Selected Acquisition Report (SAR)

RCS: DD-A&T(Q&A)823-374

Littoral Combat Ship (LCS)

As of FY 2015 President's Budget

Defense Acquisition Management
Information Retrieval
(DAMIR)

Report Documentation Page

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Common Acronyms and Abbreviations

Acq O&M - Acquisition-Related Operations and Maintenance
APB - Acquisition Program Baseline
APPN - Appropriation
APUC - Average Procurement Unit Cost
BA - Budget Authority/Budget Activity
BY - Base Year
DAMIR - Defense Acquisition Management Information Retrieval
Dev Est - Development Estimate
DoD - Department of Defense
DSN - Defense Switched Network
Econ - Economic
Eng - Engineering
Est - Estimating
FMS - Foreign Military Sales
FY - Fiscal Year
IOC - Initial Operational Capability
$K - Thousands of Dollars
LRIP - Low Rate Initial Production
$M - Millions of Dollars
MILCON - Military Construction
N/A - Not Applicable
O&S - Operating and Support
Oth - Other
PAUC - Program Acquisition Unit Cost
PB - President's Budget
PE - Program Element
Proc - Procurement
Prod Est - Production Estimate
QR - Quantity Related
Qty - Quantity
RDT&E - Research, Development, Test, and Evaluation
SAR - Selected Acquisition Report
Sch - Schedule
Spt - Support
TBD - To Be Determined
TY - Then Year
UCR - Unit Cost Reporting

Program Information

Program Name

Littoral Combat Ship (LCS)

DoD Component

Navy

Responsible Office

Responsible Office

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References

SAR Baseline (Development Estimate)

Defense Acquisition Executive (DAE) Approved Acquisition Program Baseline (APB) dated April 7, 2011

Approved APB

Defense Acquisition Executive (DAE) Approved Acquisition Program Baseline (APB) dated April 7, 2011

Mission and Description

The Littoral Combat Ship (LCS) will be optimized for flexibility in the littorals as a system of systems that is both manned and unmanned, mission reconfigurable, and deployed in LCS. It will focus on three primary anti-access mission areas: Littoral Surface Warfare operations emphasizing prosecution of small boats, mine warfare, and littoral anti-submarine warfare. Its high speed and ability to operate at economical loiter speeds will enable fast and calculated responses to small boat threats, mine laying and quiet diesel submarines. LCS employment of networked sensors for Intelligence, Surveillance, and Reconnaissance in support of Special Operations Forces will directly enhance littoral mobility. Its shallow draft will allow easier excursion into shallower areas for both mine countermeasures and small boat prosecution. Using LCS against these asymmetric threats will enable Joint Commanders to concentrate multi-mission combatants on primary missions such as precision strike, battle group escort and theater air defense.

Executive Summary

The DoD has determined that no new contract negotiations beyond 32 Flight 0+ LCS ships will go forward. The Navy has been directed to complete a study to support the future procurement of “a capable and lethal small surface combatant.” The Navy has also been directed to submit “alternative proposals to procure a capable and lethal small surface combatant,” and the study should consider options for “a completely new design, existing ship designs (including LCS), and a modified LCS.” This SAR reflects the initial estimate of a 32-ship LCS program. The results of the study, to be completed in time to inform the FY 2016 PB, will determine the configuration of the ships (future flight of LCS or different small surface combatant) that will fulfill the small surface combatant requirement.

The FY 2015 PB submission requests $1,427 million to procure LCS hulls 21 through 23 in FY 2015. This is a reduction of one ship from the FY 2014 PB for a total of three ships vice four ships in FY 2015. These ships will be awarded under the Block Buy contracts to Lockheed Martin and Austal USA as part of the FY 2010 - FY 2015 ship procurements.

Sequestration and Congressional reductions in FY 2010 - FY 2013 impacted ships (LCS 5 - LCS 16) budgets by $213M impacting the programs ability to fund shipbuilding contracts to the program manager’s estimate. A portion of this required funding has been restored in the cost to complete budget line for the FY 2010-2013 (LCS 5 - LCS 16) ship construction budgets.

A combined LCS Seaframe and Mission Module program Defense Acquisition Board Integrated Program Review (DAB IPR) was conducted with the Under Secretary of Defense for Acquisition, Technology, and Logistics (USD (AT&L)) on December 11, 2013. The Navy reported that FY 2013 budget impacts will delay completion of Mine Countermeasures Mission Package (MCM MP) Initial Operational Test and Evaluation (IOT&E), forcing USS INDEPENDENCE (LCS 2) IOT&E and IOC current estimates beyond the APB Threshold.

Twenty-four LCS have been awarded to date: four have delivered to the Navy, 10 are in various stages of production, six are in pre-production status. In June 2013, both Austal USA and Lockheed Martin (including Marinette Marine as the shipbuilder) completed all previously planned facility upgrades and began migrating their production processes to full serial production.

USS FREEDOM (LCS 1) completed a ten month (March 1, 2013 to December 23, 2013) forward deployment to the Western Pacific where she was operating out of Singapore successfully putting the first of the LCS class through expected deployment scenarios including successfully swapping the Blue and Gold crews mid-deployment. Valuable data was gathered from the LCS 1 deployment with regard to optimal manning and the maintenance balance between ship’s force and shore support.

LCS 2 completed its Post Shakedown Availability (PSA) #1 on April 12, 2013, and commenced Seaframe Development Testing (DT) in May 2013. Seaframe DT and MCM MP Integration Testing were conducted from May through August 2013. LCS 2 completed PSA #2 on January 18, 2014, completed Rough Water Trial in January 2014 and is conducting Seaframe DT events in route to MCM IOT&E in 2015.

USS FORT WORTH (LCS 3) completed Final Contract Trials in April 2013, and completed PSA in July 2013. LCS 3 reached its Obligation Work Limiting Date on August 31, 2013 and transitioned to the Fleet as an operational asset. LCS 3 completed Naval Forces Sensor and Weapon Accuracy Testing, Fuel Economy Trials, Vertical Takeoff Unmanned Aerial Vehicle Dynamic Interface Testing, Advanced Stabilized Glide Scope Indicators Testing, Surface Warfare (SUW) MP and Core Seaframe DT, and Seaframe and SUW Technical Evaluation.

USS CORONADO (LCS 4) completed Acceptance Trials on August 23, 2013 with a significant improvement in the

number of high priority deficiencies identified than was experienced on LCS 2 (10 versus 40 starred cards). LCS 4 delivered to the Navy on September 27, 2013. Following delivery, LCS 4 completed an Industrial Post Delivery Availability/Post Delivery Availability in December 2013, and sailed from Mobile, AL on January 27, 2014 and arrived in San Diego, CA for an April 5, 2014 commissioning.

MILWAUKEE (LCS 5) launch and christening occurred on December 18, 2013 while the JACKSON (LCS 6) launched on December 14, 2013. JACKSON was christened March 22, 2014. As of March 2014 both LCS 5 and LCS 6 are over 80 percent complete.

