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Selected Acquisition Report (SAR)

RCS: DD-A&T(Q&A)823-542



LPD 17 San Antonio Class Amphibious Transport Dock (LPD 17)

As of FY 2019 President's Budget

Defense Acquisition Management
Information Retrieval
(DAMIR)

UNCLASSIFIED

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Sensitivity Originator

No originator info Available at this time.

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

LPD 17 San Antonio Class Amphibious Transport Dock (LPD 17)

DoD Component

Navy

Responsible Office

CAPT Brian Metcalf
LPD 17 Amphibious Transport Dock
Ship Program Office (PMS317)
PEO Ships
Washington, DC 20376-2401

Phone: 202-781-0159
Fax:
DSN Phone: 326-0159
DSN Fax:
Date Assigned: August 12, 2016

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References

SAR Baseline (Development Estimate)

Defense Acquisition Executive (DAE) Approved Acquisition Program Baseline (APB) dated June 17, 1996

Approved APB

Navy Acquisition Executive (NAE) Approved Acquisition Program Baseline (APB) dated October 30, 2017

Mission and Description

The LPD 17 San Antonio Class Amphibious Transport Dock Ship (LPD 17) is the functional replacement for the LPD 4, LSD 36, LKA 113, and LST 1179 Classes of Amphibious Ships for embarking, transporting and landing elements of a Marine landing force in an assault by helicopters, landing craft, amphibious vehicles, and by a combination of these methods to conduct the primary amphibious warfare mission.

Executive Summary

Stability in ship construction and sustained Operational Availability above 90% have characterized the LPD 17 program over the past year. Eleven of thirteen LPD 17 class ships have been delivered and are operating as Fleet assets; two ships are currently under construction at Huntington Ingalls Industries (HII) in Pascagoula, Mississippi.

USS JOHN P. MURTHA (LPD 26) Post Shakedown Availability (PSA) concludes and will begin workups for her first deployment in CY2018.

PORTLAND (LPD 27) delivered on September 18, 2017. In 2018, the commissioning ceremony for LPD 27 will be in April in Portland, Oregon. The PSA will be performed in San Diego prior to the transfer to the in-service program office in CY2019.

As of December 2017, FORT LAUDERDALE (LPD 28) was 12% complete. The Integrated Baseline Review to assess the production plan and establish the EVM baseline was completed in September 2017. The ship's keel was laid in September; and delivery is projected in the Fall 2021.

The Consolidated Appropriations Act, 2017, provided full funding for the detail design and construction of LPD 29. An Unfinitized Contract Action for Long Lead Time Material was awarded in June 2017; and the Detail Design and Construction contract was awarded in February 2018.

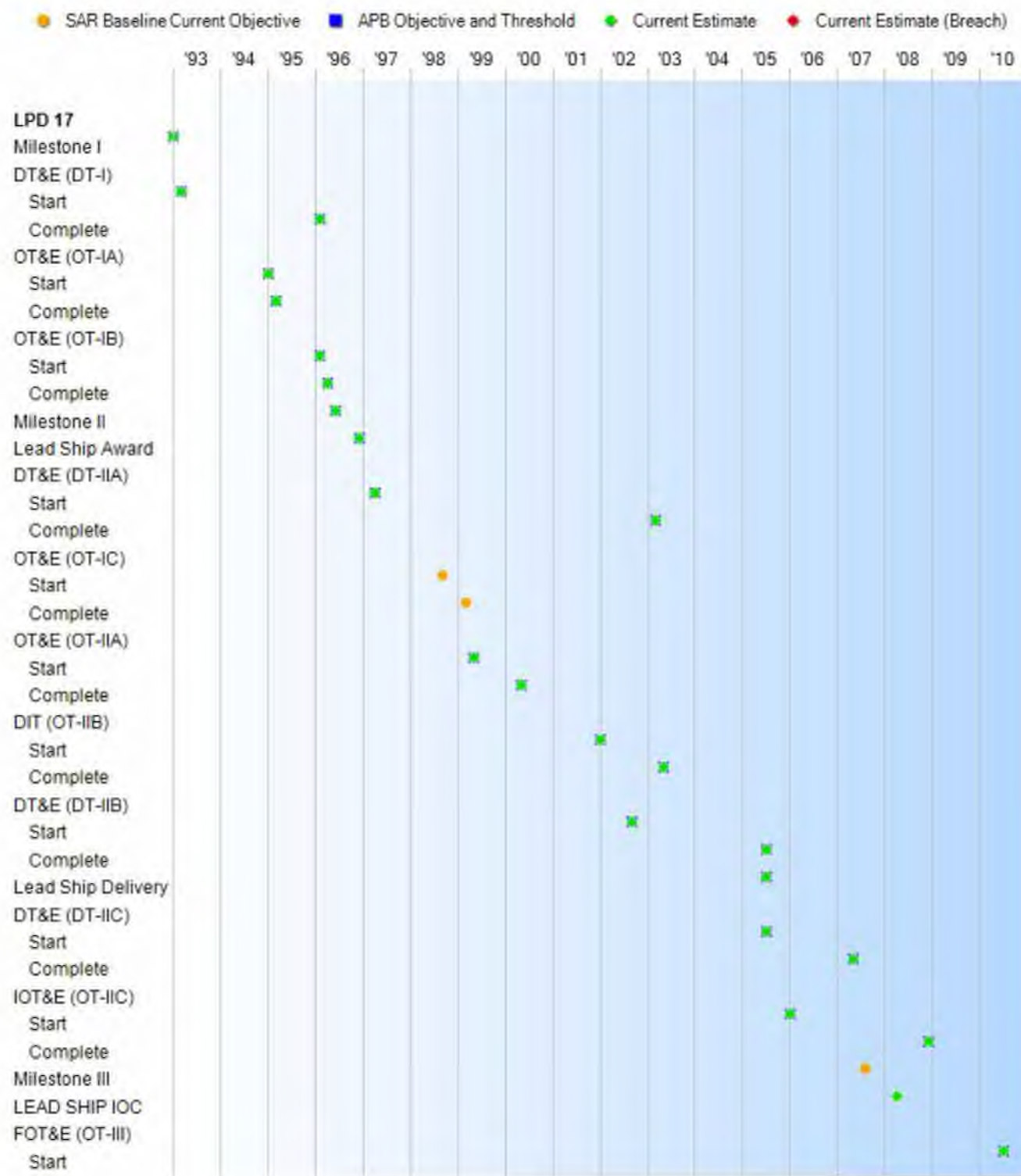
There are no significant software-related issues with this program at this time.

