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CLASSIFICATION:

EXHIBIT R-2, RDT&E Budget Item Justification								DATE: February 2002			
APPROPRIATION/BUDGET ACTIVITY RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY / BA-5						R-1 ITEM NOMENCLATURE 0604212N ASW & OTHER HELO DEVELOPMENT					
COST (\$ in Millions)	Prior Years Cost		FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	Cost to Complete	Total Program
Total PE Cost			46.618	82.951	31.123	32.082	173.401	397.094	476.834	Continuing	Continuing
H1109 CH/MH-53			0.450	2.300	2.910	2.870	2.485	2.524	2.569	Continuing	Continuing
H2415 MH-60S DEVELOPMENT			30.807	41.721	23.241	20.158	13.056	11.987	6.198	Continuing	Continuing
H2463 LAMPS MK III DATA LINK	13.225		11.597	24.901							49.723
H3058 VH-XX Replacement					1.989	4.079	45.670	78.301	127.655	Continuing	Continuing
DERF (non-add)*					1.500						Continuing
H3059 CH-53E SLEP					2.983	4.975	112.190	304.282	340.412	Continuing	Continuing
H3060 IMDS			3.764	6.938							10.702
H9055 SH-60 LASER AIM SCORING SYSTEM				0.991							0.991
H9056 HIGH TECH TRAINING (LEGACY)				0.991							0.991
H9057 H-60 FLIR Mount				2.532							2.600
H9058 H-60 HELICOPTER DYNAMIC COMPONENT				2.577							2.577
Quantity of RDT&E Articles	2			10							12
<p>*FY2003 DERF funding augments project H3058 VHXX Replacement</p> <p>(U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:</p> <p>H1109 - From FY-2000 to FY-2007, H-53E efforts continue to develop and qualify components to replace obsolete system components and incorporate supportability improvement modifications to support H-53E Service Life Extension Program (SLEP) Phase II and Phase III requirements. Modeling and simulation will be used to the maximum practical extent throughout this effort. Manned Flight Simulator (MFS) will be utilized to develop, install and test interim modifications to existing H-53E legacy avionics, while maintaining the original basic system footprint and functionality. As a part of this effort, a complete electromagnetic vulnerability (EMV) assessment will be required for the affected and/or modified systems. During FY-2003, RDT&E efforts will focus on risk reduction measures for the CH-53E Service Life Extension/Modernization Program. Consideration will be given but not limited to risk reduction efforts in identification and selection of candidate engines, refinement of the cost model, survivability improvements, avionics and cockpit enhancements, external/internal cargo handling improvements, airframe specific improvements to extend the service life to 2025 and main rotor head and main rotor blade redesign.</p> <p>H2415 - The Helicopter Combat Support (HC) mission is to maintain forward deployed fleet sustainability through rapid airborne delivery of materials and personnel and to support amphibious operations through search and rescue coverage. The primary roles of the aircraft are to conduct vertical replenishment (VERTREP), day/night ship-to-ship, ship-to-shore, and shore-to-ship external transfer of cargo; internal transport of passengers, mail and cargo, vertical on board delivery (VOD); airhead operations, and day/night search and rescue (SAR). The aircraft secondary roles include torpedo and drone recovery, noncombatant evacuation operations (NEO), Sea Air Land (SEAL) and Explosive Ordnance Disposal (EOD) support. The MH-60S ORD was modified in May 2000 to add Organic Airborne Mine Countermeasures (OAMCM) as a primary mission for the MH-60S. The AMCM mission will provide Carrier Battle Groups (CVBGs) and Amphibious Readiness Groups (ARGs) with an OAMCM capability.</p>											

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<p>(U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION (CON'T):</p> <p>H2463 - The Light Airborne Multi-Purpose System (LAMPS) MK III helicopter is deployed on Ticonderoga Class cruisers, Arleigh Burke Class Destroyer and Spruance Class destroyers, and Oliver Hazard Perry Class frigates and provides an all-weather capability for detection, classification, and localization of ships and submarines. LAMPS is an integrated ship-to-helicopter, computer-to-computer weapon system designed to increase and extend the effectiveness of the surface combatant in the performance of its mission. Currently the LAMPS helicopter is tied to its host surface ship via a C-Band bi-directional data link. This data link transfers FLIR, radar, Electronic Support Measures (ESM), Identification Friend or Foe (IFF), voice, tactical symbology, and acoustic information between the helicopter and ship making the helicopter an extension of the ships sensors and increasing the sensor horizon of the ship. The recent introduction of Cooperative Engagement Capability (CEC) into the fleet has created an Electro Magnetic Interference (EMI) problem because it operates within the same C-Band frequency spectrum as the data link. In some CEC operating modes, it completely masks the LAMPS data link resulting in loss of information exchange between the ship and helicopter. To resolve this EMI issue, the LAMPS data link is being moved from the C-Band frequency to the KU-Band. Funding supports development and delivery of 5 air and 4 surface test articles in FY 02.</p> <p>H3058 - Research and Development funds will be utilized to standup the Integrated Product Team (IPT) and produce requisite products required to meet the White House's requirement for an Executive Transport Platform. The following areas need to be explored: Nuclear Effects, E3 /TEMPEST certification requirements, Survivability (Vulnerability/Susceptibility), Facilities upgrade/modifications- Source Selection Authority (SSA), Environmental Impact, Security, Cost Estimation, Requirements Analysis, Functional Analysis and Allocation, Risk Management, Crew System/Human Systems Integration (HSI), and Logistics Support Analysis.</p> <p>H3059 - The Modernized CH-53E will be the U.S. Marine Corps' heavy lift aircraft through 2025. Current research and operational analysis indicates that the Marine Corps' need for heavy lift capability is increasing. Accordingly, the Modernized CH-53E will be capable of lifting large, mission representative external and internal loads to complement the range and speed of the MV-22 in Operational Maneuver From The Sea and the execution of our national military strategy. Research and Development funds will be used to start risk reduction measures which will include trade studies, cost modeling, the development of programmatic, engineering and logistics infrastructure; and the development of operational requirements documents and all acquisition efforts associated with an ACAT I program.</p> <p>H3060 - Integrated Mechanical Diagnostics System (IMDS) adapts a BFGoodrich (BFG) Aerospace commercial mechanical diagnostic system for military use, and integrates and tests the system on the H-53 and H-60 helicopters. This health and usage monitoring system will reduce operational and support costs, improve operational readiness, and increase flight safety through the early identification and correction of degraded components in the engine, drive train, and rotor systems of the helicopter. IMDS provides continuous onboard monitoring and diagnostics of engine health, gearbox and drive train vibrations, oil debris, and rotor track and balance. This new development effort continues the ongoing COSSI initiative, and is required to support completion of the Navy-specific efforts associated with the IMDS program.</p> <p>H9055 - The Laser Aim Scoring System (LASS) provides real-time, quantitative feedback on critical aspects of laser guided weapon employment not currently available from existing Navy laser scoring systems. This feedback has been proven to significantly improve flight crew weapon delivery capabilities during nearly a decade of use by the U. S. Army. The system consists of three major components: A Base Station, Target Kit and aircraft Flight Data Unit. LASS will be adapted to existing Navy seaborne targets to support Navy H-60 armed helicopter raining and readiness events requiring laser scoring capability.</p> <p>H9056 - High Tech Training In Support Of DOD Legacy Parts.</p> <p>H9057- H-60 FLIR Mount, Congressional Add.</p> <p>H9058 - H-60 Dynamic Component Life Cycle Engineering Evaluation to assess criteria and development of component upgrades for Life Extension.</p> <p>This program is funded under ENGINEERING AND MANUFACTURING DEVELOPMENT because it encompasses engineering and manufacturing development of new end-items prior to production approval decision.</p>		

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EXHIBIT R-2a, RDT&E Project Justification								DATE: February 2002			
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-5		PROGRAM ELEMENT NUMBER AND NAME 0604212N ASW & OTHER HELO DEVELOPMENT				PROJECT NUMBER AND NAME H1109 CH/MH-53					
COST (\$ in Millions)	Prior Years Cost		FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	Cost to Complete	Total Program
Project Cost			0.450	2.300	2.910	2.870	2.485	2.524	2.569	Continuing	Continuing
RDT&E Articles Qty											

(U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: From FY-2000 to FY-2007, H-53E efforts continue to develop and qualify components to replace obsolete system components and incorporate supportability improvement modifications to support H-53E Service Life Extension Program (SLEP) Phase II and Phase III requirements. Modeling and simulation will be used to the maximum practical extent throughout this effort. Manned Flight Simulator (MFS) will be utilized to develop, install and test interim modifications to existing H-53E legacy avionics, while maintaining the original basic system footprint and functionality. As a part of this effort, a complete electromagnetic vulnerability (EMV) assessment will be required for the affected and/or modified systems. During FY-2003 RDT&E efforts will focus on risk reduction measures for the CH-53E Service Life Extension/Modernization Program. Consideration will be given but not limited to risk reduction efforts in identification and selection of candidate engines, refinement of the cost model, survivability improvements, avionics and cockpit enhancements, external/internal cargo handling improvements, airframe specific improvements to extend the service life to 2025 and main rotor head and main rotor blade redesign.

(U) PROGRAM ACCOMPLISHMENTS AND PLANS:

1. FY 2001 ACCOMPLISHMENTS:

- (U) (\$.184) Continued In-house travel and field activities funding to support program.
- (U) (\$.266) Continued H-53 Avionics Obsolescence/Updated Cockpit. This included a cockpit study on the layout development, human factors of component layout and component commonality.

