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CLASSIFICATION:

EXHIBIT R-2, RDT&E Budget Item Justification						DATE: February 2007		
APPROPRIATION/BUDGET ACTIVITY RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY / BA-4				R-1 ITEM NOMENCLATURE 0603581N - Littoral Combat Ship (LCS)				
COST (\$ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY12	FY13
Total PE Cost	584.077	329.383	217.502	171.146	214.867	131.610	99.528	65.180
3096 - LCS Development	71.248	56.812	71.240	62.955	83.557	66.518	51.240	23.403
3129 - Mission Package Project	193.474	161.727	109.193	101.049	131.310	65.092	48.288	41.777
4018 - Littoral Combat Ship Construction	313.249	99.886	37.069	7.142	0.000	0.000	0.000	0.000
9999 - Undistributed RDT&E & Congressional Add	6.106	10.958	0.000	0.000	0.000	0.000	0.000	0.000
A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:								
<p>This Program Element (PE) provides funds for development integration and testing of the Littoral Combat Ship (LCS). Also included in the PE is detail design and construction for two ships of Flight 0, and procurement of mission packages for these Flight 0 ships. The LCS is to be a fast, agile, and stealthy surface combatant capable of operating in support of anti-access missions against asymmetric threats in the littorals. Primary access-focused missions include prosecution of small boats, mine counter-measures, littoral anti-submarine warfare (ASW). Inherent capabilities include: intelligence, surveillance and reconnaissance, homeland defense, Special Operating Forces (SOF) support and logistic support for movement of personnel and supplies, maritime interdiction / interception operations (MIO), anti-terrorism / force protection (AT/FP), air self defense, and joint littoral mobility.</p>								
B. PROGRAM CHANGE SUMMARY:								
Funding:		FY 2006	FY 2007	FY 2008	FY 2009			
Previous President's Budget (FY07 Pres Controls)		573.957	319.671	187.568	132.776			
Current President's Budget (FY08/09 Controls)		584.077	329.383	217.502	171.146			
Total Adjustments		10.120	9.712	29.934	38.370			
(U) Summary of Adjustments								
Program Adjustments				41.619	46.463			
Katrina Supplemental		12.000						
Congressional Adds			11.000					
Congressional Undistributed Adjustments		0.340	-1.288					
Pricing Adjustment				-10.300	-8.000			
Undistributed General Adjustments		-0.721		-1.385	-0.093			
SBIR		-11.498						
Reprogrammings		9.999						
Total		10.120	9.712	29.934	38.370			
Schedule: See Individual Projects. Due to production delays, it has been determined that production work arounds will not be able to fully recover schedule. Therefore, delivery of first ship is now planned for October 2007 vice January 2007								
Technical: N/A								

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EXHIBIT R-2a, RDT&E Project Justification							DATE: February 2007	
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-4		PROGRAM ELEMENT NUMBER AND NAME 0603581N - Littoral Combat Ship (LCS)			PROJECT NUMBER AND NAME 3096 - Littoral Combat Ship Development			
COST (\$ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Project Cost	71.248	56.812	71.240	62.955	83.557	66.518	51.240	23.403
RDT&E Articles Qty								

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

The LCS is to be a fast, agile, and stealthy surface combatant capable of operating in support of anti-access missions against asymmetric threats in the littorals. Primary access-focused missions include: prosecution of small boats, mine counter-measures, littoral anti-submarine warfare (ASW). Inherent capabilities include intelligence, surveillance and reconnaissance, homeland defense, SOF support and logistic support for movement of personnel and supplies. This project provides funds for the total ship system engineering, integration, program execution, platform development. Platform development includes platform experimentation and platform and ship system design and integration.

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B. Accomplishments/Planned Program				
	FY 06	FY 07	FY 08	FY 09
LCS Program	12.325	14.300	0.000	0.000
RDT&E Articles Quantity				
LCS Program Analysis, Engineering, Integration, & Management				
Continue cost and risk analysis. Held Flight 0 OIPT in October 2005. Begin documentation for Milestone B. Continue requirements and effectiveness analysis for Flight 0.				
FY06 - Continue the development of operational context in which LCS will operate. Begin documentation for Milestone B. Continue requirements and effectiveness analysis for LCS.				
FY06-07 - Continue cost and risk analysis. Continue risk management planning and implementation.				
	FY 06	FY 07	FY 08	FY 09
LCS System-of-Systems Development, Engineering & Experimentation	49.823	29.512	25.632	20.652
RDT&E Articles Quantity				
LCS System-of-Systems Development, Engineering & Experimentation				
FY06-FY09: Continue Systems Engineering, Integration Testing to include; System Architecture/ Interface Development, Ship Systems Engineering/Integration/Test, Core Systems Engineering/Integration/Test, Network Systems Engineering/Integration/Test, Human Systems Integration/Engineering/Test, Logistics & Training Development, and Shipbuilding Materials and Construction Technique Development. Continue participation in future flight design.				
The systems development team consists of Laboratories, Government Warfare Centers, Universities and selected technical support contractors. The team provides the engineering expertise to evaluate/support industry designs and technology demonstrations of new system concepts and mission systems in order to reduce risk on components and subsystems.				

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APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-4	PROGRAM ELEMENT NUMBER AND NAME 0603581N - Littoral Combat Ship (LCS)	PROJECT NUMBER AND NAME 3096 - Littoral Combat Ship Development		
B. Accomplishments/Planned Program				
	FY 06	FY 07	FY 08	FY 09
LCS Total System Training Architecture	0.000	0.000	7.462	6.103
RDT&E Articles Quantity				
LCS Total System Training Architecture				
Provide LCS with shipboard embedded training capability to satisfy individual, unit, team and force training both in port and at sea. Capability would be similar to and build off of DDG 1000 Total Ship Training System efforts and support LCS Train to Qualify requirements				
	FY 06	FY 07	FY 08	FY 09
LCS Test & Evaluation	9.100	13.000	28.705	23.000
RDT&E Articles Quantity				
LCS Test & Evaluation				
Continue LCS Test and Evaluation management to include TEMP, LFT&E management plan. Begin planning for Flight 0 test events. Completed: Test & Evaluation (T&E) strategy. Developed updated T&E strategy and draft Test & Evaluation Master Plan (TEMP) to reflect contract award. Began planning for developmental testing (DT) and early operational assessment (EOA) FY06 - Begin DT assistance. Begin component and system shock testing. Continue modeling and simulation (M&S) and surrogate testing. FY08-FY09 - Conduct LCS 1 and 2 ship delivery and qualification test and trials. Begin Flight 0 OPEVAL and LFT&E planning				
	FY 06	FY 07	FY 08	FY 09
LCS Seaframe T&E Ordnance	0.000	0.000	9.441	13.200
RDT&E Articles Quantity				
LCS Seaframe T&E Ordnance				
Update Requirements and Fully Fund T&E Ordnance for testing of each ship				

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APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-4	PROGRAM ELEMENT NUMBER AND NAME PE 0603581N- Littoral Combat Ship (LCS)	PROJECT NUMBER AND NAME 3096 - LCS Development
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C. OTHER PROGRAM FUNDING SUMMARY:

<u>Line Item No. & Name</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>To Complete</u>	<u>Total Cost</u>
BLI 1600 (OPN)	36.270	78.741	80.324	270.958	284.502	337.149	377.923	370.795	CONT	CONT
BLI 2127 (SCN)	434.007	518.472	910.482	1767.112	1761.372	1,803.063	1,856.463	1,608.842	5881.900	16541.713
BLI 4221 (WPN)				22.407	33.964	40.397	45.406	10.845	CONT	CONT
BLI 0443 (APN)		37.419	37.687	73.155	73.774	75.979	95.888	102.304	CONT	CONT
BLI 1B5B/15BR0 (OMN)			25.063	25.121	30.144	12.746	12.728	12.712	CONT	CONT
BLI 1B4B/14B50 (OMN)			8.627						CONT	CONT

D. ACQUISITION STRATEGY:

(U) The LCS acquisition strategy encompasses multiple phases: Phases I and II are Concept Refinement and Technology Development, consisting of Preliminary Design, Final Design and Detail Design and Construction for Flight 0 ships.

