Selected Acquisition Report (SAR)

Ship to Shore Connector Amphibious Craft (SSC)

FY 2024 President's Budget

Defense Acquisition Visibility Environment (DAVE)

Table of Contents

Common Acronyms and Abbreviations

$B - Billions of Dollars
$K - Thousands of Dollars
$M - Millions of Dollars
ACAT - Acquisition Category
Acq O&M - Acquisition-Related Operations and Maintenance
ADM - Acquisition Decision Memorandum
APB - Acquisition Program Baseline
APPN - Appropriation
APUC - Average Procurement Unit Cost
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
FMS - Foreign Military Sales
FOC - Full Operational Capability
FRP - Full Rate Production
FY - Fiscal Year
FYDP - Future Years Defense Program
ICE - Independent Cost Estimate
Inc - Increment
IOC - Initial Operational Capability
JROC - Joint Requirements Oversight Council
KPP - Key Performance Parameter
LRIP - Low Rate Initial Production
MDA - Milestone Decision Authority
MDAP - Major Defense Acquisition Program
MILCON - Military Construction
N/A - Not Applicable
O&M - Operations and Maintenance
O&S - Operating and Support
ORD - Operational Requirements Document
OSD - Office of the Secretary of Defense
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
U.S. - United States
UCR - Unit Cost Reporting
USD(A&S) - Under Secretary of Defense (Acquisition and Sustainment)
USD(AT&L) - Under Secretary of Defense (Acquisition, Technology and Logistics)

Program Information

Program Name

Ship to Shore Connector Amphibious Craft

DoD Component

Navy

Responsible Office

Program Manager

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Mission and Description

Ship to Shore Connector (SSC) is the Landing Craft, Air Cushion (LCAC) replacement. It is an Air Cushion Vehicle with the same footprint as the LCAC Service Life Extension Program. The SSC mission is to land surface assault elements in support of Operational Maneuver from the Sea at Over-The-Horizon distances, while operating from amphibious ships and mobile landing platforms. The primary role of SSC is to transport weapon systems, equipment, cargo, and personnel of the assault elements of the Marine Expeditionary Brigades and the Army Brigade Combat Teams during Ship-to-Objective Maneuver and Prepare for Movement operations.

Executive Summary

SSC

Program Highlights Since Last Report

The Ship to Shore Connector (SSC) program achieved significant milestones and program advancements in CY 2022.

Craft 100 (also referred to as the Test and Training Craft) was delivered to the Navy in February 2020. Landing Craft Air Cushion (LCAC) 101 and 102 were delivered to the Navy in August 2020 and June 2021. Following successful ship integration testing, fleet introduction commenced in February 2022 when LCAC 101 and 102 were transported from Panama City, Florida to Assault Craft Unit (ACU) 4. LCACs 103 and 104 were delivered in December 2021 and June 2022 respectively and were then transported to ACU 4 in August 2022. LCAC 106 and 105 were delivered to the Navy in November 2022 and March 2023 respectively, demonstrating an increased craft delivery pace of four craft in a fifteen month period.

Post Delivery Test and Trials (PDT&T), using Craft 100 and LCAC 101, commenced in October 2020. PDT&T is scheduled to complete in Q2 CY 2023. Operational testing delays have resulted in rescheduling Operational Evaluation / Initial Operational Test & Evaluation (OPEVAL/IOT&E) and impacting Acquisition Program Baseline (APB) thresholds. A Program Deviation Report has been submitted to address an APB change to modify the OPEVAL/IOT&E and Initial Operational Capabilities objectives and thresholds. The APB change is in routing for signature.

The Navy entered into a follow-on construction contract with Textron in April 2020. This contract is for a total of fifteen Craft (LCAC 109-123) appropriated in FY 2017 through FY 2020. A follow-on contract for FY 2022-2023 Craft (LCAC 124-133) is planned for CY 2023 award.