MONTGOMERY (LCS 8) keel was laid on June 25, 2013. DETROIT (LCS 7) and LCS 8 continue in production. The next major milestone for LCS 7 and LCS 8 is launch which is planned to occur in July and May 2014, respectively. As of March 2014, LCS 7 is approximately 64 percent complete and LCS 8 is approximately 70 percent complete.

As of February 2014, LITTLE ROCK (LCS 9) is approximately 48 percent complete and GABRIELLE GIFFORDS (LCS 10) is approximately 50 percent complete. SIOUX CITY (LCS 11) and OMAHA (LCS 12) completed detail design and production readiness reviews with the Navy, and start of fabrication occurred on August 7, 2013, and July 18, 2013, respectively. LCS 11 keel was laid in February 2014 and LCS 12 keel laying is scheduled for July 2014, and are approximately 13 and 26 percent complete.

WICHITA (LCS 13) and MANCHESTER (LCS 14) completed thorough detail design and production readiness reviews by the Navy and have been approved to proceed with ship fabrication. BILLINGS (LCS 15) and TULSA (LCS 16) are in a pre-production phase which includes the procurement of long lead time material that is critical to maintaining a production schedule.

Contract funding was authorized for the four FY 2014 ships on March 10, 2014. INDIANAPOLIS (LCS 17) and LCS 19 will be constructed by Lockheed Martin and LCS 18 and LCS 20 will be constructed by Austal USA. LCS 18, LCS 19 and LCS 20 have not yet been named.

In April 2011, in conjunction with the LCS Seaframe Milestone B decision, USD (AT&L) certified the LCS Seaframe program pursuant to section 2366b of title 10, United States Code, with waivers. Specifically, USD (AT&L) was unable to certify three provisions and that without these waivers the Department would be unable to meet critical national security objectives. Provisions (a)1(B) (affordability) and 1(D) (funding available) were waived due to a total resource and funding shortfall in the period covered by the future-years defense program (FYDP) submitted in FY 2011 when the certification was made. The majority of the resources and funding remain outside the FYDP as submitted for FY 2015 PB. For the waiver to provision (a)1(C) (reasonable cost estimates with concurrence of Director, Cost Assessment and Program Evaluation, (D,CAPE)), the D,CAPE continues to monitor the cost estimates as the program progresses through the budget cycles and participates in annual DAB IPRs conducted by USD (AT&L).

There are no significant software-related issues with this program at this time.

Threshold Breaches

APB Breaches		
Schedule		☑
Performance		☐
Cost	RDT&E	☐
	Procurement	☐
	MILCON	☐
	Acq O&M	☐
O&S Cost		☐
Unit Cost	PAUC	☐
	APUC	☐

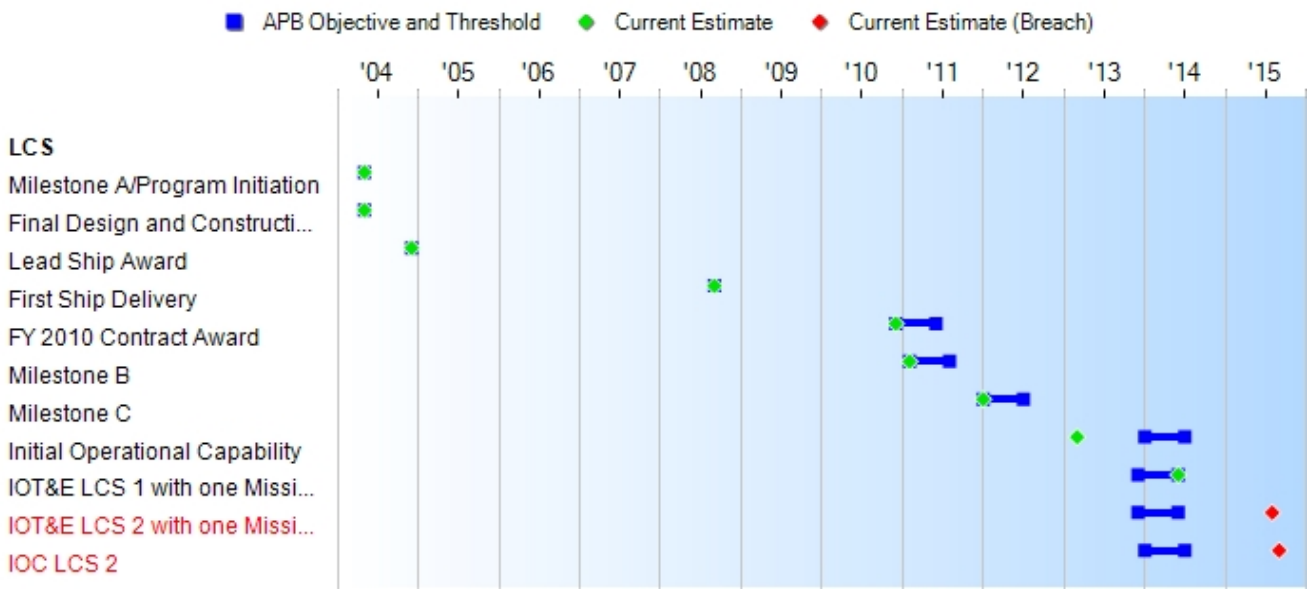
Nunn-McCurdy Breaches		
Current UCR Baseline		
	PAUC	None
	APUC	None
Original UCR Baseline		
	PAUC	None
	APUC	None

Explanation of Breach

Schedule Breach:
IOT&E LCS 2 with one Mission Package current estimate revised from December 2013 to August 2015 to align with current approved Mission Package Test & Evaluation funding and schedule.

IOC for LCS 2 current estimate revised from January 2014 to September 2015 to align with current approved Mission Package Test & Evaluation funding and schedule.

Schedule



Milestones	SAR Baseline Dev Est	Current APB Development Objective/Threshold		Current Estimate	
Milestone A/Program Initiation	MAY 2004	MAY 2004	MAY 2004	MAY 2004	
Final Design and Construction Contract Award	MAY 2004	MAY 2004	MAY 2004	MAY 2004	
Lead Ship Award	DEC 2004	DEC 2004	DEC 2004	DEC 2004	
First Ship Delivery	SEP 2008	SEP 2008	SEP 2008	SEP 2008	
FY 2010 Contract Award	DEC 2010	DEC 2010	JUN 2011	DEC 2010	
Milestone B	FEB 2011	FEB 2011	AUG 2011	FEB 2011	
Milestone C	JAN 2012	JAN 2012	JUL 2012	JAN 2012	
Initial Operational Capability	JAN 2014	JAN 2014	JUL 2014	MAR 2013	
IOT&E LCS 1 with one Mission Package	DEC 2013	DEC 2013	JUN 2014	JUN 2014	
IOT&E LCS 2 with one Mission Package	DEC 2013	DEC 2013	JUN 2014	**AUG 2015**[1]	(Ch-1)
IOC LCS 2	JAN 2014	JAN 2014	JUL 2014	**SEP 2015**[1]	(Ch-2)

[1] *APB Breach*

Change Explanations

(Ch-1) IOT&E LCS 2 with one Mission Package current estimate revised from December 2013 to August 2015 to align with current approved Mission Package Test & Evaluation funding and schedule.

