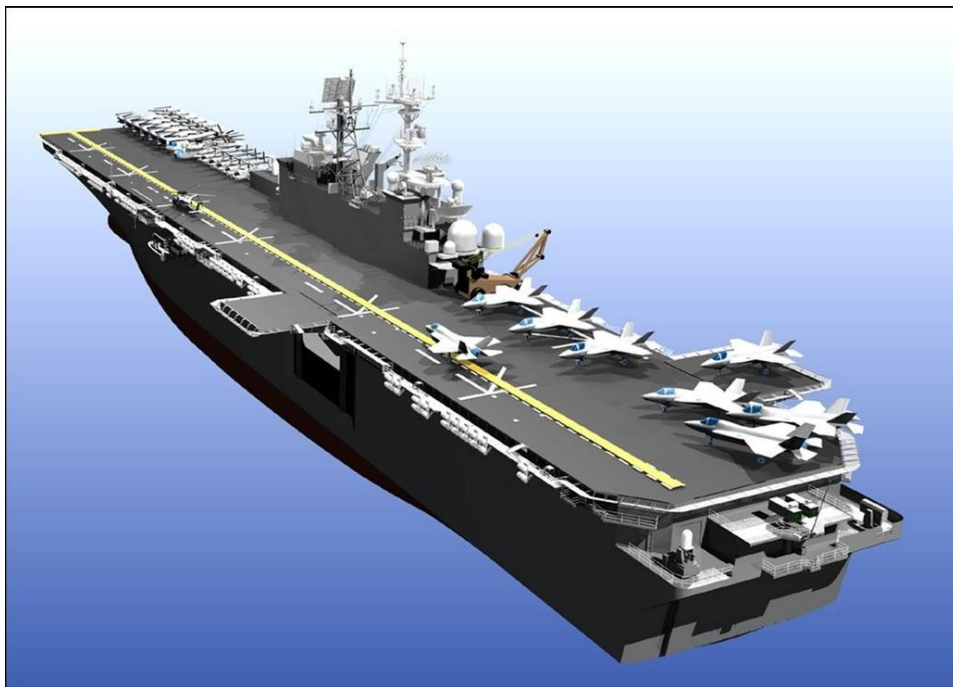




Selected Acquisition Report (SAR)

RCS: DD-A&T(Q&A)823-333



LHA 6 America Class Amphibious Assault Ship (LHA 6)

As of FY 2011 President's Budget

Defense Acquisition Management
Information Retrieval
(DAMIR)

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Common Acronyms and Abbreviations for MDAP Programs

Acq O&M - Acquisition-Related Operations and Maintenance
ACAT - Acquisition Category
ADM - Acquisition Decision Memorandum
APB - Acquisition Program Baseline
APPN - Appropriation
APUC - Average Procurement Unit Cost
\$B - Billions of Dollars
BA - Budget Authority/Budget Activity
Blk - Block
BY - Base Year
CAPE - Cost Assessment and Program Evaluation
CARD - Cost Analysis Requirements Description
CDD - Capability Development Document
CLIN - Contract Line Item Number
CPD - Capability Production Document
CY - Calendar Year
DAB - Defense Acquisition Board
DAE - Defense Acquisition Executive
DAMIR - Defense Acquisition Management Information Retrieval
DoD - Department of Defense
DSN - Defense Switched Network
EMD - Engineering and Manufacturing Development
EVM - Earned Value Management
FOC - Full Operational Capability
FMS - Foreign Military Sales
FRP - Full Rate Production
FY - Fiscal Year
FYDP - Future Years Defense Program
ICE - Independent Cost Estimate
IOC - Initial Operational Capability
Inc - Increment
JROC - Joint Requirements Oversight Council
\$K - Thousands of Dollars
KPP - Key Performance Parameter
LRIP - Low Rate Initial Production
\$M - Millions of Dollars
MDA - Milestone Decision Authority
MDAP - Major Defense Acquisition Program
MILCON - Military Construction
N/A - Not Applicable
O&M - Operations and Maintenance
ORD - Operational Requirements Document
OSD - Office of the Secretary of Defense
O&S - Operating and Support
PAUC - Program Acquisition Unit Cost

PB - President's Budget
PE - Program Element
PEO - Program Executive Officer
PM - Program Manager
POE - Program Office Estimate
RDT&E - Research, Development, Test, and Evaluation
SAR - Selected Acquisition Report
SCP - Service Cost Position
TBD - To Be Determined
TY - Then Year
UCR - Unit Cost Reporting
U.S. - United States
USD(AT&L) - Under Secretary of Defense (Acquisition, Technology and Logistics)

Program Information

Program Name

LHA Replacement Amphibious Assault Ship (LHA 6)

DoD Component

Navy

Responsible Office

CAPT JEFFERY RIEDEL
PROGRAM EXECUTIVE OFFICE, SHIPS
AMPHIBIOUS WARFARE PROGRAM OFFICE
1333 ISAAC HULL AVENUE
WASHINGTON, DC 20376-2101

Phone: 202-781-0940
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DSN Fax: 326-4596
Date Assigned: September 25, 2006

jeffery.riedel@navy.mil

References

SAR Baseline (Development Estimate)

Defense Acquisition Executive (DAE) Approved Acquisition Program Baseline (APB) dated January 12, 2006

Approved APB

Defense Acquisition Executive (DAE) Approved Acquisition Program Baseline (APB) dated January 12, 2006

Mission and Description

The LHA Replacement program is planned to replace existing LHA 1 class Amphibious Assault Ships which reach the end of their extended service lives between 2011 and 2015.