E. MAJOR PERFORMERS:

General Dynamics - Bath Iron Works
Lockheed Martin

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Exhibit R-3 Cost Analysis (page 1)											DATE: February 2007			
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT				PROJECT NUMBER AND NAME							
RDT&E, N / BA-4			PE 0603581N - Littoral Combat Ship				3096 - LCS Development							
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 06 Cost	FY 06 Award Date	FY 07 Cost	FY 07 Award Date	FY 08 Cost	FY 08 Award Date	FY 09 Cost	FY 09 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Preliminary Design (Flight 0)	Compet	LM, BIW, RAYTHEON	30.686	0.000	N/A	0.000	N/A	0.000	N/A	0.000	N/A	0.000	30.686	30.686
Final Design (Flight 0)	Compet	LM, BIW	133.479	0.000	N/A	0.000	N/A	0.000	N/A	0.000	N/A	0.000	133.479	133.479
Mission Sys Dev	Various	Various	135.532	0.000	N/A	0.000	N/A	0.000	N/A	0.000	N/A	0.000	135.532	
													0.000	
													0.000	
													0.000	
													0.000	
													0.000	
													0.000	
													0.000	
													0.000	
Subtotal Product Development			299.697	0.000		0.000		0.000		0.000		0.000	299.697	164.165
Remarks:														
													0.000	
													0.000	
													0.000	
													0.000	
													0.000	
													0.000	
													0.000	
Subtotal Support			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														

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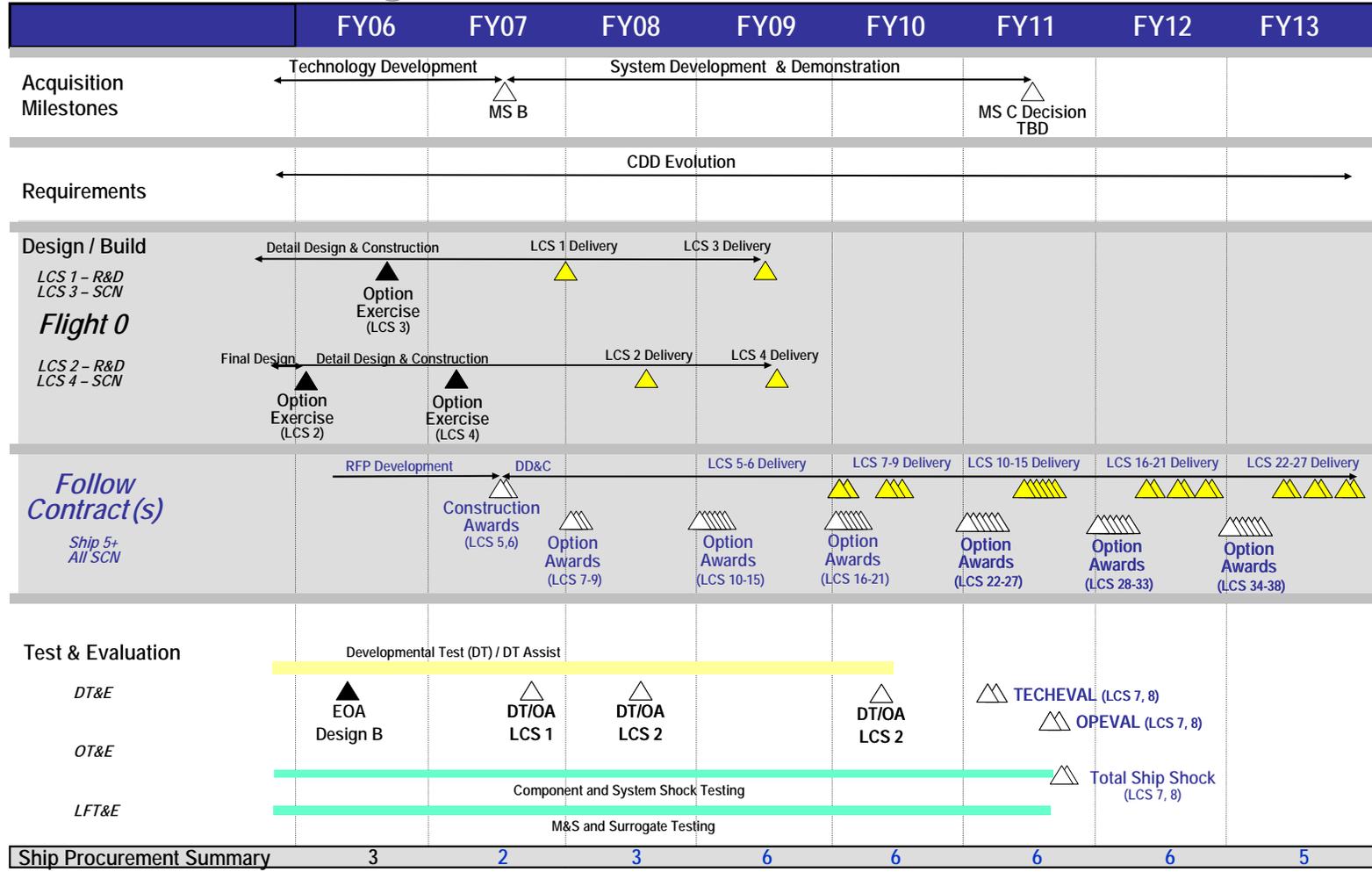
Exhibit R-3 Cost Analysis (page 2)											DATE: February 2007			
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT				PROJECT NUMBER AND NAME							
RDT&E, N / BA-4			PE 0603581N - Littoral Combat Ship				3096 - LCS Development							
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 06 Cost	FY 06 Award Date	FY 07 Cost	FY 07 Award Date	FY 08 Cost	FY 08 Award Date	FY 09 Cost	FY 09 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation	WX	NSWC/CD Bethesda, MD	4.500	3.000	1QFY06	4.500	1QFY07	6.000	1QFY08	3.000	1QFY09	7.500	28.500	
Developmental Test & Evaluation	WX	NSWC/DD, Dahlgren, VA	3.500	3.000	1QFY06	4.500	1QFY07	6.000	1QFY08	3.000	1QFY09	7.500	27.500	
Developmental Test & Evaluation	Various	Various	6.000	3.100	1QFY06	4.000	1QFY07	8.000	1QFY08	3.000	1QFY09	5.000	29.100	
Flight 0 OPEVAL & LFT&E	WX	Various	0.000	0.000	N/A	0.000	N/A	8.995	1QFY08	14.000	1QFY09	111.000	133.995	
Subtotal T&E			14.000	9.100		13.000		28.995		23.000		131.000	219.095	0.000
Remarks:														
Contractor Engineering Support	Seaport	ALION, Arlington, VA	10.148	9.200	1QFY06	9.800	N/A	0.000	N/A	0.000	N/A	0.000	29.148	19.348
	Seaport	Various	11.957	4.000	1QFY06	0.000	N/A	0.000	N/A	0.000	N/A	0.000	15.957	15.957
	Compet	TBD	0.000	0.000	N/A	0.000	1QFY07	6.800	1QFY08	4.200	1QFY09	CONT	CONT	
Government Engineering Support	WX	NSWC/CD, Bethesda, MD	16.771	12.148	1QFY06	6.500	1QFY07	2.760	1QFY08	2.500	1QFY09	CONT	CONT	
	WX	NSWC/DD, Dahlgren, VA	19.843	5.000	1QFY06	5.745	1QFY07	4.000	1QFY08	4.000	1QFY09	CONT	CONT	
	WX	NSWC/PC, Panama City, FL	12.359	7.500	1QFY06	3.267	1QFY07	3.267	1QFY08	2.500	1QFY09	CONT	CONT	
	WX	NSWC/PHD, Port Hueneme,	2.050	3.500	1QFY06	1.000	1QFY07	1.000	1QFY08	0.750	1QFY09	CONT	CONT	
	Various	Government Activities	7.112	4.000	1QFY06	5.000	1QFY07	1.100	1QFY08	0.365	1QFY09	CONT	CONT	
	WX	NUWC, Newport, RI	6.227	2.000	1QFY06	2.500	1QFY07	2.500	1QFY08	2.153	1QFY09	CONT	CONT	
	WX	SPAWAR, San Diego, CA	7.325	4.000	1QFY06	3.000	1QFY07	1.500	1QFY08	1.500	1QFY09	CONT	CONT	
	WX	NSWC Div Crane	0.625	0.500	1QFY06	0.000	N/A	9.151	1QFY08	13.200	1QFY09	16.600	40.076	
	WX	NAWC AD, Pax River	2.800	4.000	1QFY06	2.000	1QFY07	1.500	1QFY08	1.500	1QFY09	CONT	CONT	
Total System Training Architecture	Contract	LM / GD	0.000	0.000	N/A	0.000	N/A	7.867	1QFY08	6.587	1QFY09	0.000	14.454	
Program Management Support	Various	Various	9.345	5.000	1QFY06	4.000	1QFY07	0.000	1QFY08	0.000	1QFY09	CONT	CONT	
Labor (Research Personnel)	CPFF	APL/JHU Laurel MD	1.132	1.000	1QFY06	0.500	1QFY07	0.300	1QFY08	0.300	1QFY09	CONT	CONT	
Travel	Various	NAVSEA	0.281	0.300	1QFY06	0.500	1QFY07	0.500	1QFY08	0.400	1QFY09	CONT	CONT	
Subtotal Management			107.975	62.148		43.812		42.245		39.955		CONT	CONT	35.305
Remarks:														
Total Cost			421.672	71.248		56.812		71.240		62.955		CONT	CONT	199.470
Remarks:														