(Ch-2) IOC for LCS 2 current estimate revised from January 2014 to September 2015 to align with current approved Mission Package Test & Evaluation funding and schedule.

Acronyms and Abbreviations

IOT&E - Initial Operational, Test and Evaluation

Performance

Characteristics	SAR Baseline Dev Est	Current APB Development Objective/Threshold		Demonstrated Performance	Current Estimate	
Sprint Speed (kts)	50	50	40	TBD	40	
Navigational Draft (ft)	10	10	20	15.4	15.4	(Ch-1)
Range at Transit Speed (includes payload)	4,300 nm @ 16 kts	4,300 nm @ 16 kts	3,500 nm @ 14 kts	3533 nm @ 14 kts	3533 nm @ 14 kts	(Ch-2)
Mission Package Payload (Weight)	210 MT (130 MT) mission package/80 MT mission package fuel)	210 MT (130 MT) mission package/80 MT mission package fuel)	180 MT (105 MT mission package/75 MT mission package fuel)	180 MT	180 MT (105 MT) mission package/75 MT mission package fuel)	
Core Crew Manning (# Core Crew Members)	15	15	50	50 Core Crew	50 Core Crew	(Ch-3)
Net- Ready: The system must support Net-Centric military operations. The system must be able to enter and be managed in the network, and exchange data in a secure manner to enhance mission effectiveness. The system must continuously provide survivable, interoperable, secure, and operationally effective information exchanges to enable a Net-Centric military capability.	The system must fully support execution of all operational activities identified in the applicable joint and system integrated architectures and the system must satisfy the technical requirements for Net-Centric military operations to include 1) DISR mandated GIG IT standards and profiles identified in the TV-1, 2) DISR	The system must fully support execution of all operational activities identified in the applicable joint and system integrated architectures and the system must satisfy the technical requirements for Net-Centric military operations to include 1) DISR mandated GIG IT standards and profiles identified in the TV-1, 2) DISR	The system must fully support execution of joint critical operational activities identified in the applicable joint and system integrated architectures and the system must satisfy the technical requirements for transition to Net-Centric military operations to include 1) DISR mandated GIG IT standards and profiles identified in the TV-1, 2)	TBD	The system must fully support execution of all operational activities identified in the applicable joint and system integrated architectures and the system must satisfy the technical requirements for Net-Centric military operations to include 1) DISR mandated GIG IT standards and profiles identified in the TV-1, 2) DISR	

	mandated GIG KIPs identified in the KIP declaration table, 3) NCOW RM Enterprise Services 4) IA requirements including availability, integrity, authenticat-ion, confidential-ity, and nonrepudiat-ion, and issuance of an ATO by the DAA, And 5) Operationally effective information exchanges; and mission critical performance and IA attributes, data correctness, data availability, and consistent data processing specified in the applicable joint and system integrated architecture views.	mandated GIG KIPs identified in the KIP declaration table, 3) NCOW RM Enterprise Services 4) IA requirements including availability, integrity, authenticat-ion, confidential-ity, and nonrepudiat-ion, and issuance of an ATO by the DAA, And 5) Operationally effective information exchanges; and mission critical performance and IA attributes, data correctness, data availability, and consistent data processing specified in the applicable joint and system integrated architecture views.	DISR mandated GIG KIPs identified in the KIP declaration table, 3) NCOW RM Enterprise Services 4) IA requirements including availability, integrity, authenticat-ion, confidential-ity, and nonrepudiat-ion, and issuance of an IATO by the DAA, and 5) Operationally effective information exchanges; and mission critical performance and IA attributes, data correctness, data availability, and consistent data processing specified in the applicable joint and system integrated architecture views.		mandated GIG KIPs identified in the KIP declaration table, 3) NCOW RM Enterprise Services 4) IA requirements including availability, integrity, authenticat-ion, confidential-ity, and nonrepudiat-ion, and issuance of an ATO by the DAA, And 5) Operationally effective information exchanges; and mission critical performance and IA attributes, data correctness, data availability, and consistent data processing specified in the applicable joint and system integrated architecture views.
Materiel Availability	0.712	0.712	0.64	TBD	0.64

Systems Training (Core Crew)	Trained-to-Certify at all Team (Watch Section) levels	Trained-to-Certify at all Team (Watch Section) levels	Trained-to-Qualify at individual level (billet/watch station)	TBD	Trained-to-Qualify at Individual level (billet/watch station)

Classified Performance information is provided in the classified annex to this submission.

Requirements Source

Flight 0+ Capability Development Document (CDD) dated June 17, 2008

Change Explanations

(Ch-1) Navigational Draft current estimate revised from 14 to 15.4 based on actual performance data.

(Ch-2) Range at Transit Speed current estimate revised from 3777 nm to 3533 nm to show actual performance based on calm water trial results.

(Ch-3) Core Crew Manning revised from 40 to 50 per OPNAV Requirement Sponsor decision.

Acronyms and Abbreviations

ATO - Authority to Operate
DAA - Designated Approval Authority
DISR - DoD IT Standards Registry
ft - Feet
GIG - Global Information Grid
IA - Information Assurance
IATO - Interim Authority to Operate
IT - Information Technology
KIP - Key Interface Profile
kts - Knots
MT - Metric Ton
NCOW RM - Net-Centric Operations Warfare Reference Model
nm - Nautical Miles
TV - Technical View

Track to Budget

RDT&E

Appn		BA	PE		
Navy	1319	04	0603581N		
	Project		**Name**		
	3096		Littoral Combat Ship/Littoral Combat Ship Development		
	4018		Littoral Combat Ship/Littoral Combat Ship Construction		
	9999		Littoral Combat Ship/Revised Acquisition Strategy		(Sunk)
	Notes:		Congressional Add		

Procurement

Appn		BA	PE		
Navy	1611	02	0204230N		
	Line Item		**Name**		
	2127		Littoral Combat Ship		
Navy	1611	05	0204230N		
	Line Item		**Name**		
	5110		Outfitting/Post Delivery	(Shared)	
	5300		Completion of Prior Year Shipbuilding Programs	(Shared)	
Navy	1810	01	0204230N		
	Line Item		**Name**		
	0944		LCS Class Equipment		
	1320		Seaframe LCS Training	(Shared)	

MILCON

Appn		BA	PE		
Navy	1205	01	0203176N		
	Project		**Name**		
	00245499		LCS Facility Support		
	00245500		LCS Training Facility		(Sunk)
	60201425		LCS Logistics Support Facility	(Shared)	
Navy	1205	01	0815976N		
	Project		**Name**		
	60201423		LCS Operational Trainer Facility	(Shared)	
Navy	1205	03	0901211N		

Project	Name		
64482044	Planning	(Shared)	(Sunk)

