENSORS	163.6	25.2	102.7	14.9		14.9
INACTIVE OSIPS	74.4					
TOTAL	237.9	25.2	102.7	14.9		14.9

Note: Totals may not add due to rounding.

Exhibit P-3a

MODIFICATION TITLE: INTELLIGENCE SENSORS (OSIP 019-97)

MODELS OF SYSTEMS AFFECTED: P-3B/C TYPE MODIFICATION: Operational Improvement

DESCRIPTION/JUSTIFICATION:

This modification replaces obsolescent intelligence collection equipment in six P-3 Special Project aircraft by:

1. Procurement of special mission equipment as directed by the Chief of Naval Operations.

FY2008 includes a \$4.0M Congressional Add for C4ISR Operations and Training Center for Excellence and \$7.6M of Supplemental funding in support of the Global War on Terrorism (GWOT).

FY2009 includes \$84.6M Supplemental funds for complete aircraft conversion, sensor package and associated systems to modify a P-3C aircraft into a Special Project Aircraft required due to catastrophic loss in theater in October 2008 and a \$4.0M Congressional Add for C4ISR Operations and Training Center for Excellence.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

Approval for full rate production is not required.

FINANCIAL PLAN: (TOA, \$ IN MILLIONS)

	PRIOR YEARS		FY 2008		FY 2009		FY 2010		OCO FY 2010														
	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	
RDT&E																							
PROCUREMENT																							
INSTALLATION KITS																							
P-3 KITS (MISSION UNIQUE)	4	0.7																					
INSTALLATION KITS N/R																							
INSTALL EQUIPMENT																							
IMPROVED COMM & COLLECT CAPABILITY		28.8		0.7		0.7		1.4															
MISSION UNIQUE EQUIPMENT		62.4		4.1		3.0		3.7															
SPA Replacement (Special Mission)						43.9																	
Blue Force Tracking	6	1.8																					
Collection Equipment	12	3.1																					
INSTALL EQUIPMENT N/R		36.1		5.7		10.6		2.1															
BFT/Collection Equipment		0.1																					
ECO																							
DATA		2.1		0.1		0.4		0.4															
TRAINING EQUIP		3.2		3.0		4.0		0.1															
BFT/Collection Equipment		0.2																					
SUPPORT EQUIP		0.1				0.1		0.1															
ILS		2.3		0.2		0.4		0.4															
OTHER SUPPORT		17.7		4.4		7.4		4.0															
INTERIM CONTRACTOR SUPPORT																							
INSTALLATION COST		5.1		6.9		32.3		2.9															
TOTAL PROCUREMENT		163.6		25.2		102.7		14.9															

Notes:

1. Totals may not add due to rounding

Individual Modification

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: P-3B/C MODIFICATION TITLE: INTELLIGENCE SENSORS (OSIP 019-97)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Contractor Drive In and Navy Field Mod Team

ADMINISTRATIVE LEADTIME: 6 Months PRODUCTION LEADTIME: 8 Months

CONTRACT DATES: FY 2008 May-08 FY 2009 Apr-09 FY 2010 Apr-10

DELIVERY DATE: FY 2008 Jan 09 FY 2009 Dec 09 FY 2010 Dec 10

(\$ in Millions)

Cost:	PRIOR YEARS		FY 2008		FY 2009		FY 2010		OCO FY 2010													
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
FY 2007 & PY (22) kits	22	5.1		6.9																		
FY 2008 () kits						32.3																
FY 2009 () kits								2.9														
FY 2010 () kits																						
FY 2011 () kits																						
FY 2012 () kits																						
FY 2013 () kits																						
FY 2014 () kits																						
FY 2015 () kits																						
TO COMPLETE () kits																						
Total		5.1		6.9		32.3		2.9														

Installation Schedule

	FY 2007 & Prior	FY 2008				FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In																									
Out																									

	FY 2014				FY 2015				To Complete	Total
	1	2	3	4	1	2	3	4		
In										
Out										

Note: Installation equipment includes both Mission Unique and Improved Communication Capabilities to be installed concurrently.

Exhibit P-40, BUDGET ITEM JUSTIFICATION							DATE: May 2009				
APPROPRIATION/BUDGET ACTIVITY Aircraft Procurement, Navy/APN-5 Aircraft Modifications							P-1 ITEM NOMENCLATURE 056900, T-45 SERIES				
Program Element for Code B Items:							Other Related Program Elements				
	Prior Years	ID Code	FY2008	FY2009	FY2010	OCO FY 2010	Total FY 2010				
COST (In Millions)	230.7	A	56.8	65.5	51.5		51.5				
<p>DESCRIPTION: This line item funds modifications to T-45A aircraft. The T-45A Goshawk is a tandem-seat, carrier capable derivative of the existing British Aerospace Hawk aircraft powered by a single Rolls Royce Adour engine. It serves as the aircraft component of the T45TS integrated jet pilot training system which replaced three decade old TA-4 and T-2 technology.</p> <p>T-45 aircraft and simulators are facing critical avionics obsolescence and Diminishing Manufacturing Source (DMS) issues. OSIP 08-95 (Corrections Of Deficiencies) was established to resolve safety and reliability issues, improve required mission capabilities, and increase service life of aircraft components. OSIP 03-03 (Engine Surge) was established to resolve engine surge critical safety issue. OSIP 17-04 (Avionics Obsolescence) was established to convert the T-45As (analog) to the digital 45C configuration (Required Avionics Modernization Program (RAMP)). OSIP (02-06) (Synthetic Radar) was established because the T-2/T39 are going to be divested in 2008/2012 and the training command will not have Undergraduate Military Flight Officer (UMFO) radar training. No new Type Model Series will be developed to pickup this requirement, as a result, the T-45 will modify 18 aircraft to incorporate Synthetic Radar Training into curriculum. OSIP 13-06 will fund the Non-recurring Engineering (NRE) associated with modification of the Airborne Data Recorder (ADR) to provide a Crash Survivable Memory Unit (CSMU). The CSMU will assure flight incident data is available after an aircraft mishap to assist in reconstructing the cause of mishaps.</p> <p>The designed service life of the aircraft is 14,400 hours with the average remaining service life of inventory aircraft estimated at 6,092 hours.</p> <p>The overall goal of the modifications budgeted in FY 2010 is to correct discrepancies and deficiencies discovered after delivery of the aircraft and to commence upgrades to the aircraft cockpit and navigation systems.</p> <p>The specific modifications budgeted and programmed are:</p>											
OSIP No.	Description	Prior Years	FY2008	FY2009	FY2010	OCO FY2010	Total FY2010				
008-95	T-45TS CORR OF DEFIC	118.6	10.9	20.3	10.3		10.3				
003-03	ENGINE SURGE	12.7	2.9	6.7	9.7		9.7				
010-04	T-45TS GPS	5.2	1.5	1.5	1.0		1.0				
017-04	AVIONICS OBSOLESCENCE	71.1	23.6	16.5	16.2		16.2				
002-06	SYNTHETIC RADAR	4.5	18.0	20.5	14.3		14.3				
* INACTIVE OSIPS		18.6									
Total		230.7	56.8	65.5	51.5		51.5				
<p>Note: Totals may not add due to rounding.</p>											

Exhibit P-3a Individual Modification

MODIFICATION TITLE: T-45TS CORR OF DEFICIENCIES (OSIP 008-95)

MODELS OF SYSTEMS AFFECTED: T-45TS TYPE MODIFICATION: Safety, Reliability, Increased Service Life, Improved Mission Capabilities

DESCRIPTION / JUSTIFICATION:

EJECTION SEAT CHANGES: Modifications will enhance aircrew safety. Modifications include pilot tube covers, changes to the ejection sequencer, ejection seat handle modification and rail system.
 UNCOMMANDED GEAR EXTENSION: MDA-T45TS-TBDs Modification will increase travel of the landing gear control interconnect cable, increase cable friction, and change the gear selector valve actuation signal to only when the handle is in the full up or full down position. Installation of this ECP is in response to a T45TS Engineering Investigation that documented a deficiency and proposed recommendations relating to incidents of uncommanded landing gear extensions.
 GROUND TRAINING SYSTEMS: Updates to the T-45 aircraft simulator will be made to match evolving aircraft configurations/modifications and flight characteristics/software/academics enhancements to improve training capabilities.
 AIRFRAME ECPS are divided into two categories; Structural and Systems.
 STRUCTURAL ECPS: Modifications will incorporate changes to improve structural details to increase aircraft service life to 21,600 flight hours. During FSD testing of the T45 aircraft it was determined that incorporation of redesigned components applicable the critical load paths will significantly increase the service life of the aircraft. This structural portion of this OSIP effects several structural components to include Wing Dolly, SS 02 Monitor Bracket, Horizontal Stabilators, Frame 24 Crossbeam Lugs, Wing Leading Edge Redesign, Frame 29 Lower Flange, Uplock Beam Forward Attach, Slat Track Rib 5 Downstop Bolt, Frame 28/32 Boundary/Vertical Fin, Frame 33 Structure, Inlet Close-Out Fuel, Airframe Engine Mount, Frame 21 Structure, MLG Bay Tilted & Fasteners, Longitudinal Systems Viscous, Frame 20 Structures, Frame 12 Vertical Splice, Frame 1 Structures and ballast provisions, NLF Trunnion Beam, Slat Actuator Fitting Angle, Structure Life Improvement, Speed Brake, Engine Mount Link Option, Stabilizer Back-Up Structures, Fuselage/Frame 10 Door, and Fin Bracket Lever Box Assembly, Over Center Locking Mechanism.
 SYSTEMS ECPS: Modifications to the airframe other than structural deficiencies are also required to ensure safety of flight, aero-performance and maintainability to enable satisfactory PTR levels. This Airframe OSIP affects several airframe components and their sub-assemblies including: forward, center and aft fuselage components, landing gear, tail cone, wing, horizontal and vertical control surfaces, flaps, canopy/windscreen, hydraulic system, oxygen system, electrical system, fuel system, throttle, instrumentation systems, environmental controls, communications, navigation, and emergency systems.
 AVIONICS: Modifications to the Avionics will be required to update the Display Unit, Heads Up Display, Global Positioning System and Inertial Navigation Assembly to enhance effectiveness of pilot training and avoid obsolescence. The following ECP's are part of the Avionics package of the aircraft and include: Air Data Recorder/Signal Data Computer/Advanced Signal Data Computer, Almanac Loading System, Mission Computer, communication systems, navigation systems, including Radar Altimeter, GPS and inverter.
 ENGINE/POWER AND PROPULSION: Modifications under this category include modification to the Engine, Gas Turbine Starter, and Electrical System which will increase the reliability, maintainability and safety of these systems. Engine modifications include Engine Mounts, Fuel Pumps, Combustion Chamber, Compressors, Nozzle Guide Vanes, Drive Systems, Oil System, Air Systems, Turbines, Fuel Distribution and Control and modifications to address engine surge/compressor stall. Gas Turbine Starter modifications include updating the starting system with solid state circuitry and incorporation of a new turbine wheel. Electrical modifications include incorporation of generator improvements and wiring modifications.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES: T-45 aircraft achieves 14,400 flight hour aircraft service life limit with incorporation of Frame 33 structure modification.

FINANCIAL PLAN: (TOA, \$ in Millions)

	Prior Years		FY 2008		FY 2009		FY 2010		OCO FY 2010														
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
RDT&E																							
PROCUREMENT																							
Installation Kits																							
Airframe Structural	1,268	24.6	113	2.4	60	0.6	60	0.6															
Airframe Systems	554	5.8	48	2.8	74	0.4	8	*															
Avionics	646	10.9	30	1.0	192	5.9	144	3.9															
Ejection Seat Handle MB-9155	416	0.4																					
Engines/Power & Propulsion	814	6.7	250	1.0	173	0.9	117	0.8															
Ground Training Systems TBD	49	2.3																					
Uncommanded Gear Extension	35	0.7																					
Installation Kits N/R		11.3				8.0		1.3															
Installation Equipment																							
Airframe Structural	8	0.4																					
Airframe Systems	2	1.3																					
Avionics	7	1.4																					

FINANCIAL PLAN: (TOA, \$ in Millions)

	Prior Years		FY 2008		FY 2009		FY 2010		OCO FY 2010													
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
Ejection Seat Handle MB-9155	1	0.2																				
Engines/Power & Propulsion	2	2.0																				
Ground Training Systems TBD	5	0.7																				
Uncommanded Gear Extension	1	*																				
Installation Equipment N/R		2.0																				
Engineering Change Orders																						
Data		0.8																				
Training Equipment		7.1																				
Support Equipment		1.4																				
ILS																						
Other Support		1.1		0.2		1.0		1.2														
Interim Contractor Support																						
Installation Cost	1,821	37.3	447	3.4	412	3.6	783	2.5														
Total Procurement		118.6		10.9		20.3		10.3														

Notes:

1. Totals may not add due to rounding.

2. Asterisk indicates amount less than \$51K.

Note: In FY2008 there are 196 O-level installs out of 441 procured kits.

Note: In FY2009 there are 84 O-level installs out of 499 procured kits.

Note: In FY2010 there are 84 O-level installs out of 329 procured kits.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: T-45TS MODIFICATION TITLE: T-45TS CORR OF DEFICIENCIES (OSIP 008-95)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: "I" and "D" Level Installation: Contractor Field Modification Team-Separate Contract

ADMINISTRATIVE LEADTIME: VARIOUS Months PRODUCTION LEADTIME: VARIOUS Months

CONTRACT DATES: FY 2008: VARIOUS FY 2009: VARIOUS FY 2010: VARIOUS

DELIVERY DATE: FY 2008: VARIOUS FY 2009: VARIOUS FY 2010: VARIOUS

(\$ in Millions)

Cost:	Prior Years		FY 2008		FY 2009		FY 2010		FY 2010 OCO													
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
FY 2007 & PY (3782) kits	1,821	37.3	447	3.4	412	3.6	422	0.8														
FY 2008 (441) kits							228	1.0														
FY 2009 (499) kits							133	0.6														
FY 2010 (329) kits																						
FY 2011 () kits																						
FY 2012 () kits																						
FY 2013 () kits																						
FY 2014 () kits																						
FY 2015 () kits																						
TO COMPLETE () kits																						
TOTAL	1821	37.3	447	3.4	412	3.6	783	2.5														

Installation Schedule

	FY 2007 & Prior	FY 2008				FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	1821	112	112	112	111	103	103	103	103	195	195	195	107												
Out	1821	112	112	112	111	103	103	103	103	195	195	195	107												

	FY 2014				FY 2015				To Complete	Total
	1	2	3	4	1	2	3	4		
In	91									3463
Out	91									3463

Exhibit P-3a Individual Modification

MODIFICATION TITLE: ENGINE SURGE (OSIP 003-03)

MODELS OF SYSTEMS AFFECTED: T-45TS TYPE MODIFICATION: PS Safety

DESCRIPTION / JUSTIFICATION:
 Engine Surge: T-45 engine surge is a critical safety concern for a single engine aircraft with over 450 surge events documented, including over 70 surges requiring engine shutdown and restart emergency action. Kits include modifications to airframe, engine, and fuel control system.

Funding was provided to correct T-45 F405 engine surge. Non-Recurring Engineering efforts started in FY03. Kit procurement began in FY07.

FINANCIAL PLAN: (TOA, \$ in Millions)

	Prior Years		FY 2008		FY 2009		FY 2010		OCO FY 2010												
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
RDT&E																					
PROCUREMENT																					
Installation Kits																					
Airframe Kit	43	1.3	52	1.6	52	1.6	51	1.5													
Engine Kit					3	3.7	6	7.9													
Installation Kits N/R		10.7				0.6		*													
Installation Equipment																					
Installation Equipment N/R																					
Engineering Change Orders																					
Data		0.1				0.4		*													
Training Equipment		*				0.1															
Support Equipment		0.6				0.2		*													
ILS		*				0.1		*													
Other Support				1.3		0.1		0.2													
Interim Contractor Support																					
Installation Cost			43	*	52	*	55	*													
Total Procurement		12.7		2.9		6.7		9.7													

- Notes:
- Totals may not add due to rounding
 - Asterisk indicates amount less than \$51K

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: T-45TS

MODIFICATION TITLE: ENGINE SURGE (OSIP 003-03)

T45TS AIRFRAME KITS

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Contractor Field Mod Team

ADMINISTRATIVE LEADTIME: 6 Months

PRODUCTION LEADTIME: 18 Months

CONTRACT DATES: FY 2008: Mar 08 FY 2009: Mar-09 FY 2010: Mar-10

DELIVERY DATE: FY 2008: Sep 09 FY 2009: Sep 10 FY 2010: Sep 11

(\$ in Millions)

Cost:	Prior Years		FY 2008		FY 2009		FY 2010		FY 2010 OCO													
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
FY 2007 & PY (43) kits			43	*																		
FY 2008 (52) kits					52	*																
FY 2009 (52) kits							52	*														
FY 2010 (51) kits																						
FY 2011 () kits																						
FY 2012 () kits																						
FY 2013 () kits																						
FY 2014 () kits																						
FY 2015 () kits																						
TO COMPLETE () kits																						
TOTAL			43	*	52	*	52	*		*												

Installation Schedule

	FY 2007 & Prior	FY 2008				FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In				43				52				52													
Out				43				52				52													

	FY 2014				FY 2015				To Complete	Total
	1	2	3	4	1	2	3	4		
In										147
Out										147

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: T-45TS MODIFICATION TITLE: ENGINE SURGE (OSIP 003-03)

T45TS ENGINE KITS

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Contractor Field Mod Team

ADMINISTRATIVE LEADTIME: 6 Months

PRODUCTION LEADTIME: 18 Months

CONTRACT DATES: FY 2008: _____ FY 2009: Mar-09 FY 2010: Mar-10 _____

DELIVERY DATE: FY 2008: _____ FY 2009: Sep 10 FY 2010: Sep 11 _____

(\$ in Millions)

Cost:	Prior Years		FY 2008		FY 2009		FY 2010		FY 2010 OCO													
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
FY 2007 & PY () kits																						
FY 2008 () kits																						
FY 2009 (3) kits								3	*													
FY 2010 (6) kits																						
FY 2011 () kits																						
FY 2012 () kits																						
FY 2013 () kits																						
FY 2014 () kits																						
FY 2015 () kits																						
TO COMPLETE () kits																						
TOTAL								3	*													

Installation Schedule

	FY 2007 & Prior	FY 2008				FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In																									
Out													3												

	FY 2014				FY 2015				To Complete	Total
	1	2	3	4	1	2	3	4		
In										3
Out										3

Exhibit P-3a Individual Modification

MODIFICATION TITLE: AVIONICS OBSOLESCENCE (OSIP 017-04)

MODELS OF SYSTEMS AFFECTED: T-45TS A/C TYPE MODIFICATION: PS Safety

DESCRIPTION / JUSTIFICATION:
 T45TS is facing critical obsolescence/performance issues. Components of various avionics boxes will not be supportable as a result of Diminishing Manufacturing Source issues that result in part obsolescence or supplier mortality. RAMP will resolve obsolescence issues with such items as the Global Positioning Inertial Navigation Assembly (GINA) (FPGA and processor), Mission Display Processor (MDP) (Diode), Display Processor (Diode), Airborne Data Recorders (Line in Buffer Amplifier), Display Unit, Signal Data Computer, Azimuth Computer and various other avionics components.