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APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME
RDT&E, N / BA-5	0604212N ASW & OTHER HELO DEVELOPMENT	H1109 CH/MH-53
<p>2. FY 2002 PLANS:</p> <ul style="list-style-type: none">- (U) (\$.352) Conduct External Cargo Handling System Design.- (U) (\$.350) Conduct External Cargo System Indicator Design.- (U) (\$.350) Conduct Aircraft Survivability Assessment.- (U) (\$.250) Conduct Armor Threat Assessment on aircraft.- (U) (\$.330) Conduct Armor Selection/Test.- (U) (\$.269) Conduct Cockpit and Aircraft System Assessment.- (U) (\$.227) Testing other Aircraft Integration Candidates to include Helmut Displays, Cockpit Displays, and Heads Up Displays.- (U) (\$.102) Continue In-house travel and field activities funding to support program.- (U) (\$.070) Portion of extramural program reserved for Small Business Innovation Research assessment in accordance with 15USC 638. <p>3. FY 2003 PLANS:</p> <ul style="list-style-type: none">- (U) (\$.112) Continue In-house travel and field activities funding to support program.- (U) (\$.750) Design ballistic vulnerability (armor) package.- (U) (\$.139) Conduct cockpit architecture design to facility communication, navigation upgrades/modifications.- (U) (\$ 1.359) Conduct detailed cockpit design and bread board testing.- (U) (\$.150) Integrate software applique for cockpit and avionics improvements, to include the development of new sensors and the impact on flight control computers.- (U) (\$.150) Select and test antenna and other electronic components.- (U) (\$.250) Model and test survivability design effectiveness.		

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APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-5	PROGRAM ELEMENT NUMBER AND NAME 0604212N ASW & OTHER HELO DEVELOPMENT	PROJECT NUMBER AND NAME H1109 CH/MH-53																
<p>(U) B. PROGRAM CHANGE SUMMARY:</p> <table style="margin-left: auto; margin-right: auto; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;"></th> <th style="text-align: center;"><u>FY2001</u></th> <th style="text-align: center;"><u>FY2002</u></th> <th style="text-align: center;"><u>FY2003</u></th> </tr> </thead> <tbody> <tr> <td style="padding-left: 20px;">(U) FY 2002 President's Budget:</td> <td style="text-align: center;">0.461</td> <td style="text-align: center;">2.321</td> <td></td> </tr> <tr> <td style="padding-left: 20px;">(U) Adjustments from the President's Budget:</td> <td style="text-align: center;">-0.011</td> <td style="text-align: center;">-0.021</td> <td></td> </tr> <tr> <td style="padding-left: 20px;">(U) FY 2003 President's Budget Submit:</td> <td style="text-align: center;">0.450</td> <td style="text-align: center;">2.300</td> <td style="text-align: center;">2.910</td> </tr> </tbody> </table> <p style="margin-top: 20px;">CHANGE SUMMARY EXPLANATION:</p> <p style="margin-left: 40px;">(U) Funding: The FY 2001 decrease of \$.011 million is due to an decrease of \$.008 million for a Small Business Innovation Research Assessment and a decrease of \$.003 million for reprioritization of requirements within the Navy. The FY2002 decrease of \$.021 million is due to an undistributed congressional reduction.</p> <p style="margin-left: 40px;">(U) Schedule: Not Applicable.</p> <p style="margin-left: 40px;">(U) Technical: Not Applicable.</p> <p style="margin-top: 40px;">(U) C. OTHER PROGRAM FUNDING SUMMARY: Not Applicable</p>				<u>FY2001</u>	<u>FY2002</u>	<u>FY2003</u>	(U) FY 2002 President's Budget:	0.461	2.321		(U) Adjustments from the President's Budget:	-0.011	-0.021		(U) FY 2003 President's Budget Submit:	0.450	2.300	2.910
	<u>FY2001</u>	<u>FY2002</u>	<u>FY2003</u>															
(U) FY 2002 President's Budget:	0.461	2.321																
(U) Adjustments from the President's Budget:	-0.011	-0.021																
(U) FY 2003 President's Budget Submit:	0.450	2.300	2.910															

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			February 2002	
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME		
RDT&E, N / BA-5	0604212N ASW & OTHER HELO DEVELOPMENT	H1109 CH/MH-53		
(U) D. ACQUISITION STRATEGY: This is a non-ACAT program with no specific acquisition strategies.				
(U) E. SCHEDULE PROFILE:				
	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY-2003</u>	<u>TO COMPLETE</u>
(U) Program Milestones (Not Applicable)				
(U) Engineering Milestones	1Q/01-4Q/01 H-53E Develop & Qualify Component	1Q/02-4Q/02 External Cargo Handling Sys Design 1Q/02-4Q/02 Ext Cargo Handling Indicator Design 1Q/02-4Q/02 Aircraft Survivability Assessment 1Q/02-4Q/02 Armor Threat Assessment 1Q/02-4Q/02 Cockpit and A/C System Assessment 1Q/02-4Q/02 Other A/C Cockpit Integration Candidates	1Q/03-4Q/03 Design Armor Package 1Q/03-4Q/03 Cockpit Upgrade Architecture Sel	1Q/04-4Q/04 Mission Planning Station Dev 1Q/04-4Q/04 Mission Planning Data Integration 1Q/05-4Q/05 Modernize Defensive Weapon System 1Q/05-4Q/05 Weapons Sys Research Structural Interface Rqmts 1Q/06-4Q/06 Alternate Internal Power Supply Study 1Q/06-4Q/06 Daylight Compat. Head Up Display (HUD) Ass. 1Q/06-4Q/06 Internal Cabin Floor Load Assessment 1Q/06-4Q/06 Composite Main Rotor Blade Assess. 1Q/07-4Q/07 Daylight Compat. Head Up Display (HUD) Design 1Q/07-4Q/07 Composite Main Rotor Blade Design
(U) T&E Milestones		1Q/02-4Q/02 Armor Selection Test	1Q/03-4Q/03 Model and Test survivability Design Effectiveness 1Q/03-4Q/03 Cockpit Upgrade Detailed Design & Breadboard Testing	1Q/04-4Q/04 Cockpit Upgrade

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Exhibit R-2a, RD TEN Budget Item Justification
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APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME		
RDT&E, N / BA-5	0604212N ASW & OTHER HELO DEVELOPMENT	H1109 CH/MH-53		
(U) E. SCHEDULE PROFILE:				
	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>TO COMPLETE</u>
(U) T&E Milestones (Continued)			1Q/03-4Q/04 Integrate Cockpit/Avionics Software Applique 1Q/03-4Q/04 Select & Test Antennae, AMP & Modem	
(U) Contract Milestones				

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Exhibit R-3 Cost Analysis (page 1)								DATE: February 2002				
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NUMBER AND NAME						
RDT&E, N / BA-5			0604212N ASW & OTHER HELO DEVELOPMENT			H1109 CH/MH-53E						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 01 Cost	FY 01 Award Date	FY 02 Cost	FY 02 Award Date	FY 03 Cost	FY 03 Award Date	Cost to Complete	Total Cost	Target Value of Contract
External Cargo Handling System	SS CPFF	SIKORSKY, Stratford, CT				0.352	03/02				0.352	0.352
External Cargo System Indicator Des	SS CPFF	SIKORSKY, Stratford, CT				0.350	03/02				0.350	0.350
Design Armor Package	SS CPFF	SIKORSKY, Stratford, CT						0.750	02/04		0.750	0.750
Integrated Software Applique	WX	NAWCAD, Pax River, MD						0.150	12/03		0.150	
Architecture Selection	WX	NAWCAD, Pax River, MD						0.139	12/03		0.139	
IELD	WX	NAWCAD, Pax River, MD	1.869								1.869	
Subtotal Product Development			1.869			0.702		1.039			3.610	
Remarks:												
H-53 Avionics Obsolescence	WX	NAVICP, Philadelphia, PA	0.535	0.266	11/00						0.801	
Aircraft Survivability Assessment	SS CPFF	SIKORSKY, Stratford, CT				0.350	03/02				0.350	0.350
Aircraft Integration Candidates	WX	NAWCAD, Pax River, MD				0.227	10/01				0.227	
Cockpit & Aircraft Sys Assessment	WX	NAWCAD, Pax River, MD				0.269	10/01				0.269	
Armor Threat Assessment	WX	NAWCAD, Pax River, MD				0.250	10/01				0.250	
Modeling Fidelity & Data Correlation	WX	NSWC, Carderock, MD	0.150								0.150	
Subtotal Support			0.685	0.266		1.096					2.047	
Remarks:												

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Exhibit R-2a, RD TEN Budget Item Justification
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Exhibit R-3 Cost Analysis (page 2)								DATE: February 2002				
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NUMBER AND NAME						
RDT&E, N / BA-5			0604212N ASW & OTHER HELO DEVELOPMENT			H1109 CH/MH-53						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 01 Cost	FY 01 Award Date	FY 02 Cost	FY 02 Award Date	FY 03 Cost	FY 03 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Armor Selection Testing	WX	NAWCAD, Pax River, MD				0.330	10/01				0.330	
Design & Breadboard Testing	WX	NAWCAD, Pax River, MD						1.359	11/03		1.359	
Testing Antennae, AMP & Modem	WX	NAWCAD, Pax River, MD						0.150	01/04		0.150	
Model & Test Design Effectiveness	WX	NAWCAD, Pax River, MD						0.250	01/04		0.250	
Rotor Hub Quality Testing	SS CPFF	SIKORSKY, Stratford, CT	0.574								0.574	0.574
Subtotal T&E			0.574			0.330		1.759			2.663	
Remarks:												
Travel	WX	NAWCAD, Pax River, MD	0.183	0.184	11/00	0.102	11/01	0.112	11/02	Continuing	Continuing	
SBIR Assessment						0.070					0.070	
Subtotal Management			0.183	0.184		0.172		0.112		Continuing	Continuing	
Remarks:												
Total Cost			3.311	0.450		2.300		2.910		Continuing	Continuing	
Remarks:												

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APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-5	PROGRAM ELEMENT NUMBER AND NAME 0604212N ASW and Other Helo Development					PROJECT NUMBER AND NAME H2415 MH-60S Development					
COST (\$ in Millions)	Prior Years Cost		FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	Cost to Complete	Total Program
Project Cost			30.807	41.721	23.241	20.158	13.056	11.987	6.198	Continuing	Continuing
RDT&E Articles Qty	2										2

* The FY 2001 budget reflects a \$10M Congressional add for CSTRS which has been reduced by \$0.092 million for Congressional Reductions and \$0.319 million for a SBIR assessment and will be executed under H2773.