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EXHIBIT R4, Schedule Profile		DATE: February 2007
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-4	PROGRAM ELEMENT NUMBER AND NAME PE 0603581N - Littoral Combat Ship (LCS)	PROJECT NUMBER AND NAME 3096 - LCS Development

LCS Program Schedule – Ship View

FY08 PB



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EXHIBIT R-2a, RDT&E Project Justification							DATE: February 2007	
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-4		PROGRAM ELEMENT NUMBER AND NAME 0603581N - Littoral Combat Ship (LCS)			PROJECT NUMBER AND NAME 3129 - LCS Mission Package Development			
COST (\$ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Project Cost	193.474	161.727	109.193	101.049	131.310	65.092	48.288	41.777
RDT&E Articles Qty	3	1						

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

Program provides Mission capabilities in littoral mine warfare, small boat neutralization and littoral anti-submarine warfare to enable the US Joint Force to operate in the littoral. Mission systems development includes architectures, interfaces and development of mission systems. Mission systems development also includes the procurement of the mission packages to be used on the Flight 0 ships.

Mine Warfare Mission Package (MIW) will provide the Joint force commander with the capability to conduct organic mine countermeasure (MCM) operations ranging from first response mine detection and avoidance, to neutralization and sweeping for littoral conditions that preclude hunting, enabling Joint operations to be conducted ahead of power projection forces with reduced need for escorts. This will open transit lanes and operating areas for naval forces. MCM operations will reduce the timeline for access to the contested littoral thereby providing options to the joint force commander. Additionally, LCS should have the capability to deploy distributed sensors that will enhance detection, classification, identification and targeting of enemy mines.

Littoral Anti-Submarine Warfare Mission Package (ASW) will provide ASW capabilities while operating in a contested littoral environment. Leveraging multiple distributed sensors netted together, LCS will exploit real time undersea data, using maneuver and deception to enhance detection, classification, identification, targeting and destruction of enemy submarines.

Littoral Surface Warfare Mission Package (SUW) will provide the capability to detect, track and engage small boat threats, giving the joint force commander the ability to maximize striking power or successfully move through a restricted area.

Common Vehicles development will provide the capability of a single Unmanned Surface Vehicle (USV) - 11m RIHB and Remote Minehunting Vehicle (RMV) for the MIW & ASW Mission Packages.

Advanced Communications Package (ACP) provides Over The Horizon (OTH) Data Relay Capability to enable LCS to operate off-board sensors (ISR, MIW, SUW, USW) at significantly extended ranges. This project provides funds for the design and development of ACP prototype and engineering development model (EDM) systems, integration with LCS/Vertical Take-Off and Landing Unmanned Aerial Vehicle (VTUAV) and DT/OT.

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APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-4	PROGRAM ELEMENT NUMBER AND NAME 0603581N - Littoral Combat Ship (LCS)
PROJECT NUMBER AND NAME 3129 - LCS Mission Package Development	

B. Accomplishments/Planned Program

MIW Mission Module Package	FY 06	FY 07	FY 08	FY 09
Accomplishments/Effort/Subtotal Cost	43.758	24.716	4.124	0.000
RDT&E Articles Quantity				

FY06: Integration of Cobra with Fire Scout VTUAV & LCS; Modifications to Remote Minehunting System (RMS) (cradle design, capture spire, launch & recovery); Development of ILS training plans for MIW mission package on LCS. Unmanned Surface Vehicle (USV) integration, Mission Module design, test, and fabrication; MIW MP Integration with LCS and certification, modeling and simulation in support of module design; Technical manual and other related ILS documentation development (\$43.758).
 FY07: Continuation of mission module testing, integration & certification; Mission module fabrication for Mission Package #2; Human Systems Integration (HSI); ILS documentation development and updates; Mission Package training; Modeling & Simulation; and RMS installation on LCS (\$24.716).
 FY08: Continue mission module integration (\$4.124).