Threshold Breaches

APB Breaches		
Schedule		<input type="checkbox"/>
Performance		<input type="checkbox"/>
Cost	RDT&E	<input type="checkbox"/>
	Procurement	<input type="checkbox"/>
	MILCON	<input type="checkbox"/>
	Acq O&M	<input type="checkbox"/>
O&S Cost		<input type="checkbox"/>
Unit Cost	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
Milestone I	Jan 1993	Jan 1993	Jan 1993	Jan 1993
DT&E (DT-I)				
Start	Mar 1993	Mar 1993	Mar 1993	Mar 1993
Complete	Feb 1996	Feb 1996	Feb 1996	Feb 1996
OT&E (OT-IA)				
Start	Jan 1995	Jan 1995	Jan 1995	Jan 1995
Complete	Mar 1995	Mar 1995	Mar 1995	Mar 1995
OT&E (OT-IB)				
Start	Feb 1996	Feb 1996	Feb 1996	Feb 1996
Complete	Apr 1996	Apr 1996	Apr 1996	Apr 1996
Milestone II	Jun 1996	Jun 1996	Jun 1996	Jun 1996
Lead Ship Award	Aug 1996	Dec 1996	Dec 1996	Dec 1996
DT&E (DT-IIA)				
Start	Sep 1996	Apr 1997	Apr 1997	Apr 1997
Complete	Aug 1998	Mar 2003	Mar 2003	Mar 2003
OT&E (OT-IC)				
Start	Sep 1998	N/A	N/A	N/A
Complete	Mar 1999	N/A	N/A	N/A
OT&E (OT-IIA)				
Start	Jun 2003	May 1999	May 1999	May 1999
Complete	Sep 2003	May 2000	May 2000	May 2000
DIT (OT-IIB)				
Start	N/A	Jan 2002	Jan 2002	Jan 2002
Complete	N/A	May 2003	May 2003	May 2003
DT&E (DT-IIB)				
Start	Sep 1998	Sep 2002	Sep 2002	Sep 2002
Complete	Jun 2002	Jul 2005	Jul 2005	Jul 2005
Lead Ship Delivery	Jun 2002	Jul 2005	Jul 2005	Jul 2005
DT&E (DT-IIC)				
Start	Jul 2002	Jul 2005	Jul 2005	Jul 2005
Complete	Jan 2004	May 2007	May 2007	May 2007
IOT&E (OT-IIC)				
Start	N/A	Jan 2006	Jan 2006	Jan 2006
Complete	N/A	Dec 2008	Dec 2008	Dec 2008
Milestone III	Aug 2007	N/A	N/A	N/A

LEAD SHIP IOC	Jan 2004	Apr 2008	Apr 2008	Apr 2008
FOT&E (OT-III)				
Start	Jan 2011	Jul 2010	Jul 2010	Jul 2010