**The FY 2002 budget reflects a \$5.1M Congressional add for CSTRS and will be executed under H2773.

(U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: The Helicopter Combat Support (HC) mission is to maintain forward deployed fleet sustainability through rapid airborne delivery of materials and personnel and to support amphibious operations through search and rescue coverage. The primary roles of the aircraft are to conduct vertical replenishment (VERTREP), day/night ship-to-ship, ship-to-shore, and shore-to-ship external transfer of cargo; internal transport of passengers, mail and cargo, vertical on board delivery (VOD); airhead operations, and day/night search and rescue (SAR). The aircraft secondary roles include torpedo and drone recovery, noncombatant evacuation operations (NEO), Sea Air Land (SEAL) and Explosive Ordnance Disposal (EOD) support. The MH-60S ORD was modified in May 2000 to add Organic Airborne Mine Countermeasures (OAMCM) as a primary mission for the MH-60S. The AMCM mission will provide Carrier Battle Groups (CVBGs) and Amphibious Readiness Groups (ARGs) with an OAMCM capability.

(U) PROGRAM ACCOMPLISHMENTS AND PLANS:

1. FY 2001 ACCOMPLISHMENTS:

- (U) (\$7.775) Continued the design, development, integration and support of the interoperability of a Common AMCM Sensor Console for the MH-60S.
- (U) (\$6.382) Continued integration analysis and nonrecurring engineering efforts supporting the development and integration of the Airborne Mine Countermeasures (AMCM) unique items into the MH-60S helicopter. Commence integration of design changes into the Common Console and Common Cockpit.
- (U) (\$7.735) Continued development of Carriage, Stream, Tow, & Recovery System (CSTRS) prototypes. Conduct engineering analysis and trade studies to define unique requirements for all five AMCM sensors. (Congressional Plus-Up).
- (U) (\$1.825) Continued Navy field activity systems engineering and test support, program management, and travel for CSTRS efforts. (Congressional Plus-Up)
- (U) (\$6.870) Continued Navy field activity systems engineering and test support, program management, and travel.
- (U) (\$0.220) Performed Live Fire Test and Evaluation for the MH-60S program.

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Exhibit R-2a, RDTEN Budget Item Justification

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<p>(U) PROGRAM ACCOMPLISHMENTS AND PLANS:</p> <p>2. FY 2002 PLANS:</p> <ul style="list-style-type: none"> - (U) (\$4.400) Continue the design, development, integration and support of the AMCM unique items into the MH-60S. Design develop, integrate and support the interoperability of Automatic Flight Control System (AFCS). - (U) (\$6.100) Begin the engineering and integration effort to incorporate AMCM requirements into the aircraft and ship C4I structure. - (U) (\$4.080) Continued development of Carriage, Stream, Tow, & Recovery System (CSTRS) prototypes. Conduct engineering analysis and trade studies to define unique requirements for all five AMCM sensors. (Congressional Plus-Up). - (U) (\$1.020) Continued Navy field activity systems engineering and test support, program management, and travel for CSTRS efforts. (Congressional Plus-Up) - (U) (\$3.344) Begin T&E on AMCM Mission Kits as each weapon system is introduced to the MH-60S. - (U) (\$12.823) Continue developmental efforts on a production representative MH-60S helicopter. Supplies and services include engineering investigations, nonrecurring engineering, and design. Continue development of the consoles, as well as software modifications, to support AMCM sensors and palletized system. - (U) (\$6.868) Continue Navy field activity systems engineering and test support, program management, and travel. - (U) (\$0.735) Continue Live Fire Test and Evaluation for the MH-60S program. - (U) (\$1.243) Begin AMCM Training development. Tasks include a training situation analysis, instructional system development (ISD) documentation, and flight simulator aero model update. - (U) (\$1.108) Portion of extramural program reserved for Small Business Innovation Research assessment in accordance with 15USC 638. <p>3. FY 2003 PLANS:</p> <ul style="list-style-type: none"> - (U) (\$2.500) Design, development, integration and support of the AMCM unique items into the MH-60S. - (U) (\$10.300) Developmental efforts for a production representative MH-60S helicopter. Supplies and services include engineering investigations, nonrecurring engineering, and design. Continue development of the prototype consoles, as well as software modifications, to support AMCM sensors and palletized system. 		

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APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-5	PROGRAM ELEMENT NUMBER AND NAME 0604212N ASW and Other Helo Development	February 2002
(U) PROGRAM ACCOMPLISHMENTS AND PLANS:		
3. FY 2003 PLANS cont:		
- (U) (\$1.250) Engineering and integration effort to incorporate AMCM requirements into the aircraft and ship C4I structure.		
- (U) (\$2.148) Navy field activity systems engineering and program management support and travel.		
- (U) (\$1.350) AMCM Training Systems engineering and development.		
- (U) (\$0.900) MH-60S Live Fire Test and Evaluation (LFT&E) effort.		
- (U) (\$4.793) AMCM sensor systems test and evaluation support.		

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APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME						
RDT&E, N / BA-5	0604212N ASW & Other Helo Development	H2415 MH-60S Development						
(U) B. PROGRAM CHANGE SUMMARY:								
	<u>FY2001</u>	<u>FY2002</u>	<u>FY2003</u>					
(U) FY 2002 President's Budget Submit:	22.944	36.948						
(U) Adjustments from the President's Budget:	<u>7.863</u>	<u>4.773</u>						
(U) FY 2003 President's Budget Submit:	30.807	41.721	23.241					
CHANGE SUMMARY EXPLANATION:								
<p>(U) Funding: FY 2001 net increase of \$7.863 million reflects an increase of \$8.379 million to modify two MH-60S aircraft to support AMCM test and evaluation activities and an increase of \$0.148 million for test and evaluation offset by a decrease of \$0.664 million for a Small Business Innovation Research assessment. FY 2002 net increase of \$4.773 million reflects an increase of \$5.100 million for CSTRS offset by a decrease of \$0.327 million for an undistributed congressional reduction.</p> <p>(U) Schedule: The FY 2001, FY2002, and FY2003 Program, Engineering and Contracts Milestone slips result from delays in Weapon System Integration Contracts. Weapon System Integration Contracts were awarded as Undefinitized Contract Actions. The definitization of these contracts is scheduled for 2Q FY2002. MH-60S OPEVAL schedule slip is due to delays associated with MH-60S Common Cockpit Instrument Meteorological Certification (IMC) clearance and obtaining Operational Test Readiness Review approval.</p> <p>(U) Technical: N/A</p>								
(U) C. OTHER PROGRAM FUNDING SUMMARY:								
<u>Line Item No. & Name</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>To Complete</u>
017900 APN-1 MH-60S AMCM (Included in numbers above)	283.821	254.031 9.504	372.155 18.000	384.157 46.264	445.996 41.779	551.736 35.260	595.468 42.949	1,607.030 98.255
060510 APN-6 MH-60S	43.993	19.280	0.000	23.604	0.549	0.533	0.561	0.000
0604216N, H3053, MH-60S AMCM	0.000	12.687	0.000	0.000	0.000	0.000	0.000	0.000

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EXHIBIT R-2a, RDT&E Project Justification			DATE:
			February 2002
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME	
RDT&E, N / BA-5	0604212N ASW & Other Helo Development	H2415 MH-60S Development	
(U) D. ACQUISITION STRATEGY:			
(U) E. SCHEDULE PROFILE:			
	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>
(U) Program Milestones		AMCM IPR 4Q	<u>TO COMPLETE</u> AMCM IPR 2Q/04 AMCM IOC 2Q/05
(U) Engineering Milestones		Common Console CDR 3Q Common Console Delivery 4Q AFCS Design/Integration CDR 4Q	AMCM AFCS Delivery 2Q
(U) T&E Milestones	MH-60S OPEVAL (OT-IIB) 4Q/01 - 2Q/02		AMCM OT-III A Testing 2Q/04 AMCM DT Testing 2Q/04 Complete LFT&E 3Q/05
(U) Contract Milestones		Weapon System Integration Contracts Award 1Q	

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Exhibit R-3 Cost Analysis (page 1)								DATE: February 2002				
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NUMBER AND NAME						
RDT&E, N / BA-5			0604212N ASW & Other Helo Development			H2415 MH-60S Development						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 01 Cost	FY 01 Award Date	FY 02 Cost	FY 02 Award Date	FY 03 Cost	FY 03 Award Date	Cost to Complete	Total Cost	Target Value of Contract
AMCM Tow Demo & AFCS NRE	SS/CPFF	Sikorsky, Stratford, CT	8.056			4.000	03/02	2.000	11/02		14.056	14.056
Common Cockpit Development	845OT	Lockheed Martin, Owego, NY	7.334								7.334	7.334
MH-60S NRE & Test Article Mod	SS/CPAF	Sikorsky, Stratford, CT	16.107	5.775	11/00	0.400	11/01	0.500	11/02		22.782	22.782
AMCM System Integration & Analysis	SS/CPAF	Lockheed Martin, Owego, NY	6.348	6.382	11/00	12.823	11/01	10.300	11/02	22.336	58.189	58.189
MH-60S TC DL Development/Integration	845OT	Harris Corp, FL		2.000	03/01	6.100	03/02	1.250	01/03		9.350	9.350
CSTRS Integration	SS/CPFF	Sikorsky, Stratford, CT	2.000								2.000	2.000
CSTRS Development	SS/FFP	CTC, Johnstown, PA	8.310	7.735	10/01	4.080	07/02				20.125	20.125
Subtotal Product Development			48.155	21.892		27.403		14.050		22.336	133.836	133.836
Remarks:												
Gov't Engineering & Logistics Support	Various	NSWC Coastal Systems Station	7.207	0.858	12/00	1.141	01/02	0.613	11/02	Continuing	Continuing	
Engineering, Studies, Tech Supt	Various	NAWCAD	1.687								1.687	
AMCM Training Systems	Various	NAWCAD & NAWC-TSD				1.243	01/02	1.350	01/03	0.275	2.868	
Shipboard Integration	Various	NAWCAD Lakehurst/PMS-312		0.175	09/01	0.400	01/02			Continuing	Continuing	
Gov't Engineering & Logistics Support		NAWCAD Pax River		0.490	12/00	3.008	01/02	1.021	11/02	Continuing	Continuing	
Subtotal Support			8.894	1.523		5.792		2.984		Continuing	Continuing	