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

History of Significant Developments Since Program Initiation

History of Significant Developments Since Program Initiation

Date	Significant Development Description
Mar 2023	LCAC 105 was delivered to the Navy.
Nov 2022	LCAC 106 was delivered to the Navy.
Aug 2022	LCAC 103 and 104 delivered to Fleet at ACU4.
Jun 2022	LCAC 104 was delivered to the Navy.
Dec 2021	LCAC 103 was delivered to the Navy.
Nov 2021	Test and Evaluation Master Plan Rev A, Ch-1 was signed by the director, Operational Test & Evaluation.
Jun 2021	LCAC 102 was delivered to the Navy.
May 2021	Approval of APB Change 3 and increase in LRIP quantities.
Mar 2021	Congress notified of Nunn-McCurdy breach prior to APB Change
Oct 2020	SSC program officially begins the PDT&T phase.
Aug 2020	LCAC 101, the first fleet asset, was delivered to the Navy.
Apr 2020	On April 16, 2020, the Navy awarded a combination $569M fixed price incentive fee and $51M firm-fixed price contract to Textron, Inc. for the FY 2017 - 2020 follow-on construction contract of the next 15 craft (LCAC 109-123).
Feb 2020	The SSC T&T Craft (Craft 100) was delivered to the Navy.
Feb 2019	Approval of APB Change 2.
Sep 2017	Approval of APB Change 1 and increase in LRIP quantities.
Mar 2016	Pursuant to section 2308 of title 10, U.S. Code "Buy-to-Budget Acquisition - End Items" approval, the contract option for LCACs 104-108 construction was exercised in March 2016.

Jul 2015	On July 1, 2015, a revalidated CDD was signed by the Chief of Naval Operations and the Logistics Functional Capabilities Board completed its assessment with minor changes. On October 8, 2015, the CDD was signed by the Vice Chairman of the Joint Chiefs, Joint Requirements and Oversight Council.
May 2015	On May 26, 2015, a Milestone C review of the program was successfully held with the Service Acquisition Executive (SAE). The review included an evaluation of key factors that ensured adequate design maturity, production readiness, efficient manufacturing capability and low technical risk. Subsequent to this review, Milestone C approval was authorized by the SAE on July 21, 2015, and the program was granted approval to enter into the Production and Deployment Phase.
Feb 2015	On February 5, 2015, a fire occurred at General Electric Dowty's propeller production facility in Gloucestershire, United Kingdom, while the contractor was in process of developing the SSC First Article Test units. In the interim, General Electric Dowty identified a temporary manufacturing facility and reconstituted the SSC production line in September 2015.
Sep 2014	A Production Readiness Review (PRR) was held in September 2014 to evaluate the SSC craft design maturity and readiness, the availability of materials and components, and industry's ability to successfully start and sustain fabrication. All action items from the PRR were successfully addressed, adjudicated and closed out in October 2014. T&T Craft and Landing Craft Air Cushion (LCAC) 101 began production in November 2014 and January 2015, respectively.
Jul 2012	On July 5, 2012, a Milestone B review of the program was successfully held with the Service Acquisition Executive (SAE). The review included an evaluation of the SSC Milestone B Acquisition Strategy and the Acquisition Program Baseline (APB). Milestone B approval was authorized by the SAE and the program was granted approval to enter into the Engineering and Manufacturing Development phase and was authorized a Low-Rate Initial Production (LRIP) quantity not to exceed 13 craft.
Jul 2012	On July 6, 2012, the Navy awarded a $212.7M fixed price incentive fee contract to Textron, Inc. for the detail design and construction of the SSC Test and Training (T&T) Craft (Craft 100) with options for eight production craft and technical manuals. The award was based on full and open competition.
Jun 2010	On June 10, 2010, an Initial SSC Capability Development Document (CDD) was approved.

Schedule

SSC

Events	Milestone Baseline Objective	Current Baseline Objective/Threshold		Current Estimate/Actual	Deviation
Milestone B	Jul 2012	Jul 2012	Jul 2012	Jul 2012	
Test and Training Craft Detail Design and Construction Award	Jul 2012	Jul 2012	Jul 2012	Jul 2012	
Craft 101 Operational Effectiveness	Mar 2013	Dec 2012	Dec 2012	Dec 2012	
Operational Assessment	Mar 2014	Jul 2014	Jul 2014	Jul 2014	
Craft 101 Production Readiness Review	May 2014	Sep 2014	Sep 2014	Sep 2014	
Craft 101 Start Fabrication	Dec 2014	Jan 2015	Jan 2015	Jan 2015	
Milestone C	Jul 2015	Jul 2015	Jul 2015	Jul 2015	
T&T Craft Delivery	Feb 2017	Feb 2020	Feb 2020	Feb 2020	
Operational Evaluation/Initial Operational Test and Evaluation	Apr 2018	Jul 2022	Jan 2023	Dec 2023	Yes
IOC	Aug 2020	Dec 2022	Jun 2023	Mar 2024	Yes
Full-Rate Production Decision	Sep 2018	Jan 2028	Jul 2028	Jan 2028	

Notes

A Program Deviation Report has been submitted and the APB is in routing for signature.