The Required Avionics Modernization Program (RAMP) is the Analog to Digital conversion of the T-45A aircraft. The RAMP effort consists of a Glass Cockpit upgrade consisting of two Multi-Function Displays per cockpit, mission display processor, recorder, associated cockpit controls and a 1553 digital, integrating them with the existing head-up display (HUD), the airborne data recorder, and a separately procured Global positioning system inertial navigation assembly.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES: FY03 provided funding (OSIP 16-96) for 1 Simulator conversion and OSIP 17-04 provided FY04 funding for DMS/obsolescence risk mitigation efforts.

FINANCIAL PLAN: (TOA, \$ in Millions)

	Prior Years		FY 2008		FY 2009		FY 2010		FY 2010 OCO												
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
RDT&E																					
PROCUREMENT																					
Installation Kits																					
RAMP	33	26.1	9	6.7	9	3.1	13	6.1													
RAMP/Obsolescence Kits	346	3.1	200	4.0	200	*	200	*													
Installation Kits N/R		8.9		0.2		0.2		0.2													
Installation Equipment																					
AS-3822/URN (GPS ANTENNA (FR	33	0.1	9	*	9	*	13	*													
ASDC	33	1.4	9	0.6	9	0.6	13	0.9													
ATTITUDE INDICATOR					9	0.1	13	0.2													
CP-2092 (P/A (DDS)	33	0.6	9	0.2	9	0.1	13	0.2													
FFI	33	0.2	9	0.1	9	0.1	13	0.1													
MDP	33	7.3	9	2.2	9	2.3	13	3.4													
MFCD	33	4.7	9	1.5	9	1.3	13	1.8													
MU-1053/A (PROGRAM LOADER)	33	0.1	9	*	9	*	13	*													
PDU	33	0.7	9	0.3	9	0.3	13	0.5													
PYROTECHNIC	33	0.1	9	*	9	*	13	0.1													
RECORDER																					
SADS	33	0.3	9	0.2	9	0.2	13	0.2													
Installation Equipment N/R																					
Engineering Change Orders																					
Data																					
Training Equipment	2	15.3	2	5.8	2	5.6															
Support Equipment		0.1																			
ILS																					
Other Support		1.5		0.8		1.4		1.3													
Interim Contractor Support																					
Installation Cost	3	0.7	12	1.0	12	1.1	12	1.1													
Total Procurement		71.1		23.6		16.5		16.2													

Notes:
 1. Totals may not add due to rounding.
 2. Asterisk indicates amount less than \$51K.
 *Note: Aircraft was conditionally accepted without Prior year buys of the Recorder Install Equipment B kits, B kits will be put in FY12.
 *Note: Attitude Indicator install equipment was not required in all aircraft.
 *Note: Obsolescence kits will be installed "O" level by the fleet.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: T-45TS A/C MODIFICATION TITLE: AVIONICS OBSOLESCENCE (OSIP 017-04)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Contractor Field Mod Team

ADMINISTRATIVE LEADTIME: 3 Months PRODUCTION LEADTIME: 24 Months

CONTRACT DATES: FY 2008: Dec 07 FY 2009: Dec 08 FY 2010: Dec 09

DELIVERY DATE: FY 2008: Dec 09 FY 2009: Dec 10 FY 2010: Dec 11

(\$ in Millions)

Cost:	Prior Years		FY 2008		FY 2009		FY 2010													
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
FY 2007 & PY (35) kits *	3	0.7	11	0.9	9	0.8	11	1.0												
FY 2008 (11) kits			1	0.1	1	0.1	1	0.1												
FY 2009 (11) kits					2	0.2														
FY 2010 (13) kits																				
FY 2011 () kits																				
FY 2012 () kits																				
FY 2013 () kits																				
FY 2014 () kits																				
FY 2015 () kits																				
TO COMPLETE () kits																				
TOTAL	3	0.7	12	1.0	12	1.1	12	1.1												

Installation Schedule

	FY 2007 & Prior	FY 2008				FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	3	3	3	3	3	3	3	3	3	3	3	3													
Out	3	3	3	3	3	3	3	3	3		4	4	4												

	FY 2014				FY 2015				To Complete	Total
	1	2	3	4	1	2	3	4		
In										39
Out										39

Exhibit P-3a Individual Modification

MODIFICATION TITLE: SYNTHETIC RADAR (OSIP 002-06)

MODELS OF SYSTEMS AFFECTED: T-45TS TYPE MODIFICATION: PS Safety

DESCRIPTION / JUSTIFICATION:

With the T-2 and T-39 divestiture in 2008 and 2012 respectively, the training command cannot complete Uniformed Military Flight Officer (UMFO) radar training. No new Type Model Series will be developed to pick up this requirement. As a result, the T-45 will modify 19 aircraft to incorporate Virtual Mission Training System into the curriculum. The effort will include two phases of integration to incorporate a commercial off the shelf synthetic radar system into the T-45. Phase I includes determining the integration requirements for the air-to-air (A/A) and minimal air-to-ground (A/G) synthetic radar capabilities and completing the T-45 integration effort. Phase II includes determining the integration requirements for increased A/G fidelity simulation and weapons sensors simulation while also completing the Phase II integration effort. Two prototype kits will be utilized for testing.

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES: FY07 provided funding for NRE, FY08-10 provides funding for NRE and 21 kits.

FINANCIAL PLAN: (TOA, \$ in Millions)

	Prior Years		FY 2008		FY 2009		FY 2010		FY 2010 OCO													
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
RDT&E																						
PROCUREMENT																						
Installation Kits																						
VMTS			2	2.0	10	12.0	6	7.2														
Installation Kits N/R		3.8		5.0		2.0		0.9														
Installation Equipment																						
VMTS EQUIPMENT			2	2.0	10	3.3	6	2.9														
Installation Equipment N/R		0.7		4.7		1.0		1.0														
Engineering Change Orders																						
Data				0.9																		
Training Equipment			1	1.0			1	0.4														
Support Equipment				1.2																		
ILS																						
Other Support				1.2		2.0																
Interim Contractor Support																						
Installation Cost					2	0.2	10	2.0														
Total Procurement		4.5		18.0		20.5		14.3														

Notes:

1. Totals may not add due to rounding.
2. Asterisk indicates amount less than \$51K.

Exhibit P-40, BUDGET ITEM JUSTIFICATION							DATE: May 2009					
APPROPRIATION/BUDGET ACTIVITY Aircraft Procurement, Navy/APN-5 Aircraft Modification:							P-1 ITEM NOMENCLATURE 0570, POWER PLANT CHANGES					
Program Element for Code B Items:							Other Related Program Elements					
	Prior Years	ID Code	FY2008	FY2009	FY2010	FY2010 OCO	FY2010 Total					
QTY												
COST (In Millions)	413.1	A	27.1	26.1	26.4	4.5	30.9					
<p>Description: This line item funds modifications to all in-service aircraft engines. Power Plant Changes (PPC) are required throughout the service life of each aircraft to correct flight deficiencies and improve operational readiness while reducing engine operating costs. This program finances the procurement and installation of retrofit kits for all Navy and Marine Corp aircraft engines and related propulsion hardware such as propellers, starters and transmissions. The overall goal of the modifications budgeted in FY 2010 is to continue modification efforts previously initiated on the engines for the AV-8B, F/A-18C/D & E/F, S-3, F-16, H-60, H-3, H-46, H-53, EA-6B, T-2, T-38, T-45, P-3, E-2, C-2, C-130, UH-1N/HH-1N, AH-1W, and V-22.</p> <p>FY10 Overseas Contingency Operations funding is for procurement of T56 Series III Inconel Turbine Vane Case. The Inconel Turbine Vane Case is an improved alloy metal engine frame casing that covers and holds the fan turbine blades of the power section of the engine in place. The new Inconel Turbine Vane Case will improve uncontained failures that the current aged and brittle metal casings have caused in the past.</p> <p>The following depicts the current funding levels budgeted and programmed for Power Plant Changes:</p>												
							(TOA, \$ in Millions:					
							OCO					
							Total					
<u>OSIP No.</u>	<u>Description</u>	<u>Prior Years</u>	<u>FY2008</u>	<u>FY2009</u>	<u>FY2010</u>	<u>FY2010</u>	<u>FY2010</u>					
	040-00 Power Plant Changes	413.1	27.1	26.1	26.4	4.5	30.9					
Total		413.1	27.1	26.1	26.4	4.5	30.9					
 Note: Totals may not add due to rounding.												

Exhibit P-3a

Individual Modification

MODIFICATION TITLE: Power Plant Changes (OSIP 040-00)

MODELS OF SYSTEMS AFFECTED: Power Plant Changes TYPE MODIFICATION: Approx. 80% Safety, 20% Reliability

DESCRIPTION/JUSTIFICATION: This program corrects aircraft flight safety deficiencies, improves operational fleet readiness and reduces engine cost of ownership by incorporating approved power plant changes. Power plant changes are required throughout the aircraft service life as the engine ages and operationally revealed deficiencies are discovered, researched, and solutions engineered. The Component Improvement Program (CIP) which is funded in RDT&E, N develops and demonstrates engineering solutions to these deficiencies and through the Engineering Change Proposal (ECP) process, initiates power plant change. The Power Plant Change program procures the necessary power plant change retrofit kits, support equipment, kit installation and technical data. This program provides retrofit kits for all Navy and Marine Corp aircraft engines and propulsion related hardware such as propellers starters, generators, and transmissions. Reliability Improvements are designed to increase Mean Time Between Failure and Mean Time Between Engine Removal by 30% on average and are expected to generate savings/cost avoidance in excess of \$50M annually. Aircraft engines included in Power Plant changes include: F100 Engine F-16, F402 Engine A/V-8B, F404 Engine F/A-18, F405 Engine T-45, F414 Engine F/A18-E/F, J52 Engine EA-6B, J85 Engine T-38 and T-2, T400 Engine AH-1W and UH-1N, T406 Engine V-22, T56 Engine P-3, C-2, E-2, and C-130, T58 Engine H-3 and H-46, T64 Engine H-53, T700 Engine H-60 and AH-1, and TF34 Engine S-3.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

FINANCIAL PLAN: (TOA, \$ in Millions)

	Prior Years		FY 2008		FY 2009		FY 2010		FY2010 OCO												
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
RDT&E		490.8		56.3		59.4		78.3													
PROCUREMENT																					
Installation Kits																					
F100 (F-16)	22	0.1																			
F402 (A/V-8B)	6,869	17.8	325	0.7	302	0.8	235	1.0													
F404 (F/A-18)	12,351	12.1	1,797	0.8	560	0.7	460	0.5													
F405 (T-45)	2,258	10.2	36	1.6	65	3.3	86	4.3													
F414 (F/A18-E/F)	4,781	10.9	2,066	1.4	1,042	0.8	192	0.5													
J52 (EA 6/B)	4,102	11.0	1,811	1.9	258	1.4	240	1.3													
J85 (T-38, T-2)	713	2.3	40	0.0	60	0.1															
T400 (AH1W, UH1N)	1,193	1.6	159	0.7	88	0.6	63	0.3													
T406 (V22)	22	0.2																			
T56 (P-3, C-2, E-2, C-130)	6,272	15.3	1,923	10.3	2,043	9.9	1,747	10.6	300	4.5											
T58 (H-3, H-46)	1,621	2.7	695	1.9	127	0.6	50	0.5													
T64 (H-53)	8,452	11.4	2,625	4.2	2,905	5.1	2,576	5.0													
T700 (H-60, AH-1)	6,575	34.0	200	0.9	200	0.9	100	0.5													
TF34 (S-3)	346	0.5																			
Completed ECPs from Prior Yrs	35,198	200.5																			
Installation Kits N/R																					
Installation Equipment																					
Installation Equipment N/R		0.2																			
Engineering Change Orders																					
Data		0.5		0.1		0.1		0.2													
Training Equipment																					
Support Equipment		0.1		0.1		0.1		0.2													
ILS		5.6		0.2		0.2		0.2													
Other Support		41.2		0.6		0.4		0.4													
Interim Contractor Support																					
Installation Cost	10,278	35.1	1,209	1.8	756	1.2	675	1.2													
Total Procurement		413.1		27.1		26.1		26.4		4.5											

Notes:
 1. Totals may not add due to rounding
 2. Asterisk indicates amount less than \$51K

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: Power Plant Changes

MODIFICATION TITLE: Power Plant Changes (OSIP 040-00)

INSTALLATION INFORMATION: **The tables below list the quantities, installation schedules, and costs for those ECPs for which there is an installation cost. Of those ECPs with installation costs, three are not shown as they are labor-only modifications and require no kit. The reason they are not shown in these tables is that the procurement quantity and installation quantities would not be equal. Current with engine/module repair (where installation cost is zero), or by forced retrofit (shown below).**

METHOD OF IMPLEMENTATION: _____

ADMINISTRATIVE LEADTIME: Average of 6 Months PRODUCTION LEADTIME: Average of 12 Months

CONTRACT DATES: FY 2008: Varies FY 2009: Varies FY 2010: Varies _____

DELIVERY DATE: FY 2008: Varies FY 2009: Varies FY 2010: Varies _____

(\$ in Millions)

Cost:	Prior Years		FY 2008		FY 2009		FY 2010		FY 2010 OCO											
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
FY 2007 & PY (10,278) kits	10,278	35,100																		
FY 2008 (1,209) kits			1,209	1,814																
FY 2009 (756) kits					756	1,200														
FY 2010 (675) kits							675	1,161												
TOTAL	10,278	35,100	1,209	1,814	756	1,200	675	1,161												

Installation Schedule

FY 2007 & Prior	FY 2008				FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	10,278	302	302	302	303	189	189	189	189	168	169	169	169											
Out	10,278	302	302	302	303	189	189	189	189	168	169	169	169											

	FY 2014				FY 2015				To Complete	Total
	1	2	3	4	1	2	3	4		
In										
Out										

CLASSIFICATION: **UNCLASSIFIED**

Exhibit P-40, BUDGET ITEM JUSTIFICATION							DATE: May 2009				
APPROPRIATION/BUDGET ACTIVITY Aircraft Procurement, Navy/APN-5 Aircraft Modifications							P-1 ITEM NOMENCLATURE 057100, JPATS SERIES				
Program Element for Code B Items:							Other Related Program Elements				
	Prior Years	ID Code	FY2008	FY2009	FY2010	OCO FY2010	Total FY2010				
COST (In Millions)	4.1	A	8.2	8.9	4.9		4.9				
<p>DESCRIPTION:</p> <p>This line item funds modifications to T-6 aircraft. The T-6A Texan II is a tandem-seat, turboprop aircraft derivative of the Pilatus PC-9 aircraft powered by a single Pratt & Whitney PT6A-68 engine. It serves as the aircraft component of the JPATS integrated primary pilot training system which replaces the T-34C primary training aircraft. The overall goal of the modifications budgeted in FY 2010 is to correct discrepancies and deficiencies discovered after delivery of the aircraft, maintain joint configuration with Air Force aircraft and the joint program. The T-6B derivative incorporates major upgrades to the aircraft cockpit, navigation system, and aircrew life support system (ALSS).</p>											
(TOA, \$ in Millions)											
OSIP No.	Description	Prior Years	FY2008	FY2009	FY2010	OCO FY2010	Total FY2010				
011-04	JPATS CORRECTION OF DEFICIENCIE	4.1	8.2	8.9	4.9		4.9				
Total		4.1	8.2	8.9	4.9		4.9				
Note: Totals may not add due to rounding.											