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APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NUMBER AND NAME						
RDT&E, N / BA-5			0604212N ASW & Other Helo Development			H2415 MH-60S Development						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 01 Cost	FY 01 Award Date	FY 02 Cost	FY 02 Award Date	FY 03 Cost	FY 03 Award Date	Cost to Complete	Total Cost	Target Value of Contract
AMCM Test & Evaluation Engineering	WX	NAWCAD Patuxent River	4.534	1.690	12/00	0.615	02/02	0.386	11/02	1.900	9.125	
AMCM T&E	WX	NRWATS				3.394	01/02	4.274	11/02	20.560	28.228	
Sentient Sensor	SS/CPFF	Management Sciences Inc	0.987								0.987	0.987
MH-60S LFT&E	WX	NAWCWD China Lake		0.220	01/01	0.685	02/02	0.900	11/01	0.900	2.705	
Subtotal T&E			5.521	1.910		4.694		5.560		23.360	41.045	
Remarks:												
Misc Management Support	Various	Various	0.516								0.516	0.516
Program Management Support	Various	NAVAIR	2.824	2.108	Various	1.604	02/02	0.532	01/03	1.509	8.577	
Engineering Support	Various	NAWCAD	0.605	1.334	12/00						1.939	
Travel	WX	NAWCAD		0.215	11/00	0.100	11/01	0.115	11/02	0.495	0.925	
CSTRS Field Activity Support	WX	Various		1.825	11/00	1.020	02/02				2.845	
SBIR Assessment	Various	TBD				1.108					1.108	
Subtotal Management			3.945	5.482		3.832		0.647		2.004	15.910	
Remarks:												
Total Cost			66.515	30.807		41.721		23.241		Continuing	Continuing	
Remarks:												

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EXHIBIT R-2a, RDT&E Project Justification								DATE: February 2002			
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-5		PROGRAM ELEMENT NUMBER AND NAME 0604212N / ASW & OTHER HELO DEVELOPMENT				PROJECT NUMBER AND NAME H2463 / LAMPS MK III DATA LINK					
COST (\$ in Millions)	Prior Years Cost		FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	Cost to Complete	Total Program
Project Cost	13.225		11.597*	24.901							49.723
RDT&E Articles Qty				9							9

* FY 2001 budget reflects a \$2.000 million Congressional add for Upgrading the Ship Ground Station at NAWC Aircraft Division which has been reduced by \$.018 million for Congressional Reductions and \$.009 million for SBIR assessment and will be executed under H2774.

(U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: The Light Airborne Multi-Purpose System (LAMPS) MK III helicopter is deployed on Ticonderoga Class cruisers, Arleigh Burke Class Destroyer and Spruance Class destroyers, and Oliver Hazard Perry Class frigates and provides an all-weather capability for detection, classification, and localization of ships and submarines. LAMPS is an integrated ship-to-helicopter, computer-to-computer weapon system designed to increase and extend the effectiveness of the surface combatant in the performance of its mission. Currently the LAMPS helicopter is tied to its host surface ship via a C-Band bi-directional data link. This data link transfers FLIR, radar, Electronic Support Measures (ESM), Identification Friend or Foe (IFF), voice, tactical symbology, and acoustic information between the helicopter and ship making the helicopter an extension of the ships sensors and increasing the sensor horizon of the ship. The recent introduction of Cooperative Engagement Capability (CEC) into the fleet has created an Electro Magnetic Interference (EMI) problem because it operates within the same C-Band frequency spectrum as the data link. In some CEC operating modes, it completely masks the LAMPS data link resulting in loss of information exchange between the ship and helicopter. To resolve this EMI issue, the LAMPS data link is being moved from the C-Band frequency to the KU-Band. Funding supports development and delivery of 5 air and 4 surface test articles in FY 02.

(U) PROGRAM ACCOMPLISHMENTS AND PLANS:

1. FY 2001 ACCOMPLISHMENTS:

- (U) (\$6.686) Continued NRE, manufacturing, and development effort by both vendors.
- (U) (\$1.525) Continued integration of TCDL on LAMPS Air and Ship segments; conduct Contractor Lab Testing; and start Request for Proposal (RFP) to select vendor for production.
- (U) (\$.440) Continued technical services to review and evaluate vendor progress.
- (U) (\$.061) Continued Program Management and travel.
- (U) (\$.912) Continued Field Activity, Engineering and Technical Support and Integrated Logistics Support
- (U) (\$1.973) Completed the Ship Air Mission Systems Integration to include upgrading the Ship Ground Station.

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APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME
RDT&E, N / BA-5	0604212N / ASW & OTHER HELO DEVELOPMENT	H2463 / LAMPS MK III DATA LINK
<p>3. FY 2002 PLAN:</p> <ul style="list-style-type: none">- (U) (\$16.375) Continue NRE, manufacturing, and development effort by vendor.- (U) (\$3.290) Continue integration of TCDL on LAMPS Air and Ship segments; conduct Contractor Lab Testing; and start Request for Proposal (RFP) to select vendor for production.- (U) (\$.440) Continue technical services to review and evaluate vendor progress. Participate in CDR.- (U) (\$.555) Continue Program Management and travel.- (U) (\$1.713) Continue Field Activity, Engineering and Technical Support and Integrated Logistics Support.- (U) (\$1.774) Perform Flight Testing, Development/Operational Test and Evaluation (DT/OT) of airborne and surface segments, environmental, and reliability testing.- (U) (.754) Portion of extramural program reserved for Small Business Innovative Research Assessment in accordance with 15 USC 638. <p>4. FY 2003 PLAN:</p> <p>Not Applicable.</p>		

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Exhibit R-2a, RDTE Budget Item Justification
(Exhibit R-2a, page 18 of 52)

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APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-5	PROGRAM ELEMENT NUMBER AND NAME 0604212N / ASW & OTHER HELO DEVELOPMENT	PROJECT NUMBER AND NAME H2463 / LAMPS MK III DATA LINK

(U) B. PROGRAM CHANGE SUMMARY:

	<u>FY2001</u>	<u>FY2002</u>	<u>FY2003</u>
(U) FY 2002 President's Budget:	12.619	25.123	
(U) Adjustments from the President's Budget:	-1.022	-0.222	
(U) FY 2003 President's Budget Submit:	11.597	24.901	

CHANGE SUMMARY EXPLANATION:

- (U) Funding: The FY 2001 decrease of \$1.022 million reflects a \$.332 million decrease for Small Business Innovative Research Assessment and a \$.690 million decrease for reprioritization of requirements within the Navy. FY2002 decrease of \$.222 million reflects an undistributed congressional reduction.
- (U) Schedule: First production system delivery has slipped to 3Q/04. CDR has slipped to 2Q/02 due to minor specification changes that delayed contractor development efforts.
- (U) Technical: NOT APPLICABLE

(U) C. OTHER PROGRAM FUNDING SUMMARY:

<u>Line Item No. & Name</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>To Complete</u>
OPN BLI 425500 / LAMPS MK III Shipboard Equipment	0	0	5.488	23.018	27.205	30.864	35.260	176.485
BLI-018200 / MH-60R APN-1	223.328	53.676	9.933	116.212	392.768	397.215	409.733	419.567
BLI-060510 / MH-60R APN-6 Initial Spares	12.263	0.000	0.000	0.000	59.814	65.018	52.580	52.924

Related RDT&E

(U) PE 0604216N Multi-Mission Helicopter Upgrade Development

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APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-5	PROGRAM ELEMENT NUMBER AND NAME 0604212N / ASW & OTHER HELO DEVELOPMENT	PROJECT NUMBER AND NAME H2463 / LAMPS MK III DATA LINK																														
<p>(U) D. ACQUISITION STRATEGY: PMA-299 entered into development on a Navy Section 845 Agreement with Harris Corporation to develop a TCDL solution for LAMPS. The solution will integrate the TCDL KU-Band Data Link into the LAMPS MK III weapons system, ships and aircraft. Production deliveries will begin in FY 2004.</p> <p>(U) E. SCHEDULE PROFILE:</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 60%;"></th> <th style="width: 15%; text-align: center;"><u>FY 2001</u></th> <th style="width: 15%; text-align: center;"><u>FY 2002</u></th> <th style="width: 10%; text-align: center;"><u>FY 2003</u></th> <th style="width: 10%; text-align: center;"><u>TO COMPLETE</u></th> </tr> </thead> <tbody> <tr> <td>(U) Program Milestones</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>(U) Engineering Milestones</td> <td></td> <td>(2Q/02) CDR</td> <td></td> <td></td> </tr> <tr> <td>(U) T&E Milestones</td> <td></td> <td>(4Q/02) SIL DT/OT</td> <td></td> <td></td> </tr> <tr> <td>(U) Contract Milestones</td> <td></td> <td>(4Q/02) Pre-Prod Delivery</td> <td></td> <td>(3Q/04) First Production Delivery</td> </tr> <tr> <td></td> <td></td> <td>(4Q/02) RFP for FY03 Production Contract</td> <td></td> <td></td> </tr> </tbody> </table>				<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>TO COMPLETE</u>	(U) Program Milestones					(U) Engineering Milestones		(2Q/02) CDR			(U) T&E Milestones		(4Q/02) SIL DT/OT			(U) Contract Milestones		(4Q/02) Pre-Prod Delivery		(3Q/04) First Production Delivery			(4Q/02) RFP for FY03 Production Contract		
	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>TO COMPLETE</u>																												
(U) Program Milestones																																
(U) Engineering Milestones		(2Q/02) CDR																														
(U) T&E Milestones		(4Q/02) SIL DT/OT																														
(U) Contract Milestones		(4Q/02) Pre-Prod Delivery		(3Q/04) First Production Delivery																												
		(4Q/02) RFP for FY03 Production Contract																														