SHIP HULL #, DELIVERY, Obligation Work Limiting Date

LCAC 101 2020-08 2023-04; LCAC 102 2021-06 2022-10; LCAC 103 2021-12 2022-12; LCAC 104 2022-06 2023-06; LCAC 105 2022-10 2023-09; LCAC 106 2022-09 2023-09; LCAC 107 2023-03 2024-05; LCAC 108 2023-06 2024-05; LCAC 109 2023-08 2024-11; LCAC 110 2023-12 2024-11; LCAC 111 2024-02 2025-04; LCAC 112 2024-05 2025-04; LCAC 113 2024-07 2025-08; LCAC 114 2024-09 2025-08; LCAC 115 2024-11 2025-11; LCAC 116 2024-12 2025-11; LCAC 117 2025-02 2026-04; LCAC 118 2025-04 2026-04; LCAC 119 2025-06 2026-07; LCAC 120 2025-08 2026-07; LCAC 121 2025-09 2026-08; LCAC 122 2025-11 2026-10; LCAC 123 2025-12 2027-02; LCAC 124 2026-03 2027-02; LCAC 125 2026-05 2027-07; LCAC 126 2026-07 2027-07; LCAC 127 2026-10 2027-11; LCAC 128 2026-12 2027-11; LCAC 129 2027-02 2028-04; LCAC 130 2027-05 2028-04; LCAC 131 2027-07 2028-08; LCAC 132 2027-09 2029-08; LCAC 133 2028-03 2029-08; LCAC 134 2028-09 2029-08; LCAC 135 2029-03 2030-08; LCAC 136 2029-09 2030-08; LCAC 137 2030-03 2031-08; LCAC 138 2030-09 2031-08; LCAC 139 2031-03 2032-08; LCAC 140 2031-08 2032-08; LCAC 141 2032-02 2033-08; LCAC 142 2032-08 2033-08; LCAC 143 2033-02 2034-07; LCAC 144 2033-08 2034-07; LCAC 145 2034-02 2035-07; LCAC 146 2034-08 2035-07; LCAC 147 2035-02 2036-07; LCAC 148 2035-08 2036-07; LCAC 149 2036-02 2037-07; LCAC 150 2036-08 2037-07; LCAC 151 2037-01 2038-07; LCAC 152 2037-07 2038-07; LCAC 153 2038-01 2039-07; LCAC 154 2038-07 2039-07; LCAC 155 2039-01 2040-06; LCAC 156 2039-07 2040-06; LCAC 157 2040-01 2041-06; LCAC 158 2040-07 2041-06; LCAC 159 2041-01 2042-06; LCAC 160 2041-07 2042-06; LCAC 161 2042-01 2043-06; LCAC 162 2042-07 2043-06; LCAC 163 2042-12 2044-06; LCAC 164 2043-06 2044-06; LCAC 165 2043-12 2045-06; LCAC 166 2044-06 2045-06; LCAC 167 2044-12 2046-05; LCAC 168 2045-06 2046-05; LCAC 169 2045-12 2047-05; LCAC 170 2046-06 2047-05; LCAC 171 2046-12 2048-05; LCAC 172 2047-06 2048-05

Acronyms and Abbreviations (Schedule Section)
DD&C – Detail Design and Construction
IOT&E – Initial Operational Test and Evaluation
OA – Operational Assessment
OE – Option Exercise
OPEVAL – Operational Evaluation
T&T – Test and Training

Deviation Explanation

The Operational Evaluation/Initial Operation Test and Evaluation and the IOC current estimate changed from Oct 2022 to Dec 2023 and Jun 2023 to Mar 2024 respectively, due to craft delivery delays and a longer than expected testing period.

Performance

SSC

Performance Characteristics					
Milestone Baseline	**Current Baseline Objective/Threshold**		**Demonstrated Performance**	**Current Estimate/Actual**	**Deviation**
(KPP) - Force Protection					
	The SSC should be equipped with a remotely operated crew-served weapon system and provide ballistic and fragmentation protection for crew, internally carried embarked forces and critical machinery spaces. Appendix F of the CDD describes the specific ballistic protection requirement.	The SSC shall provide protection to the crew and internally carried embarked forces from small arms, crew served weapons and fragmentation. Appendix F of the CDD describes the specific ballistic protection requirement. The SSC shall be equipped with mounts capable of accepting current US crew-served weapons to include the M2 .50 Caliber (12.7mm) Machine Gun, MK19 40mm Grenade Machine Gun and M60/M240 Series 7.62mm Light Machine Gun.	Threshold requirement of protecting the crew from small arms and crew served weapons and fragmentation was demonstrated 2 November 2018 through Evaluation of the Ship-to-Shore Connector Ballistic Armor Systems (U)," NSWCCD-66-TR-2019/018, January 2020. The threshold capability of providing mounts capable of accepting current crew served weapons in 17 October 2022, Craft 101-104 received National Occupational Safety Association (NOSA) certification in November 2022.	The SSC shall provide protection to the crew and internally carried embarked forces from small arms, crew served weapons and fragmentation. Appendix F of the CDD describes the specific ballistic protection requirement. The SSC shall be equipped with mounts capable of accepting current US crew-served weapons to include the M2 .50 Caliber (12.7mm) Machine Gun, MK19 40mm Grenade Machine Gun and M60/M240 Series 7.62mm Light Machine Gun.	
(KPP) - Inland Accessibility					