ASW Mission Module Package	FY 06	FY 07	FY 08	FY 09
Accomplishments/Effort/Subtotal Cost	80.109	36.446	12.831	0.000
RDT&E Articles Quantity	2			

FY06: Continuation of the development, integration, and testing of USV bi-static mission module which includes Ultralight Towed Array Sonar (UTAS) and Multi-Static Offboard System (MSOBS) mission systems; Continuation of the development, integration, and testing of the Remote Towed Array (RTA) & Remote Towed Array Source (RTAS) mission systems; Continuation of the integration of the dipping sonar onto the USV; USV w/dipper testing; Mission module cradle development and cradle integration with the mission modules; Procure 2 ASW MPs (\$80.109).
 FY07: Continuation of the development, integration, and testing of USV bi-static mission module includes UTAS and MSOBS mission systems; Continue the development, integration, and testing of the RTA & RTAS mission systems; Continuation of the integration of the dipping sonar onto the USV; USV w/dipper testing; At Sea Array tow characteristics test (\$36.446).
 FY08: Technical Design Agent (TDA) efforts (system eng, H/W, S/W, integration, HSI, environmental & safety, ILS) of ASW Modules (\$12.831)

SUW Mission Modules Package	FY 06	FY 07	FY 08	FY 09
Accomplishments/Effort/Subtotal Cost	38.423	47.806	32.716	18.032
RDT&E Articles Quantity	1	1		

FY06: Perform design, development, test, evaluation, integration, and certification with Non Line of Sight Launching System (NLOS-LS) and 30 MM gun module systems; Conduct the development & design of the SUW Command & Control (C2) system; Coordinate with the MH-60 and VTUAV systems to support SUW Package; Mission Package Integration (MPI) efforts (\$29.423); Procure 1 NLOS-LS and 1 Med Cal Gun module (\$9.000).
 FY07: Conduct certification efforts; Final safety approach; Develop training/maintenance manuals; Provide Package prototype HW/SW to support certification efforts; continue Mission Package development and test evaluation (\$28.184); Procure one (1) SUW package (\$9.180); Procure NLOS-LS Missiles for testing and Shipfill (\$10.442).
 FY08: Procure NLOS-LS Missiles for testing and shipfill (\$9.959); Procure NLOS-LS (\$3.641); Continue the SUW Mission Packages development, integration, and testing efforts (\$19.116).
 FY09: Procure NLOS-LS Missiles for testing (\$9.978); Continuation of the SUW Mission Packages development, integration, and testing efforts (\$8.054).

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APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-4	PROGRAM ELEMENT NUMBER AND NAME 0603581N - Littoral Combat Ship (LCS)	PROJECT NUMBER AND NAME 3129 - LCS Mission Package Development
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B. Accomplishments/Planned Program

Common Mission Module Development	FY 06	FY 07	FY 08	FY 09
Accomplishments/Effort/Subtotal Cost	29.784	45.920	51.504	59.130
RDT&E Articles Quantity				

FY06: Complete C2 build 1 for MIW integration; Acquire Mission Package Computing Environment (MPCE) 1 & 2 and ILS plan; Flight 0 interface Mod Dev/Integration; Fund transition of Joint Advanced Concept Technology Demonstration program; USV program development initiatives; and MPI efforts (develop the Mission Package Spiral Development Plan, assessment of support readiness maturity of all elements of Spiral Alpha, including review of support planning, support concepts, plans for support, availability and adequacy of support data and documentation, existence of plans for Performance Based Logistics (PBL)).

FY07: Installation of the MPCE build 1 to ship; Complete C2 build 1.1 for MIW; Fire Scout integration and Rehosting Fire Scout TCS S/W in LCS; Continue Mission Package Integration efforts (MIW, ASW, SUW, C2); Common Vehicle (USV & RMV) systems development, integration and demonstration, common interface control documentation, Initiate development of Common Command and Control, fund Technology Transition Initiative (TTI) for USV development in support of Common Vehicles program.

FY08: Mission Package Computing Environment (MPCE) - Development, integration, & testing to support the H/W for Mission Packages ASW, MIW, and SUW; Mission Package Integration and Certification, Equipment and Research. USV development; integration of Common Command and Control, and technical support for system test and evaluation.

FY09: Continue USV development, Common Command and Control integration, and technical support for system test and evaluation; Continue MPCE development supporting HW for Mission Packages; Continue Fire Scout integration and Rehosting Fire Scout TCS S/W in LCS.

Airborne Communication Package	FY 06	FY 07	FY 08	FY 09
Accomplishments/Effort/Subtotal Cost	1.400	6.839	8.018	23.887
RDT&E Articles Quantity				10

FY 06 Accomplishments [NAVSEA]: Commenced development of ACP acquisition documentation required for Milestone (MS) B Decision.
 FY 07 Plan: Award 12 - 14 study contracts to support the development of performance specifications for the ACP development contract. Prepare program specifications, requirements and documentation including contract request for proposal (RFP), statement of work, CDRLs and systems requirements documents. Complete and obtain approval of ACP acquisition documentation for MS B decision.
 FY 08 Plan: Achieve MS B Decision. Award ACP development contracts to two vendors for the design, development, integration and demonstration. Design first ACP Engineering Design Model (EDM) System. Conduct Critical Design Review (CDR).
 FY 09 Plan: Commence development, integration and demonstration of ACP EDM Build 1 Systems including four shipboard interface units and six airborne data relay packages. Conduct Design Readiness Review. Commence design, development and integration of ACP EDM Build 2 Systems with LCS/VTUAV.

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APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-4	PROGRAM ELEMENT NUMBER AND NAME PE 0603581N- Littoral Combat Ship (LCS)	PROJECT NUMBER AND NAME 3129 - LCS Mission Package Development
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C. OTHER PROGRAM FUNDING SUMMARY:

<u>Line Item No. & Name</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>To Complete</u>	<u>Total Cost</u>
BLI 1600 (OPN)	36.270	78.741	80.324	270.958	284.502	337.149	377.923	370.795	CONT	CONT
BLI 2127 (SCN)	434.007	518.472	910.482	1767.112	1761.372	1,803.063	1,856.463	1,608.842	5881.900	16541.713
BLI 4221 (WPN)				22.407	33.964	40.397	45.406	10.845	CONT	CONT
BLI 0443 (APN)		37.419	37.687	73.155	73.774	75.979	95.888	102.304	CONT	CONT
BLI 1B5B/15BR0 (OMN)			25.063	25.121	30.144	12.746	12.728	12.712	CONT	CONT
BLI 1B4B/14B50 (OMN)			8.627						CONT	CONT

D. ACQUISITION STRATEGY:

(U) The LCS acquisition strategy encompasses multiple phases: Phases I and II are Concept Refinement and Technology Development, consisting of Preliminary Design, Final Design and Detail Design and Construction for Flight 0 ships. A parallel three phase approach is planned for Flight 0+ ships. - Preliminary System Design, - Final System Design and - Detail Design and Construction.