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APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NUMBER AND NAME						
RDT&E, N / BA-5			0604212N / ASW & OTHER HELO DEVELOPMENT			H2463 / LAMPS MK III DATA LINK						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 01 Cost	FY 01 Award Date	FY 02 Cost	FY 02 Award Date	FY 03 Cost	FY 03 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Primary Hardware Development	845	Harris (Melbourne, Fl)	8.900	6.686	11/00	16.375	02/02				31.961	31.961
Systems Engineering	CPIF	LMFS (Owego, NY)	2.237	1.000	11/00	3.290	02/02				6.527	6.527
Subtotal Product Development			11.137	7.686		19.665					38.488	
Remarks:												
Software Development	SS/FFP	LMFS (Owego, NY)		0.600	11/00						0.600	0.600
Integrated Logistics Support	WX	NAWCAD, Pax River MD	0.030	0.061	11/00	0.190	01/02				0.281	
Subtotal Support			0.030	0.661		0.190					0.881	
Remarks:												

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Exhibit R-3 Cost Analysis (page 2)								DATE: February 2002				
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NUMBER AND NAME						
RDT&E, N / BA-5			0604212N / ASW & OTHER HELO DEVELOPMENT			H2463 / LAMPS MK III DATA LINK						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 01 Cost	FY 01 Award Date	FY 02 Cost	FY 02 Award Date	FY 03 Cost	FY 03 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation	WX	NAWCAD (Pax River, MD)				1.371	05/02				1.371	
Operational Test & Evaluation	WX	NAWCAD (Pax River, MD)				0.403	05/02				0.403	
Subtotal T&E						1.774					1.774	
Remarks:												
Contractor Engineering Support	RX	CSCI/SM&A/Walcoff/Averstar	0.700	0.715	12/00	0.508	01/02				1.923	1.923
Government Engineering Support	WX	NAWCAD (Pax River, MD)	1.278	2.475	11/00	1.860	01/02				5.613	
Program Management Support	RX	NAWCAD (Pax River, MD)	0.040	0.040	11/00	0.130					0.210	
Travel	WX	NAWCAD (Pax River, MD)	0.040	0.020	11/00	0.020	02/02				0.080	
SBIR Assessment						0.754						
Subtotal Management			2.058	3.250		3.272					8.580	
Remarks:												
Total Cost			13.225	11.597		24.901					49.723	
Remarks:												

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EXHIBIT R-2a, RDT&E Project Justification								DATE: February 2002			
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-5		PROGRAM ELEMENT NUMBER AND NAME 0604212N ASW & OTHER HELO DEVELOPMENT				PROJECT NUMBER AND NAME H3058 VHXX REPLACEMENT					
COST (\$ in Millions)	Prior Years Cost		FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	Cost to Complete	Total Program
Project Cost					3.489	4.079	45.670	78.301	127.655	Continuing	Continuing
RDT&E Articles Qty											

(U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

(U) PROGRAM ACCOMPLISHMENTS AND PLANS: Research and Development funds will be utilized to standup the Integrated Product Team (IPT) and produce requisite products required to meet the White House's requirement for an Executive Transport Platform. The following areas need to be explored: Nuclear Effects, E3 /TEMPEST certification requirements, Survivability (Vulnerability/Susceptibility), Facilities upgrade/modifications- Source Selection Authority (SSA), Environmental Impact, Security, Cost Estimation, Requirements Analysis, Functional Analysis and Allocation, Risk Management, Crew System/Human Systems Integration (HSI), and Logistics Support Analysis.

1. FY 2001 ACCOMPLISHMENTS:

- (U) N/A

2. FY 2002 PLANS:

- (U) N/A

3. FY 2003 PLANS:

- (U) (\$.440) Upon completion of the Alternatives of Analysis (AOA), Requirements Analysis, and Functional Analysis and Allocation will be contracted for utilizing existing NAVAIR contractual vehicles.

- (U) (\$.350) Trade Study to develop System Requirements Analysis.

- (U) (\$1.199) In-house field activity support of Integrated Product Teams (IPT's), and logistics activities to allow for preparation of the Acquisition Strategy, examine the equipment and avionics for the VHXX platform, and develop the Acquisition Program Baseline. The Plan of Action and Milstones (POA&M) does not allow these functions to be accomplished sequentially.

- (U) (\$1.500) Research and development effort to combine the current programs to replace VHF-FM system in the VH-3D and VH-60N Presidential support aircraft to meet NTIA compliance issues with the development of the VH-XX. It will develop a road map for all Presidential Vertical lift communication requirements in the future and allow the currently planned communication capabilities of the VH-3D and VH-60N to be seamlessly integrated into the VH-XX. (DERF Funding)

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APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-5	PROGRAM ELEMENT NUMBER AND NAME 0604212N ASW & OTHER HELO DEVELOPMENT	PROJECT NUMBER AND NAME H3058 VHXX REPLACEMENT																																															
<p>(U) B. PROGRAM CHANGE SUMMARY:</p> <table style="margin-left: 20px; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;"></th> <th style="text-align: center;"><u>FY2001</u></th> <th style="text-align: center;"><u>FY2002</u></th> <th style="text-align: center;"><u>FY2003</u></th> <th style="text-align: center;"></th> </tr> </thead> <tbody> <tr> <td>(U) FY 2002 President's Budget:</td> <td style="text-align: center;">0</td> <td style="text-align: center;">0</td> <td></td> <td></td> </tr> <tr> <td>(U) Adjustments from the President's Budget:</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>(U) FY 2003 President's Budget Submit:</td> <td style="text-align: center;">0</td> <td style="text-align: center;">0</td> <td style="text-align: center;">3.489</td> <td></td> </tr> </tbody> </table> <p style="margin-left: 20px;">CHANGE SUMMARY EXPLANATION:</p> <ul style="list-style-type: none"> (U) Funding: Not Applicable. (U) Schedule: Not Applicable. (U) Technical: Not Applicable. <p>(U) C. OTHER PROGRAM FUNDING SUMMARY: Not Applicable</p> <p>(U) D. ACQUISITION STRATEGY: This is a non-ACAT program with no specific acquisition strategies.</p> <p>(U) E. SCHEDULE PROFILE:</p> <table style="margin-left: 20px; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;"></th> <th style="text-align: center;"><u>FY 2001</u></th> <th style="text-align: center;"><u>FY 2002</u></th> <th style="text-align: center;"><u>FY-2003</u></th> <th style="text-align: center;"><u>TO COMPLETE</u></th> </tr> </thead> <tbody> <tr> <td>(U) Program Milestones (Not Applicable)</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>(U) Engineering Milestones (Not Applicable)</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>(U) T&E Milestones (Not Applicable)</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>(U) Contract Milestones (Not Applicable)</td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>						<u>FY2001</u>	<u>FY2002</u>	<u>FY2003</u>		(U) FY 2002 President's Budget:	0	0			(U) Adjustments from the President's Budget:					(U) FY 2003 President's Budget Submit:	0	0	3.489			<u>FY 2001</u>	<u>FY 2002</u>	<u>FY-2003</u>	<u>TO COMPLETE</u>	(U) Program Milestones (Not Applicable)					(U) Engineering Milestones (Not Applicable)					(U) T&E Milestones (Not Applicable)					(U) Contract Milestones (Not Applicable)				
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Exhibit R-3 Cost Analysis (page 1)										DATE: February 2002		
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-5			PROGRAM ELEMENT 0604212N ASW & OTHER HELO DEVELOPMENT				PROJECT NUMBER AND NAME H3058 VHXX REPLACEMENT					
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 01 Cost	FY 01 Award Date	FY 02 Cost	FY 02 Award Date	FY 03 Cost	FY 03 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Trade Studies	SS/CPFF	Sikorsky, Stratford, CT						0.350	02/03		0.350	0.350
Trade Studies for VHF-FM System	CPFF	TBD						1.500				1.500
Subtotal Product Development								1.850			1.850	
Remarks:												
Engineering, Studies, Tech Support	WX/RX	NAWCAD, Pax River, MD						0.440	03/03	Continuing	Continuing	
Misc In-house Engineering, Logistics	WX	NAWCAD, Pax River, MD						0.900	01/03	Continuing	Continuing	
Subtotal Support								1.340		Continuing	Continuing	
Remarks:												

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Exhibit R-3 Cost Analysis (page 2)								DATE: February 2002				
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NUMBER AND NAME						
RDT&E, N / BA-5			0604212N ASW & OTHER HELO DEVELOPMENT			H3058 VHXX REPLACEMENT						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 01 Cost	FY 01 Award Date	FY 02 Cost	FY 02 Award Date	FY 03 Cost	FY 03 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Subtotal T&E												
Remarks:												
Travel	WX	NAWCAD Pax River, MD						0.089	11/03	Continuing	Continuing	
Program Management Support	RX	NAWCAD Pax River, MD						0.210	01/03	Continuing	Continuing	
Subtotal Management								0.299		Continuing	Continuing	
Remarks:												
Total Cost								3.489		Continuing	Continuing	
Remarks:												

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EXHIBIT R-2a, RDT&E Project Justification								DATE: February 2002			
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-5		PROGRAM ELEMENT NUMBER AND NAME 0604212N ASW & OTHER HELO DEVELOPMENT				PROJECT NUMBER AND NAME H3059 CH-53E SLEP					
COST (\$ in Millions)	Prior Years Cost		FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	Cost to Complete	Total Program
Project Cost					2.983	4.975	112.190	304.282	340.412	Continuing	Continuing
RDT&E Articles Qty											

(U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: The Modernized CH-53E will be the U.S. Marine Corps' heavy lift aircraft through 2025. Current research and operational analysis indicates that the Marine Corps' need for heavy lift capability is increasing. Accordingly, the Modernized CH-53E will be capable of lifting large, mission representative external and internal loads to complement the range and speed of the MV-22 in Operational Maneuver From The Sea and the execution of our national military strategy. Research and Development funds will be used to start risk reduction measures which will include trade studies, cost modeling, the development of programmatic, engineering and logistics infrastructure; and the development of operational requirements documents and all acquisition efforts associated with an ACAT I program.