	T=O The SSC shall be capable of operating over the high water mark. This includes movement over ice, mud, rivers, swamps, and marshes. While moving inland, the SSC shall be able to negotiate obstacles found in the complex operational environment (natural and man-made). The SSC shall be able to operate over a beach high water mark, rocks, rubble, obstacles and walls up to 4 feet high, grass, reeds and dunes.	T=O The SSC shall be capable of operating over the high water mark. This includes movement over ice, mud, rivers, swamps, and marshes. While moving inland, the SSC shall be able to negotiate obstacles found in the complex operational environment (natural and man-made). The SSC shall be able to operate over a beach high water mark, rocks, rubble, obstacles and walls up to 4 feet high, grass, reeds and dunes.		The SSC will be capable of operating over the high water mark. This includes movement over ice, mud, rivers, swamps, and marshes. While moving inland, the SSC will be able to negotiate obstacles found in the complex operational environment (natural and man-made). The SSC will be able to operate over a beach high water mark, rocks, rubble, obstacles and walls up to 4 feet high, grass, reeds and dunes.	
(KPP) - Interoperability					
	In addition to the threshold Interoperability, the SSC should be able to operate with allied amphibious ships classes with suitable well decks, to include French Mistral, Japanese Osumi, Korean Dokdo, Spanish Juan Carlos, and Australian Canberra if this interoperability does not alter other interfaces.	The SSC shall be able to: enter, exit, and embark in well decks of current and programmed USN amphibious ships, to include LHD-1, LPD-17, LSD-41, LSD-49 classes, without ship alterations, while transporting an embarked load 168" high; the off cushion length of the SSC shall permit embarkation of (4) SSCs in LSD-41 class, (2) SSCs in LSD-49 and LPD-17 classes, and (3) SSCs in LHD-1 class; and, enter/exit well		The SSC will be able to: enter, exit, and embark in well decks of current and programmed United States Navy (USN) amphibious ships, to include LHD-1, LPD-17, LSD-41, LSD-49 classes, without ship alterations, while transporting an embarked load 168" high; the off cushion length of the SSC will permit embarkation of (4) SSCs in LSD-41 class *1, (2) SSCs in LSD-49	

		decks of amphibious ships while on cushion or in displacement mode (wet well only). SSC shall embark on board the planned MLP, without ship alterations, as designed and built for the LCAC. SSC shall be able to operate with existing ships services, including the planned MLP, in place for the LCAC including ship's power, fueling/ defueling stations, compressed air, potable and washdown water, lighting, navigational aids, footprint for spare / consumable pack -up kits, and night vision systems.		and LPD-17 classes, and (3) SSCs in LHD-1 class; and, enter /exit well decks of amphibious ships while on cushion or in displacement mode (wet well only). SSC will embark on board the planned Mobile Landing Platform (MLP), without ship alterations, as designed and built for the LCAC. SSC will be able to operate with existing ships services, including the planned MLP, in place for the LCAC including ship's power, fueling/defueling stations, compressed air, potable and washdown water, lighting, navigational aids, footprint for spare /consumable pack-up kits and night vision systems. The SSC will be able to enter and exit allied amphibious ships Mistral (French) and Osumi (Japan).	
(KPP) - Manpower					