Cost and Funding

Cost Summary

Total Acquisition Cost and Quantity

Appropriation	BY2010 $M			BY2010 $M	TY $M		
	SAR Baseline Dev Est	Current APB Development Objective/Threshold		Current Estimate	SAR Baseline Dev Est	Current APB Development Objective	Current Estimate
RDT&E	3433.3	3433.3	3776.6	3086.2	3481.7	3481.7	3084.3
Procurement	28369.2	28369.2	31206.1	16337.2	33720.5	33720.5	19319.1
Flyaway	--	--	--	16337.2	--	--	19319.1
Recurring	--	--	--	16337.2	--	--	19319.1
Non Recurring	--	--	--	0.0	--	--	0.0
Support	--	--	--	0.0	--	--	0.0
Other Support	--	--	--	0.0	--	--	0.0
Initial Spares	--	--	--	0.0	--	--	0.0
MILCON	208.5	208.5	229.4	187.4	236.6	236.6	220.0
Acq O&M	0.0	0.0	--	0.0	0.0	0.0	0.0
Total	32011.0	32011.0	N/A	19610.8	37438.8	37438.8	22623.4

Confidence Level for Current APB Cost 50% -

The estimate to support this program, like most cost estimates, is built upon a product-oriented work breakdown structure based on historical actual cost information to the maximum extent possible, and, most importantly, based on conservative assumptions that are consistent with actual demonstrated contractor and government performance for a series of acquisition programs in which we have been successful.

It is difficult to calculate mathematically the precise confidence levels associated with life-cycle cost estimates prepared for Major Defense Acquisition Programs (MDAPs). Based on the rigor in methods used in building estimates, the strong adherence to the collection and use of historical cost information, and the review of applied assumptions, we project that it is about as likely the estimate will prove too low or too high for the program as described.

Quantity	SAR Baseline Dev Est	Current APB Development	Current Estimate
RDT&E	2	2	2
Procurement	53	53	30
Total	55	55	32

The estimate in this SAR represent a reduction to the LCS total program procurement quantity of Seaframes from 52 to 32, while the Navy completes the studies to support the future procurement of "a capable and lethal small surface combatant".

Cost and Funding

Funding Summary

Appropriation and Quantity Summary
FY2015 President's Budget / December 2013 SAR (TY$ M)

Appropriation	Prior	FY2014	FY2015	FY2016	FY2017	FY2018	FY2019	To Complete	Total
RDT&E	2553.8	168.2	88.7	109.1	33.4	33.9	34.9	62.3	3084.3
Procurement	7294.5	1935.0	1684.2	1739.6	1830.9	1788.0	417.3	2629.6	19319.1
MILCON	62.2	16.1	20.5	40.5	0.0	0.0	0.0	80.7	220.0
Acq O&M	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PB 2015 Total	9910.5	2119.3	1793.4	1889.2	1864.3	1821.9	452.2	2772.6	22623.4
PB 2014 Total	10213.5	2166.6	2232.8	1237.3	1369.5	1395.3	2039.7	13300.8	33955.5
Delta	-303.0	-47.3	-439.4	651.9	494.8	426.6	-1587.5	-10528.2	-11332.1

Quantity	Undistributed	Prior	FY2014	FY2015	FY2016	FY2017	FY2018	FY2019	To Complete	Total
Development	2	0	0	0	0	0	0	0	0	2
Production	0	14	4	3	3	3	3	0	0	30
PB 2015 Total	2	14	4	3	3	3	3	0	0	32
PB 2014 Total	2	14	4	4	2	2	2	3	19	52
Delta	0	0	0	-1	1	1	1	-3	-19	-20

Cost and Funding

Annual Funding By Appropriation

Annual Funding TY$
1319 | RDT&E | Research, Development, Test, and Evaluation, Navy

Fiscal Year	Quantity	End Item Recurring Flyaway TY $M	Non End Item Recurring Flyaway TY $M	Non Recurring Flyaway TY $M	Total Flyaway TY $M	Total Support TY $M	Total Program TY $M
2003	--	--	--	--	--	--	35.8
2004	--	--	--	--	--	--	116.8
2005	--	--	--	--	--	--	369.8
2006	--	--	--	--	--	--	384.5
2007	--	--	--	--	--	--	573.1
2008	--	--	--	--	--	--	200.9
2009	--	--	--	--	--	--	197.4
2010	--	--	--	--	--	--	260.0
2011	--	--	--	--	--	--	99.8
2012	--	--	--	--	--	--	146.9
2013	--	--	--	--	--	--	168.8
2014	--	--	--	--	--	--	168.2
2015	--	--	--	--	--	--	88.7
2016	--	--	--	--	--	--	109.1
2017	--	--	--	--	--	--	33.4
2018	--	--	--	--	--	--	33.9
2019	--	--	--	--	--	--	34.9
2020	--	--	--	--	--	--	62.3
Subtotal	**2**	**--**	**--**	**--**	**--**	**--**	**3084.3**

Annual Funding BY$
1319 | RDT&E | Research, Development, Test, and Evaluation, Navy

Fiscal Year	Quantity	End Item Recurring Flyaway BY 2010 $M	Non End Item Recurring Flyaway BY 2010 $M	Non Recurring Flyaway BY 2010 $M	Total Flyaway BY 2010 $M	Total Support BY 2010 $M	Total Program BY 2010 $M
2003	--	--	--	--	--	--	41.1
2004	--	--	--	--	--	--	130.5
2005	--	--	--	--	--	--	402.7
2006	--	--	--	--	--	--	406.1
2007	--	--	--	--	--	--	590.8
2008	--	--	--	--	--	--	203.4
2009	--	--	--	--	--	--	197.3
2010	--	--	--	--	--	--	256.0
2011	--	--	--	--	--	--	95.9
2012	--	--	--	--	--	--	138.8
2013	--	--	--	--	--	--	157.0
2014	--	--	--	--	--	--	153.8
2015	--	--	--	--	--	--	79.6
2016	--	--	--	--	--	--	96.0
2017	--	--	--	--	--	--	28.8
2018	--	--	--	--	--	--	28.7
2019	--	--	--	--	--	--	29.0
2020	--	--	--	--	--	--	50.7
Subtotal	**2**	**--**	**--**	**--**	**--**	**--**	**3086.2**

RDT&E for the LCS Seaframe Program includes the detail design and construction of two Flight 0 ships in addition to the program development, test and evaluation, training development, and sustained engineering.