Change Explanations

None

Acronyms and Abbreviations

DIT - Design Integration Testing
DT - Developmental Test
DT&E - Developmental Test and Evaluation
FOT&E - Follow-on Operational Test and Evaluation
IOT&E - Initial Operational Test and Evaluation
OT - Operational Test
OT&E - Operational Test and Evaluation

Performance

Performance Characteristics				
SAR Baseline Development Estimate	Current APB Development Objective/Threshold		Demonstrated Performance	Current Estimate
Mobility				
Sustained Speed (Kts)				
23	23	21.5	24	24
Endurance ((NM)(K) @ Kts)				
10/22	10/22	9.5/20	10.6/20	10.6/20
Amphibious Warfare Embarkation (Net)				
Troops				
750	750	650	720	720
Vehicles (Sq Ft)(k)				
25	25	22	22	22
Cargo (Cubic Feet)(k)				
25	25	22	34	34
Bulk Fuel (Gals)(k)				
325	325	250	307	307
LCAC				
2	2	1(+1)	2	2
VTOL Land/Launch Spots (CH-46 or CH-53E or MV-22)				
4/3/2	4/3/2	4/2/2	4/2/2	4/2/2
VTOL Maint/Storage (CH-46 or CH-53E or MV-22)				
3/1/1	3/1/1	2/1/1	2/1/1	2/1/1
Ship To Shore Capability (LCAC)				
Sustained Operations (reload 6 LCACs)(mins)				
220	220	285	274	274
Operational Availability (Ao)				
.90	.90	.80	.92	.92

Requirements Reference

ORD Revision 3 dated April 8, 1996

Change Explanations

None

Notes

Demonstrated Performance for Sustained Speed and Vehicles (Sq Ft) reflect performance during LPD 17 BT.

Demonstrated Performance for Troops, Cargo (Cubic Feet), LCAC, and VTOL Land/Launch Spots reflect measurements taken during LPD 17 Sail Away Trials.

Demonstrated Performance for Bulk Fuel, VTOL Maintenance/Storage, and Sustained Operations reflect performance during LPD 17 Class IOT&E events.

Demonstrated Performance for Ao reflects performance cited in the LPD 17 Class OPEVAL report dated January 2010.

Acronyms and Abbreviations

Ao - Operational Availability
BT - Builder's Trials
Gals - gallons
IOT&E - Initial Operational Test and Evaluation
K/k - Thousands
Kts - Knots
LCAC - Landing Craft Air Cushion
mins - minutes
NM - Nautical Miles
OPEVAL - Operational Evaluation
Sq Ft - square feet
VTOL - Vertical Take-Off and Landing

Track to Budget

RDT&E

Appn	BA	PE		
Navy	1319	05	0604311N	
Project		Name		
2283		LPD 17 Class Systems Integration (Shared) (Sunk)		

Procurement

Appn	BA	PE		
Navy	1611	03	0204411N	
Line Item		Name		
3036		LPD-17		
Navy	1611	05	0204411N	
Line Item		Name		
5110		Outfitting (Shared)		
5300		Completion of Prior Year Shipbuilding Programs (Shared)		

Notes

Funding in BA 01 / Line Item 0981 and BA 01 / Line Item 0946, which was Other Procurement, Navy funding for non-acquisition related efforts and not included in the APB objective, has been removed from this section and will no longer be reported.

Cost and Funding

Cost Summary

Total Acquisition Cost							
Appropriation	BY 1996 \$M			BY 1996 \$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	78.7	111.3	122.4	116.1	77.8	114.0	120.1
Procurement	8939.4	16268.6	17895.5	16212.7	10684.0	22670.5	22539.7
Flyaway	--	--	--	16212.7	--	--	22539.7
Recurring	--	--	--	16212.7	--	--	22539.7
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	0.0
Acq O&M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	9018.1	16379.9	N/A	16328.8	10761.8	22784.5	22659.8

Current APB Cost Estimate Reference

Program Office Estimate dated September 05, 2017

Cost Notes

In accordance with Section 842 of the National Defense Authorization Act for FY 2017, which amended title 10 U.S.C. § 2334, the Director of Cost Assessment and Program Evaluation, and the Secretary of the military department concerned or the head of the Defense Agency concerned, must issue guidance requiring a discussion of risk, the potential impacts of risk on program costs, and approaches to mitigate risk in cost estimates for MDAPs and major subprograms. The information required by the guidance is to be reported in each SAR. This guidance is not yet available; therefore, the information on cost risk is not contained in this SAR.