	The SSC should be fully operable with a crew of no more than three (3).	The SSC shall be fully operable, to include conducting on load/offload operations, with a crew of no more than five (5).	The threshold manpower requirement for the craft to be fully operable, to include conducting on load/offload operations, with a crew of no more than five was successfully demonstrated 1-8 December 2022 during Ship Interface Testing.	The SSC will be fully operable, to include conducting on load/offload operations, with a crew of no more than five (5).	
(KPP) - Materiel Availability (Am)					
	The SSC should have a Materiel Availability of 63 percent.	The SSC shall have a Materiel Availability of 59.5 percent.		The SSC will have a Materiel Availability of 59.9 percent.	
(KPP) - Net-Ready					
	The SSC should fully support execution of all operational activities and information exchanges identified in DoD Enterprise Architecture and solution architectures based on integrated DoDAF content, and must satisfy the technical requirements for transition to Net-Centric military operations to include: 1) Solution architecture products compliant with DoD Enterprise Architecture based on integrated DoDAF content, including specified operationally effective information exchanges. 2) Compliant with Net	The SSC must fully support execution of joint critical operational activities and information exchanges identified in the DoD Enterprise Architecture and solution architectures based on integrated DoDAF content, and must satisfy the technical requirements for transition to Net-Centric military operations to include: 1) Solution architecture products compliant with DoD Enterprise Architecture based on integrated DoDAF content, including specified operationally effective		The SSC must fully support execution of joint critical operational activities and information exchanges identified in the DoD Enterprise Architecture and solution architectures based on integrated Department of Defense Architecture Framework (DoDAF) content, and must satisfy the technical requirements for transition to Net Centric military operations to include: 1) Solution architecture products compliant with	

	-Centric Data Strategy and Net-Centric Services Strategy, and the principles and rules identified in the DoD IEA, excepting tactical and non-IP communications. 3) Compliant with GIG Technical Guidance to include IT Standards identified in the TV-1 and implementation guidance of GESPs, necessary to meet all operational requirements specified in the DoD Enterprise Architecture and solution architecture views. 4) Information assurance requirements including availability, integrity, authenticat -ion, confidential-ity, and non-repudiation, and issuance of an ATO by the DAA. 5) Supportabil-ity requirements to include SAASM, Spectrum and JTRS requirements. See appendix A of the CDD for additional details on the NR-KPP.	information exchanges. 2) Compliant with Net -Centric Data Strategy and Net-Centric Services Strategy, and the principles and rules identified in the DoD IEA, excepting tactical and non-IP communications. 3) Compliant with GIG Technical Guidance to include IT Standards identified in the TV-1 and implementation guidance of GESPs necessary to meet all operational requirements specified in the DoD Enterprise Architecture and solution architecture views. 4) Information assurance requirements including availability, integrity, authentication, confidentiality, and non-repudiation, and issuance of an IATO or ATO by the DAA. 5) Supportability requirements to include SAASM, Spectrum and JTRS require-ments. See appendix A of the CDD for additional details on the NR-KPP.		DoD Enterprise Architecture based on integrated DoDAF content, including specified operationally effective information exchanges. 2) Compliant with Net-Centric Data Strategy and Net-Centric Services Strategy, and the principles and rules identified in the Department of Defense Information Enterprise Architecture (DoD IEA), excepting tactical and non-IP communications. 3) Compliant with Global Information Grid (GIG) Technical Guidance to include IT Standards identified in the TV-1 and implementation guidance of Global Enterprise System Profiles (GESPs) necessary to meet all operational requirements specified in the DoD Enterprise Architecture and solution architecture views. 4) Information assurance requirements including availability,	

				integrity, authentication, confidentiality, and non-repudiation, and issuance of an Interim Authorization to Operate (IATO) or Authorization to Operate (ATO) by the Designated Approval Authority (DAA). 5) Supportability requirements to include Selective Availability Anti-Spoofing Module (SAASM), Spectrum and Joint Tactical Radio System (JTRS) requirements. See appendix A of the CDD for additional details on the Net-Ready Key Performance Parameter (NR-KPP).	
(KPP) - Payload Capacity					
	The SSC should be capable of transporting 79 short tons over the threshold range in the threshold temperature operating range and threshold sea state.	The SSC should be capable of transporting 62.5 short tons over the threshold range in the threshold temperature operating range and threshold sea state.		The Ship to Shore Connector (SSC) will be capable of transporting 74 short tons over the threshold range in the threshold temperature operating range and threshold sea state.	
(KPP) - Survivability (Sea-Worthiness)					

	T=O The SSC shall be capable of surviving (remaining afloat) in displacement mode without power or steerage through seas up to ten foot SWH without incurring structural damage which would impair mission capability until recovered or towed to a boat haven.	T=O The SSC shall be capable of surviving (remaining afloat) in displacement mode without power or steerage through seas up to ten foot SWH without incurring structural damage which would impair mission capability until recovered or towed to a boat haven.	Objective demonstrated through 1/10- Scale Model Testing.	T=O The SSC will be capable of surviving (remaining afloat) in displacement mode without power or steerage through seas up to ten foot Significant Wave Height (SWH) without incurring structural damage which would impair mission capability until recovered or towed to a boat haven.	