Exhibit P-3a	Individual Modification		
MODIFICATION TITLE:	<u>JPATS CORRECTION OF DEFICIENCIES (OSIP 011-04)</u>		
MODELS OF SYSTEMS AFFECTED:	<u>T-6A/B</u>	TYPE MODIFICATION:	<u>PS Safety</u>
<p>DESCRIPTION/JUSTIFICATION: * Corrections to discrepancies found during testing and evaluation can sometimes be incorporated into production aircraft, effective with the physical configuration audit which establishes the product baseline of the aircraft. However when this cannot be done due to constraints, retrofit of the changes into already delivered aircraft requires funding through the Aircraft Modification Program. Additionally, deficiencies discovered during Fleet operations must be corrected. The unacceptable alternative to retrofitting would be multiple configurations in the Fleet, which creates maintenance and supply problems, and in many cases the mission capability of the aircraft would be adversely affected as well as reduced service life. Corrections to the following items/conditions are required:</p> <p>VHF radio ECP (ECP-055)- Provide for the correction of volume and reception level discrepancies. Current volume inequities between the UHF/VHF radios make the radio unintelligible and a safety concern for aircrew.</p> <p>Nose Wheel Centering (ECP-052) - Safety modification to provide positive nose wheel centering in flight. Category 1 Deficiency.</p> <p>MLG Door Tie Rods - Retrofit of improved durability MLG door tie rod.</p> <p>MLG Sidebrace Redesign (ECP-059) - Re-work of existing MLG drag link. Improve grease fitting access to maintainability improvement.</p> <p>Oil Pressure Warning - Safety modifications to correct oil pressure cockpit warning indications and associated systems to improving aircrew situational awareness and overall systems operation.</p> <p>OBOGS Upgrades (ECP-049) - Safety modifications to improve the normal and emergency aircrew oxygen supply systems. Mods address increased supply, delivery control box and software logic corrections.</p> <p>Trim System Redesign - Safety modification to reduce trim actuator force limit, decrease activation speed. Results in shorter landing distances.</p> <p>Braking (anti-skid) - Safety modification to improve the short field abort and stopping distances of the aircraft through the introduction of improved tires and braking system.</p> <p>NACWS Replacement- Safety modification to replace the obsolete and unsupported Naval Aircraft Collision Warning System (NACWS) due to FAA changes in the National Airspace System.</p> <p>Ejection Mode Selector -Modifies Interseat Sequencing System (Ejection system) to add two additional modes allowing command ejection authority designated to each seat.</p> <p>ASV Regulator/EL Panel - Safety modification addressing excessive force required to breathe utilizing current Anti-Suffocation Valve (ASV). This Correction will solve unconscious aircrew air supply requirements. In addition, a safety modification will replace the current EL Panel to increase the oxygen regulator blinker visibility at night. Deficiency noted during OPEVAL.</p> <p>Landing Gear Doors & Bellcrank - Structural fixes to gear doors & bellcrank to eliminate cracking.</p> <p>UWARS Addition to Ejection Seat - Safety modification to add UWARS to Ejection Seat. Current system lacks UWARS, restricting overwater flight operations.</p> <p>Acceptance of Ground Power (ECP-056) - Operational modification to allow acceptance of electric power commercial ground power carts.</p> <p>Life Raft Addition to Ejection Seat - Safety modification to install life raft to ejection seat and incorporate URT-140 radio. Current system lacks raft, restricting overwater flight operations.</p> <p>Cockpit Improvements (ECP-058/063) - Safety and Human Factors modification to the cockpit to improve aircrew efficiencies and to eliminate excessive pilot workload and other dangerous situations. Modifications include rearview mirrors, improved cockpit storage, improved night lighting, reducing excessive ambient noise, improved trim relays, open avionics wire bundles, communication audio volume solutions, nose wheel position/positioning systems and flight instrument display issues.</p> <p>Increase Gross Weight - Structural mods to increase weight capacity. Need driven by weight additions for Anti-Skid, Life Raft, Oil Pressure warning system.</p> <p>OBOGS Low Pressure Switch - Safety modification to improve OBOGS low pressure switch. In-flight failures have caused numerous aborts.</p> <p>Condenser blower motor-longer life - Replace air conditioning blower with longer life, brushless motor, reducing life cycle costs</p> <p>Supplemental Oxygen System - Safety modification to increase volume of emergency oxygen. Class A safety board recommendation.</p> <p>GPS receiver upgrade-LAAS/WAAS - Operational upgrade to GPS system-allows aircraft to utilize LAAS/WAAS approaches.</p> <p>Engine PMU upgrade - Operational modification to fix engine power management unit (PMU) software. Mod required to eliminate hot-start abort conditions.</p> <p>ANTI-G valve replacement - Safety modification to improve Anti-G valve with rust resistant valve. Rusty valves have caused numerous inflight emergencies (loss of pressurization).</p> <p>Avionics Obsolescence - Replace various Avionics components due to supplier and/or technical obsolescence.</p> <p>Aft Fuselage Structural Upgrade - Add structural components to strengthen the AFT Fuselage to address minor cracks and rivets coming loose and/or breaking in the area of Frame 9 and the Ventral Fins. This is both a safety and maintainability issue.</p> <p>Sealed Rudder Position Sensor - Replace the current Rudder Position Sensor which has an excessively high failure rate due to water intrusion into the unit resulting in inaccurate information being provided to the flight data recorder. Erroneous data negatively impacts the structural integrity/FLE monitoring program because rudder position affects tail loading (asymmetric G's) and accident/incident replay and investigation.</p> <p>Engine Oil Dipstick and Bottle - Enhance the Engine Oil Dipstick and add a Collection Bottle which will allow a higher total engine oil volume to provide an allowable range for safe operation. This effort is a direct response to a Navy Class B engine incident.</p> <p>MFOQA - Improve the flight data recorder, change the data cartridge adapter, and install a larger capacity data storage module (PCMCIA) to allow for participation in the Military Flight Operations Quality Assurance (MFOQA) Program. MFOQA is part of a DoD-wide safety emphasis.</p> <p>Emergency Locator Transmitter - DoD mandated installation of a 121.5/406 MHz ELT system in the T-6 to replace the current 121.5/243 MHz emergency beacon.</p> <p>Communications Cord/Oxygen Hose - Replace the current T-6 single Line Replaceable Unit (LRU) Communications Cord and Oxygen Hose with a Communications Cord and Oxygen Hose that consists of two (2) separate LRUs.</p> <p>Unique Identification (UID) - Per MIL-STD-130M dated 2 Dec 05 and the DoD Unit Identification Guide, each T-6 will be marked with a two-dimensional PDF214 or equivalent machine-readable unique identification (UID).</p> <p>Canopy Fracturing Initiation System (CFIS) - Redesign Safety related modification will replace the current T-6 laser system CFIS with an electro-mechanical CFIS that will improve reliability and reduce life-cycle costs.</p> <p>Avionics Upgrade Program (AUP) - Upgrade T-6 avionics to include multifunctional displays controlled by two (2) redundant Integrated Avionics Computers (AICs), add a Heads-Up Display (HUD) to the front cockpit, a radar altimeter and additional navigational capability.</p> <p>Landing Gear Handle - Safety modification to T-6 Landing Gear Handle to reduce the risk of gear up landings. Effort includes redesign of cams and down-lock solenoid, replacing lights with LEDs and changing Programmable Array Logic to improve voltage thresholds.</p> <p>Landing Gear Shimmy - Modify the T-6 Landing Gear to mitigate excessive vibration (shimmy) that has been experienced during landings and takeoffs. No mishaps have occurred to date, but the potential exists.</p> <p>Power Control Lever (PCL) Cut-Off - Safety related effort to install a mechanical barrier to PCL to prevent inadvertent engine shutdown (cut-off). Result of Class A safety investigation.</p> <p>Structural Improvement - Change structural components to strengthen the T-6 Airframe to address cracks and structural fatigue issues. This is both a safety and maintainability issue.</p> <p>Nosewheel Actuator - Replace existing T-6 Nosewheel Actuator with longer life, better sealed actuator, reducing life cycle costs.</p> <p>Engine Redesign - Redesign turbine blades, discs, seals, support case and compressor in the T-6 engine to eliminate safety, reliability and maintainability issues, turbine blade crack development and propagation.</p> <p>OBOGS Concentrator (-0105 to -0106) - Upgrade current -0105 model Onboard Oxygen Generating System (OBOGS) Concentrator to replace parts that are no longer available due to manufacturing obsolescence. In addition, replace the slide valve to eliminate issues with sticking.</p> <p>OPAS Signal Conditioning Unit - Upgrade the Oil Pressure Annunciator System (OPAS) Signal Conditioning Unit (SCU). Upgraded OPAS SCU will take readings from a different point in the engine oil system and use upgraded software to eliminate erroneous "Oil Pressure Low" warning indications in the cockpit.</p> <p>Voice Recorder - OPNAV mandated installation of a cockpit voice recording system to provide audio playback capability for investigation and reconstruction of incidents and mishaps.</p> <p>Ground Proximity Warning System (GPWS) - Safety of flight issue. OPNAV mandated incorporation of a system that will indicate the proximity of the T-6 aircraft to the ground. GPWS will reduce the potential of an inadvertent ground strike resulting in the possible loss of aircraft and crew.</p> <p>AUP Integrated Avionics Computer Upgrade - Upgrade the two (2) Integrated Avionics Computers (IACs) in each T-6 with both hardware and software to provide a power caret indication in the cockpit for setting engine power.</p> <p>AUP Spiral I Retrofit - Upgrade the hardware and software in the AUP computer system to provide for increased speed in the Data Transfer System (DTS).</p> <p>AUP Spiral II Retrofit - Upgrade the Hardware and software in the AUP computer system to provide solution to conditions that were noted as deficiencies during the T-6B FOT&E.</p>			
DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: Feb 93 received MS 0 and MSI approval, Aug 95 received MSII and LRIP approval, Dec 01 received MSIII approval, and Navy IOC occurred 4th Qtr FY03.			

FINANCIAL PLAN: (TOA, \$ in Millions)																					
	Prior Years		FY 2008		FY 2009		FY 2010		FY 2010 OCO		FY 2010 Total										
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
Avionics Obsolescence					49	*	49	*													
Avionics Upgrade Program																					
Braking Improvement (Anti-skid)			16	*	9	*	10	*													
CFIS Redesign					2	*	2	*													
Cockpit Improvements	70	*	4	*	3	*	6	*													
Communication Cord/Oxygen Hose					24	*	4	*													
Condenser Blower Motor - Longer Life			1	*	1	*	1	*													
ENGINE REDESIGN								1	*												
Ejection Mode Selector	10	*	24	*	15	*															
Emergency Locator Transmitter	43	*	6	*																	
Engine Oil Dipstick and Bottle					12	*	14	*													
Engine PMU Upgrade					2	*	3	*													
GPS Receiver Upgrade - LAAS					12	*	12	*													
Increase Gross Weight					14	*	14	*													
LANDING GEAR HANDLE					5	*	5	*													
LANDING GEAR SHIMMY					5	*	5	*													
Landing Gear Doors & Bellcrank	66	0.1	24	*	12	*	4	*													
Life Raft Addition to Ejection Seat			24	*	7	*	6	*													
MFOQA			20	*	30	*	1	*													
MLG Door Tie Rods			18	*	18	*	7	*													
MLG Sidebrace Redesign	36	0.1																			
NACWS Replacement			16	*	18	*	6	*													
NOSE WHEEL ACTUATOR					8	*	6	*													
Nose Wheel Centering	36	0.3																			
OBOGS Low Pressure Switch			24	*	24	*	3	*													
OBOGS upgrades (ECP-049)	37	*	3	*																	
Oil Pressure Warning	46	*	3	*																	
PCL CUT-OFF					5	*	5	*													
STRUCTURAL IMPROVEMENT					5	*	5	*													
Sealed Rudder Position Sensor			36	*	10	*	6	*													
Supplemental Oxygen System			2	*	3	*	3	*													
Trim System Redesign	73	*	59	*	9	*	9	*													
UWARS Addition to Ejection Seat			6	*	1	*	1	*													
Unique Identification (UID)			3	*	4	*	5	*													
VHF Radio (Audio Volume)	39	0.1																			
OBOGS Concentrator (-0105 to -0106)							1	*													
OPAS Signal Conditioning Unit							1	*													
Voice Recorder							1	*													
Ground Proximity Warning System							1	*													
Instrument Training Hood							1	*													
AUP Integrated Avionics Computer Upgrade							1	*													
AUP Spiral I Retrofit							1	*													
AUP Spiral II Retrofit							1	*													
Installation Equipment N/R					*	*	*	*													
Engineering Change Orders					*	*	*	*													
Data					*	*	*	*													
Training Equipment	11	*	4	*	17	*	26	0.1													
Support Equipment					*	*	*	*													
ILS					*	*	*	*													
Other Support					*	*	*	*													
Interim Contractor Support					*	*	*	*													
Installation Cost	689	1.2	306	2.5	337	2.5	193	1.6													
Total Procurement		4.1		8.2		8.9		4.9													

Notes:

1. Totals may not add due to rounding.

2. Asterisk indicates amount less than \$51K.

*Install kits and equipment quantities differ because those specific airframe kits do not require a corresponding "B kit."

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: T-6A/B MODIFICATION TITLE: JPATS CORRECTION OF DEFICIENCIES(OSIP 011-04)

INSTALLATION INFORMATION: VHF Radio (Audio Volume)/OBOGS Upgrades (ECP-049)/Oil Pressure Warning/ASV Regulator/EL Panel/Ejection Mode Selector/Cockpit Improvements/NACWS Replacement/Avionics Obsolescence/Braking Improvement (Antiskid)/Nose Wheel Centering/MLG Door Tie Rods/MLG Sidebrace Redesign/Trim System Redesign/Landing Gear Doors & Bellcrank/UWARS Addition to Ejection Seat/Acceptance of Ground Power/Life Raft Addition to Ejection Seat/Increase Gross Weight/OBOGS Low Pressure Switch/GPS Repeater for Simulator/Baro Altimeter Repeater for Simulator/Condenser Blower Motor-Longer Life/Supplemental Oxygen System/GPS Receiver Upgrade-LAAS-WAAS Engine PMU Upgrade/Anti-G Valve/Simulator Mods to Reflect A/C Systems/AFT Fuselage Structural Upgrade/Sealed Rudder Position Sensor/Engine Oil Dipstick and Bottle/MFOQA Landing Gear Handle, Landing Gear Shimmy, PCL Cut-Off, Structural Improvement, Nose Wheel Actuator, Engine Redesign.

METHOD OF IMPLEMENTATION: Contractor Field Mod Team

ADMINISTRATIVE LEADTIME: 0 Months PRODUCTION LEADTIME: 0 Months

CONTRACT DATES: FY 2008: VARIOUS FY 2009: VARIOUS FY 2010: VARIOUS

DELIVERY DATE: FY 2008: VARIOUS FY 2009: VARIOUS FY 2010: VARIOUS

(\$ in Millions)

Cost:	Prior Years		FY 2008		FY 2009		FY 2010		FY 2010 OCO													
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
FY 2007 & PY (689) kits	689	1.2																				
FY 2008 (306) kits			306	2.5																		
FY 2009 (337) kits					337	2.5																
FY 2010 (193) kits							193	1.6														
TOTAL	689	1.2	306	2.5	337	2.5	193	1.6														

Installation Schedule

	FY 2007 & Prior	FY 2008				FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	689	76	76	76	78	84	84	84	85	48	48	48	49												
Out	689	76	76	76	78	84	84	84	85	48	48	48	49												

	FY 2014				FY 2015				To Complete	Total
	1	2	3	4	1	2	3	4		
In										1525
Out										1525

Exhibit P-40, BUDGET ITEM JUSTIFICATION							DATE: May 2009				
APPROPRIATION/BUDGET ACTIVITY <i>Aircraft Procurement, Navy/APN-5 Aircraft Modifications</i>							P-1 ITEM NOMENCLATURE 057500, AVIATION LIFE SUPPORT MODS				
Program Element for Code B Items:							Other Related Program Elements				
	Prior Years	ID Code	FY2008	FY2009	FY2010	OCO FY2010	Total FY2010				
QTY											
COST (In Millions)	4.4	A	4.1	2.0	5.6		5.6				
<p>DESCRIPTION:</p> <p>The specific modifications budgeted and planned are:</p> <p>(1) Detector installation on rotary and cargo aircraft to identify the presence of chemical warfare (CW)vapors.</p> <p>(2) The addition of the Mobile Aircrew Restraint System (MARS) to helicopters and fixed wing aircraft. MARS will replace existing fixed length tether with a locking retraction system that allows safe movement of the aircrew within the cargo area while affording protection during a mishap or combat. MARS will be mounted to the aircraft overhead.</p> <p>(3) Installation of new aircrew endurance modifications in legacy ejection seat equipped aircraft due to extended range missions.</p> <p>(4) Installation of new aircrew endurance modifications in non-ejection seat equipped aircraft due to extended range missions.</p> <p>(5) Installation of the Joint Helmet Mounted Cueing System (JHMCS) night mission system compatible electronic packages into tactical aircraft. This will provide the ability to cue and display weapons and sensors at night using Night Vision Devices (NVD) that integrate JHMCS cueing, display symbology, and scene viewed through the NVD.</p>											
(TOA, \$ in Millions)											
<u>OSIP No.</u>	<u>Description</u>	<u>Prior Years</u>	<u>FY2008</u>	<u>FY2009</u>	<u>FY2010</u>	<u>FY2010</u>					
002-05	CW DETECTORS	1.2	0.2								
001-07	MARS/CMARS		1.5	0.5		0.7					
001-08	EJECTION SEAT ENDURANCE		2.4	1.4		1.7					
004-09	NON-EJECTION SEAT ENDURANCE	0.3				1.7					
007-10	JOINT HELMET MOUNTED CUEING SYSTEM					1.5					
	INACTIVE OSIPs	2.9									
Total		4.4	4.1	2.0	5.6						