Total Quantity			
Quantity	SAR Baseline Development Estimate	Current APB Development	Current Estimate
RDT&E	0	0	0
Procurement	12	13	13
Total	12	13	13

Cost and Funding

Funding Summary

Appropriation Summary									
FY 2019 President's Budget / December 2017 SAR (TY\$ M)									
Appropriation	Prior	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
RDT&E	120.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	120.1
Procurement	22314.6	30.1	3.5	8.7	14.9	15.0	8.2	144.7	22539.7
MILCON	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Acq O&M	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PB 2019 Total	22434.7	30.1	3.5	8.7	14.9	15.0	8.2	144.7	22659.8
PB 2018 Total	22450.6	30.1	0.5	10.4	17.4	0.4	43.9	0.0	22553.3
Delta	-15.9	0.0	3.0	-1.7	-2.5	14.6	-35.7	144.7	106.5

Quantity Summary										
FY 2019 President's Budget / December 2017 SAR (TY\$ M)										
Quantity	Undistributed	Prior	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Development	0	0	0	0	0	0	0	0	0	0
Production	0	13	0	0	0	0	0	0	0	13
PB 2019 Total	0	13	0	0	0	0	0	0	0	13
PB 2018 Total	0	13	0	0	0	0	0	0	0	13
Delta	0	0	0	0	0	0	0	0	0	0

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
1990	--	--	--	--	--	--	0.5
1991	--	--	--	--	--	--	4.9
1992	--	--	--	--	--	--	1.2
1993	--	--	--	--	--	--	10.3
1994	--	--	--	--	--	--	28.0
1995	--	--	--	--	--	--	10.8
1996	--	--	--	--	--	--	9.2
1997	--	--	--	--	--	--	4.3
1998	--	--	--	--	--	--	12.9
1999	--	--	--	--	--	--	1.3
2000	--	--	--	--	--	--	2.3
2001	--	--	--	--	--	--	0.2
2002	--	--	--	--	--	--	0.5
2003	--	--	--	--	--	--	5.6
2004	--	--	--	--	--	--	3.1
2005	--	--	--	--	--	--	7.4
2006	--	--	--	--	--	--	8.5
2007	--	--	--	--	--	--	4.8
2008	--	--	--	--	--	--	0.3
2009	--	--	--	--	--	--	--
2010	--	--	--	--	--	--	4.0
Subtotal	--	--	--	--	--	--	120.1

Annual Funding								
1319 RDT&E Research, Development, Test, and Evaluation, Navy								
Fiscal Year	Quantity	BY 1996 \$M						
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program	
1990	--	--	--	--	--	--	--	0.6
1991	--	--	--	--	--	--	--	5.4
1992	--	--	--	--	--	--	--	1.3
1993	--	--	--	--	--	--	--	10.8
1994	--	--	--	--	--	--	--	28.7
1995	--	--	--	--	--	--	--	10.9
1996	--	--	--	--	--	--	--	9.1
1997	--	--	--	--	--	--	--	4.2
1998	--	--	--	--	--	--	--	12.5
1999	--	--	--	--	--	--	--	1.2
2000	--	--	--	--	--	--	--	2.2
2001	--	--	--	--	--	--	--	0.2
2002	--	--	--	--	--	--	--	0.5
2003	--	--	--	--	--	--	--	5.1
2004	--	--	--	--	--	--	--	2.7
2005	--	--	--	--	--	--	--	6.4
2006	--	--	--	--	--	--	--	7.1
2007	--	--	--	--	--	--	--	3.9
2008	--	--	--	--	--	--	--	0.2
2009	--	--	--	--	--	--	--	--
2010	--	--	--	--	--	--	--	3.1
Subtotal	--	--	--	--	--	--	--	116.1

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
1996	1	1051.9	--	--	1051.9	--	1051.9
1997	--	--	--	--	--	--	--
1998	--	96.0	--	--	96.0	--	96.0
1999	1	653.2	--	--	653.2	--	653.2
2000	2	1557.6	--	--	1557.6	--	1557.6
2001	--	592.3	--	--	592.3	--	592.3
2002	--	418.5	--	--	418.5	--	418.5
2003	1	1240.7	--	--	1240.7	--	1240.7
2004	1	1654.8	--	--	1654.8	--	1654.8
2005	1	1314.2	--	--	1314.2	--	1314.2
2006	1	3303.0	--	--	3303.0	--	3303.0
2007	--	469.3	--	--	469.3	--	469.3
2008	1	1600.5	--	--	1600.5	--	1600.5
2009	1	1047.1	--	--	1047.1	--	1047.1
2010	--	1234.2	--	--	1234.2	--	1234.2
2011	--	49.0	--	--	49.0	--	49.0
2012	1	1968.7	--	--	1968.7	--	1968.7
2013	--	392.1	--	--	392.1	--	392.1
2014	--	57.2	--	--	57.2	--	57.2
2015	--	1076.4	--	--	1076.4	--	1076.4
2016	1	640.1	--	--	640.1	--	640.1
2017	1	1897.8	--	--	1897.8	--	1897.8
2018	--	30.1	--	--	30.1	--	30.1
2019	--	3.5	--	--	3.5	--	3.5
2020	--	8.7	--	--	8.7	--	8.7
2021	--	14.9	--	--	14.9	--	14.9
2022	--	15.0	--	--	15.0	--	15.0
2023	--	8.2	--	--	8.2	--	8.2
2024	--	144.7	--	--	144.7	--	144.7
Subtotal	13	22539.7	--	--	22539.7	--	22539.7