The LHA Replacement/LHA 6 will be the key platform in the Expeditionary Strike Group (ESG) of the future and will provide the Joint Force Commander options to project power. It will embark and support all of the Short Take-off Vertical Landing (STOVL) and Vertical Take-off Landing (VTOL) Marine aviation assets in the ESG, including the MV-22 and the F-35B, the STOVL model of the Joint Strike Fighter (JSF). The ship will embark over 1,600 Marines and transport them and their equipment ashore by rotary-wing aircraft.

The LHA Replacement class is an LHD variant with enhanced aviation capability.

Executive Summary

June 30, 2008, the Secretary of the Navy officially announced the name of LHA 6 as the USS AMERICA. During 2008 and 2009, Northrop Grumman Shipbuilding (NGSB) Gulf Coast (GC) has continued their design and production efforts on LHA 6 (AMERICA). The LHA 6 keel laying was completed April 27, 2009, one week ahead of schedule.

To help ease the workload and facility planning in the NGSB-GC yard, sections of the ship were contracted to be outsourced and constructed at facilities separate from NGSB-GC. The contract for four units of Module 1 (bow section) was codified December 14, 2007, and construction began February 4, 2008, at NGSB Newport News (NN). Module 3 (superstructure) units were outsourced to Tecnico Marine of Mobile, AL March 26, 2009, and fabrication started May 1, 2009. All four of the Module 1 units have been delivered to NGSB-GC. Several Module 3 units have been completed by and shipped back to NGSB-GC for pre-outfitting prior to erection.

September 11, 2008, a contractual Production Readiness Review (PRR) was conducted. The review addressed readiness of the Design, Manpower, Material, Quality Assurance, Production Methods, Pre-outfitting and Facilities to successfully start and sustain production of LHA 6. ASN (RD&A) requested that a second PRR be held prior to the start of Phase 2 unit construction, which was planned by the shipyard to start March 2009. PRR#2 was held February 2009. A PRR completion Report to Congress was signed by the Secretary of the Navy on July 8, 2009, and submitted to Congress.

Quarterly Progress and Design Reviews have been held on a routine basis to monitor and assess the status of design and production at NGSB-GC and in outsourced facilities.

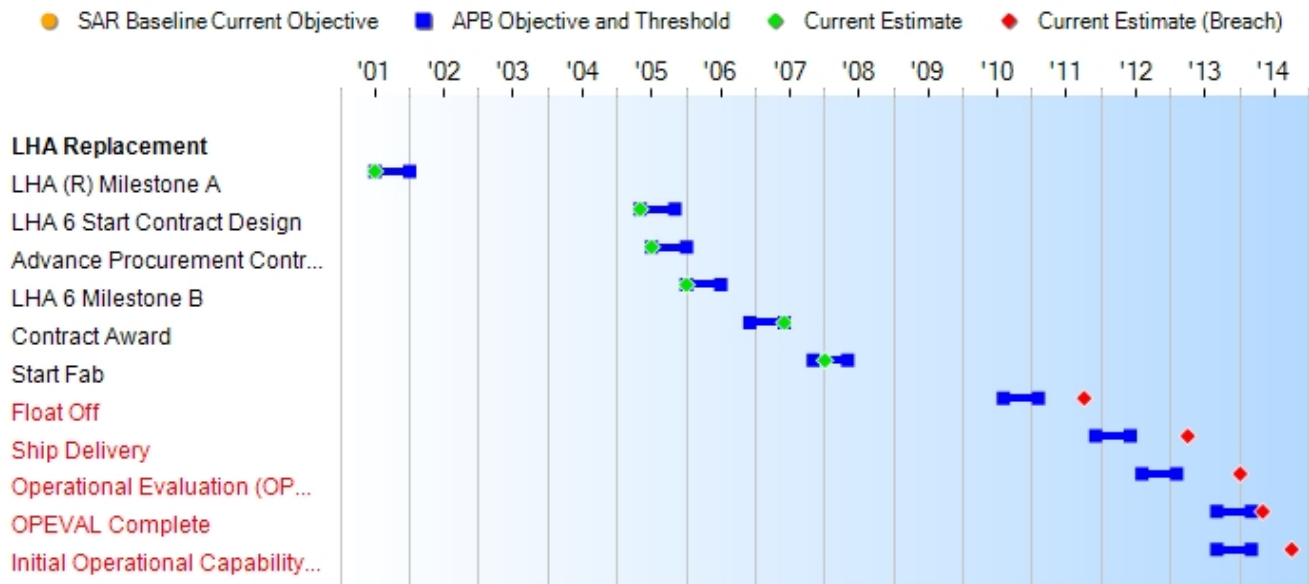
In the fall of 2008, NGSB-GC formally notified the Navy of a projected delay in ship delivery from August 31, 2012 to April 8, 2013. The Navy agreed to allow NGSB-GC to reschedule their baseline. This rescheduled baseline was assessed at the Vessel Integrated Baseline Review (IBR) held with NGSB-GC June 15-19, 2009. The Navy is negotiating with NGSB-GC for additional slippage in schedule and appropriate contract considerations.

NGSB-GC's latest cost performance assessment reflects a contract Best Case Latest Revised Estimate (LRE) that exceeds the contract Target Cost which would cause a potential budget shortfall. Current contract performance data is still insufficient (~11% production complete) to develop a pedigreed Program Manager's Estimate at Completion (PMEAC). The program office will develop a PMEAC once additional performance (20% production complete) data is available in 3rd Quarter 2010 to further evaluate the possibility of contract costs exceeding target costs and the effectiveness of current mitigation strategies.