Requirement Reference

CDD dated June 10, 2010

Deviation Explanation

No deviations for this program/subprogram

Notes

The Materiel Availability (Am) current estimate was updated based on collection of actual craft performance data during initial testing and operation.
Acronyms and Abbreviations (Performance Section):
ATO - Authority to Operate
DAA - Designated Approval Authority
DoD IEA - Department of Defense Information Enterprise Architecture
DoDAF - Department of Defense Architecture Framework
GESP - GIG Enterprise Service Profile
GIG - Global Information Grid
IATO - Interim Authority to Operate
IP - Internet Protocol
IT - Information Technology
JTRS - Joint Tactical Radio System
LCAC - Landing Craft Air Cushion
LHD - Amphibious Assault Ship (Multi-Purpose)
LPD - Landing Platform Dock
LSD - Landing Ship Dock
MK – Mark
MLP - Mobile Landing Platform
mm – Millimeter
NR-KPP - Net Ready Key Performance Parameter
O – Objective
SAASM - Selective Availability Anti-Spoofing Module

SWH - Significant Wave Height
T – Threshold
TV - Technical View
USN - United States Navy

Acquisition Budget Estimate

SSC

Total Acquisition Cost

		Milestone APB	Current Baseline		Budget Estimate PB 2024		Deviation
Category	**Base Year**	**Objective (BY$M)**	**Objective (BY$M)**	**Threshold (BY$M)**	**BY$M**	**TY$M**	
RDT&E	2011	552.70	576.4	634	569.6	600.8	
Procurement	2011	3354.40	4,062.5	4,468.8	4,188.3	6,415.3	
MILCON	2011	18.50	14.3	15.7	13.8	17.3	
Acq. O&M	2011	0	0	0	0	0	
Total		3925.60	4,653.2		4,771.6	7,033.4	
PAUC	2011	53.775	63.742	70.116	65.365	96.348	
APUC	2011	47.245	56.424	62.066	58.171	89.101	

Appropriation Category Deviation Explanations

PAUC Deviation Explanation

APUC Deviation Explanation

Budget Notes

Total End Item Quantity

Quantity Category	Current APB Quantity	Current Estimate Quantity
Development	1	1
Procurement	72	72

Quantity Notes

Unit Cost

SSC

Current UCR Baseline and Current Estimate (Base-Year Dollars)			
Category ($M) Base Year:2011	**Current UCR Baseline**	**Current Estimate**	**% Change**
Program Acquisition Unit Cost			
Cost	4,653.2	4,771.6	
Quantity	73	73	
Unit Cost	63.742	65.365	2.55%
Average Procurement Unit Cost			
Cost	4,062.5	4,188.3	
Quantity	72	72	
Unit Cost	56.424	58.171	3.10%

Original UCR Baseline and Current Estimate (Base-Year Dollars)			
Category ($M) Base Year:2011	**Original UCR Baseline**	**Current Estimate**	**% Change**
Program Acquisition Unit Cost			
Cost	3,925.6	4,771.6	
Quantity	73	73	
Unit Cost	53.775	65.365	21.55%
Average Procurement Unit Cost			
Cost	3,354.4	4,188.3	
Quantity	71	72	
Unit Cost	47.245	58.171	23.13%

Cost Growth Details
Current Baseline PAUC Breach Explanation
Current Baseline APUC Breach Explanation
Original Baseline PAUC Breach Explanation
Original Baseline APUC Breach Explanation
Impacts of Schedule Changes on Unit Cost
Impacts of Performance Changes on Unit Cost
Actions Taken or Proposed to Control Future Cost Growth

Risk and Sensitivity Analysis

SSC

Risk and Sensitivity Analysis
Current Procurement Cost(December 2022)
Ship to Shore Connector (SSC) Craft Affordability: If Textron's proposal for the FY 2022-2023 craft exceeds appropriated funding, then the program may not be able to award appropriated quantities potentially causing a production line break. MITIGATION: 1) Determine areas driving cost increase and assess opportunities to lower perceived risks that are driving cost increases.
Original Baseline Estimate (July 2012)
The SAE endorsed the Navy's SCP and certified that the FYDP fully funded the Navy's SCP. Risk: In preparing the SCP, three cost drivers were identified: labor hours, Manufacturing Overhead and Command, Control, Communications, Computers, and Navigation. The Navy baseline remained unchanged at Milestone C.
Current Baseline Estimate (May 2021)
None

Schedule Risk		
Current	December 31, 2021	Ship to Shore Connector (SSC) Life Cycle Training: If the Lifecycle Training Solution is not Ready for Training (RFT) by the end of FY 2025, then the Assault Craft Unit (ACU4) will continue to incur significant maintenance cost increases ($17 M/year) due to the requirement to utilize live Craft flights to execute crew training. MITIGATION: 1) Release Operator Training Request for Proposals (RFP) in Q2 FY 2023 2) Deliver On Board Trainer Estimated Completion Date (ECD): Q4 FY 2023 3) Release Maintainer Training RFP in Q1 FY 2024 4) 1st Trainers estimated delivery date to the East Coast Expeditionary Warfare Training Group Atlantic and ACU in FY 2025.