CLASSIFICATION: **UNCLASSIFIED**

Exhibit P-40, BUDGET ITEM JUSTIFICATION							DATE: May 2009																																																																													
APPROPRIATION/BUDGET ACTIVITY Aircraft Procurement, Navy/APN-5 Aircraft Modifications							P-1 ITEM NOMENCLATURE 057600, Common ECM Equipment																																																																													
Program Element for Code B Items:							Other Related Program Elements																																																																													
	Prior Years	ID Code	FY2008	FY2009	FY2010	OCO FY2010	Total FY2010																																																																													
COST (In Millions)	734.5	A	216.6	238.0	47.4	263.4	310.8																																																																													
<p>DESCRIPTION: This line item funds common Electronic CounterMeasures (ECM) equipment (B kits) for multiple aircraft. The overall goal of the modification budget is to provide a reprogrammable radar and missile warning system, provide attacking missile declaration and sector direction finding, laser detection, and self protection capability devices to applicable user aircraft.</p> <p style="text-align: center;">(TOA, \$ in Millions)</p> <table border="1"> <thead> <tr> <th>OSIP No.</th> <th>Description</th> <th>Prior Years</th> <th>FY2008</th> <th>FY2009</th> <th>FY2010</th> <th>OCO FY2010</th> <th>Total FY2010</th> </tr> </thead> <tbody> <tr> <td>72-88</td> <td>AN/AAR-47 Detection</td> <td>331.6</td> <td>5.8</td> <td>39.2</td> <td></td> <td>46.4</td> <td>46.4</td> </tr> <tr> <td>14-90</td> <td>AN/APR-39(V)2 RWR</td> <td>195.4</td> <td>7.5</td> <td></td> <td></td> <td>4.7</td> <td>4.7</td> </tr> <tr> <td>06-00</td> <td>ALE-39 to 47 Retrofit</td> <td>79.8</td> <td>36.1</td> <td>6.8</td> <td>4.3</td> <td>32.5</td> <td>36.8</td> </tr> <tr> <td>07-03</td> <td>IDECM</td> <td>127.7</td> <td>39.1</td> <td>40.5</td> <td>40.3</td> <td></td> <td>40.3</td> </tr> <tr> <td>05-08</td> <td>DIRCM</td> <td></td> <td>27.9</td> <td>149.7</td> <td>2.7</td> <td>179.8</td> <td>182.5</td> </tr> <tr> <td>14-08</td> <td>Generation II Missile Warning System (MWS) Upgrade</td> <td></td> <td>100.3</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>13-09</td> <td>ALQ-144</td> <td></td> <td></td> <td>1.8</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Total</td> <td></td> <td>734.5</td> <td>216.6</td> <td>238.0</td> <td>47.4</td> <td>263.4</td> <td>310.8</td> </tr> </tbody> </table> <p>Notes: 1. Totals may not add due to rounding.</p>													OSIP No.	Description	Prior Years	FY2008	FY2009	FY2010	OCO FY2010	Total FY2010	72-88	AN/AAR-47 Detection	331.6	5.8	39.2		46.4	46.4	14-90	AN/APR-39(V)2 RWR	195.4	7.5			4.7	4.7	06-00	ALE-39 to 47 Retrofit	79.8	36.1	6.8	4.3	32.5	36.8	07-03	IDECM	127.7	39.1	40.5	40.3		40.3	05-08	DIRCM		27.9	149.7	2.7	179.8	182.5	14-08	Generation II Missile Warning System (MWS) Upgrade		100.3					13-09	ALQ-144			1.8				Total		734.5	216.6	238.0	47.4	263.4	310.8
OSIP No.	Description	Prior Years	FY2008	FY2009	FY2010	OCO FY2010	Total FY2010																																																																													
72-88	AN/AAR-47 Detection	331.6	5.8	39.2		46.4	46.4																																																																													
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07-03	IDECM	127.7	39.1	40.5	40.3		40.3																																																																													
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Exhibit P-3a Individual Modification

MODIFICATION TITLE: AN/AAR-47 DETECTION(OSIP 072-88)

MODELS OF SYSTEMS AFFECTED: AH-1W/Z, UH-1N/Y, CH-53D/E, HH-60H, SH-60B, MH-60R/S, P-3/P-3AIP, KC-130F/R/T/J, CH-46E, MV-22 TYPE MODIFICATION: MISSION CAPABILITY

DESCRIPTION/JUSTIFICATION:

The AN/AAR-47 warns of approaching missiles by detecting radiation associated with rocket motors and automatically initiates flare ejection. Detection algorithms are used to discriminate against non-approaching radiation sources. The AN/AAR-47 is a passive missile approach warning system consisting of four sensor assemblies housed in two or more sensor domes, a central processor unit and a control indicator. The AN/AAR-47 provides attacking missile declaration and sector direction finding as will be interfaced directly to the ALE-39/47 countermeasures dispenser. Without the AAR-47, helicopters and fixed wing aircraft have no capability to detect an infrared missile attack. FY 2007 Supplemental funds were received to provide AAR-47B(V)2 Probability of Detection Improvement Engineering Change Proposal (ECP) Retrofit Program. Currently deployed system has performance limitations in certain OCO operating environments; the ECP supports USMC Urgent Need Statement (UNS) #03606UC. FY 09 and FY10 OCO supplemental funding will complete the Engineering Change Proposal (ECP) and improve Missile Warning capabilities in support of Urgent Needs Statement USN #03606UC for USN/USMC Assault Aircraft. Fielded Missile Warning System (MWS) has performance limitations in certain OCO environments.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

Milestone II was passed in 1982. OPEVAL (on the CH-53E) was passed in October 1986. Milestone III was passed in May 1987 for full production with extension of application to all other platforms. Production of 709 systems and preparation of a Level III data package followed, with deliveries completed in early 1992. Under full and open competition, a contract for up to 1200 systems was awarded to Hercules (now Alliant) in December 1991. Actual orders were for 1122 systems with deliveries completed in January 1997. Under full and open competition, a contract for up to 1077 systems was awarded to Lockheed Martin in September 1995. Deliveries began in January 1997 and were completed in July 1999. There are two upgrade programs: The Computer Processor Microprocessor upgrade program FY97-FY99 replaced the 8086 MP board with an MP 80486 Board with new software to enhance threat declaration and to better control false alarms. The Second Upgrade; AAR-47(V)2 Sensor upgrade, contained two phases; Phase one upgraded the UV sensors with a solid state spectral filter assembly with embedded Laser warning capability. Phase two incorporated a Class I Sensor ECP (Dynamic Blanking) which upgraded the AAR-47(V)2 Sensors to the AAR-47A(V)2 sensor design. Due to the current operational environment a third Sensor Class I ECP is required which improves probability of detection in the current theaters of operation. The FY07 Supplemental funded the procurement of 5 First Article Test units for USMC/USN/USAF Operational Assessment and the accelerated development of a Class I ECP for AAR-47B(V)2 for multiple T/M/S and delivery of 300 PDX upgrade kits consisting of four sensors and one CP unit. This is an O-level replacement with the existing sensors being sent to the contractor, upgraded and then sent back to the fleet. An IOC date of October 2008 is expected for the AAR-47B(V)2. Congressional Add funds provided in FY08 funded the Operational Flight Software for the Hostile Fire Indication Capability. FY09 OCO supplemental and FY10 OCO will fund procurement of AAR-47 B(V)2 retrofit kits.

FINANCIAL PLAN: (TOA, \$ in Millions)

	Prior Years		FY 2008		FY 2009		FY 2010		OCO FY2010										Total		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
RDT&E																					
PROCUREMENT																					
Installation Kits																					
AAR-47B(V)2 HFI Sensors					80	10.6															
AAR-47B(V)2 MWS					1,200	18.0															
AAR-47B(V)2 Retrofit Kits									580	37.7											
Installation Kits N/R																					
Installation Equipment																					
AAR-47 NVG Suite					4.6																
ECO (Sensor Upgrade Equip ECO)	1,836	49.5																			
FY05 SUP (CP Upgrade Equip ECO)	1	0.3																			
FY05 SUP (CP Upgrade Equip ECO)	98	3.7																			
FY06 Title IX Sup (Dynamic Blk ECO)	4	8.1																			
Install Equip (AAR-47 Equip)	1,250	90.2																			
Title IX Sup (Sensor Upgrade)	151	11.3																			
Installation Equipment N/R		24.6																			
Engineering Change Orders																					
UMP Rehosting									3.0												
ECO (CP Upgrade Equip ECO)		7.7																			
ECO (Dynamic Blanking)		1.9																			
ECO - Sensor Upgrade Equipment		4.3																			
FY05 Sup (Dynamic Blanking ECO)		8.9																			
Title IX Sup (Dynamic Blanking)		0.5																			
FY07 Sup (PDX Upgrade Kit)	300	18.8																			
FY07 Sup PDX ECO		1.7																			
FY07 Sup Sensor Fusion ECP		17.6																			
FY07 Sup (Hostile Fire Indicator)		12.9																			
FY08 Cong Add (Hostile Fire Operational Flight SW)				4.0																	
FY09 Cong Add (Hostile Fire Operational Flight SW)						4.0															
Data		1.8																			
Test Equipment																					
Training Equipment		0.6																			
Support Equipment		8.8																			
ILS		5.7																			
Other Support		52.7		1.8		2.0			5.7												
Interim Contractor Support																					
Installation Cost																					
Total Procurement		331.6		5.8		39.2			46.4												

Notes:
 1. Totals may not add due to rounding.
 2. Asterisk indicates amount less than \$51K.
 3. FY08 funding is Congressional Add.

Exhibit P-3a Individual Modification

MODIFICATION TITLE: AN/APR-39(V)2 RWR (OSIP 014-90)

MODELS OF SYSTEMS AFFECTED: AN/APR-39A/B(V)2, UH-1N/Y, AH-1W/Z, MV-22, KC-130T, CH-53K, MH-60S TYPE MODIFICATION: MISSION CAPABILITY

DESCRIPTION / JUSTIFICATION:

The AN/APR-39B(V)2 Radar Signal Detecting Set (RSDS) is designed for use on US Marine Corps, US Navy, and US Army Assault Support aircraft to provide onboard situational awareness and warning of radar threats. The AN/APR-39B(V)2 also provides control and display of the AAR-47A(V)2 Missile Warning System and Chaff dispense commands to the ALE-47 Counter Measure Dispensing System (SMDS). The APR-39A(V)2 consists of five antennas, one Cockpit Control unit, one or two Display Indicators, two or four receivers, and one processor. FY10 Overseas Contingency Operations (OCO) funding will support a Class I Computer Processor (CP) ECP upgrade program. The Engineering Change Proposal (ECP) will correct RWR integration and suitability deficiencies noted in AH-1W and recent MV-22 and KC-130T OpEval reports. The current RWR provides time delayed detection and identification of threat emitters causing loss of situational awareness to combat aircrews. 8 (eight) first article Computer Processor Unit (CPU) upgrade kits will be procured to support platform integration and suitability testing on the AH-1W/Z, UH-1N/Y, MV-22, MH-60S, KC-130T and CH-53E/K and aircraft System Integration Labs (SILs).

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

The AN/APR-39A(V)2 is in the APN-1 Post Production and sustainment phase (MSII3Q/96). The U.S. Navy is the lead service of this joint service program. The U.S. Army awarded the production contract 3Q/96, and continues to administer the contract. U.S. Navy delivery of production systems commenced June 1999. Procurement of an AN/APR-39A/B(V)2 for the additional requiring platforms will be by extension of application with the required follow-on test and evaluation conducted on each platform. Version B of AN/APR-39A/B(V)2 is a glass cock-pit compatible for H-1 upgrades and CH-53K.

Current efforts include the FY08 supplemental funding for the developing the Computer Processor Unit (CPU) ECP upgrade (BVX program). This includes incorporation of the Army APR-39A(V)X CPU and Memory Circuit Card Assemblies. The MV-22, AH-1Z, UH-1Y, CH-53K and MH-60S platforms have planned APN-1 procurement of APR-39 systems in FY2010.

FINANCIAL PLAN: (TOA, \$ in Millions)

	Prior Years		FY 2008		FY 2009		FY 2010		OCO FY2010												Total		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
RDT&E																							
PROCUREMENT																							
Installation Kits																							
Install Kits	7	0.2																					
Installation Kits N/R																							
Installation Equipment																							
GWOT FY05 Supp (Install Equip) APR39A	24	5.0																					
Install Equip (AVR-2)	254	32.2																					
Install Equip AN/APR-39A/B(V)2	463	73.4																					
Install Equip AN/APR-39A/B(V)X			8	0.4																			
Title IX Supplemental (Install Equip) 39a	4	5.1																					
Installation Equipment N/R		16.7																					
Engineering Change Orders																							
ECO		20.9																					
ECO B(V)X Computer Processor ECP				3.6						2.2													
Data		1.0																					
Training Equipment		1.0																					
Support Equipment		2.1																					
ILS		6.3		0.1						0.9													
Other Support		31.5		3.4						1.6													
Interim Contractor Support																							
Installation Cost																							
Total Procurement	752	195.4	8	7.5						4.7													

- Notes:
1. Totals may not add due to rounding.
 2. Asterisk indicates amount less than \$51K.
 3. Program received \$7.51M of Supplemental funds in FY08.

Exhibit P-3a Individual Modification

MODIFICATION TITLE: ALE-39 TO ALE-47 RETROFIT (OSIP 006-00)
 CH-53E, EA-6B, AH-1W, CH-46E, UH-1N,
 MODELS OF SYSTEMS AFFECTED: CH-53D, MH-53D, F/A-18C/D, AV8B, MV-22, KC-130FRT, HH60, P-3 TYPE MODIFICATION: MISSION CAPABILITY

DESCRIPTION/JUSTIFICATION:

The replacement of the AN/ALE-39 Dispenser System will correct serious safety problems and greatly improve aircraft survivability. The AN/ALE-47 system has been developed to correct the safety issues of the ALE-39. As a joint program, USD (AT&L) memo of November 1986 directed U.S. Navy and U.S. Army to participate in the USAF Engineering Manufacturing Development (EMD) phase. Requirements established by USAF Statement of Operational Requirements Document (SORD) number 341.88-AA-D of 8 July 92. OSIP 006-00 had been cancelled beginning FY04, but operational requirements in support of the Global War on Terrorism resulted in accelerated installs and additional aircraft being identified for retrofit incorporation with FY-04/05 GWOT Supplemental funds. FY-07/08 GWOT Supplemental funds add additional dispensers for increased capacity and forward firing capability. FY-09 and subsequent funding supports installation of ALE-47 on F/A-18/C/D aircraft lots 12-17.

Overseas Contingency Operations: This Phase II effort will increase mission duration for CH-53D/E with significantly improved survivability. CH-53D/E Expendable Effectiveness Flight Testing with Forward Firing Capability (FY07/08 GWOT) demonstrated significant increase in survivability against IR MANPADs. However, the large IR signature of CH-53 aircraft requires dispensing of a larger quantity of flares per event to protect this platform. These funds will provide for the procurement of additional production CH-53 Dual Dispenser Pods and the NRE/installation to increase the expendables capacity from 120 to 240. This effort will also procure new AN/ALE-47 Test Sets (ALM-290) for F/A-18C/D, MV-22, HH-60 and P-3 to replace original version ALM-286s that cannot declare ALE-47 as full mission capable due to the limitations of older system design. Additionally, funding is provided to procure AN/ALE-47 Breech plates for CH-46, MV-22 and F/A-18 C/D to provide more reliable countermeasures dispensing and ensure accurate onboard inventory reporting. The current operational tempo has accelerated breech plate wear, impacting reliable dispensing capability and replacement breech plates are required for sustained survivability.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

The AN/ALE-47 system is in production and being installed in multiple U.S. Navy and Marine aircraft. MS III decision awarded March 1993. Production systems are being procured under Air Force contract FA8540-06-D-0002 awarded 02 November 2006.

FINANCIAL PLAN: (TOA, \$ in Millions)

	Prior Years		FY 2008		FY 2009		FY 2010		OCO FY2010		Qty	\$	Total										
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$											Qty	\$	Qty
RDT&E																							
PROCUREMENT																							
Installation Kits																							
AV8 Kit	48	0.9																					
EA6B Kit	35	0.3																					
'A' Kit	987	5.8	863	6.9	2	0.1	27	1.5	376	7.1													
Installation Kits N/R	4	3.8		0.4		2.6		0.5	8	0.3													
Installation Equipment																							
GWOT FY05 Spp (Install Equip) B Kits	266	3.0																					
Install Equip (39 Sequencer Switches)	1	2.0																					
TACAIR/HELOS Equip	1,573	30.7	325	19.5	1566	2.4	27	0.8	1616	15.9													
Title 9 Supplemental (Install Equip)	7	5.6																					
Installation Equipment N/R																							
Engineering Change Orders																							
Equip ECO		0.8																					
Data		0.1																					
Training Equipment		3.2																					
Support Equipment		5.7				0.2		0.2		2.3													
I/LS		1.0		0.3						0.7													
Other Support		14.1		8.5		1.4		0.8		4.3													
Interim Contractor Support																							
Installation Cost	720	3.0		0.5	6	0.1	167	0.6		1.9													
Total Procurement		79.8		36.1		6.8		4.3		32.5													

Notes:

1. Totals may not add due to rounding.
2. Asterisk indicates amount less than \$51K.
3. Program received \$10.9M of Supplemental funds in FY07.
4. FY 2008 \$35.62M Supplemental Funds; 863 A kits procured in FY 2008, 140 A Kits will be inducted on CH-53E in FY 2010 utilizing FY 2008 supplemental funds. The delta will be an 'O' Level Install.
5. FY 2010 OCO installs will occur across the FYDP utilizing funds identified in FY 2010.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: CH-53E, F/A-18C/D, CH-53D, CH-46E, MV-22, HH-60, P-3 MODIFICATION TITLE: ALE-39 TO ALE-47 RETROFIT (OSIP 006-00)

INSTALLATION INFORMATION: ALE-47 Retrofit requires different types of Installation equipment kits based on the quantity and mounting of dispensers on each aircraft. F/A-18C/D Lots 12-17 kits require two (2) dispensers per aircraft. CH-53E kit requires two (2) pods per aircraft that contain 2 dispensers per pod (4 dispensers per aircraft). CH-53D/E kits require two (2) additional pods per aircraft that contain 2 dispensers per pod (adds 4 dispensers per aircraft). Breechplates and Test Sets are O-Level items

METHOD OF IMPLEMENTATION: Depot Level Installation

F/A-18C/D INSTALLATIONS

ADMINISTRATIVE LEADTIME: 1 Months PRODUCTION LEADTIME: 4 Months

CONTRACT DATES: FY 2008: Sep-08 FY 2009: Oct-08 FY 2010: Oct-09

DELIVERY DATE: FY 2008: Dec-08 FY 2009: Feb-09 FY 2010: Feb-10

CH-53E INSTALLATIONS

ADMINISTRATIVE LEADTIME: 6 Months PRODUCTION LEADTIME: 10 Months

CONTRACT DATES: FY 2008: Feb-09 FY 2009: _____ FY 2010: _____

DELIVERY DATE: FY 2008: Dec-09 FY 2009: _____ FY 2010: _____

NOTE: FY08 submit assumed Depot Level modifications were not required for all platforms. However, structural modifications were determined to be required for CH-53E (140 aircraft in FY10.)