Threshold Breaches

APB Breaches		Explanation of Breach
Schedule	<input checked="" type="checkbox"/>	<p>On December 30, 2008, the LHA Replacement Program reported further deviation in its Ship Delivery schedule from its approved Acquisition Program Baseline (APB) of January 12, 2006 due to lack of production resources. The current estimate extends the schedule for Ship Delivery to April 2013, a period of eight months from the previous estimate. The schedule change caused changes to the Milestones as follows: Float Off from FEB 2011 to OCT 2011, Ship Delivery from AUG 2012 to APR 2013, OPEVAL Start from SEP 2012 to JAN 2014, OPEVAL Complete from SEP 2014 to May 2014, IOC from FEB 2014 to OCT 2014. Subsequently OPEVAL Start and OPEVAL Complete were rescheduled respectively to MAY 2014 and OCT 2014.</p> <p>APB Cost Breach for RDT&E due to including LHA 7 & LHA 8 RDT&E through the FYDP.</p> <p>APB Cost Breach for Procurement due to including LHA 7 Advance Procurement, Split Funding, and Outfitting through the FYDP.</p>
Performance	<input type="checkbox"/>	
Cost	<input checked="" type="checkbox"/>	
RDT&E	<input checked="" type="checkbox"/>	
Procurement	<input type="checkbox"/>	
MILCON	<input type="checkbox"/>	
Acq O&M	<input type="checkbox"/>	
O&S Cost	<input type="checkbox"/>	
Unit Cost	<input type="checkbox"/>	
PAUC	<input type="checkbox"/>	
APUC	<input type="checkbox"/>	
Nunn-McCurdy Breaches		
Current UCR Baseline		
PAUC	None	
APUC	None	
Original UCR Baseline		
PAUC	None	
APUC	None	

Schedule



Schedule Events				
Events	SAR Baseline Development Estimate	Current APB Development Objective/Threshold		Current Estimate
LHA (R) Milestone A	Jul 2001	Jul 2001	Jan 2002	Jul 2001
LHA 6 Start Contract Design	May 2005	May 2005	Nov 2005	May 2005
Advance Procurement Contract	Jul 2005	Jul 2005	Jan 2006	Jul 2005
LHA 6 Milestone B	Jan 2006	Jan 2006	Jul 2006	Jan 2006
Contract Award	Dec 2006	Dec 2006	Jun 2007	Jun 2007
Start Fab	Nov 2007	Nov 2007	May 2008	Jan 2008 (Ch-1)
Float Off	Aug 2010	Aug 2010	Feb 2011	Oct 2011 ¹ (Ch-2)
Ship Delivery	Dec 2011	Dec 2011	Jun 2012	Apr 2013 ¹ (Ch-2)
Operational Evaluation (OPEVAL) Start	Aug 2012	Aug 2012	Feb 2013	Jan 2014 ¹ (Ch-2)
OPEVAL Complete	Sep 2013	Sep 2013	Mar 2014	May 2014 ¹ (Ch-2)
Initial Operational Capability (IOC)	Sep 2013	Sep 2013	Mar 2014	Oct 2014 ¹ (Ch-2)

¹ APB Breach

Change Explanations

(Ch-1) Start Fab Current Estimate changed from APR 2008 to JAN 2008 to reflect Start Fab at Northrop Grumman Ship Building-Gulf Coast.

(Ch-2) On December 30, 2008, the LHA Replacement Program reported further deviation in its Ship Delivery schedule from its approved Acquisition Program Baseline (APB) of January 12, 2006 due to lack of production resources. The current estimate extends the schedule for Ship Delivery to April 2013, a period of eight months from the previous estimate. The schedule change caused changes to the Milestones as follows: Float Off from FEB 2011 to OCT 2011, Ship Delivery from AUG 2012 to APR 2013, OPEVAL Start from SEP 2012 to JAN 2014, OPEVAL Complete from SEP 2014 to May 2014, IOC from FEB 2014 to OCT 2014. Subsequently OPEVAL Start and OPEVAL Complete were rescheduled respectively to MAY 2014 and OCT 2014.