Annual Funding TY$
1611 | Procurement | Shipbuilding and Conversion, Navy

Fiscal Year	Quantity	End Item Recurring Flyaway TY $M	Non End Item Recurring Flyaway TY $M	Non Recurring Flyaway TY $M	Total Flyaway TY $M	Total Support TY $M	Total Program TY $M
2006	--	500.0	--	--	500.0	--	500.0
2007	--	--	--	--	--	--	--
2008	--	--	--	--	--	--	--
2009	2	1017.0	--	--	1017.0	--	1017.0
2010	2	1028.8	--	--	1028.8	--	1028.8
2011	2	1189.0	--	--	1189.0	--	1189.0
2012	4	1719.3	--	--	1719.3	--	1719.3
2013	4	1789.2	--	--	1789.2	--	1789.2
2014	4	1861.2	--	--	1861.2	--	1861.2
2015	3	1638.4	--	--	1638.4	--	1638.4
2016	3	1670.6	--	--	1670.6	--	1670.6
2017	3	1756.1	--	--	1756.1	--	1756.1
2018	3	1710.1	--	--	1710.1	--	1710.1
2019	--	329.8	--	--	329.8	--	329.8
2020	--	657.8	--	--	657.8	--	657.8
2021	--	948.6	--	--	948.6	--	948.6
2022	--	1016.6	--	--	1016.6	--	1016.6
Subtotal	**30**	**18832.5**	**--**	**--**	**18832.5**	**--**	**18832.5**

Annual Funding BY$
1611 | Procurement | Shipbuilding and Conversion, Navy

Fiscal Year	Quantity	End Item Recurring Flyaway BY 2010 $M	Non End Item Recurring Flyaway BY 2010 $M	Non Recurring Flyaway BY 2010 $M	Total Flyaway BY 2010 $M	Total Support BY 2010 $M	Total Program BY 2010 $M
2006	--	535.7	--	--	535.7	--	535.7
2007	--	--	--	--	--	--	--
2008	--	--	--	--	--	--	--
2009	2	978.8	--	--	978.8	--	978.8
2010	2	958.0	--	--	958.0	--	958.0
2011	2	1073.9	--	--	1073.9	--	1073.9
2012	4	1521.6	--	--	1521.6	--	1521.6
2013	4	1555.1	--	--	1555.1	--	1555.1
2014	4	1588.1	--	--	1588.1	--	1588.1
2015	3	1371.2	--	--	1371.2	--	1371.2
2016	3	1370.8	--	--	1370.8	--	1370.8
2017	3	1412.7	--	--	1412.7	--	1412.7
2018	3	1348.7	--	--	1348.7	--	1348.7
2019	--	255.0	--	--	255.0	--	255.0
2020	--	498.6	--	--	498.6	--	498.6
2021	--	705.0	--	--	705.0	--	705.0
2022	--	740.7	--	--	740.7	--	740.7
Subtotal	**30**	**15913.9**	**--**	**--**	**15913.9**	**--**	**15913.9**

Cost Quantity Information
1611 | Procurement | Shipbuilding and Conversion, Navy

Fiscal Year	Quantity	End Item Recurring Flyaway (Aligned with Quantity) BY 2010 $M
2006	--	--
2007	--	--
2008	--	--
2009	2	1606.9
2010	2	1081.5
2011	2	1191.2
2012	4	1744.3
2013	4	1746.3
2014	4	1702.6
2015	3	1424.0
2016	3	1582.9
2017	3	1860.0
2018	3	1974.2
2019	--	--
2020	--	--
2021	--	--
2022	--	--
Subtotal	**30**	**15913.9**

Annual Funding TY$
1810 | Procurement | Other Procurement, Navy

Fiscal Year	Quantity	End Item Recurring Flyaway TY $M	Non End Item Recurring Flyaway TY $M	Non Recurring Flyaway TY $M	Total Flyaway TY $M	Total Support TY $M	Total Program TY $M
2012	--	--	20.4	--	20.4	--	20.4
2013	--	--	30.8	--	30.8	--	30.8
2014	--	--	73.8	--	73.8	--	73.8
2015	--	--	45.8	--	45.8	--	45.8
2016	--	--	69.0	--	69.0	--	69.0
2017	--	--	74.8	--	74.8	--	74.8
2018	--	--	77.9	--	77.9	--	77.9
2019	--	--	87.5	--	87.5	--	87.5
2020	--	--	6.6	--	6.6	--	6.6
Subtotal	**--**	**--**	**486.6**	**--**	**486.6**	**--**	**486.6**

Annual Funding BY$
1810 | Procurement | Other Procurement, Navy

Fiscal Year	Quantity	End Item Recurring Flyaway BY 2010 $M	Non End Item Recurring Flyaway BY 2010 $M	Non Recurring Flyaway BY 2010 $M	Total Flyaway BY 2010 $M	Total Support BY 2010 $M	Total Program BY 2010 $M
2012	--	--	19.2	--	19.2	--	19.2
2013	--	--	28.5	--	28.5	--	28.5
2014	--	--	67.1	--	67.1	--	67.1
2015	--	--	40.9	--	40.9	--	40.9
2016	--	--	60.4	--	60.4	--	60.4
2017	--	--	64.2	--	64.2	--	64.2
2018	--	--	65.5	--	65.5	--	65.5
2019	--	--	72.2	--	72.2	--	72.2
2020	--	--	5.3	--	5.3	--	5.3
Subtotal	**--**	**--**	**423.3**	**--**	**423.3**	**--**	**423.3**

Annual Funding TY$
1205 | MILCON | Military Construction, Navy and Marine Corps

Fiscal Year	Total Program TY $M
2013	62.2
2014	16.1
2015	20.5
2016	40.5
2017	--
2018	--
2019	--
2020	80.7
Subtotal	**220.0**

Annual Funding BY$
1205 | MILCON | Military Construction, Navy and Marine Corps

Fiscal Year	Total Program BY 2010 $M
2013	56.5
2014	14.4
2015	17.9
2016	34.7
2017	--
2018	--
2019	--
2020	63.9
Subtotal	**187.4**

Low Rate Initial Production

	Initial LRIP Decision	Current Total LRIP
Approval Date	2/18/2011	2/18/2011
Approved Quantity	24	24
Reference	Milestone B ADM	Milestone B ADM
Start Year	2005	2005
End Year	2015	2016

The Current Total LRIP Quantity is more than 10% of the total production quantity due to the Milestone B decision that includes the ships through FY 2015 in order to cover the LCS Seaframe program requirements.

The LRIP decision of 24 ships includes two ships procured with RDT&E, two ships procured in FY 2009, and the 20 ships being procured in a block buy arrangement in FY 2010 through FY 2015.

The FY 2015 PB submission requested $1,427 million to procure LCS hulls 21 through 23 in FY 2015. This is a reduction of one ship from the FY 2014 PB for a total of three ships vice four ships in FY 2015. The last of the block buy ships will be funded in FY 2016, award of all 20 ships of the block buy occurred in December 2010.