(\$ in Millions)

Cost:	Prior Years		FY 2008		FY 2009		FY 2010		OCO FY 2010		Qty	\$											
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$													Qty
FY 2007 & PY (720) kits	720	3.0																					
FY 2008 (144) kits				0.5	4	0.1	140																
FY 2009 (2) kits					2	*																	
FY 2010 (403) kits							27	0.6	1.9														
FY 2011 () kits																							
FY 2012 () kits																							
FY 2013 () kits																							
FY 2014 () kits																							
FY 2015 () kits																							
To Complete () kits																							
TOTAL	720	3.0		0.5	6	0.1	167	0.6	1.9														

NOTE: Of the 144 A kits procured with FY08 funds, 4 are F/A18 kits and 140 are CH-53E. Remaining procurements are O-Level installations. 752 Kits for OCO are comprised of 188 Left Side A-Kits, 188 Right Side A-kits, 188 Left Side B-Kits and 188 Right Side B-Kits. These kits as well as 41 of the regularly funded kits will be installed in the outyears. Remaining procurements for Breech Plates and Test Sets are O-Level installations.

Installation Schedule

	FY 2007	FY 2008				FY 2009				FY 2010				FY 2011				FY 2012				FY 2013				
	& Prior	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
In	720						4	2		35	49	42	41													
Out	720								4	2	35	49	42	41												

	FY 2014				FY 2015				To	Total
	1	2	3	4	1	2	3	4	Complete	
In										893
Out										893

Exhibit P-3a Individual Modification

MODIFICATION TITLE: INTEGRATED DEFENSIVE ELECTRONIC COUNTERMEASURE (IDECM) RADIO FREQUENCY COUNTERMEASURE (RFCM)(OSIP 007-03)
 MODELS OF SYSTEMS AFFECTED: F/A-18E/F TYPE MODIFICATION: MISSION CAPABILITY

DESCRIPTION/JUSTIFICATION:

IDECM RFCM consists of an Onboard Electronic Countermeasure Set, an Electronic Frequency Converter (EFC), an Improved Multi Platform Launch Controller (IMPLC) and Fiber Optic Towed Decoy (FOTD) that improves the survivability of aircraft against modern RF threats. The IDECM RFCM Operational Requirements Document (ORD) numbers are 494-88-98, 624-78-03 AND 730-88-07. Current IDECM RFCM configurations are: Block 1 (IB-1) consisting of the ALQ-165 and ALE-50 (AAED); IDECM Block 2 (IB-2) consisting of the ALQ-214 and the ALE-50 (AAED); IDECM Block 3 (IB-3) consisting of ALQ-214, the ALE-55 (FOTD), and the EFC. The EFC enables dataflow via the fiber optic cable to the decoy. This Operational Safety Improvement Program is for the onboard portion of the IDECM Blocks 2 and 3 configuration

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

IDECM Block 2 received MS III approval in January 2004. Full Rate Production contracts 1-6 were awarded in FY04-FY09 respectively. Annual production contract awards are expected to continue. A total of 285 ALQ-214s are planned for procurement via OSIP 007-03. A total of 160 ALQ-214s are planned for procurement via the Common On-Board Jammer OSIP 014-12. A FY09 Congressional Add provided funds for an ALQ-214 incremental depot stand-up.

FINANCIAL PLAN: (TOA, \$ in Millions)

	Prior Years		FY 2008		FY 2009		FY 2010		OCO FY2010								Total		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$							Qty	\$	
RDT&E																			
PROCUREMENT																			
Installation Kits																			
Installation Kits N/R																			
Installation Equipment																			
ALQ-214	50	84.6	16	27.2	7	12.2	10	21.1											
EFC	6	3.4	5	2.2	8	1.5	53	9.3											
IMPLC Retrofit					190	2.5	165	2.5											
Installation Equipment N/R		0.3		3.0		1.4													
Engineering Change Orders		1.8																	
Data		0.1																	
Training Equipment																			
Support Equipment																			
ILS		1.1		0.1		0.4		0.2											
Other Support		36.5		6.5		22.6		7.2											
Interim Contractor Support																			
Installation Cost																			
Total Procurement		127.7		39.1		40.5		40.3											

Notes:
 1. Totals may not add due to rounding.
 2. Asterisk indicates amount less than \$51K

Exhibit P-3a Individual Modification

MODIFICATION TITLE: DIRECTED INFRARED COUNTERMEASURE(OSIP 005-08)

MODELS OF SYSTEMS AFFECTED: UH-1Y;MV-22;CH-53D/E/K;MH-60R;MH-60S;AH-1Z; CH46E TYPE MODIFICATION: MISSION CAPABILITY

DESCRIPTION/JUSTIFICATION:

Urgent Overseas Contingency Operations (OCO) requirement to provide aircraft survivability against Infrared Surface-to-Air Missile (IR SAM) threats for USN/USMC rotary wing aircraft in support of Operation Iraqi Freedom and Operation Enduring Freedom. FY2008-2010 funding is for the A kit and P kit procurement of a Directed Infrared Countermeasure (DIRCM) capability until the next generation DIRCM is produced. FY 2009 and FY 2010 Overseas Contingency Operations (OCO) Funds will procure complete ship sets, including A-kits and installation, as well as, contractor logistic support for Infrared Countermeasures (IRCM) systems supporting squadrons deployed in direct support of Operation Iraqi Freedom (OIF) and Operation Enduring Freedom (OEF). Current USMC operations require improved IRCM capability against the MANPADs threat. This upgrade will provide improved MWS and IRCM performance in current theaters of operation. The upgrade incorporates improved detection capability and increased countermeasure response in a multi-target and high clutter environments. The FY 2009 OCO funding will outfit a total of 32 aircraft mix of CH-53D/E and CH-46 USMC aircraft with A-Kits and B-Kits. The FY 2010 OCO funding will outfit a total of 48 aircraft mix of CH-53D/E and CH-46 USMC aircraft with A-Kits and B-Kits. If unfunded, aircraft with the currently fielded AAR-47A(V)2 MWS will operate in a degraded mode in certain operational environments allowing increased risk to aircraft and aircrew.

The DoN LAIRCM System (B-KIT) consists of 5 Components: A Missile Warning System, a processor, a cockpit indicator, two Turret Assemblies, and two Laser Transmitters. The DoN LAIRCM system (A-Kit) includes all AFC material and wiring based on the platform AFC Design.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

The urgent OCO requirement MS C decision for DoN LAIRCM is scheduled for 4th QTR FY09. The follow-on acquisition strategy for the Next Generation Assault DIRCM and JATAS is TBD (awaiting OSD Joint Assessment Team guidance). Current Missile Warning System is a Generation I system that provides a cost effective solution to the Infra-Red (IR) threat with limited ability to distinguish non-threat from threat energy in high clutter environments. FY 2005 Supplemental funds enabled an analysis of a current Generation I MWS with current countermeasure dispense techniques as compared to Generation II MWS. Directed IR Countermeasures (DIRCM) system CH-53 Technology Assessment Program (TAP) used FY 2007 Supplemental funds to develop and purchase the Airframe Changes (AFC) A-Kit and B-Kit test articles. The Analysis of Alternatives (AOA) for the Assault DIRCM program was completed in July 2007. This program demonstrated the improved capability and mitigated deficiencies using the next generation system incorporating improved MWS with advanced DIRCM solution. The DoN LAIRCM effort is a pre-milestone C program with an expected Initial Operational Capability date of May 2009. This OSIP will provide currently available technology improvements to survivability to USMC aircraft operating in support of OIF and OEF in the Overseas Contingency Operations.

FINANCIAL PLAN: (TOA, \$ in Millions)

	Prior Years		FY 2008		FY 2009		FY 2010		OCO FY2010												
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
RDT&E																					
PROCUREMENT																					
Installation Kits					32	16.0			31	16.0											
Installation Kits N/R				0.9																	
Installation Equipment																					
Assault DIRCM (Next Gen/MWS/JATAS)																					
DIRCM CH-53			7	20.3	7	19.6	1	2.3													
FY09 SUPP Install Equipment					35	77.0															
FY10 SUPP Install Equipment									48	129.6											
Installation Equipment N/R																					
Engineering Change Orders				2.5		14.0		*		18.3											
Data								0.6													
Training Equipment				*		0.5															
Support Equipment								0.2													
ILS				1.8		0.9				2.0											
Other Support				2.5		8.2		0.4		13.9											
Interim Contractor Support																					
Installation Cost								12.8													
Total Procurement				27.9		149.7		2.7		179.8											

Notes:

- Totals may not add due to rounding.
- Asterisk indicates amount less than \$51K.
- Installs reflected in FY2009 were procured in FY2007 and FY2008 by PMA-272 and PMA-261 OSIP 10-80 (Qty 32). FY2009 procurement (Qty 32) will be installed in FY2011 utilizing baseline funds.
- FY10 funds will support the following programs : PMA-226 (CH-46) \$9.0M (12 "A" Kits procurement and installation), PMA-261 (CH-53) \$7.0 (19 "A" Kits procurement and installation).

Exhibit P-40, BUDGET ITEM JUSTIFICATION							DATE: May 2009			
APPROPRIATION/BUDGET ACTIVITY Aircraft Procurement, Navy/APN-5 Aircraft Modifications							P-1 ITEM NOMENCLATURE 057700 Common Avionics			
Program Element for Code B Items:							Other Related Program Elements			
	Prior Years	ID Code	FY2008	FY2009	FY2010	OCO FY2010	Total FY2010			
QTY		A								
COST (In Millions)	1555.8	A	147.7	148.5	151.1		151.1			
DESCRIPTION:										
This line item funds common avionics equipment for multiple aircraft. With the exception of OSIPs 43-94 (Flight Data Recorders), 14-97 (KC-130T GPWS), 17-98 (Helo GPWS), and 24-99 (CAS), the individual aircraft platforms fund the "A" kits and installation in the appropriate aircraft line.										
The specific modifications budgeted and programmed are: (1) The NAVSTAR GPS (Global Positioning System) is designed to provide a highly accurate passive position (16 meters) velocity (0.1 meter/sec) and time to users worldwide in all weather conditions. The GPS will interface with communication, navigation, and weapon systems equipment (standard attitude heading reference systems, inertial navigation systems, on-board computers, etc.) in selected applications. GPS is a DoD mandated requirement for all aircraft operating in the National Air Space System after the year 2000. (2) The AN/ARC-210 Electronic Protection (EP) Combination Radio provides dual V/UHF capability for CV based TACAIR; VHF AM for close air support and maritime channels; VHF AM for air traffic control; and EP capabilities. The AN/ARC-210 can be controlled by either a remote control unit or via MIL-STD-1553 multiplex data bus. (3) The Crash Survivable Flight Incident Recorder (CSFIR) is a crash hardened recorder which will be used in support of aircraft mishap and incident investigations. (4) The Ground Proximity Warning System (GPWS) provides visual and aural warnings to the pilot when the aircraft is in conditions that could result in a controlled flight into terrain accident. (5) The Traffic Alert & Collision Avoidance System (TCAS) will provide a display of situation awareness to aid in the prevention of mid-air mishaps. (6) The Advanced Mission Computer and Display (AMC&D) system will replace existing aging/obsolete and performance limited AN/AYK-14(V) Mission Computer and Contractor Furnished Equipment Displays. (7) The Tactical Air Moving Map Capability (TAMMAC), the common solution for US Naval Aviation, provides a common tactical aircraft moving map and data loading capability and replaces current obsolete Fleet equipment. (8) Communication Navigation Surveillance/ Air Traffic Management (CNS/ATM) provides civil upgrades to communications, navigation, and surveillance systems enabling shift from Air Traffic Control to Air Traffic Management in increasingly congested airspace and frequency spectrum. (9) Aircrew Wireless Internal Communications System (AWICS) will provide a wireless, spread spectrum intercom system to allow for unimpeded movement throughout the aircraft and prevent aircrew/passenger entanglement with intercom system cords in the event of mishap. (10) Attitude Gyro Upgrade replaces obsolete gyros with a more reliable and, maintainable gyro. (11) Military Flight Operations Quality Assurance (MFOQA) is a program that provides the warfighter with timely and quantitative information regarding aircrew and system performance for improving safety, operational efficiency, and readiness every flight. (12) Avionics Component Improvement Program (AVCIP) provides resources to address critical readiness and reliability deficiencies, obsolescence, loss of sustainability and top Fleet repair cost drivers in Naval avionics systems. The overall goal of the modifications budgeted in FY 2010 is to procure the common equipment required for the individual aircraft platforms. The specific modifications budgeted and programmed are:										
(TOA, \$ in Millions)										
OSIP No.	Description	Prior Years	FY2008	FY2009	FY2010	OCO FY2010	Total FY2010			
71-88	NAVSTAR GPS (Hardware)	317.4	9.2	9.1	7.7		7.7			
04-94	AN/ARC-210 (Hardware)	289.7	2.4	7.6	3.8		3.8			
14-97	GPWS (CAT I) Fixed Wing	89.6	4.5	3.4	0.3		0.3			
21-01	CNS/ATM	211.0	51.1	67.2	87.0		87.0			
02-02	Tactical Air Moving Map Capability (TAMMAC)	65.3	15.9	17.0	15.4		15.4			
01-02	AMC&D/MPCD	205.1	53.7	30.7	26.2		26.2			
07-04	Attitude Gyro Upgrade	48.0	6.9	5.7	3.2		3.2			
09-04	Aircrew Wireless Internal Communications System (AWI)	15.0	4.0	4.4	3.1		3.1			
10-09	Military Flight Operations Quality Assurance (MFOQA)			1.6	2.3		2.3			
11-09	Avionics Component Improvement Program (AVCIP)			2.0	2.0		2.0			
	Inactive Years	314.9								
Total		1,555.8	147.7	148.5	151.1		151.1			
Note: Totals may not add due to rounding.										

Exhibit P-3a Individual Modification

MODIFICATION TITLE: Global Positioning System (GPS) (OSIP 71-88)

MODELS OF SYSTEMS AFFECTED: All aircraft TYPE MODIFICATION: Common Avionics (Safety) (Added Capability)

DESCRIPTION/JUSTIFICATION:
 The NAVSTAR GPS is designed to provide highly accurate passive position (16 meters), velocity (0.1 meter/sec) and time to users worldwide in all weather conditions. GPS will be integrated with communication, navigation, and weapon systems equipment (attitude heading reference systems, inertial navigation systems, mission computers, etc.). This OSIP procures the GPS B-kit equipment (receivers, antennas, amplifiers, CDNU, DDS, SDC, etc.) as required for the above platforms. Hardware configuration varies depending on the TMS of the aircraft. Approximately 2500 aircraft will be modified with equipment provided through this OSIP. The Global Positioning System Operational Requirement Document (ORD) 003-78 dated 22 Jan 90 was based on an Air Force General Operating Requirement (GOR) dated 28 Jan 1978. The Navy ORD for Enhanced GPS User Equipment for Navigation Warfare (NAVWAR) and GPS Modernization was approved on 7 June 2000. NAVWAR systems protect a platform's GPS capability from GPS jamming and unintentional interference.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:
 The NAVSTAR GPS program completed Phase II (Full Scale Engineering Development) and completed Milestone IIIA (Approval for Limited Production) in June 1986. Milestone IIIB (Approval for Full Production) was completed in January 1992. The NAVWAR full rate production approval was received in June 2002. Research, Development, Test and Evaluation, Navy (RDT&E,N) is funded under program element #0604777N.

FINANCIAL PLAN: (TOA, \$ in Millions)

	Prior Years		FY 2008		FY 2009		FY 2010		OCO FY2010										
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
RDT&E																			
PROCUREMENT																			
Installation Kits																			
NAVWAR	343	4.4	16	0.2	37	1.0	8	0.3											
Installation Kits N/R	1	2.8		0.6		0.6		1.0											
Installation Equipment																			
GPS	2,047	173.8																	
NAVWAR	405	18.3	16	1.5	37	3.9	8	0.6											
Installation Equipment N/R		21.3		1.9															
Engineering Change Orders																			
NAVWAR Kit ECO		0.5																	
Data		7.9		0.1															
Training Equipment																			
GPS	114	7.8																	
NAVWAR	2	0.2																	
Support Equipment		0.4																	
ILS		0.5		0.1		*		0.1											
Other Support		78.0		3.0		2.2		5.3											
Interim Contractor Support																			
Installation Cost	122	1.4	124	1.8	80	1.3	32	0.5											
Total Procurement		317.4		9.2		9.1		7.7											

- Notes:
1. Totals may not add due to rounding.
 2. Asterisk indicates amount less than \$51K.
 3. Installation Equipment NR provides non recurring engineering on kits installed in subsequent years.
 4. Installation Kit, Installation Equipment and Installation unit costs vary by platform due to different equipment configurations.

CLASSIFICATION: **UNCLASSIFIED**

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: All Aircraft (Excluding AV-8B) MODIFICATION TITLE: Global Positioning System (GPS) (OSIP 71-88)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Equipment is provided to the platform PMA and installed as per airframe ECP/AFC.