Acronyms and Abbreviations

APB - Acquisition Program Baseline

Fab - Fabrication

IOC - Initial Operational Capability

NGSB-GC - Northrop Grumman Ship Building-Gulf Coast

OPEVAL - Operational Evaluation

Performance

Performance Characteristics				
SAR Baseline Development Estimate	Current APB Development Objective/Threshold		Demonstrated Performance	Current Estimate
Net Ready				
100% of interfaces; services; policy-enforcement controls; and data correctness, availability and processing requirements in the joint integrated architecture	100% of interfaces; services; policy-enforcement controls; and data correctness, availability and processing requirements in the joint integrated architecture	100% of interfaces; services; policy-enforcement controls; and data correctness, availability and processing requirements designated as enterprise level or critical in the joint integrated architecture	TBD	100% of interfaces; services; policy-enforcement controls; and data correctness, availability and processing requirements designated as enterprise level or critical in the joint integrated architecture
Vertical Take Off and Landing land/launch spots				
9 CH-53E/MV-22	9 CH-53E/MV-22	9 CH-53E/MV-22	TBD	9 CH-53E/MV-22
F-35B capacity				
23 Aircraft	23 Aircraft	20 Aircraft	TBD	23 Aircraft
Aviation operations				
6 Spots 12 hrs/day (Sustained) 6 Spots 24 hrs/day for six consecutive days (Surge)	6 Spots 12 hrs/day (Sustained) 6 Spots 24 hrs/day for six consecutive days (Surge)	6 Spots 12 hrs/day (Sustained) 6 Spots 24 hrs/day for six consecutive days (Surge)	TBD	6 Spots 12 hrs/day (Sustained) 6 Spots 24 hrs/day for six consecutive days (Surge)
Vehicle space				
12,000 sq. ft.	12,000 sq. ft.	10,000 sq. ft.	TBD	11,760 sq. ft.
Total manpower (includes ship's force and all embarked elements such as troops, staffs, detachments, etc.)				
2,891 Persons	2,891 Persons	2,891 Persons	TBD	2,891 Persons
Cargo space				
160,000 cu. ft.	160,000 cu. ft.	130,000 cu. ft.	TBD	160,000 cu. ft.
Troop accommodations				
1,686 Persons	1,686 Persons	1,626 Persons	TBD	1,686 Persons
Survivability: Navy Survivability Policy for Surface Ships				
Equals threshold, implement recommendations of the NAVSEA USS COLE	Equals threshold, implement recommendations of the NAVSEA COLE	Level II per OPNAV-INST 9070.1 of 23 Sep 1988 (LHA(R) cargo magazine	TBD	Equals threshold, implement recommendations of the NAVSEA COLE

Survivability Review Group Phase II Analysis Report of Amphibious Ships, April 2003	Survivability Review Group Phase II Analysis Report of Amphibious Ships, April 2003	protection as stated in para. 6.b.17 of the CDD		Survivability Review Group Phase II Analysis Report of Amphibious Ships, Apr 2003
Force Protection: Collective Protection System (CPS)				
Expanded CBR protection that provides a toxic-free environment (where it is not necessary to wear protective clothing or masks) for 40% of crew in berthing, messing, sanitary, and battle dressing facilities as well as key operational spaces that can be affordably integrated into ship design	Expanded CBR protection that provides a toxic-free environment (where it is not necessary to wear protective clothing or masks) for 40% of crew in berthing, messing, sanitary, and battle dressing facilities as well as key operational spaces that can be affordably integrated into ship design	CBR protection that provides a toxic-free environment (where it is not necessary to wear protective clothing or masks) for 40% of crew in berthing, messing, sanitary, and battle dressing facilities	TBD	CBR protection that provides a toxic-free environment (where it is not necessary to wear protective clothing or masks) for 40% of crew in berthing, messing, sanitary, and battle dressing facilities
Force Protection: Decontamination Stations				
Four decontaminat-ion stations (two CPS, one casualty, and one conventional) providing a capability of decontamination an avg of ten people per hr per station	Four decontaminat-ion stations (two CPS, one casualty, and one conventional) providing a capability of decontamination an avg of ten people per hr per station	Four decontaminat-ion stations (two CPS, one casualty, and one conventional) providing a capability of decontamination an avg of ten people per hr per station	TBD	Four decontamination stations (two CPS, one casualty, and one conventional) providing a capability of decontamination an avg of ten people per hr per station

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

Requirements Reference

Capability Development Document (CDD) dated December 19, 2005 and Capability Development Document (CDD) dated December 17, 2009

Change Explanations

None

Track to Budget

RDT&E

Appn	BA	PE	
Navy	1319	04	0603564N
	Project	Name	
	0408	Ship Preliminary Design & Feasibility Studies/Ship Development (Shared) (Sunk)	
Navy	1319	05	0604567N
	Project	Name	
	2465	Ship Contract Design/Live Fire Test & Evaluation/LHA(R) (Shared)	
	9235	Ship Contract Design/Live Fire Test & Evaluation/LHA (R) DESIGN (Shared) (Sunk)	
	9236	Ship Contract Design/Live Fire Test & Evaluation/LHA(R) DESIGN (Shared) (Sunk)	

Procurement

Appn	BA	PE	
Navy	1611	03	0204411N
	Line Item	Name	
	304100	LHA Replacement	
Navy	1611	05	0204411N
	Line Item	Name	
	530000	Completion of Prior Year Shipbuilding Programs (Shared)	
	511000	Outfitting (Shared)	

Acq O&M

Appn	BA	PE	
Navy	1804	01	0204411N
	Project	Name	
	6C	LHA(R) TADTAR (Shared)	

Cost and Funding

Cost Summary

Total Acquisition Cost							
Appropriation	BY 2006 \$M			BY 2006 \$M	TY \$M		
	SAR Baseline Development Estimate	Current APB Development Objective/Threshold		Current Estimate	SAR Baseline Development Estimate	Current APB Development Objective	Current Estimate
RDT&E	199.9	199.9	219.9	262.7 ¹	197.5	197.5	264.4
Procurement	2677.5	2677.5	2945.2	5602.2 ¹	2896.0	2896.0	6561.2
Flyaway	--	--	--	5602.2	--	--	6561.2
Recurring	--	--	--	5602.2	--	--	6561.2
Non Recurring	--	--	--	0.0	--	--	0.0
Support	--	--	--	0.0	--	--	0.0
Other Support	--	--	--	0.0	--	--	0.0
Initial Spares	--	--	--	0.0	--	--	0.0
MILCON	0.0	0.0	--	0.0	0.0	0.0	0.0
Acq O&M	0.0	0.0	--	1.2	0.0	0.0	1.2
Total	2877.4	2877.4	N/A	5866.1	3093.5	3093.5	6826.8