Technical Risks		

Low Rate Initial Production

SSC

Item	Initial LRIP Decision	Current Total LRIP
Approval Date	07/05/2012	05/06/2021
Approved Quantity	13	50
Reference	Milestone B ADM	APB Change 3
Start Year	2013	2013
End Year	2021	2028

Rationale if quantity exceeds 10% of the total number of articles to be procured:

The Current Total LRIP Quantity is more than 10% of the total production quantity per the Milestone B approved Acquisition Strategy which establishes an initial production base for the system, provides for an orderly increase in the production rate prior to approval for FRP, and meets fleet operational requirements by FY 2031.

Notes

The Service Acquisition Executive authorized an increase in LRIP quantities to 50 in order to cover fluctuating procurement quantities.

Contracts & Efforts

Contract Data	
Contract Number	N00024-12-C-2401
Effort Number	1
Modification Number	P00155
Award Date	July 6, 2012
Definitization Date	July 6, 2012
Order Number	
CAGE Code/CAGE Legal Name	50079
Contract Title	Ship to Shore Connector (SSC) Detail Design & Construction
Contract Address	New Orleans, LA
Contracting Office	
Supported Phase	Production
Contract Strategy	
Contract Type	Other
Modification Date	December 13, 2022
Work Start Date	
Technical Data Rights	
Work Completed	

Contracts/Effort Price, Quantity, and Performance (TY$M)		
Initial Target Price	Current Target Price	
$199.9	$571.1	
Initial Ceiling Price	Current Ceiling Price	
$226.4	$571.1	
Contractor EAC	PM EAC	
Initial Quantity	Current Quantity	Delivered Quantity
1	9	7
BAC	BCWP	ACWP

BCWS	Cost Variance	Schedule Variance

Contract Notes:
In accordance with Section 830(a)(2) of the FY 2020 National Defense Authorization Act, which requires a Selected Acquisition Report (SAR) to be submitted in unclassified form without any designation relating to dissemination control this SAR section has omitted information that is Controlled Unclassified Information (CUI).

Factors Contributing to Cost Variance and Projected Effects on Program Costs

Factors Contributing to Schedule Variance and Projected Effects on Program Schedule

Contract Data	
Contract Number	N00024-17-C-2480
Effort Number	1
Modification Number	P00042
Award Date	September 1, 2017
Definitization Date	April 16, 2020
Order Number	
CAGE Code/CAGE Legal Name	50079
Contract Title	SSC Follow On Production
Contract Address	New Orleans, LA
Contracting Office	
Supported Phase	Production
Contract Strategy	
Contract Type	Other
Modification Date	January 10, 2023
Work Start Date	
Technical Data Rights	
Work Completed	

Contracts/Effort Price, Quantity, and Performance (TY$M)		
Initial Target Price	Current Target Price	
$3.5	$778	
Initial Ceiling Price	Current Ceiling Price	
$7.0	$891.3	
Contractor EAC	PM EAC	
Initial Quantity	Current Quantity	Delivered Quantity
1	14	0
BAC	BCWP	ACWP
BCWS	Cost Variance	Schedule Variance

Contract Notes:
The difference between the Initial contract Price Target and the Current Contract Price Target is due to Incremental acquisition of 14 Ship to Shore Connector craft.

In accordance with Section 830(a)(2) of the FY 2020 National Defense Authorization Act, which requires a Selected Acquisition Report (SAR) to be submitted in unclassified form without any designation relating to dissemination control this SAR section has omitted information that is Controlled Unclassified Information (CUI).

Factors Contributing to Cost Variance and Projected Effects on Program Costs

Factors Contributing to Schedule Variance and Projected Effects on Program Schedule

External Government Activities

Activity Title		Government Entity	Supported Phase
CAGE		Work Start Date	
City		State/Province:	
Notes			

Deliveries and Expenditures

SSC

Deliveries				
Delivered to Date	Planned to Date	Actual to Date	Total Quantity	Percent Delivered
Development		1	1	100.00%
Production		6	72	8.33%
Total Program Quantity Delivered	0	7	73	9.59%

Expended and Appropriated (TY $M)

Years Appropriated to date: 19

Total Years Appropriated Funding (Current Baseline): 33

Percent Years Appropriated: 57.58%

Then-Year Funding Appropriated as Percentage of Total Acquisition Estimate: 59.20%

Then-Year Funding Expended as Percentage of Total Acquisition Estimate: 23.50%

Total Acquisition Cost: 7,033.37

Deliveries & Expenditures Notes: The above data is current as of March 13, 2023.