(U) PROGRAM ACCOMPLISHMENTS AND PLANS:

1. FY 2001 ACCOMPLISHMENTS:

- (U) N/A

2. FY 2002 PLANS:

- (U) N/A

3. FY 2003 PLANS:

- (U) (\$.200) Field activity support for the requirements generation process.

- (U) (\$1.900) Trade Studies in the areas to develop System Requirements Analysis.

- (U) (\$.883) In-house field activity support of Integrated Product Teams (IPT's), and engineering and logistics activities to allow for preparation of the Acquisition Strategy, examine the equipment and avionics for the Modernized CH-53E.

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EXHIBIT R-2a, RDT&E Project Justification			DATE: February 2002																																										
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-5	PROGRAM ELEMENT NUMBER AND NAME 0604212N ASW & OTHER HELO DEVELOPMENT	PROJECT NUMBER AND NAME H3059 CH-53 SLEP																																											
<p>(U) B. PROGRAM CHANGE SUMMARY:</p> <table style="margin-left: 20px; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;"></th> <th style="text-align: center;"><u>FY2001</u></th> <th style="text-align: center;"><u>FY2002</u></th> <th style="text-align: center;"><u>FY2003</u></th> </tr> </thead> <tbody> <tr> <td>(U) FY 2002 President's Budget:</td> <td style="text-align: center;">0</td> <td style="text-align: center;">0</td> <td></td> </tr> <tr> <td>(U) Adjustments from the President's Budget:</td> <td></td> <td></td> <td></td> </tr> <tr> <td>(U) FY 2003 President's Budget Submit:</td> <td style="text-align: center;">0</td> <td style="text-align: center;">0</td> <td style="text-align: center;">2.983</td> </tr> </tbody> </table> <p style="margin-left: 20px;">CHANGE SUMMARY EXPLANATION:</p> <ul style="list-style-type: none"> (U) Funding: (U) Schedule: Not Applicable. (U) Technical: Not Applicable. <p>(U) C. OTHER PROGRAM FUNDING SUMMARY: Not Applicable</p> <p>(U) D. ACQUISITION STRATEGY: This is a non-ACAT program with no specific acquisition strategies.</p> <p>(U) E. SCHEDULE PROFILE:</p> <table style="margin-left: 20px; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;"></th> <th style="text-align: center;"><u>FY 2001</u></th> <th style="text-align: center;"><u>FY 2002</u></th> <th style="text-align: center;"><u>FY-2003</u></th> <th style="text-align: center;"><u>TO COMPLETE</u></th> </tr> </thead> <tbody> <tr> <td>(U) Program Milestones (Not Applicable)</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>(U) Engineering Milestones (Not Applicable)</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>(U) T&E Milestones (Not Applicable)</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>(U) Contract Milestones (Not Applicable)</td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>						<u>FY2001</u>	<u>FY2002</u>	<u>FY2003</u>	(U) FY 2002 President's Budget:	0	0		(U) Adjustments from the President's Budget:				(U) FY 2003 President's Budget Submit:	0	0	2.983		<u>FY 2001</u>	<u>FY 2002</u>	<u>FY-2003</u>	<u>TO COMPLETE</u>	(U) Program Milestones (Not Applicable)					(U) Engineering Milestones (Not Applicable)					(U) T&E Milestones (Not Applicable)					(U) Contract Milestones (Not Applicable)				
	<u>FY2001</u>	<u>FY2002</u>	<u>FY2003</u>																																										
(U) FY 2002 President's Budget:	0	0																																											
(U) Adjustments from the President's Budget:																																													
(U) FY 2003 President's Budget Submit:	0	0	2.983																																										
	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY-2003</u>	<u>TO COMPLETE</u>																																									
(U) Program Milestones (Not Applicable)																																													
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(U) T&E Milestones (Not Applicable)																																													
(U) Contract Milestones (Not Applicable)																																													

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Exhibit R-3 Cost Analysis (page 1)								DATE: February 2002				
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NUMBER AND NAME						
RDT&E, N / BA-5			0604212N ASW & OTHER HELO DEVELOPMENT			H3059 CH-53E SLEP						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 01 Cost	FY 01 Award Date	FY 02 Cost	FY 02 Award Date	FY 03 Cost	FY 03 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Trade Studies	SS/CPFF	Sikorsky, Stratford, CT						1.600	01/03		1.600	1.600
Requirements Generation	RX	MCCDC Quantico, VA						0.200	11/02	Continuing	Continuing	
Subtotal Product Development								1.800		Continuing	Continuing	
Remarks:												
Engineering, Studies, Tech Support	WX/RX	NAWCAD Pax River, MD						0.750	11/02	Continuing	Continuing	
Subtotal Support								0.750		Continuing	Continuing	
Remarks:												

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Exhibit R-2a, RD TEN Budget Item Justification
(Exhibit R-2a, page 29 of 52)

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Exhibit R-3 Cost Analysis (page 2)								DATE: February 2002				
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NUMBER AND NAME						
RDT&E, N / BA-5			0604212N ASW & OTHER HELO DEVELOPMENT			H3059 CH-53E SLEP						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 01 Cost	FY 01 Award Date	FY 02 Cost	FY 02 Award Date	FY 03 Cost	FY 03 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Subtotal T&E												
Remarks:												
Travel	WX	NAWCAD Pax River, MD						0.133	11/02	Continuing	Continuing	
Program Management Support	RX	NAWCAD Pax River, MD						0.300	11/03	Continuing	Continuing	
Subtotal Management								0.433		Continuing	Continuing	
Remarks:												
Total Cost								2.983		Continuing	Continuing	
Remarks:												

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EXHIBIT R-2a, RDT&E Project Justification								DATE: February 2002			
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-5		PROGRAM ELEMENT NUMBER AND NAME 0604212N ASW and Other Helo Development				PROJECT NUMBER AND NAME H3060 Integrated Mechanical Diagnostics System (IMDS)					
COST (\$ in Millions)	Prior Years Cost		FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	Cost to Complete	Total Program
Project Cost			3.764	6.938							10.702
RDT&E Articles Qty											

(U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

Integrated Mechanical Diagnostics System (IMDS) adapts a BFGoodrich (BFG) Aerospace commercial mechanical diagnostic system for military use, and integrates and tests the system on the H-53 and H-60 helicopters. This health and usage monitoring system will reduce operational and support costs, improve operational readiness, and increase flight safety through the early identification and correction of degraded components in the engine, drive train, and rotor systems of the helicopter. IMDS provides continuous onboard monitoring and diagnostics of engine health, gearbox and drive train vibrations, oil debris, and rotor track and balance. This new development effort continues the ongoing COSSI initiative, and is required to support completion of the Navy-specific efforts associated with the IMDS program.

(U) PROGRAM ACCOMPLISHMENTS AND PLANS:

1. FY 2001 ACCOMPLISHMENTS:

- (U) (\$3.764) Continued the ongoing Commercial Operations and Support Savings Initiative (COSSI) adapting BFG's product to the military environment which has proven more complex and time consuming than planned, thus continuing IMD efforts to include source data completion, H-60 kit integration design and test, correction of software deficiencies, and continue contractor engineering support through Operational Evaluation (OPEVAL).

2. FY 2002 PLANS:

- (U) (\$6.938) Continuing of the ongoing Commercial Operations and Support Savings Initiative (COSSI) adapting BFG's product to the military environment in conjunction with H-53; which has proven more complex and time consuming than planned, thus continuing IMD efforts to include source data completion, H-60 kit integration design and test, correction of software deficiencies, and continue contractor engineering support through Operational Evaluation (OPEVAL).

3. FY 2003 PLANS: N/A

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EXHIBIT R-2a, RDT&E Project Justification						DATE: February 2002		
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-5		PROGRAM ELEMENT NUMBER AND NAME 0604212N ASW and Other Helo Development			PROJECT NUMBER AND NAME H3060 Integrated Mechanical Diagnostics System (IMDS)			
(U) B. PROGRAM CHANGE SUMMARY:								
		FY2001	FY2002	FY2003				
(U) FY 2002 President's Budget:		0	0					
(U) Adjustments from the President's Budget:		3.764	6.938					
(U) FY 2003 President's Submit:		3.764	6.938					
CHANGE SUMMARY EXPLANATION:								
<p>(U) Funding: The FY 2001 increase of \$3.764 million for the Integrated Mechanical Diagnostics System (IMDS) was approved as part of the FY 2001 OMNIBUS Reprogramming. The FY 2002 net increase of \$6.938 million reflects a \$7.000 million Congressional Add for the IMDS offset by a decrease of \$.062 million for an undistributed congressional reduction.</p> <p>(U) Schedule: The schedule supports the current program plan which was not reflected in the President's Budget pending approval of the FY 2001 OMNIBUS Reprogramming.</p> <p>(U) Technical: Not Applicable</p>								
(U) C. OTHER PROGRAM FUNDING SUMMARY:								
	<u>Line Item No. & Name</u>	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007 To Complete
APN BLI-053000	H-60 Series	23.211	9.609	15.419	28.705	5.057	5.767	5.767 66.400
APN BLI-052801	H-53 Series	24.356	18.794	22.517	34.738	30.854	39.311	39.007 132.000