(U) ACP - A competitive contract will be awarded to two vendors for the design, development, integration and demonstration of the Advanced Communications Package. There will be a down select to one vendor for the production phase.

E. MAJOR PERFORMERS:

N/A

ACP - TBD

G. PERFORMANCE METRICS:

ACP - Earned value management will be used for metrics reporting and risk management.

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CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 1)							DATE: February 2007						
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT				PROJECT NUMBER AND NAME						
RDT&E, N / BA-4			PE 0603581N - Littoral Combat Ship				3129 - LCS Mission Package Development - MIW						
Cost Categories	Contract Method & Type	Performing Activity & Location	FY 06 Cost	FY 06 Award Date	FY 07 Cost	FY 07 Award Date	FY 08 Cost	FY 08 Award Date	FY 09 Cost	FY 09 Award Date	Cost to Complete	Total Cost	Target Value of Contract
MIW Mission Module Development, integration, Modularization	WX	Various	41.358	10/05	24.716	10/06	4.124	10/07	0.000	N/A	0.000	70.198	
Equipment and Hardware													
- BPAUV	CPAF	Bluefin, MA	2.400	02/06	0.000	N/A	0.000	N/A	0.000	N/A	0.000	2.400	2.400
Subtotal Product Development			43.758		24.716		4.124		0.000		0.000	72.598	2.400
Remarks:													
			0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:													

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CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 1)										DATE: February 2007			
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT				PROJECT NUMBER AND NAME						
RDT&E, N / BA-4			PE 0603581N - Littoral Combat Ship				3129 - LCS Mission Package Development - ASW						
Cost Categories	Contract Method & Type	Performing Activity & Location	FY 06 Cost	FY 06 Award Date	FY 07 Cost	FY 07 Award Date	FY 08 Cost	FY 08 Award Date	FY 09 Cost	FY 09 Award Date	Cost to Complete	Total Cost	Target Value of Contract
ASW Mission Module Development													
integration and Modularization	WX	Various	34.441	02/06	32.196	02/06	12.381	10/07	0.000	N/A	Continuing	Continuing	
Equipment and Hardware													
- USV (11m RHIB)	RX/WX	SSC - SD	9.310	03/06-08/06	0.000	N/A	0.000	N/A	0.000	N/A	0.000	9.310	
- Underwater Dipping Sonar (UDS)	RX/WX	NUWC Newport	6.851	03/06-08/06	0.000	N/A	0.000	N/A	0.000	N/A	0.000	6.851	
- Multistatic Onboard Sonar	RX/WX	SSC - SD	4.627	03/06-08/06	0.000	N/A	0.000	N/A	0.000	N/A	0.000	4.627	
- UTAS	RX/WX	SSC - SD	14.581	05/06	0.000	N/A	0.000	N/A	0.000	N/A	0.000	14.581	
- RTAS	FP	LMC, NY	5.246	03/06	0.000	N/A	0.000	N/A	0.000	N/A	0.000	5.246	5.246
- MFTA	OMNIBUS	JHU/APL MD	5.052	05/06	0.000	N/A	0.000	N/A	0.000	N/A	0.000	5.052	5.052
- Sea Talon	RX/WX	NUWC Newport	0.000	N/A	4.250	11/06	0.450	10/07	0.000	N/A	0.000	4.700	
Subtotal Product Development			80.109		36.446		12.831		0.000		Continuing	Continuing	10.298
Remarks:													
Subtotal Support			0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:													

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CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 1)										DATE: February 2007			
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT				PROJECT NUMBER AND NAME						
RDT&E, N / BA-4			PE 0603581N - Littoral Combat Ship				3129 - LCS Mission Package Development - SUW						
Cost Categories	Contract Method & Type	Performing Activity & Location	FY 06 Cost	FY 06 Award Date	FY 07 Cost	FY 07 Award Date	FY 08 Cost	FY 08 Award Date	FY 09 Cost	FY 09 Award Date	Cost to Complete	Total Cost	Target Value of Contract
SUW Mission Module Development													
Integration and Modularization	WX	Various	30.723	10/05-05/06	25.284	10/06	16.116	10/07	4.929	10/08	Continuing	Continuing	
Equipment and Hardware													
- NLOS-LS (NetFires)	FFP	Raytheon, AZ	0.000	06/06	3.570	12/06	3.641	N/A	0.000	N/A	0.000	3.570	7.070
- Med Cal Gun Module	FFP	ATK, MD	5.500	06/06	5.610	12/06	0.000	N/A	0.000	N/A	0.000	11.110	11.110
- NLOS (Netfires) Missiles for Shipfill & Testing	FFP	Raytheon, AZ	0.000	N/A	10.442	12/06	9.959	12/07	9.978	12/08	Continuing	Continuing	
Subtotal Product Development			36.223		44.906		29.716		14.907		Continuing	Continuing	18.180
Remarks:													
T&E	WX	Various	2.200	02/06	2.900	10/06	3.000	10/07	3.125	10/08	Continuing	Continuing	
Subtotal Product Development			2.200		2.900		3.000		3.125		Continuing	Continuing	0.000
Remarks:													