¹ APB Breach

Total Quantity			
Quantity	SAR Baseline Development Estimate	Current APB Development	Current Estimate
RDT&E		0	0
Procurement		1	2
Total		1	2

Cost and Funding

Funding Summary

Appropriation Summary									
FY 2011 President's Budget / December 2009 SAR (TY\$ M)									
Appropriation	Prior	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	To Complete	Total
RDT&E	207.1	6.3	10.4	10.1	12.2	10.2	8.1	0.0	264.4
Procurement	3188.7	169.5	958.6	2197.8	10.6	20.5	15.5	0.0	6561.2
MILCON	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Acq O&M	0.0	0.2	0.2	0.2	0.2	0.2	0.2	0.0	1.2
PB 2011 Total	3395.8	176.0	969.2	2208.1	23.0	30.9	23.8	0.0	6826.8
PB 2009 Total	3183.9	88.7	31.5	51.5	10.5	1.8	0.0	0.0	3367.9
Delta	211.9	87.3	937.7	2156.6	12.5	29.1	23.8	0.0	3458.9

Funding Notes

LHA 6 is the first LHA Replacement Ship. The APB reflects the LHA 6 only. The Current Estimate reflects LHA 6, LHA 7 and LHA 8.

Quantity Summary										
FY 2011 President's Budget / December 2009 SAR (TY\$ M)										
Quantity	Undistributed	Prior	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	To Complete	Total
Development	0	0	0	0	0	0	0	0	0	0
Production	0	1	0	1	0	0	0	0	0	2
PB 2011 Total	0	1	0	1	0	0	0	0	0	2
PB 2009 Total	0	1	0	0	0	0	0	0	0	1
Delta	0	0	0	1	0	0	0	0	0	1

Cost and Funding

Annual Funding By Appropriation

Annual Funding							
1319 RDT&E Research, Development, Test, and Evaluation, Navy							
Fiscal Year	Quantity	TY \$M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
2001	--	--	--	--	--	--	15.2
2002	--	--	--	--	--	--	4.9
2003	--	--	--	--	--	--	38.1
2004	--	--	--	--	--	--	52.9
2005	--	--	--	--	--	--	43.0
2006	--	--	--	--	--	--	21.6
2007	--	--	--	--	--	--	12.9
2008	--	--	--	--	--	--	10.9
2009	--	--	--	--	--	--	7.6
2010	--	--	--	--	--	--	6.3
2011	--	--	--	--	--	--	10.4
2012	--	--	--	--	--	--	10.1
2013	--	--	--	--	--	--	12.2
2014	--	--	--	--	--	--	10.2
2015	--	--	--	--	--	--	8.1
Subtotal	--	--	--	--	--	--	264.4

Annual Funding 1319 RDT&E Research, Development, Test, and Evaluation, Navy							
Fiscal Year	Quantity	BY 2006 \$M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
2001	--	--	--	--	--	--	16.6
2002	--	--	--	--	--	--	5.3
2003	--	--	--	--	--	--	40.7
2004	--	--	--	--	--	--	55.0
2005	--	--	--	--	--	--	43.5
2006	--	--	--	--	--	--	21.2
2007	--	--	--	--	--	--	12.4
2008	--	--	--	--	--	--	10.3
2009	--	--	--	--	--	--	7.1
2010	--	--	--	--	--	--	5.8
2011	--	--	--	--	--	--	9.4
2012	--	--	--	--	--	--	9.0
2013	--	--	--	--	--	--	10.7
2014	--	--	--	--	--	--	8.8
2015	--	--	--	--	--	--	6.9
Subtotal	--	--	--	--	--	--	262.7

RDT&E reflects funding for LHA 6, LHA 7 & LHA 8 from inception through the FYDP.

Annual Funding 1611 Procurement Shipbuilding and Conversion, Navy							
Fiscal Year	Quantity	TY \$M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
2005	--	149.3	--	--	149.3	--	149.3
2006	--	350.4	--	--	350.4	--	350.4
2007	1	1131.1	--	--	1131.1	--	1131.1
2008	--	1365.8	--	--	1365.8	--	1365.8
2009	--	192.1	--	--	192.1	--	192.1
2010	--	169.5	--	--	169.5	--	169.5
2011	1	958.6	--	--	958.6	--	958.6
2012	--	2197.8	--	--	2197.8	--	2197.8
2013	--	10.6	--	--	10.6	--	10.6
2014	--	20.5	--	--	20.5	--	20.5
2015	--	15.5	--	--	15.5	--	15.5
Subtotal	2	6561.2	--	--	6561.2	--	6561.2

Annual Funding 1611 Procurement Shipbuilding and Conversion, Navy								
Fiscal Year	Quantity	BY 2006 \$M						
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program	
2005	--	142.2	--	--	142.2	--	142.2	
2006	--	323.4	--	--	323.4	--	323.4	
2007	1	1007.4	--	--	1007.4	--	1007.4	
2008	--	1189.0	--	--	1189.0	--	1189.0	
2009	--	164.6	--	--	164.6	--	164.6	
2010	--	143.2	--	--	143.2	--	143.2	
2011	1	797.5	--	--	797.5	--	797.5	
2012	--	1798.1	--	--	1798.1	--	1798.1	
2013	--	8.5	--	--	8.5	--	8.5	
2014	--	16.2	--	--	16.2	--	16.2	
2015	--	12.1	--	--	12.1	--	12.1	
Subtotal	2	5602.2	--	--	5602.2	--	5602.2	

Procurement includes Advance Procurement, Split Funding, Outfitting and Post Delivery, and Prior Year Cost to Complete funding from shared Budget Activity 5 line items for LHA 6 and LHA 7 through the FYDP.