Annual Funding 1611 Procurement Shipbuilding and Conversion, Navy							
Fiscal Year	Quantity	BY 1996 \$M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
1996	1	1024.9	--	--	1024.9	--	1024.9
1997	--	--	--	--	--	--	--
1998	--	90.1	--	--	90.1	--	90.1
1999	1	603.5	--	--	603.5	--	603.5
2000	2	1403.4	--	--	1403.4	--	1403.4
2001	--	515.9	--	--	515.9	--	515.9
2002	--	362.5	--	--	362.5	--	362.5
2003	1	1015.8	--	--	1015.8	--	1015.8
2004	1	1307.4	--	--	1307.4	--	1307.4
2005	1	994.2	--	--	994.2	--	994.2
2006	1	2413.7	--	--	2413.7	--	2413.7
2007	--	327.9	--	--	327.9	--	327.9
2008	1	1081.4	--	--	1081.4	--	1081.4
2009	1	686.5	--	--	686.5	--	686.5
2010	--	782.0	--	--	782.0	--	782.0
2011	--	30.1	--	--	30.1	--	30.1
2012	1	1182.9	--	--	1182.9	--	1182.9
2013	--	231.2	--	--	231.2	--	231.2
2014	--	33.2	--	--	33.2	--	33.2
2015	--	613.1	--	--	613.1	--	613.1
2016	1	358.3	--	--	358.3	--	358.3
2017	1	1043.6	--	--	1043.6	--	1043.6
2018	--	16.2	--	--	16.2	--	16.2
2019	--	1.9	--	--	1.9	--	1.9
2020	--	4.5	--	--	4.5	--	4.5
2021	--	7.6	--	--	7.6	--	7.6
2022	--	7.5	--	--	7.5	--	7.5
2023	--	4.0	--	--	4.0	--	4.0
2024	--	69.4	--	--	69.4	--	69.4
Subtotal	13	16212.7	--	--	16212.7	--	16212.7

Cost Quantity Information		
1611 Procurement Shipbuilding and Conversion, Navy		
Fiscal Year	Quantity	End Item Recurring Flyaway (Aligned With Quantity) BY 1996 \$M
1996	1	1812.2
1997	--	--
1998	--	--
1999	1	1160.7
2000	2	2343.1
2001	--	--
2002	--	--
2003	1	1318.7
2004	1	1247.0
2005	1	1133.7
2006	1	1217.6
2007	--	--
2008	1	1300.2
2009	1	1295.4
2010	--	--
2011	--	--
2012	1	1295.5
2013	--	--
2014	--	--
2015	--	--
2016	1	1061.2
2017	1	1027.4
2018	--	--
2019	--	--
2020	--	--
2021	--	--
2022	--	--
2023	--	--
2024	--	--
Subtotal	13	16212.7

Low Rate Initial Production

Item	Initial LRIP Decision	Current Total LRIP
Approval Date	6/17/1996	5/18/2017
Approved Quantity	12	13
Reference	Milestone II ADM	LPD 29 ADM
Start Year	1996	1996
End Year	2016	2017

The Current Total LRIP Quantity is more than 10% of the total production quantity which is standard for shipbuilding programs.