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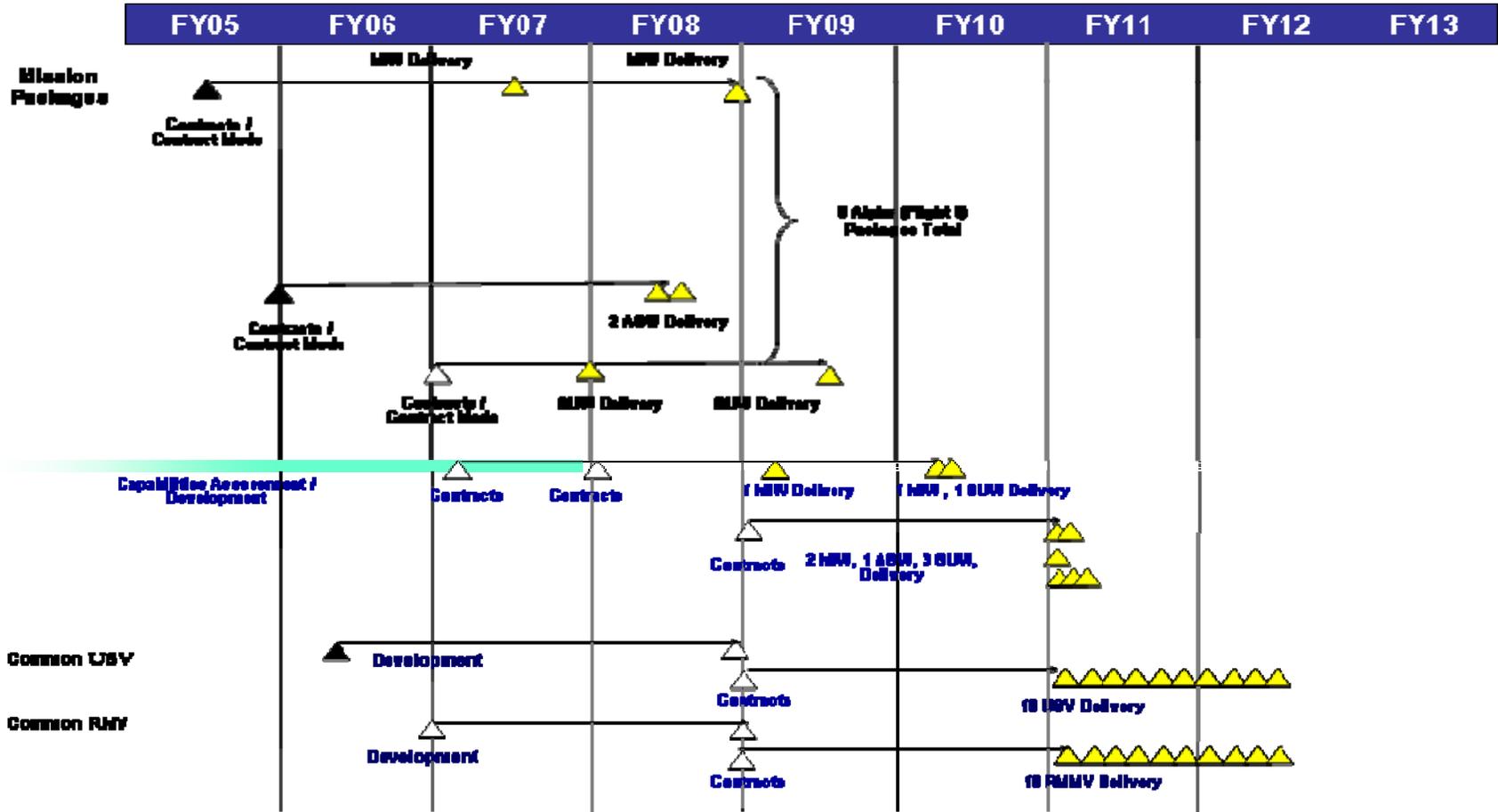
Exhibit R-3 Cost Analysis (page 2)										DATE: February 2007			
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NUMBER AND NAME							
RDT&E, N / BA-4			PE 0603581N - Littoral Combat Ship			3129 - LCS Mission Package Development - Common							
Cost Categories	Contract Method & Type	Performing Activity & Location	Total FY 06 Cost	FY 06 Award Date	FY 07 Cost	FY 07 Award Date	FY 08 Cost	FY 08 Award Date	FY 09 Cost	FY 09 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Common Module Development and integration													
- FIRES-COUT (Integration & TCS S/W)	Various	Various	0.688	02/06	6.257	10/06	10.742	10/07	10.912	10/08	Continuing	Continuing	
- Common Vehicles (RMVs & USVs)	Various	Various	9.604	02/06	14.767	10/06	18.988	10/07	27.057	10/08	Continuing	Continuing	
- ACP Design, Dev & Integration	CPFF/ CPIF	TBD			2.000	02/07	4.507	11/07	19.137	11/08	TBD	TBD	TBD
- ACP Acquisition/PM Support	CPFF	BAH, McLean, VA	1.200	11/05									
- ACP Engineering Support	WX	Various	0.200	11/05	0.584	Various	0.711	Various	1.975	Various	Continuing	Continuing	
- ACP Acquisition/PM Support	CPAF	SeaPort/TBD	0.000	N/A	4.255	02/07	2.800	11/07	2.648	11/08	Continuing	Continuing	
- ACP Test & Evaluation	Various	Various	0.000	N/A	0.000	N/A	0.000	N/A	0.127	Various	Continuing	Continuing	
Subtotal ACP			1.400		6.839		8.018		23.887				
- MPCE	Various	Various	1.300	10/05-02/06	1.214	10/06	1.229	10/07	1.200	10/08	Continuing	Continuing	
- Common C2	Various	Various	9.705	10/05-02/06	10.408	10/06	6.481	10/07	0.000	N/A	Continuing	Continuing	
Modular Development	CPAF	Northrop Grumman-Bethpage, N	4.034	01/06	8.914	11/06	9.777	11/07	16.612	11/08	Continuing	Continuing	
Subtotal Development & Integration			26.731		48.399		55.235		79.668		Continuing	Continuing	0.000
Remarks:													
Program Management Support	Various	Various	1.893	10/05	1.900	10/06	1.947	10/07	0.954	10/08	Continuing	Continuing	
Travel Support	PD	NAVSEA	0.070	10/05	0.060	10/06	0.065	10/07	0.070	10/08	Continuing	Continuing	
ILS, C4I and Aviation Rep Support	Various	Various	2.490	10/06	2.400	10/06	2.275	10/07	2.325	10/08	Continuing	Continuing	
Subtotal Management			4.453		4.360		4.287		3.349		Continuing	Continuing	0.000
Remarks:													
Mission Package Total Cost			193.474		161.727		109.193		101.049		Continuing	Continuing	30.878
Remarks:													

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CLASSIFICATION:

EXHIBIT R4, Schedule Profile		DATE: February 2007	
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-4	PROGRAM ELEMENT NUMBER AND NAME PE 0603581N - Littoral Combat Ship (LCS)	PROJECT NUMBER AND NAME 3129 - LCS Mission Package Development	

LCS Program Schedule – Mission Package View PRES 08



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EXHIBIT R-4, Schedule Profile																				DATE: February 2007																		
APPROPRIATION/BUDGET ACTIVITY RDT&E, N/ BA-4					PROGRAM ELEMENT NUMBER AND NAME 0603581N - Littoral Combat Ship (LCS)										PROJECT NUMBER AND NAME 3129 - LCS Mission Package Development																							
Fiscal Year	2006				2007				2008				2009				2010				2011				2012				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	1	2	3	4	1	2	3	4						
ACP Acquisition Milestones									▲ MS B													▲ MS C									▲ FRP							
Engineering Milestones											▲ CDR				▲ DRR																							
Test & Evaluation Milestones																																						
Production Milestones																									▲ LRIP									▲ FRP				

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EXHIBIT R-2a, RDT&E Project Justification							DATE: February 2007	
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-4		PROGRAM ELEMENT NUMBER AND NAME PE 0603581N - Littoral Combat Ship			PROJECT NUMBER AND NAME 4018 - Littoral Combat Ship Construction			
COST (\$ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Project Cost	313.249	99.886	37.069	7.142	0.000	0.000	0.000	0.000
RDT&E Articles Qty								

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

This project funds the detail design and construction of two of the LCS Flight 0 ships, LCS 1 funded in FY05 and LCS 2 Funded in FY06. This project also funds Outfitting & Post Delivery. Breakout of RDT&E ship end cost are shown below.