Operating and Support Costs

SSC

O&S Cost Breakdown:

Category (BY$ Million)	SSC
Unit-Level Manpower	
Unit Operations	
Maintenance	
Sustaining Support	
Continued System Improvements	
Other	
Total	

Cost Estimate Source:

O&S Cost Notes:

Total Program O&S Cost Compared with Baseline					
	Current Baseline				
	Objective (BY$M)	Threshold (BY$M)	Current Estimate (BY$M)	Current Estimate (TY$M)	Deviation
Total O&S					

Note:

O&S Cost Deviation Explanation

Operating and Support Costs - Disposal and Unitized Costs

SSC

Annual Unitized O&S Cost Definition and Calculation Relative to Total O&S Cost:

Total O&S cost is calculated by multiplying the Average Annual Cost per craft by the total number of craft by total years of service. $4.615 BY 2011 $M X 73 X 30 = $10,106.0 BY 2011 $M. $15,657 TY

Sustainment Factors	System Name: Ship to Shore Connector	Antecedent System Name: LCAC
Quantity to Sustain	73	
Unit of Measure	$M	
Unit Expected Service Life	30	

Base Year: 2011

Annual Unitized O&S Cost by Category Base Year $ Unit:($M)	System Name: Ship to Shore Connector	Antecedent System Name: LCAC
Unit-Level Manpower	1.5	1.3
Unit Operations	0.5	0.5
Maintenance	1.1	1.4
Sustaining Support	0.5	0.5
Continued System Improvements	0.3	0.3
Other	0.8	0.4
Total O&S	4.6	4.3

Disposal/Demilitarization Cost Estimate

(Base Year $Millions)	System Name: Ship to Shore Connector	Antecedent System Name: LCAC
Total Disposal	14.0	

Cost Estimate Source - Disposal	
Type:	Program Office Estimate
Approval Authority and Date:	NCAA 05/21/2015
Note:	
i. Date of Estimate: May 21, 2015 ii. Source of Estimate: Service Cost Position iii. Disposal Total Cost (BY 2011 $M): $14.0	
Disposal Cost Notes:	
BY 2011 $M	
Additional O&S Estimate Assumptions:	

The SSC Operating & Support (O&S) cost estimate is based primarily on Landing Craft Air Cushion (LCAC) actual operating and support cost data. The cost data is obtained from the Assault Craft Units (ACU) and the program office and managed using the LCAC-M cost model. The LCAC-M model is a Chief of Naval Operations (CNO) accredited cost model currently used as a financial model and management information tool by the LCAC Program. LCAC-M is the LCAC program equivalent of the Visibility and Management of Operating and Support Cost (VAMOSC) database and Operating and Support Cost Analysis Model (OSCAM). The LCAC-M model was used to generate an LCAC Baseline O&S cost model to account for the differences in operating hours between the SSC and LCAC and to reflect the various design changes made to improve reliability, maintainability and performance. Since the SSC is basically an updated version of the LCAC design with an identical support structure at the ACU's, LCAC O&S cost data provides a reasonable basis of estimate for SSC. The Service Cost Position for SSC was updated in May 2015.

Sustainment Strategy:

The SSC product support strategy is based on performance driven sustainment and involves utilizing performance-based objectives with traditional data analysis practices to meet program sustainment goals. Given that the SSC replaces the existing LCAC assets, and the same infrastructure is used for logistics support and sustainment, the SSC strategy is baselined on the LCAC program. This strategy is based on implementing an effective supportability analysis program to develop and deliver the logistics products and processes necessary to execute an efficient, affordable sustainment program. Sustainment goals will be applied to both government and contractor support activities to use supportability analysis practices that delivers required craft availability while enabling best-cost improvement opportunities. Performance of the support activities will be measured by their assigned equipment availability as it relates to overall program operational and material availability measures.

Antecedent Estimate Assumptions:

LCAC-M is currently used as a financial model and management information tool by the LCAC Program. LCAC-M uses data from the most recent ten years of Operating Target data which funds LCAC Operations, Support, Readiness, Hours of Operation, Sustaining Support, and Continuing System Improvements to predict the O&S cost of a specified level of readiness. The LCAC-M model parameters were adjusted to reflect the specified 150 operating hours per year and manning specified in the Cost Analysis Requirements Description for the SSC.