Cost Quantity Information 1611 Procurement Shipbuilding and Conversion, Navy		
Fiscal Year	Quantity	End Item Recurring Flyaway (Aligned With Quantity) BY 2006 \$M
2005	--	--
2006	--	--
2007	1	2785.6
2008	--	--
2009	--	--
2010	--	--
2011	1	2816.6
2012	--	--
2013	--	--
2014	--	--
2015	--	--
Subtotal	2	5602.2

Annual Funding 1804 Acq O&M Operation and Maintenance, Navy	
Fiscal Year	TY \$M
	Total Program
2010	0.2
2011	0.2
2012	0.2
2013	0.2
2014	0.2
2015	0.2
Subtotal	1.2

Annual Funding 1804 Acq O&M Operation and Maintenance, Navy	
Fiscal Year	BY 2006 \$M
	Total Program
2010	0.2
2011	0.2
2012	0.2
2013	0.2
2014	0.2
2015	0.2
Subtotal	1.2

O&M,N funding for LHA 6 & LHA 7 Travel and Pre-Commissioning expenses.

Low Rate Initial Production

Item	Initial LRIP Decision	Current Total LRIP
Approval Date	2/14/2006	2/14/2006
Approved Quantity	1	1
Reference	LHA(R)/LHA-6 -Acquistion Decision Memorandum	LHA(R)/LHA-6 -Acquistion Decision Memorandum
Start Year	2007	2007
End Year	2013	2013

Foreign Military Sales

None

Nuclear Costs

None

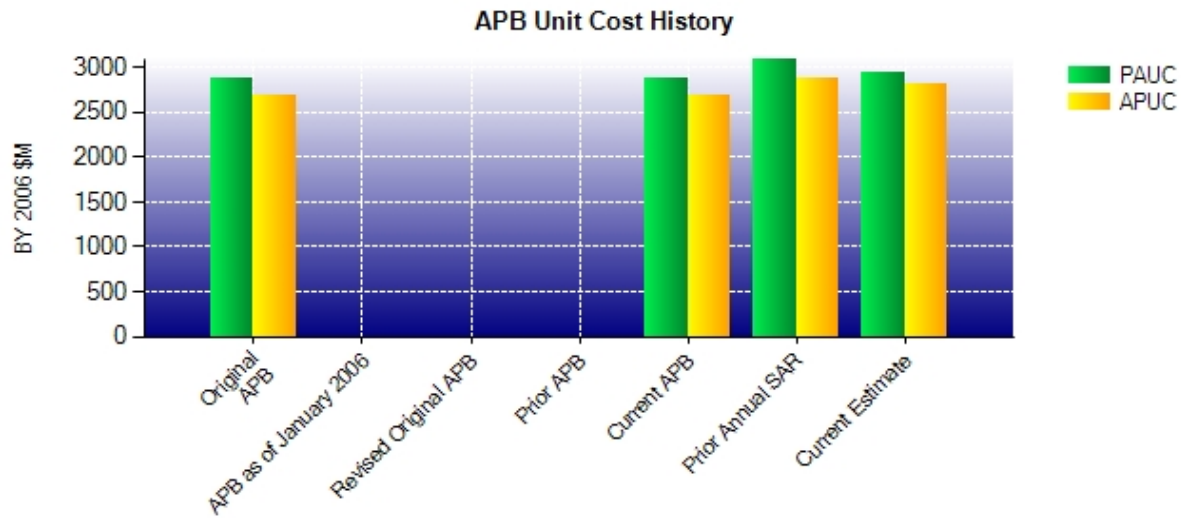
Unit Cost

Unit Cost Report

Item	BY 2006 \$M	BY 2006 \$M	% Change
	Current UCR Baseline (Jan 2006 APB)	Current Estimate (Dec 2009 SAR)	
Program Acquisition Unit Cost			
Cost	2877.4	5866.1	
Quantity	1	2	
Unit Cost	2877.400	2933.050	+1.93
Average Procurement Unit Cost			
Cost	2677.5	5602.2	
Quantity	1	2	
Unit Cost	2677.500	2801.100	+4.62

Item	BY 2006 \$M	BY 2006 \$M	% Change
	Original UCR Baseline (Jan 2006 APB)	Current Estimate (Dec 2009 SAR)	
Program Acquisition Unit Cost			
Cost	2877.4	5866.1	
Quantity	1	2	
Unit Cost	2877.400	2933.050	+1.93
Average Procurement Unit Cost			
Cost	2677.5	5602.2	
Quantity	1	2	
Unit Cost	2677.500	2801.100	+4.62

Unit Cost History



Item	Date	BY 2006 \$M		TY \$M	
		PAUC	APUC	PAUC	APUC
Original APB	Jan 2006	2877.400	2677.500	3093.500	2896.000
APB as of January 2006	N/A	N/A	N/A	N/A	N/A
Revised Original APB	N/A	N/A	N/A	N/A	N/A
Prior APB	N/A	N/A	N/A	N/A	N/A
Current APB	Jan 2006	2877.400	2677.500	3093.500	2896.000
Prior Annual SAR	Dec 2007	3078.900	2875.600	3367.900	3167.000
Current Estimate	Dec 2009	2933.050	2801.100	3413.400	3280.600