ADMINISTRATIVE LEADTIME: 3 Months PRODUCTION LEADTIME: 10 Months

CONTRACT DATES: FY 2008: Dec-07 FY 2009: Dec-08 FY 2010: Dec-09

DELIVERY DATE: FY 2008: Oct-08 FY 2009: Oct-09 FY 2010: Oct-10

(\$ in Millions)

Cost:	Prior Years		FY 2008		FY 2009		FY 2010		OCO FY2010											
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
FY 2007 & PY (284) kits	122	1.4	114	1.7	48	0.8														
FY 2008 (2) kits					2	*														
FY 2009 (4) kits							4	0.1												
FY 2010 (4) kits																				
FY 2011 () kits																				
FY 2012 () kits																				
FY 2013 () kits																				
FY 2014 () kits																				
FY 2015 () kits																				
To Complete () kits																				
TOTAL	122	1.4	114	1.7	50	0.9	4	0.1												

**FY03 (1) HH-60 A-kit installation reflected in Installation Kit N/R line. Qty of 1 in FY03 HH-60H unit bought will not be installed.
 ***Asterisk indicates amount less than \$51K

Installation Schedule

	FY 2007 & Prior	FY 2008				FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	122	28	28	29	29	12	12	13	13	1	1	1	1												
Out	122	28	28	29	29	12	12	13	13	1	1	1	1												

	FY 2014				FY 2015				To Complete	Total
	1	2	3	4	1	2	3	4		
In										290
Out										290

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: AV-8B MODIFICATION TITLE: Global Positioning System (GPS) (OSIP 71-88)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Equipment is provided to the platform PMA and installed as per airframe ECP/AFC.

ADMINISTRATIVE LEADTIME: 11 Months PRODUCTION LEADTIME: 13 Months

CONTRACT DATES: FY 2008: Sep-08 FY 2009: Sep-09 FY 2010: Sep-10

DELIVERY DATE: FY 2008: Oct-09 FY 2009: Oct-10 FY 2010: Oct-11

(\$ in Millions)

Cost:	Prior Years		FY 2008		FY 2009		FY 2010		OCO FY2010													
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
FY 2007 & PY (58) kits			10	0.2	30	0.5	18	0.3														
FY 2008 (14) kits							10	0.2														
FY 2009 (33) kits																						
FY 2010 (4) kits																						
FY 2011 () kits																						
FY 2012 () kits																						
FY 2013 () kits																						
FY 2014 () kits																						
FY 2015 () kits																						
To Complete () kits																						
TOTAL			10	0.2	30	0.5	28	0.5														

**Water Tank Panel AV-8B 16 month delivery (FY08-12)

***Asterisk indicates amount less than \$51K

Installation Schedule

FY 2007 & Prior	FY 2008				FY 2009				FY 2010				FY 2011				FY 2012				FY 2013				
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
In			5	5	7	7	8	8	7	7	7	7													
Out			5	5	7	7	8	8	7	7	7	7													

	FY 2014				FY 2015				To Complete	Total
	1	2	3	4	1	2	3	4		
In										68
Out										68

CLASSIFICATION: **UNCLASSIFIED**

Exhibit P-3a Individual Modification

MODIFICATION TITLE: Communication - Navigation - Surveillance / Air Traffic Management (CNS/ATM) Systems (OSIP 21-01)

MODELS OF SYSTEMS AFFECTED: P-3C, EP-3E, C-2A, EA-6B, KC-130J, C/KC-130T, VH-3D, VH-60N, F/A-18E/F, F/A-18C/D, E-2C, MH-60S, MH-60R, F/A-18A+, H-1, CH-53E, AV-8B, TAV-8B, UP/VP-3A, NP-3C/D, MV-22B, MH-53E, T-45, and other A/C as directed by OPNAV TYPE MODIFICATION: Common Avionics Modification

DESCRIPTION/JUSTIFICATION:
 CNS/ATM provides new and enhanced hardware and software solutions to comply with national and worldwide civil and military airspace requirements. Solutions will include communication, navigation, and surveillance technologies that facilitate air traffic management in an increasingly congested airspace environment. Impacts of non-compliance with airspace standards will include operational delays, circuitous rerouting, or access denial to controlled airspace.

Prioritization of platform type and quantity is based on mission and anticipated operation in affected airspace. Examples of required functionality includes Mode S (Common Transponder and Aircraft Personality Module), 8.33KHz VHF channel spacing, RNP-4 integrity, Protected Instrument Landing System (P-ILS), and cockpit processing and display capability.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:
 Began Mode S and RNP/RNAV integration into P-3 and C-2 in 2004. Achieved IOC in 2007.
 Began Mode S and RNP/RNAV integration into E-2 in 2005. Achieved IOC in 2008.

FINANCIAL PLAN: (TOA, \$ in Millions)

	Prior Years		FY 2008		FY 2009		FY 2010		OCO FY2010		Qty	\$									
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$											
RDT&E																					
PROCUREMENT																					
Installation Kits																					
CNS/ATM Kit	153	8.1	26	1.5	107	6.8	28	5.2													
Installation Kits N/R		4.1		0.6		1.6		1.7													
Installation Equipment																					
CNS/ATM Equip	419	29.4	48	8.5	170	24.2	73	20.7													
CNS/ATM P-ILS	713	2.7																			
Installation Equipment N/R		73.0		6.3		0.9		18.3													
Engineering Change Orders				0.8		0.2		0.3													
Data		3.5		0.4		0.6		0.2													
Training Equipment	7	3.9	5	5.1	8	2.8	4	7.0													
Support Equipment						0.2		0.2													
ILS		4.0		1.1		1.1		1.4													
Other Support		76.7		23.0		24.0		18.5													
Interim Contractor Support																					
Installation Cost	102	5.7	28	3.7	31	4.9	148	13.5													
Total Procurement		211.0		51.1		67.2		87.0													

- Notes:
1. Totals may not add due to rounding.
 2. A-Kits, B-Kits, and Installation cost varies due to multiple & different functionalities/systems on each aircraft T/M/S.
 3. B-Kits quantities differ from A-Kits where B-Kits consists of a card or module that will be integrated without A-Kit requirement.
 4. Installation Kit/Installation Equipment quantities reflect number of units procured, installation quantity reflects number of aircraft.

CLASSIFICATION: **UNCLASSIFIED**

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: P-3C, EP-3E, C-2A, EA-6B, KC-130J, C/KC-130T, VH-3D, VH-60N, F/A-18E/F, F/A-18C/D, E-2C, MH-60S, MH-60R, F/A-18A+, H-1, CH-53E, AV-8B, TAV-8B, UP/VP-3A, NP-3C/D, MV-22B, MH-53E, T-45, and other A/C as directed by OPNAV MODIFICATION TITLE: CNS/ATM (OSIP 21-01)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: USN Field Modification Team

ADMINISTRATIVE LEADTIME: 4 Months PRODUCTION LEADTIME: 11 Months

CONTRACT DATES: FY 2008: Jan-08 FY 2009: Jan-09 FY 2010: Jan-10

DELIVERY DATE: FY 2008: Jan-09 FY 2009: Jan-10 FY 2010: Jan-11

(\$ in Millions)

Cost:	Prior Years		FY 2008		FY 2009		FY 2010		OCO FY2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
FY 2007 & PY (144) kits	102	5.7	28	3.7	14	2.2														
FY 2008 (25) kits					17	2.7														
FY 2009 (107) kits							8	0.7												
FY 2010 (61) kits							107	9.7												
FY 2011 () kits							33	3.0												
FY 2012 () kits																				
FY 2013 () kits																				
FY 2014 () kits																				
FY 2015 () kits																				
To Complete () kits																				
TOTAL	102	5.7	28	3.7	31	4.9	148	13.5												

****Notes:** E-2C GNS-530 COTS item; no production lead time.

Installation Schedule

	FY 2007 & Prior	FY 2008				FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	102	7	7	7	7	7	8	8	8	37	37	37	37												
Out	102	7	7	7	7	7	8	8	8	37	37	37	37												

	FY 2014				FY 2015				To Complete	Total
	1	2	3	4	1	2	3	4		
In										309
Out										309

Exhibit P-3a Individual Modification

MODIFICATION TITLE: Tactical Aircraft Moving Map Capability (TAMMAC) (OSIP 02-02)

MODELS OF SYSTEMS AFFECTED: F/A-18C/D/E/F, AV-8B, AH-1Z, UH-1Y TYPE MODIFICATION: Common Avionics Modification

DESCRIPTION/JUSTIFICATION:

TAMMAC provides the aircrew an easily assimilated graphical presentation of the aircraft's position and the relative positions of targets, threats, terrain features, planned mission flight path, no fly zones, safe bases and other objects. TAMMAC will present the aircraft's current situation on a map using new or existing cockpit displays. In addition to providing a basic moving map capability, the TAMMAC system will serve as a memory resource for the overall aircraft mission system and will incorporate an improved data transfer and recording capability. This memory resource includes a data loader function of sufficient memory capacity and speed to load/update all required map theater and mission specific databases as well as the ability to record mission and maintenance data. TAMMAC will also provide a Terrain Awareness Warning System (TAWS) capability. The principle benefits anticipated, increased mission effectiveness and survivability, arise from improved situation awareness, reduced crew workload and enhanced capability for precision navigation, targeting, terrain avoidance, and mission replanning. TAMMAC is comprised of two Weapon Replaceable Assemblies (WRA), the Advanced Memory Unit (AMU) and the Digital Map Computer (DMC). The Digital Video Map Computer (DVMC), a DMC variant, will be utilized for Lot 26 and above F/A-18E/F aircraft. The TAMMAC system will replace the existing Navy AN/ASQ-196 Digital Map Set in the older aircraft, which is facing major parts obsolescence problems and is not capable of growing to support future requirements. TAMMAC will also replace the AN/ASQ-194 Data Storage Set which has insufficient memory and loading speed to load map theater databases. DVMCs are procured to replace F/A-18E/F DMCs installed in Lot 26 and 27. The DMC will be reused in the C/D retrofit program.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

Milestone III approved April 01.

FINANCIAL PLAN: (TOA, \$ in Millions)

	Prior Years		FY 2008		FY 2009		FY 2010		OCO FY 2010												
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
RDT&E																					
PROCUREMENT																					
Installation Kits																					
TAMMAC Kit	366	1.5	119	0.5	50	1.0	20	0.4													
Installation Kits N/R																					
Installation Equipment																					
TAMMAC Equip	595	29.0	116	6.0	59	4.3	19	1.2													
Installation Equipment N/R		16.1		3.4		4.2		6.3													
Engineering Change Orders		0.3		0.5		0.5		0.8													
Data		0.6						0.3													
Training Equipment		0.1																			
Support Equipment	300	1.3	90	*	27	0.1															
ILS		1.4		0.6		0.6		0.6													
Other Support		14.0		3.0		3.1		2.9													
Interim Contractor Support																					
Installation Cost	122	1.0	117	1.9	153	3.2	114	2.8													
Total Procurement		65.3		15.9		17.0		15.4													

Notes:

- Totals may not add due to rounding.
- Asterisk indicates amount less than \$51K.
- Difference in A and B kits reflect procurements of AMU only and DVMC retrofits - no A kit required.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: F/A-18C/D/E/F, AV-8B, AH-1Z, UH-1Y MODIFICATION TITLE: Tactical Aircraft Moving Map Capability (TAMMAC) (OSIP 02-02)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: USN Field Modification Team

ADMINISTRATIVE LEADTIME: 4 Months PRODUCTION LEADTIME: 12 Months

CONTRACT DATES: FY 2008: Jan-08 FY 2009: Jan-09 FY 2010: Jan-10

DELIVERY DATE: FY 2008: Jan-09 FY 2009: Jan-10 FY 2010: Jan-11

(\$ in Millions)

Cost:	Prior Years		FY 2008		FY 2009		FY 2010		OCO FY2010													
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
FY 2007 & PY (369) kits	122	1.0	117	1.9	130	2.7																
FY 2008 (119) kits					23	0.5	96	2.4														
FY 2009 (50) kits							18	0.4														
FY 2010 (20) kits																						
FY 2011 () kits																						
FY 2012 () kits																						
FY 2013 () kits																						
FY 2014 () kits																						
FY 2015 () kits																						
To Complete () kits																						
TOTAL	122	1.0	117	1.9	153	3.2	114	2.8														

**Notes:
 ** FY02 F/A-18 C/D/E/F (8) VAL/VER units: corresponding A-kits are in F-18 OSIP NRE line.
 ** FY04 AV-8B (3) VAL/VER units: corresponding A-kits are in AV-8B OSIP NRE line.
 **FY05 AV-8B Trainer (5) units: corresponding A-kits are in AV-8B OSIP NRE line.
 Installation Schedule

FY 2007 & Prior	FY 2008				FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	122	39	39	39	51	51	51		38	38	38													
Out	122	39	39	39	51	51	51		38	38	38													

	FY 2014				FY 2015				To Complete	Total
	1	2	3	4	1	2	3	4		
In										506
Out										506

Exhibit P-3a Individual Modification

MODIFICATION TITLE: Advanced Mission Computer & Displays (AMC&D)/ Multipurpose Color Display (MPCD) (OSIP 01-02)

MODELS OF SYSTEMS AFFECTED: F/A-18C/D/E/F, AV-8B, T-45 TYPE MODIFICATION: Common Avionics Modification

DESCRIPTION/JUSTIFICATION:

Advanced Mission Computer and Displays (AMC&D) System is targeted to replace existing aging/obsolete and performance limited AN/AYK-14(V) Mission Computer (MC) and Contractor Furnished Equipment Displays. AMC&D system consists of an Advanced Mission Computer (AMC) which includes Mission Processing and Display Processing, Display Heads (DH), High-Speed Data Bus interfaces with Fiber Channel Network Switches (FCNS) and an 8x10 display. AMC&D system will have modular components integrated on an Open Systems Architecture so that it can be tailored and configured for each application, and can address new performance requirements and technologies with minimum cost. AMC&D will provide improved mission computers and displays to handle increased requirement for flight, mission, and imagery data. Due to obsolescence problems with the current Multipurpose Color Display (MPCD), the AMC&D program is leveraging the 5x5 DH to provide a form, fit, function and interface replacement (no install funding required). Analysis of parts obsolescence will be required to maintain current AMC&D configuration and to determine life of type procurements as required. MPCD production buys begin in FY02 (no installation required) and AMC&D LRIP production buys began in FY01 with FRP buys beginning in FY04. The F/A-18E/F Retrofit Program (begins in FY06) goal is to achieve a 2-block configuration. Block 1 aircraft include Lots 23-25 and Block 2 includes Lots 26 and above. Block 1 will consist of replacing the AN/AYK-14 computers in Lots 23-24 and replacing the AMC with an newer configuration AMC in Lot 25. The computers are obtained as part of a reuse program from Block 2 portion of the upgrade and all Lots will require an A-kit. Lots 26 and 27 of Block 2 are provisioned to accept all WRAs for Block 2. The FY06 procurement for Lots 26 consisted of FCNS, displays and digital video mapping card. The FY06 procurement for Lot 27 consisted of displays, DVMC, and upgrade to a card in the AMC. To maintain the common block configuration, new AMCs are procured for both Lots in the out years. The AMCs removed from Lots 26 and 27 will be part of the reuse to the Block 1 configuration. The AMCs procured for Lot 28 and 29 do not require installation costs since they are a form fit function replacement for as-delivered AMCs. The systems removed from Lots 28 and 29 will be part of the reuse process. AMC&D MNS - M061-88-94 of 2 December 1994. AMC&D ORD Ser. No. 549-88-00 Approved 21 March 2000. The FY08, 09 and 10 procurements include B-kits to provide digital output for the 8x10 AMPD (HRR!) to address a COMOPTEVFOR finding of poor ready room playback quality of the current analog video signal.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

AMC and 5x5 display CDR - 2nd Qtr FY01. FCNS CDR - 4th Qtr FY01, 8x10 CDR - 2nd Qtr FY02.
 F/A-18E/F: OPEVAL - 2nd Qtr FY03, Milestone III - 4th Qtr FY04, OA - 3rd Qtr FY02, FOT&E 3rd Qtr FY04.
 AV-8B DT-II-B-2 - 4th Qtr FY01, OPEVAL - 4th Qtr FY02, Milestone III - 2nd Qtr FY03.
 8x10 Displays MS III 2th Qtr FY06.
 Due to variation in lead times, B-kits are procured in year 1, A-kits in year 2 and Installs in year 3. B-kit lead time 19 months, A-kit lead time 8 months.

FINANCIAL PLAN: (TOA, \$ in Millions)

	Prior Years		FY 2008		FY 2009		FY 2010		OCO FY2010												
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
RDT&E																					
PROCUREMENT																					
Installation Kits																					
AMC&D Kit	6	0.4	15	0.2	39	1.5	72	4.0													
Installation Kits N/R																					
Installation Equipment																					
AMC&D / MPCD Equip	669	125.8	45	15.8	76	20.4	53	14.9													
Installation Equipment N/R		43.7		29.5		3.4		2.5													
Engineering Change Orders		4.3		0.1		0.5															
Data		1.4																			
Training Equipment		1.9																			
Support Equipment		3.0		2.3		0.9															
ILS		8.8		2.6		1.4		1.2													
Other Support		15.5		3.1		2.2		2.9													
Interim Contractor Support																					
Installation Cost	2	0.2			26	0.4	53	0.6													
Total Procurement		205.1		53.7		30.7		26.2													

Notes:

- Totals may not add due to rounding.
- MPCD is a drop-in-replacement. No A-kit required.
- B-Kit (WRA) procured in outyears are necessary to meet common block configuration.

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: F/A-18C/D/E/F, AV-8B, T-45

MODIFICATION TITLE: Advanced Mission Computer & Displays (AMC&D)/ Multipurpose Color Display (MPCD) (OSIP 01-02)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: Prime Contractor

ADMINISTRATIVE LEADTIME: 4 Months

PRODUCTION LEADTIME: 14 Months

CONTRACT DATES: FY 2008: Jan-08 FY 2009: Jan-09 FY 2010: Jan-10

DELIVERY DATE: FY 2008: Mar-09 FY 2009: Mar-10 FY 2010: Mar-11

(\$ in Millions)

Cost:	Prior Years		FY 2008		FY 2009		FY 2010		OCO FY2010													
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
FY 2007 & PY (6) kits	2	0.2			4	0.1																
FY 2008 (15) kits					15	0.3																
FY 2009 (56) kits					7	0.1	49	0.6														
FY 2010 (72) kits							4	*														
FY 2011 () kits																						
FY 2012 () kits																						
FY 2013 () kits																						
FY 2014 () kits																						
FY 2015 () kits																						
To Complete () kits																						
TOTAL	2	0.2			26	0.4	53	0.6														

Note: Lots 26 (64) B-kits with associated installation cost included in schedule, no A-kit required.