Foreign Military Sales

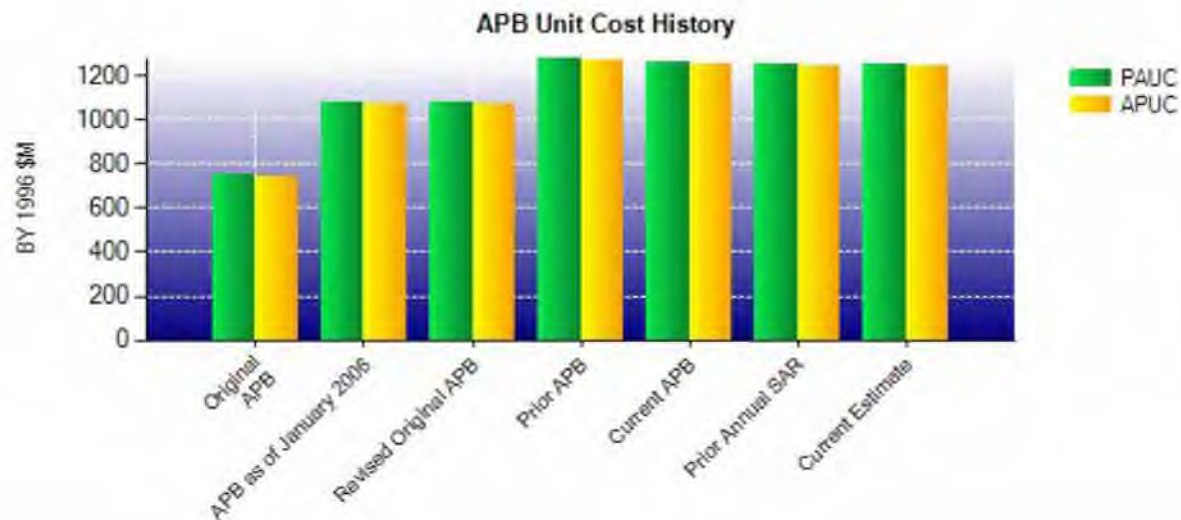
None

Nuclear Costs

None

Unit Cost

Current UCR Baseline and Current Estimate (Base-Year Dollars)			
Item	BY 1996 \$M	BY 1996 \$M	% Change
	Current UCR Baseline (Oct 2017 APB)	Current Estimate (Dec 2017 SAR)	
Program Acquisition Unit Cost			
Cost	16379.9	16328.8	
Quantity	13	13	
Unit Cost	1259.992	1256.062	-0.31
Average Procurement Unit Cost			
Cost	16268.6	16212.7	
Quantity	13	13	
Unit Cost	1251.431	1247.131	-0.34
Original UCR Baseline and Current Estimate (Base-Year Dollars)			
Item	BY 1996 \$M	BY 1996 \$M	% Change
	Revised Original UCR Baseline (Oct 2005 APB)	Current Estimate (Dec 2017 SAR)	
Program Acquisition Unit Cost			
Cost	12955.2	16328.8	
Quantity	12	13	
Unit Cost	1079.600	1256.062	+16.35
Average Procurement Unit Cost			
Cost	12842.4	16212.7	
Quantity	12	13	
Unit Cost	1070.200	1247.131	+16.53



APB Unit Cost History					
Item	Date	BY 1996 \$M		TY \$M	
		PAUC	APUC	PAUC	APUC
Original APB	Jun 1996	751.508	744.950	896.817	890.333
APB as of January 2006	Oct 2005	1079.600	1070.200	1283.233	1273.642
Revised Original APB	Oct 2005	1079.600	1070.200	1283.233	1273.642
Prior APB	Mar 2015	1282.708	1273.433	1744.292	1734.792
Current APB	Oct 2017	1259.992	1251.431	1752.654	1743.885
Prior Annual SAR	Dec 2016	1251.108	1242.177	1734.869	1725.631
Current Estimate	Dec 2017	1256.062	1247.131	1743.062	1733.823

SAR Unit Cost History

Current SAR Baseline to Current Estimate (TY \$M)									
PAUC Development Estimate	Changes								PAUC Current Estimate
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
896.817	76.492	-36.370	84.523	0.000	531.023	190.692	-0.115	846.245	1743.062

Current SAR Baseline to Current Estimate (TY \$M)									
Initial APUC Development Estimate	Changes								APUC Current Estimate
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
890.333	76.477	-35.872	84.054	0.000	528.254	190.692	-0.115	843.490	1733.823

SAR Baseline History				
Item	SAR Planning Estimate	SAR Development Estimate	SAR Production Estimate	Current Estimate
Milestone I	Jan 1993	Jan 1993	N/A	Jan 1993
Milestone II	Jul 1995	Jun 1996	N/A	Jun 1996
Milestone III	Oct 2003	Aug 2007	N/A	N/A
IOC	Oct 2003	Jan 2004	N/A	Apr 2008
Total Cost (TY \$M)	59.1	10761.8	N/A	22659.8
Total Quantity	N/A	12	N/A	13
PAUC	N/A	896.817	N/A	1743.062