Foreign Military Sales

None

Nuclear Costs

None

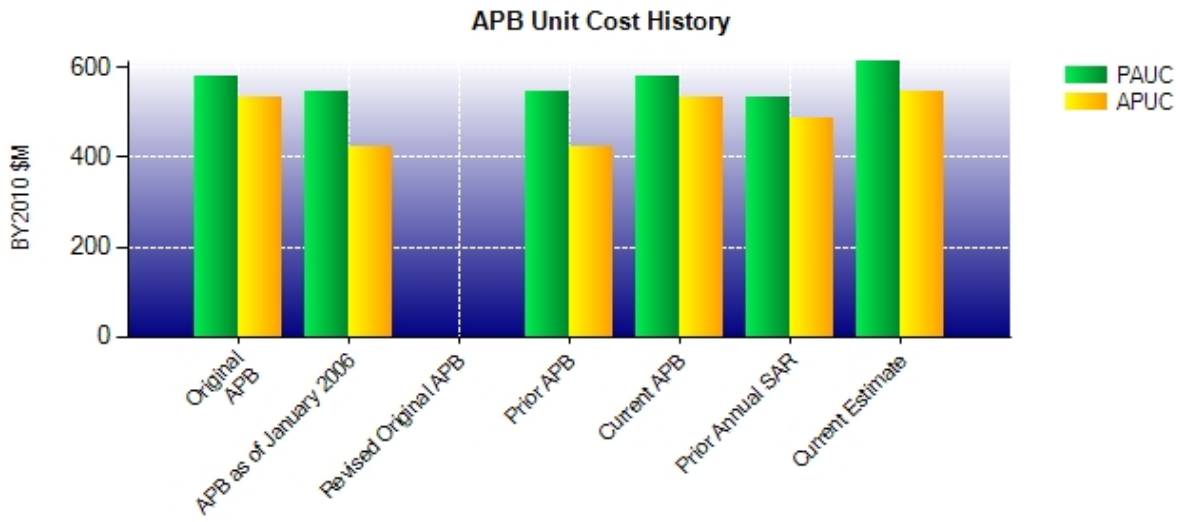
Unit Cost

Unit Cost Report

Unit Cost	BY2010 $M Current UCR Baseline (APR 2011 APB)	BY2010 $M Current Estimate (DEC 2013 SAR)	BY % Change
Program Acquisition Unit Cost (PAUC)			
Cost	32008.2	19610.8	
Quantity	55	32	
Unit Cost	581.967	612.838	+5.30
Average Procurement Unit Cost (APUC)			
Cost	28369.2	16337.2	
Quantity	53	30	
Unit Cost	535.268	544.573	+1.74

Unit Cost	BY2010 $M Original UCR Baseline (APR 2011 APB)	BY2010 $M Current Estimate (DEC 2013 SAR)	BY % Change
Program Acquisition Unit Cost (PAUC)			
Cost	32008.2	19610.8	
Quantity	55	32	
Unit Cost	581.967	612.838	+5.30
Average Procurement Unit Cost (APUC)			
Cost	28369.2	16337.2	
Quantity	53	30	
Unit Cost	535.268	544.573	+1.74

Unit Cost History



		BY2010 $M		TY $M	
	Date	PAUC	APUC	PAUC	APUC
Original APB	APR 2011	582.018	535.268	680.705	636.236
APB as of January 2006	MAY 2004	547.200	424.450	502.925	400.000
Revised Original APB	N/A	N/A	N/A	N/A	N/A
Prior APB	MAY 2004	547.200	424.450	502.925	400.000
Current APB	APR 2011	582.018	535.268	680.705	636.236
Prior Annual SAR	DEC 2012	534.538	485.338	652.990	606.636
Current Estimate	DEC 2013	612.838	544.573	706.981	643.970

SAR Unit Cost History

Current SAR Baseline to Current Estimate (TY $M)

Initial PAUC Dev Est	Changes								PAUC Current Est
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
680.705	79.659	-24.106	19.119	1.088	-49.484	0.000	0.000	26.276	706.981

Current SAR Baseline to Current Estimate (TY $M)

Initial APUC Dev Est	Changes								APUC Current Est
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
636.236	83.540	-59.806	24.607	1.160	-41.767	0.000	0.000	7.734	643.970

SAR Baseline History

Item/Event	SAR Planning Estimate (PE)	SAR Development Estimate (DE)	SAR Production Estimate (PdE)	Current Estimate
Milestone A	MAY 2004	MAY 2004	N/A	MAY 2004
Milestone B	JAN 2007	FEB 2011	N/A	FEB 2011
Milestone C	DEC 2010	JAN 2012	N/A	JAN 2012
IOC	OCT 2007	JAN 2014	N/A	MAR 2013
Total Cost (TY $M)	1211.7	37438.8	N/A	22623.4
Total Quantity	2	55	N/A	32
Prog. Acq. Unit Cost (PAUC)	605.850	680.705	N/A	706.981

Cost Variance

Summary Then Year $M				
	RDT&E	Proc	MILCON	Total
SAR Baseline (Dev Est)	3481.7	33720.5	236.6	37438.8
Previous Changes				
Economic	+42.4	+2372.7	+10.5	+2425.6
Quantity	--	-2425.9	--	-2425.9
Schedule	-76.6	-371.8	-5.5	-453.9
Engineering	--	--	--	--
Estimating	-60.4	-2963.7	-5.0	-3029.1
Other	--	--	--	--
Support	--	--	--	--
Subtotal	-94.6	-3388.7	--	-3483.3
Current Changes				
Economic	-7.8	+133.5	-2.2	+123.5
Quantity	--	-14001.7	--	-14001.7
Schedule	-32.3	+1110.0	-12.0	+1065.7
Engineering	--	+34.8	--	+34.8
Estimating	-262.7	+1710.7	-2.4	+1445.6
Other	--	--	--	--
Support	--	--	--	--
Subtotal	-302.8	-11012.7	-16.6	-11332.1
Adjustments	--	--	--	--
Total Changes	-397.4	-14401.4	-16.6	-14815.4
CE - Cost Variance	3084.3	19319.1	220.0	22623.4
CE - Cost & Funding	3084.3	19319.1	220.0	22623.4

Summary Base Year 2010 $M				
	RDT&E	Proc	MILCON	Total
SAR Baseline (Dev Est)	3433.3	28369.2	208.5	32011.0
Previous Changes				
Economic	--	--	--	--
Quantity	--	-1522.3	--	-1522.3
Schedule	-44.5	-288.8	-2.1	-335.4
Engineering	--	--	--	--
Estimating	-59.7	-2291.2	-6.4	-2357.3
Other	--	--	--	--
Support	--	--	--	--
Subtotal	-104.2	-4102.3	-8.5	-4215.0
Current Changes				
Economic	--	--	--	--
Quantity	--	-10040.2	--	-10040.2
Schedule	-31.3	+863.3	-10.4	+821.6
Engineering	--	+29.0	--	+29.0
Estimating	-211.6	+1218.2	-2.2	+1004.4
Other	--	--	--	--
Support	--	--	--	--
Subtotal	-242.9	-7929.7	-12.6	-8185.2
Adjustments	--	--	--	--
Total Changes	-347.1	-12032.0	-21.1	-12400.2
CE - Cost Variance	3086.2	16337.2	187.4	19610.8
CE - Cost & Funding	3086.2	16337.2	187.4	19610.8

Previous Estimate: December 2012

RDT&E	$M	
Current Change Explanations	Base Year	Then Year
Revised escalation indices. (Economic)	N/A	-7.8
Adjustment for current and prior escalation. (Estimating)	+4.3	+4.6
Revised estimate for rephasing of testing and support from FY 2015 to FY 2016. (Schedule)	-1.3	0.0
Revised estimate for reprogramming of Research and Development to support Mine Countermeasure test and evaluation. (Schedule)	-30.0	-32.3
Revised estimate due to sequestration reductions in FY 2013. (Estimating)	-17.7	-18.9
Revised estimate to reflect the application of new outyear escalation indices. (Estimating)	+1.3	+1.3
Revised estimate due to Congressional reductions in FY 2012 - FY 2014. (Estimating)	-44.5	-48.4
Revised estimate for proper phasing of Research and Development activities. (Estimating)	-5.0	-4.1
Revised estimate due to the reduction in ship procurement quantity from 52 to 32 (FY 2021 to FY 2026). (Estimating) (QR)	-150.0	-197.2
RDT&E Subtotal	-242.9	-302.8