	<u>LCS 1</u>	<u>LCS 2*</u>
Basic Construction (\$M)	270,864	275,340
Change Orders (\$M)	5,000	10,000
Other (ILS, Sys Eng., Test/Trials) (\$M)	5,000	5,000
Other GFE (\$M)	12,476	7,139
	293,340	297,479

*Basic Construction includes \$30M for Naval Vessel Rules and MSSIT changes

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EXHIBIT R-2a, RDT&E Project Justification		DATE: February 2007
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA 4	PROGRAM ELEMENT NUMBER AND NAME PE 0603581N - Littoral Combat Ship (LCS)	PROJECT NUMBER AND NAME 4018 - Littoral Combat Ship Construction

B. Accomplishments/Planned Program

	FY 06	FY 07	FY 08	FY 09
Accomplishments/Effort/Subtotal Cost	304.543	63.527	0.000	0.000
RDT&E Articles Quantity				

FY06 - FY07 Detail design and construction funding for Lockheed Martin LCS 1.
 FY06 - FY07 Detail design and construction funding for General Dynamics LCS 2.
 FY06 Continue detailed production planning for LCS to include: development of purchase specifications/drawings for all the significant equipment, begin initial competition and selection of components, issue contracts and begin production of components. Begin logistics support analysis and develop crew training. Design fixtures and jigs to facilitate construction. Begin production design for early work packages to include work instructions, schedules, work locations, material list, tooling, facilities and manpower. requirements.

	FY 06	FY 07	FY 08	FY 09
Accomplishments/Effort/Subtotal Cost	8.706	36.359	37.069	7.142
RDT&E Articles Quantity				

FY06 - LCS 1 Outfitting funding is required for spare parts, medical and dental supplies, pre-commission crew support, and crew move aboard.
 FY07-FY09 - LCS 1/2 Outfitting funding is required for spare parts, medical and dental supplies, pre-commission crew support, and crew move aboard. Post Delivery funding is required for Developmental Testing, Combat System Ship Qualification Test (CSSQT), test and trials, Mission Package interface testing, correction of deficiencies, and Live Fire.

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EXHIBIT R-2a, RDT&E Project Justification	DATE: February 2007
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APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-4	PROGRAM ELEMENT NUMBER AND NAME PE 0603581N - Littoral Combat Ship (LCS)	PROJECT NUMBER AND NAME 4018 - Littoral Combat Ship Construction
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C. OTHER PROGRAM FUNDING SUMMARY:

<u>Line Item No. & Name</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>To Complete</u>	<u>Total Cost</u>
BLI 1600 (OPN)	36.270	78.741	80.324	270.958	284.502	337.149	377.923	370.795	CONT	CONT
BLI 2127 (SCN)	434.007	518.472	910.482	1767.112	1761.372	1,803.063	1,856.463	1,608.842	5881.900	16541.713
BLI 4221 (WPN)				22.407	33.964	40.397	45.406	10.845	CONT	CONT
BLI 0443 (APN)		37.419	37.687	73.155	73.774	75.979	95.888	102.304	CONT	CONT
BLI 1B5B/15BR0 (OMN)			25.063	25.121	30.144	12.746	12.728	12.712	CONT	CONT
BLI 1B4B/14B50 (OMN)			8.627						CONT	CONT

D. ACQUISITION STRATEGY:

(U) The LCS acquisition strategy encompasses multiple phases: Phases I and II are Concept Refinement and Technology Development, consisting of Preliminary Design, Final Design and Detail Design and Construction for Flight 0 ships.

E. MAJOR PERFORMERS:

General Dynamics - Bath Iron Works
Lockheed Martin

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Exhibit R-3 Cost Analysis (page 1)											DATE: February 2007			
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT				PROJECT NUMBER AND NAME							
RDT&E, N / BA-4			PE 0603581N - Littoral Combat Ship (LCS)				4018 - Littoral Combat Ship Construction							
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 06 Cost	FY 06 Award Date	FY 07 Cost	FY 07 Award Date	FY 08 Cost	FY 08 Award Date	FY 09 Cost	FY 09 Award Date	Cost to Complete	Total Cost	Target Value of Contract
LCS Ship 1 Construction	Comp	Lockheed Martin	206.749	78.064	1QFY06	8.527	1QFY07	0.000	N/A	0.000	N/A	0.000	293.340	293.340
Long Lead Material LCS Ship 2	Comp	General Dynamics	16.000	0.000	N/A	0.000	N/A	0.000	N/A	0.000	N/A	0.000	16.000	16.000
LCS Ship 2 Construction	Comp	General Dynamics	0.000	226.479	1QFY06	55.000	1QFY07	0.000	N/A	0.000	N/A	0.000	281.479	281.479
Subtotal Product Development			222.749	304.543		63.527		0.000		0.000		0.000	590.819	590.819
Remarks:														
Initial Outfitting	MP	DCMA	0.000	7.506	4QFY06	12.076	2QFY07	5.646	1QFY08		1QFY09	0.000	25.228	89.276
Testing	WX	Naval Surface Warfare Cntr.		1.200		9.000		21.850						
Post Delivery ECPs	Comp	LM / GD				14.283								
PSA/PSA Planning	WX	Supship (Various)				1.000		9.573		7.142				
			0.000	8.706		36.359		37.069		7.142		0.000	89.276	89.276
Remarks:														