Cost Variance

Summary TY \$M				
Item	RDT&E	Procurement	MILCON	Total
SAR Baseline (Development Estimate)	77.8	10684.0	--	10761.8
Previous Changes				
Economic	+0.2	+1020.4	--	+1020.6
Quantity	--	+424.0	--	+424.0
Schedule	+6.1	+1092.7	--	+1098.8
Engineering	--	--	--	--
Estimating	+36.0	+6734.6	--	+6770.6
Other	--	+2479.0	--	+2479.0
Support	--	-1.5	--	-1.5
Subtotal	+42.3	+11749.2	--	+11791.5
Current Changes				
Economic	--	-26.2	--	-26.2
Quantity	--	--	--	--
Schedule	--	--	--	--
Engineering	--	--	--	--
Estimating	--	+132.7	--	+132.7
Other	--	--	--	--
Support	--	--	--	--
Subtotal	--	+106.5	--	+106.5
Total Changes	+42.3	+11855.7	--	+11898.0
CE - Cost Variance	120.1	22539.7	--	22659.8
CE - Cost & Funding	120.1	22539.7	--	22659.8

Summary BY 1996 \$M				
Item	RDT&E	Procurement	MILCON	Total
SAR Baseline (Development Estimate)	78.7	8939.4	--	9018.1
Previous Changes				
Economic	--	--	--	--
Quantity	--	-268.4	--	-268.4
Schedule	+4.8	+509.9	--	+514.7
Engineering	--	--	--	--
Estimating	+32.6	+5206.1	--	+5238.7
Other	--	+1761.3	--	+1761.3
Support	--	--	--	--
Subtotal	+37.4	+7208.9	--	+7246.3
Current Changes				
Economic	--	--	--	--
Quantity	--	--	--	--
Schedule	--	--	--	--
Engineering	--	--	--	--
Estimating	--	+64.4	--	+64.4
Other	--	--	--	--
Support	--	--	--	--
Subtotal	--	+64.4	--	+64.4
Total Changes	+37.4	+7273.3	--	+7310.7
CE - Cost Variance	116.1	16212.7	--	16328.8
CE - Cost & Funding	116.1	16212.7	--	16328.8

Previous Estimate: December 2016

Procurement	\$M	
Current Change Explanations	Base Year	Then Year
Revised escalation indices. (Economic)	N/A	-26.2
Revised estimate to reflect miscellaneous adjustments to Post Delivery and Outfitting. (Estimating)	-10.8	-22.5
Revised estimate to add Post Delivery and Outfitting Requirements for LPD 28 and LPD 29. (Estimating)	+69.4	+144.7
Revised estimate due to Congressional Mark in FY2016 against Government Furnished Equipment for Surface Electronic Warfare Improvement Program and Rolling Airframe Missile. (Estimating)	-8.4	-14.9
Adjustment for current and prior escalation. (Estimating)	+14.2	+25.4
Procurement Subtotal	+64.4	+106.5

Contracts

Contract Identification	
Appropriation:	Procurement
Contract Name:	LPD 28
Contractor:	Huntington Ingalls Industries
Contractor Location:	1000 Access Road Pascagoula, MS 39567-0149
Contract Number:	N00024-16-C-2431
Contract Type:	Fixed Price Incentive(Firm Target) (FPIF)
Award Date:	December 19, 2016
Definitization Date:	December 19, 2016

Contract Price							
Initial Contract Price (\$M)			Current Contract Price (\$M)			Estimated Price At Completion (\$M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
1434.0	1573.0	1	1451.0	1591.0	1	1451.0	1467.0

Target Price Change Explanation
The difference between the Initial Contract Price Target and the Current Contract Price Target is due to the incorporation of engineering change proposals and settlement of LPD 28's share of Avondale restructure.

Contract Variance		
Item	Cost Variance	Schedule Variance
Cumulative Variances To Date (1/31/2018)	-7.0	-9.0
Previous Cumulative Variances	--	--
Net Change	-7.0	-9.0

Cost and Schedule Variance Explanations
The unfavorable cumulative cost variance is due to underestimation of complexity of detail design effort.
The unfavorable cumulative schedule variance is due to delays in material deliveries driven by testing issues and union strike at a major supplier's site.

Notes
This is the first time this contract is being reported.

LPD 28 construction is being performed at Huntington Ingalls Industries (HII), Pascagoula Operations.

Over the past year the Program Manager's Estimate At Completion (EAC) has increased due to an increase in the number of vessel labor hours required for production operations at the shipyard. The program manager's estimated price at completion includes the estimate of the government liability for a contract clause associated with the Avondale restructuring/closure.