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EXHIBIT R-2a, RDT&E Project Justification			DATE: February 2002	
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-5	PROGRAM ELEMENT NUMBER AND NAME 0604212N ASW and Other Helo Development	PROJECT NUMBER AND NAME H3060 Integrated Mechanical Diagnostics System (IMDS)		
(U) D. ACQUISITION STRATEGY: The contract was awarded on an existing 845 Other Transaction Agreement.				
(U) E. SCHEDULE PROFILE:				
	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>TO COMPLETE</u>
(U) Program Milestones				
(U) Engineering Milestones				
(U) T&E Milestones	DT-IIB (3Q01-4Q01)	DT-IIC (4Q01-1Q02) OTRR (2Q02) OT-11A (2Q02-4Q02)	OPEVAL (1Q03-2Q03) Milestone III (1Q03)	
(U) Contract Milestones				

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Exhibit R-3 Cost Analysis (page 1)								DATE: February 2002				
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-5			PROGRAM ELEMENT 0604212N ASW & Other Helo Development			PROJECT NUMBER AND NAME H3060 Integrated Mechanical Diagnostics System (IMDS)						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 01 Cost	FY 01 Award Date	FY 02 Cost	FY 02 Award Date	FY 03 Cost	FY 03 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Systems Engineering	845OT	BFGoodrich Aerospace		3.764	11/00	6.938	12/01				10.702	10.702
Subtotal Product Development				3.764		6.938					10.702	10.702
Remarks: Contract amount above reflects cost for Project H3060 only and does not include funding from other sources. The total 845OT value including funding from all sources will be \$19.2M												
Development Support Equipment												
Software Development												
Training Development												
Integrated Logistics Support												
Configuration Management												
Technical Data												
GFE												
Subtotal Support												
Remarks:												

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Exhibit R-3 Cost Analysis (page 2)								DATE: February 2002				
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NUMBER AND NAME						
RDT&E, N / BA-5			0604212N ASW & Other Helo Development			H3060 Integrated Mechanical Diagnostics System (IMDS)						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 01 Cost	FY 01 Award Date	FY 02 Cost	FY 02 Award Date	FY 03 Cost	FY 03 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation												
Operational Test & Evaluation												
Tooling												
GFE												
Subtotal T&E												
Remarks:												
Contractor Engineering Support												
Government Engineering Support												
Program Management Support												
Travel												
Labor (Research Personnel)												
Overhead												
Subtotal Management												
Remarks:												
Total Cost				3.764		6.938					10.702	
Remarks:												

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EXHIBIT R-2a, RDT&E Project Justification								DATE: February 2002			
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-5		PROGRAM ELEMENT NUMBER AND NAME 0604212N ASW & Other Helo Development				PROJECT NUMBER AND NAME H9055 SH-60 Laser Aim Scoring System (LASS)					
COST (\$ in Millions)	Prior Years Cost		FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	Cost to Complete	Total Program
Project Cost				0.991							0.991
RDT&E Articles Qty				1							

(U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: The Laser Aim Scoring System (LASS) provides real-time, quantitative feedback on critical aspects of laser guided weapon employment not currently available from existing Navy laser scoring systems. This feedback has been proven to significantly improve flight crew weapon delivery capabilities during nearly a decade of use by the U. S. Army. The system consists of three major components: A Base Station, Target Kit and aircraft Flight Data Unit. LASS will be adapted to existing Navy seaborne targets to support Navy H-60 armed helicopter raining and readiness events requiring laser scoring capability.

(U) PROGRAM ACCOMPLISHMENTS AND PLANS:

1. FY 2001 ACCOMPLISHMENTS: N/A

2. FY 2002 PLANS:

-(U) (\$.991) Design and development efforts required for adaptation of an existing LASS base station, target and flight data unit to Navy H-60 configuration requirements.

3. FY 2003 PLANS: N/A

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EXHIBIT R-2a, RDT&E Project Justification		DATE: February 2002																																		
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-5	PROGRAM ELEMENT NUMBER AND NAME 0604212N ASW & Other Helo Development	PROJECT NUMBER AND NAME H9055 SH-60 Laser Aim Scoring System (LASS)																																		
<p>(U) B. PROGRAM CHANGE SUMMARY:</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 70%;"></th> <th style="text-align: center; width: 10%;"><u>FY2001</u></th> <th style="text-align: center; width: 10%;"><u>FY2002</u></th> <th style="text-align: center; width: 10%;"><u>FY2003</u></th> </tr> </thead> <tbody> <tr> <td>(U) FY 2002 President's Budget Submit:</td> <td></td> <td></td> <td></td> </tr> <tr> <td>(U) Adjustments from the FY2002 President's Budget:</td> <td></td> <td style="text-align: center;">0.991</td> <td></td> </tr> <tr> <td>(U) FY 2003 President's Budget Submit:</td> <td></td> <td style="text-align: center;">0.991</td> <td></td> </tr> </tbody> </table> <p>CHANGE SUMMARY EXPLANATION:</p> <p>(U) Funding: The FY 2002 net increase of \$0.991 million reflects a \$1.000 million congressional add for the Laser Aim Scoring System offset by a decrease of \$0.009 million for an undistributed congressional reduction.</p> <p>(U) Schedule: Not applicable (U) Technical: Not applicable</p> <p>(U) C. OTHER PROGRAM FUNDING SUMMARY: Not Applicable</p> <table style="width: 100%; border-collapse: collapse; margin-top: 20px;"> <thead> <tr> <th style="text-align: left; width: 25%;"><u>Line Item No. & Name</u></th> <th style="text-align: center; width: 7.5%;"><u>FY 2001</u></th> <th style="text-align: center; width: 7.5%;"><u>FY 2002</u></th> <th style="text-align: center; width: 7.5%;"><u>FY 2003</u></th> <th style="text-align: center; width: 7.5%;"><u>FY 2004</u></th> <th style="text-align: center; width: 7.5%;"><u>FY 2005</u></th> <th style="text-align: center; width: 7.5%;"><u>FY 2006</u></th> <th style="text-align: center; width: 7.5%;"><u>FY 2007</u></th> <th style="text-align: center; width: 7.5%;"><u>To Complete</u></th> </tr> </thead> <tbody> <tr> <td> </td> </tr> </tbody> </table> <p>(U) D. ACQUISITION STRATEGY: TBD</p> <p>(U) E. SCHEDULE PROFILE: Not Applicable</p>				<u>FY2001</u>	<u>FY2002</u>	<u>FY2003</u>	(U) FY 2002 President's Budget Submit:				(U) Adjustments from the FY2002 President's Budget:		0.991		(U) FY 2003 President's Budget Submit:		0.991		<u>Line Item No. & Name</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>To Complete</u>									
	<u>FY2001</u>	<u>FY2002</u>	<u>FY2003</u>																																	
(U) FY 2002 President's Budget Submit:																																				
(U) Adjustments from the FY2002 President's Budget:		0.991																																		
(U) FY 2003 President's Budget Submit:		0.991																																		
<u>Line Item No. & Name</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>To Complete</u>																												

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Exhibit R-3 Cost Analysis (page 1)								DATE: February 2002				
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-5			PROGRAM ELEMENT 0604212N ASW & Other Helo Development			PROJECT NUMBER AND NAME H9055 SH-60 Laser Aim Scoring System (LASS)						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 01 Cost	FY 01 Award Date	FY 02 Cost	FY 02 Award Date	FY 03 Cost	FY 03 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Hardware/Software Development	TBD	Cartwright Electronics, Fullerton, CA				0.991	04/02				0.991	0.991
Subtotal Product Development						0.991					0.991	0.991
Remarks:												
Subtotal Support												

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Exhibit R-3 Cost Analysis (page 2)								DATE: February 2002				
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-5			PROGRAM ELEMENT 0604212N ASW & Other Helo Development			PROJECT NUMBER AND NAME H9055 SH-60 Laser Aim Scoring System (LASS)						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 01 Cost	FY 01 Award Date	FY 02 Cost	FY 02 Award Date	FY 03 Cost	FY 03 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Subtotal T&E												
Remarks:												
Subtotal Management												
Remarks:												
Total Cost												
Remarks:												

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Exhibit R-2a, RD TEN Budget Item Justification
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EXHIBIT R-2a, RDT&E Project Justification								DATE: February 2002			
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-5		PROGRAM ELEMENT NUMBER AND NAME 0604212N ASW and Other Helo Development				PROJECT NUMBER AND NAME H9056 High Tech Training of DOD Legacy Parts					
COST (\$ in Millions)	Prior Years Cost		FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	Cost to Complete	Total Program
Project Cost				0.991							0.991
RDT&E Articles Qty											

(U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: High Tech Training In Support Of DOD Legacy Parts.

(U) PROGRAM ACCOMPLISHMENTS AND PLANS:

1. FY 2001 PLANS: Not Applicable

2. FY 2002 PLANS:

- (U) (\$.991) Research and develop additional functionality for desktop tactical trainer. Adapt functionality to increase readiness for the fleet. Develop into 18.5 software package.