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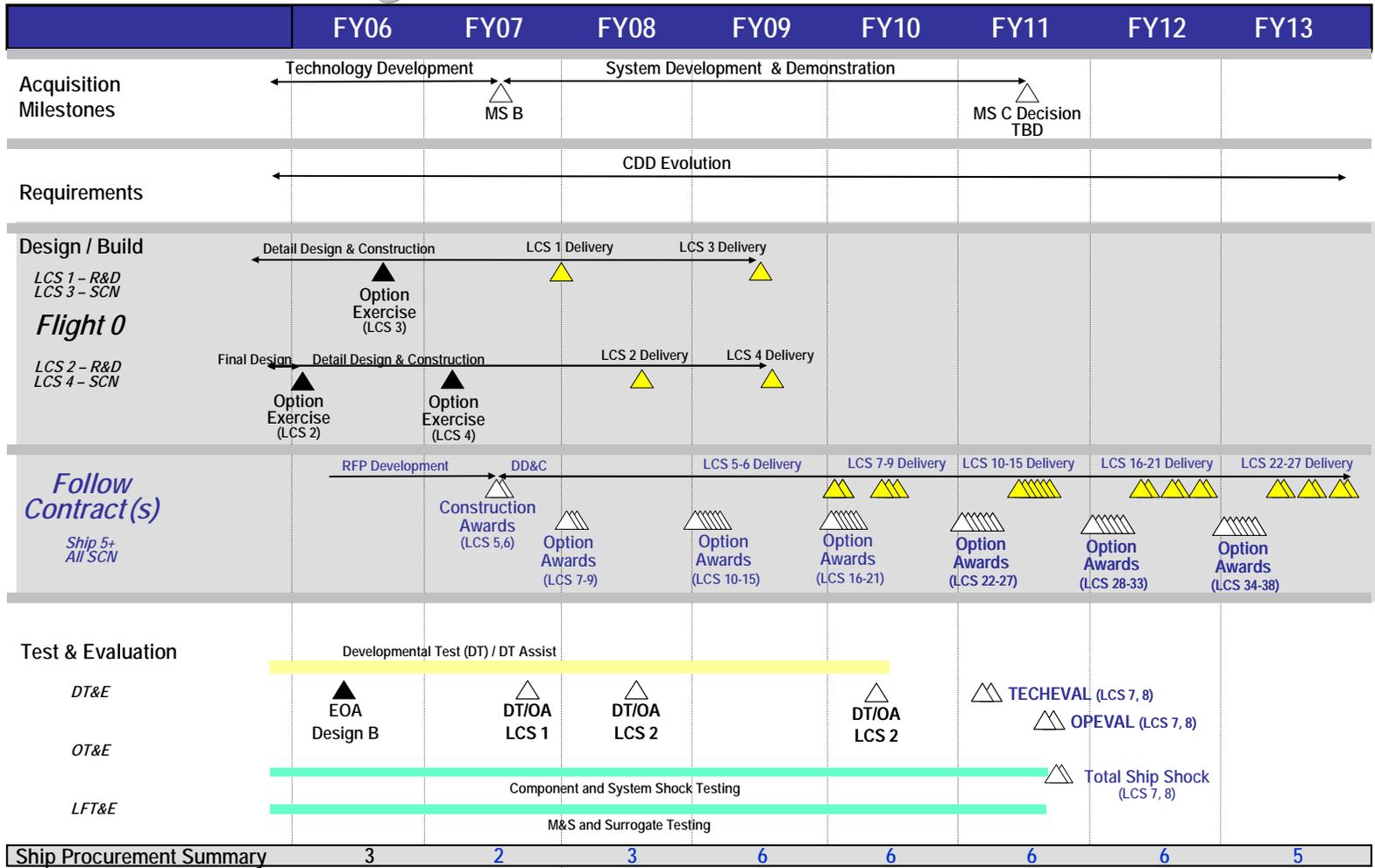
Exhibit R-3 Cost Analysis (page 2)											DATE: February 2007			
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-4			PROGRAM ELEMENT PE 0603581N - Littoral Combat Ship (LCS)			PROJECT NUMBER AND NAME 4018 - Littoral Combat Ship Construction								
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 06 Cost	FY 06 Award Date	FY 07 Cost	FY 07 Award Date	FY 08 Cost	FY 08 Award Date	FY 09 Cost	FY 09 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation														
Subtotal T&E														
Remarks:														
Government Engineering Support														
Government Engineering Support														
Program Management Support														
Travel														
Labor (Research Personnel)														
SBIR Assessment														
Subtotal Management														
Remarks:														
Total Cost			222.749	313.249		99.886		37.069		7.142		0.000	680.095	680.095
Remarks:														

CLASSIFICATION:

EXHIBIT R4, Schedule Profile		DATE: February 2007
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-4	PROGRAM ELEMENT NUMBER AND NAME PE 0603581N - Littoral Combat Ship (LCS)	PROJECT NUMBER AND NAME 4018 - LCS Construction

LCS Program Schedule – Ship View

FY08 PB



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Exhibit R-4a, Schedule Detail					DATE: February 2007			
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-4		PROGRAM ELEMENT PE 0603581N - Littoral Combat Ship			PROJECT NUMBER AND NAME 4018 - LCS Construction			
Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Detail Design and Construction (Flight 0)	1Q-4Q	1Q-4Q	1Q					
Mission System Development & Platform Exp	1Q-4Q	1Q-4Q						
Construction - SCN Funded	3Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q
Milestone B		2Q						
Milestone C						2Q		
Ship 1 Delivery (Flight 0) - RDT&E Funded			1Q					
Ship 2 Delivery (Flight 0) - RDT&E Funded			3Q					
Ship 3 Delivery - SCN Funded				3Q				
Ship 4 Delivery - SCN Funded				3Q				
NOTE:								
Developmental Testing	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q	2Q-3Q			
Operational Testing	2Q	3Q	4Q		2Q-4Q			
Shock Planning / Test	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q			

R-1 Line Item No. 50

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CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: February 2007
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-4	PROGRAM ELEMENT NUMBER AND NAME PE 0603581N - Littoral Combat Ship	PROJECT NUMBER AND NAME 9999-Congressional Plus-Ups: VARIOUS

CONGRESSIONAL PLUS-UPS:

	FY 06	FY07		
9820N				
ASW Multistatic Sensor Mission Planning Upgrade	0.985	0.000		

The LCS ASW Mission Package (MP) will include common capabilities for use with pre-deployment planning, in situ performance estimates and in situ replanning for all ASW Mission Modules. This funding is for mission planning for Low Frequency Bi-static/multi-static Systems deployed from USVs in support of the LCS ASW MP. The LCS ASW MP common capabilities will be derived from legacy PORs that have been developed for the surface ship, surveillance and submarine programs.

	FY 06	FY07		
9821N/C				
Remote Operation of Active Sonar Technology	2.953	0.996		

Funding is for efforts to optimize active Sonar operating depth and source transmission to achieve the best acoustic coverage for the mission area and target scenario, based on the available source transmission and receiver processing characteristics in support of the ASW Mission Package.

	FY 06	FY07		
9822N/C				
Unmanned Surface Vehicle Concepts & Technology	2.168	2.192		

Initiated common USV program transition, concept development, and integration for LCS. This concept focused on a critical need of the Navy as it seeks to develop and deploy rapidly reconfigurable, multi-mission unmanned surface vehicles (USVs) of modular design . This effort provided:

- Systems engineering and modeling and simulation (M&S) tools to support USV system module development and budget decisions
- Assessment of operational performance versus cost, programmed capabilities, engineering concepts/designs
- Risk analyses of operational concepts, and combination of USV systems and Sensor technology.

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EXHIBIT R-2a, RDT&E Project Justification		DATE: February 2007
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-4	PROGRAM ELEMENT NUMBER AND NAME PE 0603581N - Littoral Combat Ship	PROJECT NUMBER AND NAME 9999-Congressional Plus-Ups: VARIOUS

CONGRESSIONAL PLUS-UPS:

	FY 06	FY07		
9995N				
Advanced Lightweight Metals Tech for Aluminum Intensive Marine Structures	0.000	1.195		

Advanced Lightweight Metals Technology for Aluminum Intensive Marine Structures program provides research, development, testing and evaluation of new, advanced aluminum alloys and processing technologies for use in the design of lighter weight structures for the LCS Flight 1, LHA(R), JMAC and other high speed, shallow draft ships and craft.

	FY 06	FY07		
9996N				
LCS ASW Mission Area Commonality	0.000	2.291		

Conduct coordinated "build-test-build" testing for LCS surface combatants and embarked off-board platforms, demonstrate an accelerated path towards enhanced joint net-centric operational ASW effectiveness.

	FY 06	FY07		
9997N				
LCS Mission Module Enhanced Tactical Response	0.000	4.284		

Funding to extend depth of program of record derivation and select non program of record risk mitigation efforts to: Field a Continuous Active Sonar (CAS) capable integrated ASW USV threat redetection, localization and engagement capability; Develop a common USV sensor launch & recovery system; Establish the LCS ASW Operations Support Center to provide end-user responsive "pier side" operator training refresh, reachback mission planning and prosecution support; Adapt netted distributed sensor grid communication protocols and data sharing methods for off board sensor systems real time situational awareness; Enable Mission Module USV increased bandwidth communications connectivity, and advanced autonomous data fusion and contact management