Deliveries and Expenditures

Deliveries				
Delivered to Date	Planned to Date	Actual to Date	Total Quantity	Percent Delivered
Development	0	0	0	--
Production	11	11	13	84.62%
Total Program Quantity Delivered	11	11	13	84.62%

Expended and Appropriated (TY \$M)			
Total Acquisition Cost	22659.8	Years Appropriated	29
Expended to Date	18690.0	Percent Years Appropriated	82.86%
Percent Expended	82.48%	Appropriated to Date	22464.8
Total Funding Years	35	Percent Appropriated	99.14%

The above data is current as of February 12, 2018.

Operating and Support Cost

Cost Estimate Details

Date of Estimate:	January 08, 2018
Source of Estimate:	POE
Quantity to Sustain:	13
Unit of Measure:	Ship
Service Life per Unit:	40.00 Years
Fiscal Years in Service:	FY 2005 - FY 2063

The cost element data for the LPD 17 class was pulled from the Naval Visibility and Management of Operating & Support Costs (VAMOSC) database for 2008 through 2017.

Average crew size for an LPD 17 class ship over this timeframe was 391.

Sustainment Strategy

Life cycle engineering and support contracts with the shipbuilder and the Integrated Shipboard Electronics contractor, along with In Service Engineering Agent support contracts, are in place to support sustainment efforts.

Responsibilities have been divided to leverage strengths; the shipbuilder maintains the planning yard while the program office manages life-cycle maintenance, modernization, and logistics. Phased maintenance and dry dock availabilities are planned on a standard cycle; and continuous maintenance availabilities are conducted in between.

Antecedent Information

The LPD 17 San Antonio Class Amphibious Transport Dock Ship (LPD 17) is the functional replacement for the LPD 4, LSD 36, LKA 113, and LST 1179 classes of amphibious ships. Of these four ship classes, the LPD 4 class is most analogous to the LPD 17 class in terms of profile, configuration, and crew size; and thus, the LPD 4 class was selected as the antecedent for purposes of O&S cost comparisons. The cost element data for the LPD 4 class was pulled from the Naval VAMOSC database for all available years of data. The LPD 4 average annual cost per ship was extended using a quantity of 13 ships and expected service life of 40 years to mirror the LPD 17 Class profile and expected service life. The estimate also incorporated actual LPD 4 commissioning and decommissioning profiles. The average annual costs per LPD 4 class ship were calculated in BY 1996 dollars for each cost element.

The cost element estimates for the LPD 4 class were not revised since last year's SAR submission, as all but one, LPD 4 class ships were decommissioned prior to 2013. USS DENVER was decommissioned in August 2014.

Average crew size for an LPD 4 class ship was 364.

Annual O&S Costs BY1996 \$M		
Cost Element	LPD 17 Average Annual Cost Per Ship	LPD 4 (Antecedent) Average Annual Cost Per Ship
Unit-Level Manpower	17.900	12.300
Unit Operations	4.700	3.900
Maintenance	10.300	8.600
Sustaining Support	0.900	0.900
Continuing System Improvements	3.300	2.400
Indirect Support	13.300	8.300
Other	0.000	0.000
Total	50.400	36.400

Item	Total O&S Cost \$M		
	LPD 17		LPD 4 (Antecedent)
	Current Development APB Objective/Threshold	Current Estimate	
Base Year	N/A	N/A	26208.0
Then Year	N/A	N/A	65666.4
			18928.0
			N/A

Equation to Translate Annual Cost to Total Cost

The total O&S cost estimates for both the LPD 17 class and LPD 4 class are based on 13 ships over the same 40-year life cycle timeframe. The estimates were calculated using the following formula.

(Total Average Annual Cost per Hull x 13 hulls x 40 years)

LPD 17: \$50.4M x 13 x 40 = \$26,208M

LPD 4: \$36.4M x 13 x 40 = \$18,928M

O&S Cost Variance		
Category	BY 1996 \$M	Change Explanations
Prior SAR Total O&S Estimates - Dec 2016 SAR	20544.0	
Programmatic/Planning Factors	1980.0	Quantity profile increase from 12 to 13 ships.
Cost Estimating Methodology	0.0	
Cost Data Update	1900.0	Additional elements for base/facility support, family housing, and dependent care have been added to indirect support.
Labor Rate	0.0	
Energy Rate	0.0	
Technical Input	1784.0	Increased number of hardware modifications driven by technological advancements and increase in availability

duration driven by Surface Maintenance Engineering Planning Program (SURFMEPP) revision to class maintenance requirements.

Other	0.0
Total Changes	5664.0
Current Estimate	26208.0

Disposal Estimate Details

Date of Estimate: January 08, 2018

Source of Estimate: POE

Disposal/Demilitarization Total Cost (BY 1996 \$M): Total costs for disposal of all Ship are 66.3

The disposal cost estimate per ship is unchanged.

The LPD 17 Class disposal cost has been updated to include LPD 29.