(QR) Quantity Related

Procurement	$M	
Current Change Explanations	Base Year	Then Year
Revised escalation indices. (Economic)	N/A	+133.5
Adjustment for current and prior escalation. (Estimating)	-4.6	-5.1
Total Quantity variance resulting from the reduction in ship procurement quantity from 50 to 30 LCS (FY 2019 to FY 2026) (Shipbuilding and Conversion, Navy (SCN)). (Subtotal)	-9081.6	-12590.9
Quantity variance resulting from the reduction in ship procurement quantity from 50 to 30 LCS (FY 2019 to FY 2026)(SCN). (Quantity)	(-10348.2)	(-14348.5)
Allocation to Schedule resulting from Quantity change. (Schedule) (QR)	(+141.2)	(+196.0)
Allocation to Estimating resulting from Quantity change. (Estimating) (QR)	(+1125.4)	(+1561.6)
Additional Quantity Variance due to the reduction in ship procurement quantity from 50-30 LCS (SCN). (Quantity)	+308.0	+346.8
Change in procurement buy profile due to schedule allocation associated with realignment of LCS in the 30 year shipbuilding plan (FY 2015 to FY 2018) (SCN). (Schedule)	+722.1	+914.0
Revised estimate reflects addition of design improvement in ship baseline. (Engineering)	+29.0	+34.8
Revised estimate to reflect application of new outyear escalation indices. (Estimating)	-30.8	-40.8
Revised estimate for pricing of trainer and battle spare requirements. (Estimating)	+41.8	+53.7
Revised estimate due to sequestration reductions in FY 2010 - FY 2013 impacting the programs ability to fund shipbuilding contracts to the program manager's estimate. (Estimating)	-165.7	-184.2

Revised estimate due to Congressional reduction in FY 2012. (Estimating)	-25.5	-28.8
Revised estimate for proper pricing of outfitting and post delivery requirements. (Estimating)	+106.9	+146.4
Revised estimate for proper pricing of ship construction cost due in part to the impacts of sequestration. (Estimating)	+211.5	+257.7
Revised estimate for contracted services reductions. (Estimating)	-40.8	-49.8
Procurement Subtotal	-7929.7	-11012.7

(QR) Quantity Related

MILCON	$M	
Current Change Explanations	**Base Year**	**Then Year**
Revised escalation indices. (Economic)	N/A	-2.2
Adjustment for current and prior escalation. (Estimating)	+0.9	+1.0
Revised estimate for proper phasing of MILCON requirements. (Schedule)	-10.4	-12.0
Revised estimate due to sequestration and budget reductions in FY 2013. (Estimating)	-3.1	-3.4
MILCON Subtotal	-12.6	-16.6

Contracts

Appropriation: Procurement	
Contract Name	**Construction - LCS 4**
Contractor	General Dynamics
Contractor Location	700 Washington St. Bath, ME 04530
Contract Number, Type	N00024-09-C-2302/101, FPIF
Award Date	May 01, 2009
Definitization Date	May 01, 2009

Initial Contract Price ($M)			Current Contract Price ($M)			Estimated Price at Completion ($M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
357.2	410.2	1	382.2	438.6	1	398.7	402.0

Target Price Change Explanation

The difference between the Initial Contract Price Target and the Current Contract Price Target is due to the execution of change order budget on the contract.

Variance	Cost Variance	Schedule Variance
Cumulative Variances To Date (1/26/2014)	-53.1	-2.2
Previous Cumulative Variances	-52.9	-8.0
Net Change	-0.2	+5.8

Cost and Schedule Variance Explanations

The unfavorable net change in the cost variance is due to a negligible change in performance.

The favorable net change in the schedule variance is due to completion of late finishing tasks.

Contract Comments

This contract is more than 90% complete; therefore, this is the final report for this contract.

LCS 4 delivered to the Navy in September 2013.

This report contains the recurring construction contract line item 0101 only. It does not include the value of material reused from the FY 2006 terminated ship contracts.

Appropriation: Procurement	
Contract Name	**Construction - LCS 5**
Contractor	Lockheed Martin
Contractor Location	2323 Eastern Boulevard Middle River, MD 21220
Contract Number, Type	N00024-11-C-2300/1, FPIF
Award Date	December 29, 2010
Definitization Date	December 29, 2010

Initial Contract Price ($M)			Current Contract Price ($M)			Estimated Price at Completion ($M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
436.8	498.1	1	442.4	504.1	1	455.9	461.5

Target Price Change Explanation

The difference between the Initial Contract Price Target and the Current Contract Price Target is due to execution of change order budget on the contract.

Variance	Cost Variance	Schedule Variance
Cumulative Variances To Date (1/26/2014)	-24.5	-11.7
Previous Cumulative Variances	-12.0	-32.5
Net Change	-12.5	+20.8

Cost and Schedule Variance Explanations

The unfavorable net change in the cost variance is due to rework and inefficiencies in the construction trades.

The favorable net change in the schedule variance is due to an over target schedule adjustment.

Appropriation: Procurement

Contract Name	**Construction - LCS 6**
Contractor	Austal USA
Contractor Location	1 Dunlap Drive Mobile, AL 36602
Contract Number, Type	N00024-11-C-2301/1, FPIF
Award Date	December 29, 2010
Definitization Date	December 29, 2010

Initial Contract Price ($M)			Current Contract Price ($M)			Estimated Price at Completion ($M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
432.0	480.4	1	442.4	491.5	1	453.0	475.3

Target Price Change Explanation

The difference between the Initial Contract Price Target and the Current Contract Price Target is due to the execution of change order budget on the contract.

Variance	Cost Variance	Schedule Variance
Cumulative Variances To Date (1/26/2014)	-38.0	-14.3
Previous Cumulative Variances	-10.7	-13.9
Net Change	-27.3	-0.4

Cost and Schedule Variance Explanations

The unfavorable net change in the cost variance is due to rework and over-manning to maintain schedule.

The unfavorable net change in the schedule variance is due to rework as Austal works through re-prioritization efforts.

Appropriation: Procurement	
Contract Name	**Construction - LCS 7**
Contractor	Lockheed Martin
Contractor Location	2323 Eastern Boulevard Middle River, MD 21220
Contract Number, Type	N00024-11-C-2300/2, FPIF
Award Date	March 07, 2011
Definitization Date	March 17, 2011

Initial Contract Price ($M)			Current Contract Price ($M)			Estimated Price at Completion ($M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
376.6	430.4	1	379.1	433.1	1	377.3	395.3

Target Price Change Explanation

The difference between the Initial Contract Price Target and the Current Contract Price Target is due to the execution of change order budget on the contract.

Variance	Cost Variance	Schedule Variance
Cumulative Variances To Date (1/26/2014)	-2.0	-1.4
Previous Cumulative Variances	+0.1	-28.7
Net Change	-2.1	+27.3

Cost and Schedule Variance Explanations

The unfavorable net change in the cost variance is due to construction trade inefficiencies associated with new module construction sequences.