SAR Unit Cost History

Current SAR Baseline to Current Estimate (TY \$M)									
Initial PAUC Development Estimate	Changes								PAUC Current Estimate
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
3093.500	67.800	160.000	0.000	0.000	-43.900	136.000	0.000	319.900	3413.400

Current SAR Baseline to Current Estimate (TY \$M)									
Initial APUC Development Estimate	Changes								APUC Current Estimate
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
2896.000	68.550	258.750	0.000	0.000	-78.700	136.000	0.000	384.600	3280.600

SAR Baseline History				
Item	SAR Planning Estimate	SAR Development Estimate	SAR Production Estimate	Current Estimate
Milestone A	N/A	Jul 2001	N/A	Jul 2001
Milestone B	N/A	Jan 2006	N/A	Jan 2006
Milestone C	N/A	N/A	N/A	N/A
IOC	N/A	Sep 2013	N/A	Oct 2014
Total Cost (TY \$M)	N/A	3093.5	N/A	6826.8
Total Quantity	N/A	1	N/A	2
PAUC	N/A	3093.500	N/A	3413.400

Cost Variance

Summary TY \$M					
Item	RDT&E	Procurement	MILCON	Acq O&M	Total
SAR Baseline (Development Estimate)	197.5	2896.0	--	--	3093.5
Previous Changes					
Economic	-0.7	+56.5	--	--	+55.8
Quantity	--	--	--	--	--
Schedule	--	--	--	--	--
Engineering	--	--	--	--	--
Estimating	+4.1	-57.5	--	--	-53.4
Other	--	+272.0	--	--	+272.0
Support	--	--	--	--	--
Subtotal	+3.4	+271.0	--	--	+274.4
Current Changes					
Economic	-0.8	+80.6	--	--	+79.8
Quantity	--	+3413.5	--	--	+3413.5
Schedule	--	--	--	--	--
Engineering	--	--	--	--	--
Estimating	+64.3	-99.9	--	+1.2	-34.4
Other	--	--	--	--	--
Support	--	--	--	--	--
Subtotal	+63.5	+3394.2	--	+1.2	+3458.9
Total Changes	+66.9	+3665.2	--	+1.2	+3733.3
Current Estimate	264.4	6561.2	--	1.2	6826.8

Summary BY 2006 \$M					
Item	RDT&E	Procurement	MILCON	Acq O&M	Total
SAR Baseline (Development Estimate)	199.9	2677.5	--	--	2877.4
Previous Changes					
Economic	--	--	--	--	--
Quantity	--	--	--	--	--
Schedule	--	--	--	--	--
Engineering	--	--	--	--	--
Estimating	+3.4	-51.6	--	--	-48.2
Other	--	+249.7	--	--	+249.7
Support	--	--	--	--	--
Subtotal	+3.4	+198.1	--	--	+201.5
Current Changes					
Economic	--	--	--	--	--
Quantity	--	+2816.6	--	--	+2816.6
Schedule	--	--	--	--	--
Engineering	--	--	--	--	--
Estimating	+59.4	-90.0	--	+1.2	-29.4
Other	--	--	--	--	--
Support	--	--	--	--	--
Subtotal	+59.4	+2726.6	--	+1.2	+2787.2
Total Changes	+62.8	+2924.7	--	+1.2	+2988.7
Current Estimate	262.7	5602.2	--	1.2	5866.1

Previous Estimate: December 2007

RDT&E	\$M	
Current Change Explanations	Base Year	Then Year
Revised escalation indices. (Economic)	N/A	-0.8
Adjustment for current and prior escalation. (Estimating)	+0.1	+0.1
Revisions to the TEMP have reduced cost. (Estimating)	-2.5	-2.8
Revised Estimate to include LHA 7 and LHA 8 R&D through the FYDP. (Estimating)	+61.8	+67.0
RDT&E Subtotal	+59.4	+63.5

Procurement	\$M	
Current Change Explanations	Base Year	Then Year
Revised escalation indices. (Economic)	N/A	+80.6
Quantity variance resulting from an increase of one ship from one to two ships (Quantity)	+2816.6	+3413.5
Adjustment for current and prior escalation. (Estimating)	-70.3	-79.6
Reduction of LHA 6 Cost to Complete, Outfitting and Post Delivery. (Estimating)	-19.7	-20.3
Procurement Subtotal	+2726.6	+3394.2

Acq O&M	\$M	
Current Change Explanations	Base Year	Then Year
Increase requested for LHA 6 and LHA 7 Travel and Pre-Commissioning expenses. (Estimating)	+1.2	+1.2
Acq O&M Subtotal	+1.2	+1.2

Contracts

Contract Identification

Appropriation: Procurement
Contract Name: LHA6 Detail Design & Construction
Contractor: Northrop Grumman Shipbuilding
Contractor Location: Pascagoula, MS 39567
Contract Number: N00024-05-C-2221
Contract Type: Fixed Price Incentive(Firm Target) (FPIF)
Award Date: July 15, 2005
Definitization Date: June 01, 2007

Contract Price

Initial Contract Price (\$M)			Current Contract Price (\$M)			Estimated Price At Completion (\$M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
2340.0	2521.6	1	2371.2	2556.4	1	2462.8	2462.8

Target Price Change Explanation

The difference between the Initial Contract Price Target and the Current Contract Price Target is due to