Installation Schedule

	FY 2007 & Prior	FY 2008				FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	2					8	9	9		17	18	18													
Out	2					8	9	9		17	18	18													

	FY 2014				FY 2015				To Complete	Total
	1	2	3	4	1	2	3	4		
In										81
Out										81

* A-Kits, B-Kits and Installs do not align. A or B-Kits which require installation are shown.

** F/A-18's longest lead time component is 19 months.

Note 1: AMC&D sub-systems may be installed at different times. Aircraft quantity is counted in year of first installation.

Note 2: Kit detail by Lot

Lot	Description
Lot 22-24	A-Kit (a/c mod kit), B-kit (5x5)
Lot 25	A-Kit (a/c mod kit)
Lot 26	B-Kits (AMC, FCNS, 8x10)
Lot 27	A-Kit (8x10 HRRR kit), B-Kit (AMC, FCNS, 8x10)
Lot 28	A-Kit (8x10 HRRR kit), B-Kit (AMC)
Lot 29	A-Kit (8x10 HRRR kit), B-Kit (AMC)
Lot 30	A-Kit (8x10 HRRR kit)

Note 3: Lots 27-29 AMC retrofits are O-Level mods with no install cost.

Note 4: Due to variation in lead times, B-kits are procured in year 1, A-kits in year 2 and Installs in year 3. B-kit lead time 19 months, A-kit lead time 8 months.

Exhibit P-40, BUDGET ITEM JUSTIFICATION							DATE: May 2009																																											
APPROPRIATION/BUDGET ACTIVITY Aircraft Procurement, Navy/APN-5 Aircraft Modifications							P-1 ITEM NOMENCLATURE 058100, COMMON DEFENSE WEAPON SYSTEM																																											
Program Element for Code B Items:							Other Related Program Elements																																											
	Prior Years	ID Code	FY2008	FY2009	FY2010	OCO FY2010	Total FY2010																																											
QTY																																																		
COST (In Millions)	32.1	A	9.6	7.3	0.0	5.5	5.5																																											
<p>DESCRIPTION: The CDWS systems consists of a GAU-21 .50 cal machine gun, common cradle, ammo box, feed/link chutes and either a right hand or a left hand Medium Window Pintle Connector. The CDWS for the CH-46E is being procured to replace the current WWII era XM-218 .50 cal machine gun. The XM-218 machine gun can no longer be procured, and the gun depot is experiencing a 41% reject rate of guns able to be reworked. Based on current usage rates and depot maintenance rejection rates, the inventory of XM-218 guns will be below requirement in 5 years. There will also be a substantial increase in maintenance funding required to sustain the inventory of usable guns. The CDWS will give the Fleet enhanced reliability, safety, and increased operational effectiveness.</p> <p>FY2010 Overseas Contingency Operations funding in OSIP 003-06 will provide 40 CDWS for CH-46 and 40 CDWS for UH-1Y.</p> <p>OSIP 019-10 provides 400 laser aiming devices for crew served weapons being used in OIF and OEF. There are currently five different types of lasers manufactured by three vendors. This funding will allow the standardization of all NAVIAR Crew Served Weapons (CSW) lasers through attrition and replacement as assets are expended.</p> <p style="text-align: center;">(TOA, \$ in Millions)</p> <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">OSIP No.</th> <th style="text-align: left;">Description</th> <th style="text-align: center;">Prior Years</th> <th style="text-align: center;">FY2008</th> <th style="text-align: center;">FY2009</th> <th style="text-align: center;">FY2010</th> <th style="text-align: center;">FY2010 OCO</th> <th style="text-align: center;">FY 2010 TOTAL</th> </tr> </thead> <tbody> <tr> <td>003-06</td> <td>Common Defense Weapon System</td> <td style="text-align: center;">30.8</td> <td style="text-align: center;">9.6</td> <td style="text-align: center;">7.3</td> <td style="text-align: center;">0.0</td> <td style="text-align: center;">4.5</td> <td style="text-align: center;">4.5</td> </tr> <tr> <td>019-10</td> <td>Crew Served Weapons Systems Laser</td> <td></td> <td></td> <td></td> <td style="text-align: center;">0.0</td> <td style="text-align: center;">1.0</td> <td style="text-align: center;">1.0</td> </tr> <tr> <td colspan="2">Inactive OSIPS</td> <td style="text-align: center;">1.3</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td colspan="2">Total</td> <td style="text-align: center;">32.1</td> <td style="text-align: center;">9.6</td> <td style="text-align: center;">7.3</td> <td style="text-align: center;">0.0</td> <td style="text-align: center;">5.5</td> <td style="text-align: center;">5.5</td> </tr> </tbody> </table> <p>Note: Totals may not add due to rounding.</p>											OSIP No.	Description	Prior Years	FY2008	FY2009	FY2010	FY2010 OCO	FY 2010 TOTAL	003-06	Common Defense Weapon System	30.8	9.6	7.3	0.0	4.5	4.5	019-10	Crew Served Weapons Systems Laser				0.0	1.0	1.0	Inactive OSIPS		1.3						Total		32.1	9.6	7.3	0.0	5.5	5.5
OSIP No.	Description	Prior Years	FY2008	FY2009	FY2010	FY2010 OCO	FY 2010 TOTAL																																											
003-06	Common Defense Weapon System	30.8	9.6	7.3	0.0	4.5	4.5																																											
019-10	Crew Served Weapons Systems Laser				0.0	1.0	1.0																																											
Inactive OSIPS		1.3																																																
Total		32.1	9.6	7.3	0.0	5.5	5.5																																											

CLASSIFICATION: **UNCLASSIFIED**

Exhibit P-40, BUDGET ITEM JUSTIFICATION							DATE: May 2009																													
APPROPRIATION/BUDGET ACTIVITY Aircraft Procurement, Navy/APN-5 Aircraft Modifications BA-5							P-1 ITEM NOMENCLATURE 058200, ID Systems																													
Program Element for Code B Items:							Other Related Program Elements																													
	Prior Years	ID Code	FY2008	FY2009	FY2010	OCO FY 2010	Total FY 2010																													
QTY																																				
COST (In Millions)	20.9	B	10.2	12.0	24.1		24.1																													
<p>DESCRIPTION:</p> <p>MK X11A Mode 5 provides improved secure cooperative combat identification via Identification Friend or Foe (IFF). MODE 5 is a product improvement which is designed to be installed throughout engineering changes to digital MK X11 interrogators and transponders including, but not limited to the APX-118/123, UPX-37/41C, APX-111, RT-1832/1918, and APX-119. Mode 5 is designed to be installed in all Navy T/M/S aircraft which are currently Mode 4 IFF capable. Mode 5 is developed in cooperation with NATO and is governed by STANAG 4193</p> <p style="text-align:center">(TOA, \$ in Millions)</p> <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align:left"><u>OSIP No.</u></th> <th style="text-align:left"><u>Description</u></th> <th style="text-align:right"><u>Prior Years</u></th> <th style="text-align:right"><u>FY2008</u></th> <th style="text-align:right"><u>FY2009</u></th> <th style="text-align:right"><u>FY2010</u></th> <th style="text-align:right"><u>OCO FY2010</u></th> <th style="text-align:right"><u>Total FY2010</u></th> </tr> </thead> <tbody> <tr> <td>015-03</td> <td>MARK X11A MODE 5 IFF</td> <td style="text-align:right">20.9</td> <td style="text-align:right">10.2</td> <td style="text-align:right">12.0</td> <td style="text-align:right">24.1</td> <td></td> <td style="text-align:right">24.1</td> </tr> <tr> <td>Total</td> <td></td> <td style="text-align:right">20.9</td> <td style="text-align:right">10.2</td> <td style="text-align:right">12.0</td> <td style="text-align:right">24.1</td> <td></td> <td style="text-align:right">24.1</td> </tr> </tbody> </table> <p>Note: Totals may not add due to rounding.</p>													<u>OSIP No.</u>	<u>Description</u>	<u>Prior Years</u>	<u>FY2008</u>	<u>FY2009</u>	<u>FY2010</u>	<u>OCO FY2010</u>	<u>Total FY2010</u>	015-03	MARK X11A MODE 5 IFF	20.9	10.2	12.0	24.1		24.1	Total		20.9	10.2	12.0	24.1		24.1
<u>OSIP No.</u>	<u>Description</u>	<u>Prior Years</u>	<u>FY2008</u>	<u>FY2009</u>	<u>FY2010</u>	<u>OCO FY2010</u>	<u>Total FY2010</u>																													
015-03	MARK X11A MODE 5 IFF	20.9	10.2	12.0	24.1		24.1																													
Total		20.9	10.2	12.0	24.1		24.1																													

Exhibit P-3a Individual Modification

MODIFICATION TITLE: MARK XIIA MODE 5 IFF(OSIP 015-03)

MODELS OF SYSTEMS AFFECTED: VARIOUS (49 SEPARATE T/M/S) TYPE MODIFICATION: CAPABILITY IMPROVEMENT

DESCRIPTION/JUSTIFICATION:

MK XIIA Mode 5 provides improved secure cooperative combat identification via Identification Friend or Foe (IFF). Mode 5 upgrades existing Mode 4 IFF equipment, including cryptography, support equipment, and associated hardware and software changes. Mode 5 is designed to be installed through engineering changes to digital MK XII interrogators and transponders including, but not limited to the APX-118/123, UPX-37/41C, APX-111, RT-1832/1918, and APX-119. Mode 5 is designed to be installed in all Navy T/M/S aircraft which are currently Mode 4 IFF capable. Mode 5 is developed in cooperation with NATO and is governed by STANAG 4193. (ORD # 577-06-01).

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

MODE 5 completed a brassboard development in December 1997. Modeling and simulation to demonstrate interoperability was completed in February of 1998 to support NATO STANAG development. Proof of concept flight testing completed in December 1999. A Preliminary Design Review (PDR) for the proposed Engineering Change Proposal (ECP) to incorporate MODE 5 in the APX-118 was completed in July 2001. Contracts for prototype Cryptographic Module and ECP kit are presently executed. Milestone B was completed in May 2003. Operational Assessment (OA) completed 2nd quarter FY 2006. Milestone C and Low Rate Initial procurement (LRIP) was approved in July 2006. In March 2007, Joint Requirements Oversight Council Memorandum (JROCM 047-07) endorsed a Mode 5 Joint Initial Operational Capability (IOC) in FY14 and Joint Full Operational Capability (FOC). An amendment to the LRIP Acquisition Decision Memorandum was signed in November 2007 to reschedule IOT&E in support of DoD synchronization efforts.

FINANCIAL PLAN: (TOA, \$ in Millions)

	Prior Years		FY 2008		FY 2009		FY 2010		OCO FY 2010												
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
RDT&E		60.7		11.7		9.5		30.4													
PROCUREMENT																					
Installation Kits																					
MODE 5 IFF A-KIT							9	0.1													
Installation Kits N/R																					
Installation Equipment																					
MODE 5 IFF Equip	90	2.7	21	0.3	24	1.2	58	2.7													
Installation Equipment N/R		7.4		2.5		5.4		13.1													
Engineering Change Orders																					
MODE 5 IFF Kit ECO		0.2		0.0		0.2		0.4													
Data		0.2		0.1		0.0		0.1													
Training Equipment		0.1		0.4		0.1		1.0													
Support Equipment		4.5		4.1		1.6		2.1													
ILS		0.7		0.4		0.4		0.9													
Other Support		5.2		2.3		3.1		3.8													
Interim Contractor Support																					
Installation Cost	5	0.0	33	0.1	28	0.0	49	0.1													
Total Procurement		20.9		10.2		12.0		24.1													

Notes:

- Totals may not add due to rounding.
- Asterisk indicates amount less than \$51K.
- Mode 5 IFF "A" Kits will be required for installation on the F/A-18C/D platform along with the "B" kits. The other platforms will only require "B" kits. A-Kit realignment due to changes in platform schedules.
- Inventory objective increase and cost changes due to Resource Sponsor direction to add P-3C, EP-3E, E-6B, and F/A-18A+/C/D (AN/APX-111).
- Installation of 52 B-Kits procured in FY07 delayed to FY09-FY10 due to program delays (Amendment to Mark XIIA Mode 5 Identification Friend or Foe Milestone C/Low Rate Initial Production Acquisition Decision Memorandum, 14 November 2007)

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: VARIOUS (49 SEPARATE T/M/S) MODIFICATION TITLE: MARK XIIA MODE 5 IFF (OSIP 015-03)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: FIELD INSTALL KITS AND VENDOR DEPOT ECP INSTALLATION

ADMINISTRATIVE LEADTIME: 6 Months PRODUCTION LEADTIME: 12 Months

CONTRACT DATES: FY 2008: Nov-07 FY 2009: Nov-08 FY 2010: Nov-09

DELIVERY DATE: FY 2008: Nov-08 FY 2009: Nov-09 FY 2010: Nov-10

(\$ in Millions)

Cost:	Prior Years		FY 2008		FY 2009		FY 2010		OCO FY 2010												
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
FY 2007 & PY (90) Kits	5	*	33	0.1	28	*	24	*													
FY 2008 (21) Kits							21	*													
FY 2009 (24) Kits							4	*													
FY 2010 (67) Kits																					
To Complete () kits																					
TOTAL	5	0.0	33	0.1	28	0.0	49	0.1													

Installation Schedule

FY 2007 & Prior	FY 2008				FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
In	5	4	4	8	17	7	7	7	7	12	12	12	13											
Out	5	4	4	8	17	7	7	7	7	12	12	12	13											

	FY 2014				FY 2015				To Complete	Total
	1	2	3	4	1	2	3	4		
In										115
Out										115

Exhibit P-40, BUDGET ITEM JUSTIFICATION								DATE: May 2009				
APPROPRIATION/BUDGET ACTIVITY Aircraft Procurement, Navy/APN-5 Aircraft Modifications							P-1 ITEM NOMENCLATURE 059000, V-22 SERIES					
Program Element for Code B Items:							Other Related Program Elements					
	Prior Years	ID Code	FY2008	FY2009	FY2010	FY2010 OCO	FY2010 Total					
QTY		A										
COST (In Millions)		A	114.9	43.2	24.5	53.5	78.0					
<p>DESCRIPTION: The V-22 is a tilt-rotor, vertical takeoff and landing aircraft currently being developed for joint service application. The program is being designed to provide an aircraft to meet the amphibious/vertical assault needs of the Marine Corps, the strike rescue needs of the Navy, and supplement USSOCOM special mission aircraft. The aircraft will be capable of flying 2,100 miles with one refueling, giving the Services the advantage of a Vertical/Short Takeoff and Landing (V/STOL) aircraft the could rapidly sel deploy to any location in the world. The FY 2010 budget request reflects the funding level necessary to correct currently known deficiencies and allow the program to move forward. The FY 2010 modifications program procures retrofit kits necessary to correct discrepancies identified during initial flight testing as well as those resulting from any redesign efforts.</p> <p>The current procurement objective is 458: 360 MV-22 Marine Corps aircraft, 48 HV-22 Navy aircraft, and 50 CV-22 aircraft for USSOCOM.</p> <p>Modification Types: Safety, Reliability, Increased Service Life, Improved Mission Capabilities</p>												
(TOA, \$ in Millions)												
<u>OSIP No.</u>	<u>Description</u>	<u>Prior Years</u>	<u>FY2008</u>	<u>FY2009</u>	<u>FY2010</u>	<u>FY2010 OCO</u>	<u>FY2010 Total</u>					
022-01	MV-22 CORRECTION OF DEFICIENCIES	291.0	114.9	43.2	24.5	53.5	78.0					
Total												
Note: Totals may not add due to rounding.		291.0	114.9	43.2	24.5	53.5	78.0					

Exhibit P-3a

Individual Modification

MODIFICATION TITLE: MV-22 CORRECTION OF DEFICIENCIES AND PRE BLOCK A THROUGH C (OSIP 022-01)

MODELS OF SYSTEMS AFFECTED:

V-22 Series

TYPE MODIFICATION:

Safety, Reliability, Increased Service Life,
Improved Mission Capability

DESCRIPTION/JUSTIFICATION:

Future ECPs:

PRE BLOCK A, BLOCK A, BLOCK B, and BLOCK C: Major configuration changes are associated with the aircraft Propulsion/Drive, Electrical, Avionics, Hydraulics, Structure/Airframe, Fuel, Software, and Environmental Control System (ECS). Specifically included are Nacelle changes, Avionics, Blade Fold Harness, Fuel Probe, Active Vibration Suppression System, Constant Frequency Generator and Variable Frequency Generator. Additional configuration changes include Effectiveness and Suitability and Enhanced Capability. ECPs for (R&M changes, Ice Protection and Clam Shell Doors) are configuration items associated with production Block A, Block B, and Block C changes. Aircraft Retrofits are implemented to coincide with resources and aircraft availability, stand-alone retrofit ECPs are generated. These Retrofit ECPs are the implementation of the approved production Block Configuration changes. ECP-344: REGULATED CONVERTER: Incorporates fixes to alleviate concerns associated with spec compliance and eliminate nuisance failures for fleet aircraft.

SHAFT DRIVEN COMPRESSOR SCREEN: Incorporates a new shaft drive compressor screen with one piece inner and outer frames to reduce the number of parts and larger holes to increase air flow.

RAMP ACTUATOR: Incorporates fixes for reliability and life limit deficiencies. There are two ramp actuators per aircraft.

CARGO RESTRAINT SYSTEM: Changes the cargo restraint factors from a dynamic to a static tie down system to improve Fleet suitability.

FUEL ISOLATION TUBES: Incorporates the productionized final design for resistive tubes on hoses for lightning strike protection.

AVIONICS: Avionics modifications to the V-22 will improve display reliability, eliminate communication security issues and alleviate parts obsolescence/vendor problems. Changes to the V-22 avionics will include: Display System upgrade, Cockpit Inter Communication System modification, upgraded Mission Computer, updated Data Transfer Module, Control Display Unit/Engine Instrument Caution Advisory System upgrade, Control Display Unit Keyboard upgrade, and Avionics Interface Units upgrades. As well as Mission System Upgrade (MSU) and Midwing Processing Unit (MPU) obsolescence replacement.