The favorable net change in the schedule variance is due to an over target schedule adjustment.

Appropriation: Procurement	
Contract Name	**Construction - LCS 8**
Contractor	Austal USA
Contractor Location	1 Dunlap Drive Mobile, AL 36602
Contract Number, Type	N00024-11-C-2301/2, FPIF
Award Date	March 17, 2011
Definitization Date	March 17, 2011

Initial Contract Price ($M)			Current Contract Price ($M)			Estimated Price at Completion ($M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
368.6	405.7	1	375.3	412.8	1	377.4	401.1

Target Price Change Explanation

The difference between the Initial Contract Price Target and the Current Contract Price Target is due to the execution of change order budget on the contract.

Variance	Cost Variance	Schedule Variance
Cumulative Variances To Date (1/26/2014)	-8.2	-1.9
Previous Cumulative Variances	-2.5	-22.4
Net Change	-5.7	+20.5

Cost and Schedule Variance Explanations

The unfavorable net change in the cost variance is due to inefficiencies in the construction trades.

The favorable net change in the schedule variance is due to an over target schedule adjustment.

Appropriation: Procurement

Contract Name	**Construction - LCS 9**
Contractor	Lockheed Martin
Contractor Location	2323 Eastern Blvd Middle River MD 21220
Contract Number, Type	N00024-11-C-2300/3, FPIF
Award Date	March 16, 2012
Definitization Date	March 16, 2012

Initial Contract Price ($M)			Current Contract Price ($M)			Estimated Price at Completion ($M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
363.6	416.2	1	365.4	418.2	1	365.8	382.5

Target Price Change Explanation

The difference between the Initial Contract Price Target and the Current Contract Price Target is due to the execution of change order budget on the contract.

Variance	Cost Variance	Schedule Variance
Cumulative Variances To Date (1/26/2014)	+1.0	-15.7
Previous Cumulative Variances	+1.7	-0.8
Net Change	-0.7	-14.9

Cost and Schedule Variance Explanations

The unfavorable net change in the cost variance is due to inefficiencies in the construction trades.

The unfavorable net change in the schedule variance is due to undermanning to the plan to maintain schedule.

Deliveries and Expenditures

Delivered to Date	Plan to Date	Actual to Date	Total Quantity	Percent Delivered
Development	2	2	2	100.00%
Production	2	2	30	6.67%
Total Program Quantity Delivered	4	4	32	12.50%

Expended and Appropriated (TY $M)			
Total Acquisition Cost	22623.4	Years Appropriated	12
Expended to Date	6164.8	Percent Years Appropriated	60.00%
Percent Expended	27.25%	Appropriated to Date	12029.8
Total Funding Years	20	Percent Appropriated	53.17%

The above data is current as of 2/22/2013.

Operating and Support Cost

LCS

Assumptions and Ground Rules

Cost Estimate Reference:
Source of estimate is a April 2014 updated Naval Sea Systems Command developed O&S cost estimate reflecting the decrease in ship Quantity from 55 to 32, the increase in ship core crew from 40 to 50 and an associated increase in shore support personnel. Maintenance planning and execution estimate revised to include LCS specific requirements of fly away teams, Emergent Restricted Technical Availability, Other Restricted Technical Availability and associated habitability expenses. Additional updates to the maintenance estimate from LCS operational and deployment data is under review and being monitored for future impacts to the program including impacts of the latest version of Chief of Naval Operations Note 4790. Other updates include 2015 inflation guidance, military standard composite rates and indirect rates, civilian personnel rates, and price of fuel.

Sustainment Strategy:
The Program Executive Office Littoral Combat Ship Fleet Introduction and Sustainment branch is responsible for the operation, maintenance, and support of the LCS Seaframe systems. Costs are incurred in preparation for and after the fielding of each LCS Seaframe. Operating and sustainment costs assume:

a) 32 Seaframes with a service life of 25 years

b) 48 Crews (50 personnel: 8 Officers/42 Enlisted per crew)

c) Steaming Hours underway/not underway (4421 underway/718 not underway)

d) Defense Logistics Agency Acquisition Price of Fuel (CY 2010) $112.56/barrel

e) Government Furnished Equipment and Contractor Furnished Equipment systems configurations are based on the equipment selected by each contractor.

Sustainment execution includes maintenance execution planning, planned and emergent maintenance; planning for Chief of Naval Operations scheduled availabilities, facilities maintenance; fly-away support; modernization and engineering support services of LCS ships homeported in San Diego, California and deploying worldwide. Core services and maintenance execution are currently being performed under an Interim Support Plan. Transition to In-Service sustainment under a Product Support Plan is scheduled to occur in FY 2015.

Antecedent Information:
There is no Antecedent for LCS.

Unitized O&S Costs BY2010 $K		
Cost Element	**LCS 32 Seaframes average annual cost per ship**	**No Antecedent (Antecedent) N/A**
Unit-Level Manpower	9.981	0.000
Unit Operations	7.860	0.000
Maintenance	7.600	0.000
Sustaining Support	6.301	0.000
Continuing System Improvements	7.732	0.000
Indirect Support	4.403	0.000
Other	0.000	0.000
Total	43.877	--

Unitized Cost Comments:

Assumes 32 ships with a 25 year service life with an average annual cost of $43.877.

	Total O&S Cost $M			
	Current Development APB Objective/Threshold		Current Estimate	
	LCS		LCS	No Antecedent (Antecedent)
Base Year	50479.0	55526.9	35101.9	N/A
Then Year	87089.3	N/A	48843.4	N/A

Total O&S Costs Comments:

O&S Cost Variance		
Category	**Base Year 2010 $M**	**Change Explanation**
Prior SAR Total O&S Estimate December 2012	50,334.556	
Cost Estimating Methodology	-104.803	Redefined Rate for Civilian Shore Support, Updated Facilities Sustainment Estimate
Cost Data Update	-1,169.998	Additional Navy Visibility and Management of Operating and Support Costs data added to Cost Estimating Relationships, Updated to the 2015 NCCA Inflation Guidance, Updated Indirect Support Rates via Manpower cost Estimating Tool for Enhanced Online Reporting data
Labor Rate	-101.428	Updated to the FY 2014 OSD Military Standard Composite Rates
Energy Rate	-249.546	Updated to the FY 2013 DLA Price of Fuel Guidance: Fuel Price decreased by $5.04/barrel
Technical Input	4,210.179	Increased the core crew per ship, increased the number of shore support personnel; Updated maintenance with LCS specific requirements (i.e. Fly Away Teams, Emergent Repairs, Other Technical Repairs and Habitability)
		Decreased quantity by three ships; updated ship building

Programmatic/Planning Factors	-17,817.031	profile; decrease the number of total crews; updated crew phasing profile; updated Award from Delivery schedule (48 months)
Other	0.000	N/A
Total Changes	-15,232.627	
Current Estimate	**35,101.929**	

Disposal Costs:

$88.1 million in BY 2010 for 32 ships as of April 2014. The Current Estimate does not include these disposal costs.