3. FY 2003 PLANS: Not Applicable

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EXHIBIT R-2a, RDT&E Project Justification						DATE: February 2002		
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-5		PROGRAM ELEMENT NUMBER AND NAME 0604212N ASW and Other Helo Development			PROJECT NUMBER AND NAME H9056 High Tech Training of DOD Legacy Parts			
(U) B. PROGRAM CHANGE SUMMARY:								
		FY2001	FY2002	FY2003				
(U) FY 2002 President's Budget:								
(U) Adjustments from the President's Budget:			0.991					
(U) FY 2003 President's Budget Submit:			0.991					
CHANGE SUMMARY EXPLANATION:								
(U) Funding: The FY 2002 net increase of \$0.991 million reflects a \$1.000 million congressional add for High Tech Training of DOD Legacy Parts offset by a decrease of \$0.009 million for an undistributed congressional reduction.								
(U) Schedule: Not Applicable								
(U) Technical: Not Applicable								
(U) C. OTHER PROGRAM FUNDING SUMMARY:								
<u>Line Item No. & Name</u>		FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007 To Complete
APN BLI-053000 H-60 Series		23.211	9.609	15.419	28.705	28.248	5.057	5.767 66.400
APN BLI-052801 H-53 Series		24.356	18.794	22.517	34.738	30.854	39.311	39.007 132.000

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EXHIBIT R-2a, RDT&E Project Justification		DATE: February 2002																									
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-5	PROGRAM ELEMENT NUMBER AND NAME 0604212N ASW and Other Helo Development	PROJECT NUMBER AND NAME H9056 High Tech Training of DOD Legacy Parts																									
<p>(U) D. ACQUISITION STRATEGY: The contract was awarded on an existing 845 Other Transaction Agreement.</p> <p>(U) E. SCHEDULE PROFILE:</p> <table style="width: 100%; border-collapse: collapse; margin-top: 20px;"> <thead> <tr> <th style="width: 60%;"></th> <th style="width: 10%; text-align: center;"><u>FY 2001</u></th> <th style="width: 10%; text-align: center;"><u>FY 2002</u></th> <th style="width: 10%; text-align: center;"><u>FY 2003</u></th> <th style="width: 10%; text-align: center;"><u>TO COMPLETE</u></th> </tr> </thead> <tbody> <tr> <td style="padding: 5px;">(U) Program Milestones</td> <td></td> <td style="padding: 5px;">Release to fleet (4qtr02)</td> <td></td> <td></td> </tr> <tr> <td style="padding: 5px;">(U) Engineering Milestones</td> <td></td> <td style="padding: 5px;">Development (2qtr02 - 4qtr-02)</td> <td></td> <td></td> </tr> <tr> <td style="padding: 5px;">(U) T&E Milestones</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td style="padding: 5px;">(U) Contract Milestones</td> <td></td> <td style="padding: 5px;">Contract Award (2qtr 02)</td> <td></td> <td></td> </tr> </tbody> </table>				<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>TO COMPLETE</u>	(U) Program Milestones		Release to fleet (4qtr02)			(U) Engineering Milestones		Development (2qtr02 - 4qtr-02)			(U) T&E Milestones					(U) Contract Milestones		Contract Award (2qtr 02)		
	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>TO COMPLETE</u>																							
(U) Program Milestones		Release to fleet (4qtr02)																									
(U) Engineering Milestones		Development (2qtr02 - 4qtr-02)																									
(U) T&E Milestones																											
(U) Contract Milestones		Contract Award (2qtr 02)																									

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CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 1)										DATE: February 2002		
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-5			PROGRAM ELEMENT 0604212N ASW & Other Helo Development			PROJECT NUMBER AND NAME H9056 High Tech Training of DOD Legacy Parts						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 01 Cost	FY 01 Award Date	FY 02 Cost	FY 02 Award Date	FY 03 Cost	FY 03 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Systems Engineering	CPFF	Lockheed Manassas Manassas, VA				0.991					0.991	0.991
Subtotal Product Development						0.991					0.991	0.991
Remarks:												
Development Support Equipment												
Software Development												
Training Development												
Integrated Logistics Support												
Configuration Management												
Technical Data												
GFE												
Subtotal Support												
Remarks:												

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CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 2)								DATE: February 2002				
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NUMBER AND NAME						
RDT&E, N / BA-5			0604212N ASW & Other Helo Development			H9056 High Tech Training of DOD Legacy Parts						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 01 Cost	FY 01 Award Date	FY 02 Cost	FY 02 Award Date	FY 03 Cost	FY 03 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation												
Operational Test & Evaluation												
Tooling												
GFE												
Subtotal T&E												
Remarks:												
Contractor Engineering Support												
Government Engineering Support												
Program Management Support												
Travel												
Labor (Research Personnel)												
Overhead												
Subtotal Management												
Remarks:												
Total Cost						0.991					0.991	
Remarks:												

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CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification								DATE: February 2002			
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-5		PROGRAM ELEMENT NUMBER AND NAME 0604212N Other Helicopter Development				PROJECT NUMBER AND NAME H-60 FLIR Mount					
COST (\$ in Millions)	Prior Years Cost		FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	Cost to Complete	Total Program
Project Cost				2.532							2.532
RDT&E Articles Qty											

(U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: H-60 FLIR Mount, Congressional Add.

(U) PROGRAM ACCOMPLISHMENTS AND PLANS:

1. FY 2001 ACCOMPLISHMENTS: N/A

2. FY 2002 PLANS:

- (U) (\$2.532) H-60 FLIR Mount (Congressional Plus-Up).

3. FY 2003 PLANS: N/A

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CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-5	PROGRAM ELEMENT NUMBER AND NAME 0604212N Other Helicopter Development	PROJECT NUMBER AND NAME H-60 FLIR Mount

(U) B. PROGRAM CHANGE SUMMARY:

	<u>FY2001</u>	<u>FY2002</u>	<u>FY2003</u>
(U) FY 2002 President's Budget:		0.000	
(U) Adjustments from the FY 2002 President's Budget:		2.532	
(U) FY 2003 President's Budget:		2.532	

CHANGE SUMMARY EXPLANATION:

(U) Funding: FY 2002 reflects a Congressional plus-up of \$2.600 million for H-60 FLIR Mount decreased by \$.068 million due to an undistributed Congressional reduction..

(U) Schedule: Not applicable

(U) Technical: Not applicable

<u>Line Item No. & Name</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>To Complete</u>	<u>Total</u>
APN-1 MH-60R (BLI 018200)	53.676	9.933	116.212	392.768	397.215	409.733	419.567	5,919.588	7942.02
APN-6 MH-60R Initial Spares (BLI 060510)	0.000	0.000	0.000	59.814	65.018	52.580	52.924	5.600	248.199

Related RDT&E
PE 0604216N Multi-Mission Helicopter Upgrade Development

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CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 1)							DATE: February 2002					
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NUMBER AND NAME						
RDT&E, N / BA-5			0604212N Other Helicopter Development			H-60 FLIR Mount						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 01 Cost	FY 01 Award Date	FY 02 Cost	FY 02 Award Date	FY 03 Cost	FY 03 Award Date	Cost to Complete	Total Cost	Target Value of Contract
H-60 FLIR Mount	RX	NSWC Crane, Indy				2.532	04/02				2.532	2.532
Subtotal Product Development						2.532					2.532	2.532
Remarks:												
Subtotal Support												

UNCLASSIFIED

CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 2)								DATE: February 2002				
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NUMBER AND NAME						
RDT&E, N / BA-5			0604212N Other Helicopter Development			H-60 FLIR Mount						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 01 Cost	FY 01 Award Date	FY 02 Cost	FY 02 Award Date	FY 03 Cost	FY 03 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Subtotal T&E												
Remarks:												
Subtotal Management												
Remarks:												
Total Cost											2.532	2.532
Remarks:												

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Exhibit R-2a, RD TEN Budget Item Justification
(Exhibit R-2a, page 48 of 52)

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CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification								DATE: February 2002			
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-5		PROGRAM ELEMENT NUMBER AND NAME 0604212N Other Helicopter Development				PROJECT NUMBER AND NAME H9058 H-60 Helicopter Dynamic Component					
COST (\$ in Millions)		Prior Years Cost	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	Cost to Complete	Total Program
Project Cost				2.577							2.577
RDT&E Articles Qty											

(U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: H-60 Dynamic Component Life Cycle Engineering Evaluation to assess criteria and development of component upgrades for Life Extension.

(U) PROGRAM ACCOMPLISHMENTS AND PLANS:

1. FY 2001 ACCOMPLISHMENTS: N/A

2. FY 2002 PLANS:

- (U) (\$2.577) Dynamic Component Life Cycle Engineering Evaluation, Life Cycle criteria and development of component upgrades for Life Extension.

3. FY 2003 PLANS: N/A

UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification	DATE: February 2002
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APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-5	PROGRAM ELEMENT NUMBER AND NAME 0604212N Other Helicopter Development	PROJECT NUMBER AND NAME H9058 H-60 Helicopter Dynamic Component
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(U) B. PROGRAM CHANGE SUMMARY:

	<u>FY2001</u>	<u>FY2002</u>	<u>FY2003</u>
(U) FY 2002 President's Budget:		0.000	
(U) Adjustments from the FY 2002 President's Budget:		2.577	
(U) FY 2003 President's Budget:		2.577	

CHANGE SUMMARY EXPLANATION:

(U) Funding: FY 2002 reflects a Congressional plus-up of \$2.600 million for H-60 Helicopter Dynamic Component offset by a decrease of \$.023 million for undistributed congressional reduction.

(U) Schedule: Not applicable

(U) Technical: Not applicable

<u>Line Item No. & Name</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>To Complete</u>	<u>Total</u>
APN-1 MH-60R (BLI 018200)	53.676	9.933	116.212	392.768	397.215	409.733	419.567	5,919.588	7942.02
APN-6 MH-60R Initial Spares (BLI 060510)	0.000	0.000	0.000	59.814	65.018	52.580	52.924	5.600	248.199

Related RDT&E
PE 0604216N Multi-Mission Helicopter Upgrade Development

UNCLASSIFIED

CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 1)							DATE: February 2002					
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-5			PROGRAM ELEMENT 0604212N Other Helicopter Development			PROJECT NUMBER AND NAME H9058 H-60 Helicopter Dynamic Component						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 01 Cost	FY 01 Award Date	FY 02 Cost	FY 02 Award Date	FY 03 Cost	FY 03 Award Date	Cost to Complete	Total Cost	Target Value of Contract
H-60 Helicopter Dynamic Component	TBD	TBD				2.577	04/02				2.577	2.577
Subtotal Product Development						2.577					2.577	2.577
Remarks:												
Subtotal Support												

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CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 2)								DATE: February 2002				
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NUMBER AND NAME						
RDT&E, N / BA-5			0604212N Other Helicopter Development			H9058 H-60 Helicopter Dynamic Component						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 01 Cost	FY 01 Award Date	FY 02 Cost	FY 02 Award Date	FY 03 Cost	FY 03 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Subtotal T&E												
Remarks:												
Subtotal Management												
Remarks:												
Total Cost												
						2.577				2.577		
Remarks:												

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