POWER TRANSMISSION AND CONTROL: Changes to the V-22 Power Transmission and Control System will improve reliability and maintainability. Changes to the V-22 Power Transmission and Control System will include: swashplate reliability upgrades, engine gimbal ring/spherical bearing installation revision, updated refuel/defuel valve, bull gear shroud and engine gimbal ring.

COCKPIT: Changes to the V-22 cockpit will improve crew safety, mission suitability and overall reliability. Changes to the V-22 cockpit include: night vision goggle compatible hardware, upgraded inertial reels, upgraded pilot and co-pilot restraint system, throttle control lever soft stop modification, and improved rain removal.

STRUCTURAL: Structural changes to the V-22 will increase survivability, improve maintainability and aircraft availability, eliminate component interferences, improve suitability and correct safety related issues. Structural changes include: forward sponson fuel bladder access redesign/install powder panels, environmental control unit Ram air barrier filter, avionics left hand mounting tray, aft upper door strut, add manual drive decal, fold blades in high winds and modified trunnion fitting.

PRODUCTION ROTOR LIGHTING PROTECTION: Improves rotor system lighting protection by adding improved bonding harness and grounding strap bracket.

BRACKET HYDRAULIC LINE CLAMPING: Relocate clamping provisions from the removable conversion actuator fairing to the frame and improve the tube installation.

SWASHPLATE DRAG TUBE: Redesign Swashplate Drag Tube to increase part life.

WASHER: Washer to now be included with attach hardware to ensure adequate tying of the assembly.

RELIABILITY & MAINTAINABILITY FIXES: Includes Corrective Action Plans to make the aircraft compliant with Operation Requirements Document requirements.

ECP-400: AIRCRAFT MAINTENANCE TRAINER: Improves training and pilot proficiency by incorporating modifications to the AMT #1 to reflect most current aircraft configuration as directed by Blue Ribbon Panel.

ECP-397: FULL FIDELITY SIMULATOR (FFS) UPGRADES: Improves training and pilot proficiency by incorporating modifications to the FFS #1 & #2 to reflect most current aircraft configuration as directed by Blue Ribbon Panel.

ECP-###: FLIGHT TRAINING DEVICE (FTD) UPGRADES: Improves training and pilot proficiency by incorporating modifications to the FTD #1 to reflect most current aircraft configuration as directed by Blue Ribbon Panel.

ECP-427R1: MECHANICAL PART TASK TRAINER: Improves maintainer and aircrew proficiency by incorporating Block 'A' configuration changes.

ECP-511: AIRFRAME PART TASK TRAINER, incorporate Block 'B' configuration changes.

ECP-###: Block B safety configuration changes required to meet mission requirements. Changes are associated with the aircraft Propulsion/Drive, Electrical, Avionics, Hydraulics, and Structure/Airframe.

ECP-###: Block B safety, reliability and maintainability changes required to meet mission requirements. Changes are associated with the aircraft Propulsion/Drive, Electrical, Avionics, Hydraulics, and Structure/Airframe.

ECP-722: Shaft Driven Compressor Inlet Barrier Filter, provides an inlet barrier filter to prevent particles from reaching and damaging the Shaft Driven Compressor.

ECP-592: Wing Stow System, Incorporate hydraulic system isolation valve normally closed to inhibit Wing Stow System Forward 2 Lock Pin actuator from extending when performing wing maintenance.

ECP-###: Refuel/Defuel Valve, redesign of the refuel/defuel valve.

ECP-656: Rotor Harness Redesign, Change the moldings area, extending them to the clamp locations on each side of the strap and squaring off the molded area.

ECP-505: ECU Water Spray Redesign, redesigned the water spray inlet assembly (U-tube) and the heat exchanger crossover tube assembly so the system tolerance can be increased to sand and dust ingestion.

ECP-559: AMT #2, Improves training and pilot proficiency by incorporating modifications to the AMT #2 to reflect most current Block A and Block B aircraft configuration.

ECP-513R1: Forward Engine Air Bleed, Redesign Air tube will improve reliability and increase aircraft safety.

ECP-539: Plugs & Covers, Redesign plugs and covers to meet durability and operational suitability.

ECP-###: Lightweight Paint, improves aircraft suitability and reduces IR Vulnerability.

ECP-652R1: Cargo Hook Door Actuator, new design improves cargo hook door reliability and operational suitability.

ECP-573: NLG Shock Struts, Nose Landing Gear shock struts are a life limited part, redesigned struts will eliminate safety of flight issue.

ECP-493: Wheel & Brake, Redesign to improve reliability on the wheel, brake and components.

ECP-470: Lateral Mass Balance, design change that will increase lateral mass balance by 9 lbs and add new pads, tungsten plates and bellcrank.

ECP-471: Life Raft, designed for 20-man raft with overflow capacity to 30-man.

ECP-478: SDC Duct Leak Switch Set Point, Reliability change to SDC duct leak switches to reduce false alarm pilot nuisance alarms.

ECP-479: Suction Lift Pump Bypass Valve, Redesign valve to prevent the diaphragm inverting due to pressure spike.

ECP-568R1: Swashplate Actuator Hose, Redesign Hose end fittings of the swashplate Actuator ports by adding tabs so hoses can be oriented one way.

ECP-510: Climb Dive Valve, provides for redesign of the valve to decrease cracking pressure to 1.0-1.5ps.

ECP-684: Ice Protection System and Fairings, provides automatic anti-ice protection in aircraft icing conditions.

ECP-721: Ramp Mounted Weapon System (RMWS), Provide an all quadrant Defensive Weapon System for the V-22.

ECP-716: Infra-Red Suppressor (IRS) Redesign, Provide a more reliable configuration to items that have contributed to poor system reliability and identify a repair kit for the aircraft Infra-Red Suppressor system.

ECP-783: Cabin Upper Crew Door, Provides redesign to the cabin upper crew door and the proper use of the new door.

ECP-761: Engine Air Particle Separator (EAPS), Provides a more efficient and reliable system by incorporating an upgraded EAPS Blower case drain hose, an upgraded EAPS Blower outlet hose, and the elimination of restrictors in the case drain circuit.

ECP-621: Full Authority Digital Electronic Control (FADEC), Provides modification of the FADEC mount brackets to allow proper seating of FADEC into mounting bracket.

ECP-695R2: Improved Troop Seats, Provides for the redesign of the seat and the supporting airframe seat mount points.

ECP-557: Additional Force & Drive Rate for TCL, Provides an increased maximum drive rate to meet current design specification requirements.

ECP-544: Slip Ring Commonality, Provides a revised routing of the power feeder lines in the right and left hand Engine Nacelles.

ECP-515: Improved Nacelle Blower, Provides a change to correct current nacelle blower bearing failures.

ECP-685: Incorporation of Miscellaneous ECPs, Implements the following ECPs on Lot 4 aircraft: 2nd source Refuel/Defuel Valve, Block B Cargo Door Actuator Redesign and Cargo Tie Down.

ECP-613: Purge Check Valve Cracking Pressure Change, Provides a modified purge valve to increase the cracking pressure range.

ECP-746: Air Cycle Machine Filtration, Modifies the bearing cooling flow path and adds a barrier filter.

ECP-741: Fuel System Changes, Provides redesigned Rupture Disks and Sponson Boost Pumps to decrease fatigue failure and eliminate potential fuel run back.

ECP-649: O2N2 Concentrator, Modifies the O2N2 Concentrator to eliminate false failures at low end of tolerance band for input air pressure.

ECP-647: Landing Gear Isolation Valve, Provides a new Landing Gear Isolation Valve to eliminate single failures in the normal control system which can cause retraction or extension in flight at unsafe airspeed.

ECP-693: Fuel Surge Valve: Provides a regulator in the V-22 refueling system to limit the surge pressures associated with aerial refueling.

ECP-717: Tilt Axis Gear Box Mounting Hardware Change, Provides upgraded hardware for mounting in the tilt axis gear box.

ECP-751: Blade Deice Distributor (BDD) Chassis Redesign, Provides upgraded BDD and mounting bracket to alleviate fretting and cracking associated with original BDD.

ECP-763: Nose Landing Gear (NLG) Door Mechanism Improvements, Provides modified bellcrank stop and clamp-up bushings to prevent damage to NLG doors.

ECP-###: Retractable Refueling Probes, Provides Retractable Refueling Probe installation kits for 4 retrofit aircraft.

ECP-772: FLIR Firmware Improvements, Provides the FLIR System Electronics Unit Video Signal Processor firmware version 2.38.

ECP-681R1: Aerojet Fire Suppressors Revision, Provides redesigned mounting hardware for fire suppressor cannisters to reduce potential for galling threads during installation.

ECP-782: ALE-47 Forward Firing Bucket, Provides for the ALE-47 Dispenser with Cabin Dispense Switch. Modifications will increase survivability of aircraft operating in GWOT environment. SUPPLEMENTAL.

ECP-806: EMI Hardened Proximity Sensors, revealed bladefold proximity sensor is susceptible to certain frequencies. Blade folding resulted in repeated shear pin failures (at B band frequency). Blade folding resulted in proximity sensor toggling between far/near indications (at C band frequency).

ECP-825: Nacelle Clamshell Door Hinge Halves: The Nacelle Clamshell doors utilize aluminum hinge halves have been found to be cracked/fretted. Steel hinge halves are to replace the aluminum hinge halves.

ECP-###: Interim Defense Weapon System (IDWS): Provides responsive and suppressive fire with its maximum sustained rate of fire to provide maximum protection from threats in the vicinity of the landing zone.

ECP-803: AMT #3, Improves training and pilot proficiency by incorporating modifications to the AMT #3 to reflect most current Block A and Block B aircraft configuration.

ECP-###: GPS Repeater for Troop Commander Block B : Provides procurement and installation of GPS Repeater for the embarked assault units for Block B aircraft. This modification provides embarked troops the ability to update their GPS location data while still in the aircraft, precluding hazardous delays in the zone while waiting for the GPS update.

ECP-###: FBCB2 Compliant Blue Force Tracker (BFT) with moving map: funding provides 44 off-shelf Blue Force Tracker systems for the MV-22 to retrofit the Block B aircraft deploying in support of the warfighter.

ECP-###: Defensive Weapon System: The Block B CPD requires V22 aircraft have a mission configurable, crew-served, Night Vision Device (NVD) compatible DWS. This funding will field the retrofit of an interim solution ramp mounted weapons system (RMWS) to support the warfighter until the forward fit becomes effective starting in lot 11.

ECP-###: Ice Protection: CDD/MIPC/NIPCU .Block B CPD states the V22 is required to be able to operate in moderate icing conditions without adaptive kits. Funding will field the kits and installation of the ice protection systems in 3 aircraft. This modification is necessary to ensure that training squadrons have the icing system functionality to support training requirements for squadron deployment in support of the warfighter.

ECP-746: Air Cycle Machine Modification: Funding will provide 44 Block B aircraft with the improved Air Cycle Machine modification. This modification provides needed design changes to combat erosion due to elevated levels of sand and dust in environments encountered while supporting the warfighter.

ECP-744: Cargo nets and pulleys mission kits: to correct deficiencies.

ECP-TBD: Cargo Wench System Redesign:

ECP-###: Landing Gear Bay Fire Suppression System: This modification will provide landing gear bay fire suppression systems for 73 aircraft.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

The MV-22 aircraft are currently in Full Rate Production. First acceptance and incorporation has been in production aircraft. FY2008 through FY2012 Production is in a Multi Year Procurement Contract. All Awarded Kit deliveries and Installations are on schedule.

FINANCIAL PLAN: (TOA, \$ in Millions)

	Prior Years		FY 2008		FY 2009		FY 2010		FY2010 OCO		Qty	\$											
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$													
RDT&E																							
PROCUREMENT																							
Installation Kits																							
Addl Force & Drive Rate Output for T	39	1.7																					
Aerojet Fire Suppressors Revision	48	0.1	29	0.1	16	*	21	*															
Air Cycle Machine Filtration	53	1.4	13	0.3	22	0.6	22	0.6															
Air Cycle Machine Filtration			43	1.3																			
Blade Deice Distributor Chassis Rede	32	1.1	37	1.3	22	0.8																	
Block A to B (9 A/C) (Lot 5, 41-49)	7	49.3			2	12.2																	
CCP Items (various)	192	24.8																					
Climb Drive Valve	28	0.4																					
ECP 471 Life Rafts	3	*																					
ECP 478 SDC DUCT LEAK SWITCH	19	*																					
ECP 479 SUCTION LIFT PUMP	20	*																					
ECP 782 ALE-47 Forward Firing Bud	43	3.6			19	0.9	17	0.8															
ECP-V-22-0647 Landing Gear Isolati	7	0.3	29	1.2	48	1.9	30	1.2															
ECP-V-22-0649 O2N2 Concentrator	20	0.2	9	0.2																			
ECP-V-22-0693 Fuel Surge Valve			13	0.1	19	0.1	3	*															
ECU Water Spray Design	57	*																					
EMI Hardened Proximity Sensors			53	1.4	17	0.5	20	0.5															
Engine Air Particle Separator	92	10.0	71	0.2	84	3.3	21	0.8															
FLIR Firmware Improvements			12	*	14	2.3																	
FWD Engine Bleed Air	27	0.4																					
Fuel System Changes	47	0.5	13	0.1	19	0.2	3	*															
Full Authority Digital Engine Control	20	0.1																					
IR Suppressor	41	3.3	27	1.8																			
Ice Protection - Block B	15	0.3																					
Ice Protection - Block B CDD/MIPC/NIPCU			3	13.2																			
Interim Defense Weapon System (IDWS)			8	4.6																			
Incorporation of Misc ECPs			5	0.3	5	0.3																	
Interior Handholds		*																					
NLG Door Mechanism Improvements	48	0.3																					
Nacelle Clamshell Door Hinge Half			51	0.1	8	0.0																	
Plugs & Covers	21	0.5																					
Pre Block A to B	1	1.2																					
Pre-Block A to B Supplemental	2	54.6																					
Ramp Mounted Weapon System	20	0.8	9	0.4																			
Refuel/Defuel Valve	28	0.5																					
Retractable Refueling Probes	4	1.7																					
Rotor Harness Redesign	52	0.7																					
Rotor Harness Redesign					30	0.6																	
Shaft Driven Comp Inlet Barrier Filte	41	2.4	26	1.3																			
Swashplate Actuator Hose	53	1.8																					
TAGB Mounting Hardware	54	0.4																					
Troop Seats	44	4.8																					
Cargo Nets and Pulleys Mission Kit			76	0.9	18	0.2																	
Cargo Wench System Redesign			25	2.3	41	3.7	14	1.3															

	Prior Years		FY 2008		FY 2009		FY 2010		FY2010 OCO											
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
GPA Repeater for Troop Commander			44	1.3																
FBCB2 Compliant Blue Force Tracker			44	4.2																
Nacelle STA 400 Air Baffle Cracking/Hydraulic System 3 Lin			32	0.9																
Purge Check Valve Cracking Pressur	32	0.1	5	*																
Upper Crew Door			5	0.5	22	2.2	12	1.2												
Landing Gear Bay Fire Suppression System					73	1.8														
Interim Defense Weapon System (DWS)									12	30.0										
Troop Commander Situational Awareness									120	23.5										
Installation Kits N/R		30.4		19.6																
Installation Equipment																				
XXX Equip		0.6																		
XXX Equip																				
Installation Equipment N/R																				
Engineering Change Orders																				
XXX Kit ECO XXX																				
XXX Equip ECO XXX																				
Data		0.2		0.1		*		*												
Training Equipment	29	85.3	7	38.0	4	4.1	4	6.9												
Support Equipment		0.5		1.5		2.4		2.6												
ILS		1.0		7.3																
Other Support		1.4		1.7		1.9		1.7												
Interim Contractor Support																				
Installation Cost	246	3.9	140	8.5	157	3.1	191	6.8												
Total Procurement		291.0		114.9		43.2		24.5		53.5										

Notes:

1. Totals may not add due to rounding
2. Asterisk indicates amount less than \$51K
3. FY 2010 OCO DWS and Troop Commander Situational Awareness kits are an 'O' Level Install

Exhibit P-3a

MODELS OF SYSTEMS AFFECTED: V-22 SERIES MODIFICATION TITLE: MV-22 CORRECTION OF DEFICIENCIES AND PRE-BLOCK A THROUGH C (OSIP 022-01)

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION:

ADMINISTRATIVE LEADTIME: VARIOUS Months PRODUCTION LEADTIME: VARIOUS Months

CONTRACT DATES: FY 2008: VARIOUS FY 2009: VARIOUS FY 2010: VARIOUS

DELIVERY DATE: FY 2008: VARIOUS FY 2009: VARIOUS FY 2010: VARIOUS

(\$ in Millions)

Cost:	Prior Years		FY 2008		FY 2009		FY 2010		FY2010 OCO												
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
FY 2007 (382) Kits	246	3.9	86	7.9	47	2.7	3	4.8													
FY 2008 (207) Kits			54	0.7	75	0.3	78	0.7													
FY 2009 (125) Kits					35	0.1	90	1.2													
FY 2010 (2) Kits							20	0.1													
FY 2011 () kits																					
FY 2012 () kits																					
FY 2013 () kits																					
FY 2014 () kits																					
FY 2015 () kits																					
To Complete () kits																					
TOTAL	246	3.9	140	8.5	157	3.1	191	6.8													

Installation Schedule

	FY 2007 & Prior	FY 2008				FY 2009				FY 2010				FY 2011				FY 2012				FY 2013				
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
In	246	35	35	35	35	39	39	39	40	47	48	48	48													
Out	246		35	35	35	35	39	39	39	40	47	48	48													

	FY 2014				FY 2015				To Complete	Total
	1	2	3	4	1	2	3	4		
In										
Out										

Note: Above installation schedule does not reflect all kits procured thru FY10