Contract Variance

Item	Cost Variance	Schedule Variance
Cumulative Variances To Date (12/20/2009)	-99.9	-91.6
Previous Cumulative Variances	-5.7	-19.4
Net Change	-94.2	-72.2

Cost and Schedule Variance Explanations**General Contract Variance Explanation**

The unfavorable -\$72.2M Net Change in Schedule Variance from December 2007 to December 2009 is primarily due to the following: Inventory Systems delays in the production cycle versus the phased costs for inventories, as well as continuing anomalies resulting from the transition of material systems during Material Requisitioning System (MARS) implementation; Hull Labor late assembly units impacting hull welders and hull fitters, a contributing factor to the overall schedule slip on LHA 6; and Auxiliary System Labor delays occurring in the pipe shop, the result of increased focus placed on the fit and weld quality, receipt of shorter raw material pipe lengths causing additional prep time, and engineering changes occurring mid-schedule.

The unfavorable -\$94.2M Net Change in Cost Variance from December 2007 to December 2009 is primarily due to the following: Integration Engineering Labor redesign of the JP-5 pump room and development of ship constructor models to streamline the construction process, the nature of the farm out performance, composites scope increasing from the original estimates and greater than planned design effort, foundation analysis, structural assembly reviews, Land Based Test Facility (LBTF) re-plan, and incorporating lessons learned from LHD 8 into the LHA 6 design products; Interdivisional Work Orders cost growth realized associated with the Sperry Machinery Control System (MCS) and Four Unit Work-share effort at Newport News plus a Management Work Package misalignment associated with Combat Systems Interdivisional Divisional Work-order (IWO); and Inventory Systems misalignment of accounts. Budget resides on a Management Work Package (MWP)/Account that is not consistent with actual incurred; this issue continues to be worked.

Notes

The LHA Replacement Advance Procurement (AP) Contract was subsumed by the LHA Replacement Detail Design and Construction (DD&C) Contract on June 1, 2007. Target Price and Ceiling Price changes are due to a change in the Build Strategy and Engineering Change Proposals.

Deliveries and Expenditures

Deliveries				
Delivered to Date	Planned to Date	Actual to Date	Total Quantity	Percent Delivered
Development	0	0	0	--
Production	0	0	2	0.00%
Total Program Quantity Delivered	0	0	2	0.00%

Expended and Appropriated (TY \$M)			
Total Acquisition Cost	6826.8	Years Appropriated	10
Expended to Date	1441.4	Percent Years Appropriated	66.67%
Percent Expended	21.11%	Appropriated to Date	3571.8
Total Funding Years	15	Percent Appropriated	52.32%

Operating and Support Cost

Assumptions and Ground Rules

The Operating and Support Cost Estimate was published in October 2005. The Operating and Support Cost Analysis Model (OSCAM) Naval Suite V7.0 was used for the LHA(R)/LHA 6 Milestone B Program Life Cycle Cost Estimate (PLCCE).

OSCAM provides a means of analyzing O&S costs of Navy shipboard systems and ships and provides a tool for estimating O&S costs over a ship's service life. The OSCAM model comes with annually updated datasets based on historical data extracted from the Visibility and Management of Operating and Support Costs (VAMOSOC) database. The FY04 Historical VAMOSOC dataset for the LHD 1 Class serves as the baseline for the LHA 6 O&S estimate.

O&S costs for the LHA 6 were estimated as an annual cost based on one ship with an expected service life of 40 years while operating and supporting the ship in typical peacetime operations. Potential costs of currently unplanned and unknown future upgrades or configuration changes are assumed to occur in the same proportion as modernization work that has occurred on the LHA 1 and LHD 1 ship classes. OSCAM builds the O&S costs by month, and the results show the estimated cost by year based on the Operational Tempo (OPTEMPO) and maintenance cycle. Nominal OPTEMPO is assumed to be 2700 hours steaming underway and 1200 hours steaming not underway, based on the fuel burn rates and time profiles provided by the LHA 6 design team.

Notes: 1. The average annual O&S cost for the LHA 6 is estimated at \$110.16 million (CY06\$) without disposal costs included. The total O&S cost for one ship over the 40 year life is estimated to be \$4.452 billion (CY06\$), including disposal costs. 2. The average annual O&S Costs for the LHA 6 was based on a 40 year Life Cycle. The average annual O&S Costs for an LHD 1 Class ship was based on a 35 year Life Cycle.

Cost Estimate Reference:

None

Sustainment Strategy:

None

Antecedent Information:

None

Unitized O&S Costs BY2006 \$M		
Cost Element	LHA Replacement Average Annual Cost Per Ship	LHD 1 (Antecedent) Average Annual Cost Per Ship
Mission Pay & Allowance	65.000	69.400
Unit Level Consumption	11.800	15.600
Intermediate Maintenance	1.000	0.900
Depot Maintenance	13.600	13.800
Contractor Support	0.000	0.000
Sustaining Support	15.700	12.100
Indirect	3.100	3.500
Other	--	--
Total	110.200	115.300

Unitized Cost Comments:

None

Item	Total O&S Cost \$M			
	LHA Replacement			LHD 1 (Antecedent)
	Current Development APB Objective/Threshold		Current Estimate	
Base Year	4451.9	4897.1	4452.0	4097.1
Then Year	9114.8	N/A	9114.8	7929.2

Total O&S Cost Comment

None

Disposal Estimate Details

Date of Estimate:

Source of Estimate:

Disposal/Demilitarization Total Cost (BY 2006 \$M):