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RCS: DD-A&T(Q&A)823-303



Ship to Shore Connector Amphibious Craft (SSC)

As of FY 2021 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)
USD(A&S) - Under Secretary of Defense (Acquisition and Sustainment)

Program Information

Program Name

Ship to Shore Connector Amphibious Craft (SSC)

DoD Component

Navy

Responsible Office

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References

SAR Baseline (Development Estimate)

Defense Acquisition Executive (DAE) Approved Acquisition Program Baseline (APB) dated July 5, 2012

Approved APB

Component Acquisition Executive (CAE) Approved Acquisition Program Baseline (APB) dated February 13, 2019

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

Program Highlights Since Last Report

The SSC program made notable progress in the production of multiple craft during CY 2019.

In CY 2019, Craft 100 and Craft 101 completed production and began pre-delivery testing, leading to Craft 100 Builders Trials (BT) beginning in June 2019. Initial testing on Craft 100 led to joint Navy/Textron technical concerns with the propeller blades. This resulted in a decision to divide BT into two separate events, "unloaded" (no simulated load on deck) and "loaded" (74-ton load on the cargo deck to simulate an M1A1 Main Battle Tank). After the loaded BT, craft inspection revealed extensive propeller blade cracking. To avoid additional blade loss, Craft 100's Acceptance Trials (AT) were conducted unloaded. A joint Industry-Navy technical assessment has commenced to develop a technical resolution and path forward. Testing with instrumented blades will be conducted in early 2020 to finalize the way ahead for propeller blade design and remediation actions.

Design issues with the main gearbox have driven the schedule for the past several years. In CY 2019, supplemental testing revealed abnormal markings (spalling) on the high-speed bull gear. Textron is working with the manufacturer to address this issue via shipping and handling procedures. A gearbox redesign is not required. In CY 2019, the interim gearbox design solution was successfully used to continue systems integration testing and to complete Craft 100's BT and AT. Also in CY 2019, Textron completed Factory Acceptance Testing on the final gearbox design and began installing the redesigned gearbox on craft. The redesigned gearbox is scheduled to undergo the 100-hour long First Article Test in Spring CY 2020. This gearbox solution will be incorporated into all craft prior to delivery to the fleet.

With numerous lessons learned from Craft 100, Textron is preparing for LCAC 101's BT in early CY 2020. LCAC 101's AT is currently scheduled for May 2020. To fully demonstrate SSC's cargo/vehicle lift requirements, LCAC 101's AT will be conducted in the fully loaded condition and will be independently assessed by the Navy's Board of Inspection and Survey (INSURV). The Navy plans to take delivery of LCAC 101 in the summer of CY 2020. Subsequent craft under construction, 102 through 112, show reduced overall man hours and expedited outfitting in earlier stages of construction.

Navy anticipates a Q2 FY 2020 award of the follow on construction contract. Given the PB 2021 budget shifted 12 craft beyond FY 2021 – FY 2023, there is an increased risk for industrial base instability impacting cost.

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

History of Significant Developments Since Program Initiation	
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History of Significant Developments Since Program Initiation	
Date	Significant Development Description
June 2010	On June 10, 2010, an Initial SSC CDD was approved.
July 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 APB. Milestone B approval was authorized by the SAE and the program was granted approval to enter into the EMD phase and was authorized a LRIP quantity not to exceed 13 craft.
July 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 with options for eight production craft and technical manuals. The award was based on full and open competition.
September 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.
February 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.
May 2015	On May 26, 2015, a Milestone C review of the program was successfully held with the 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.
July 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.
March 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.
September 2017	Approval of APB Change 1 and increase in LRIP quantities.
February 2019	Approval of APB Change 2.

Threshold Breaches

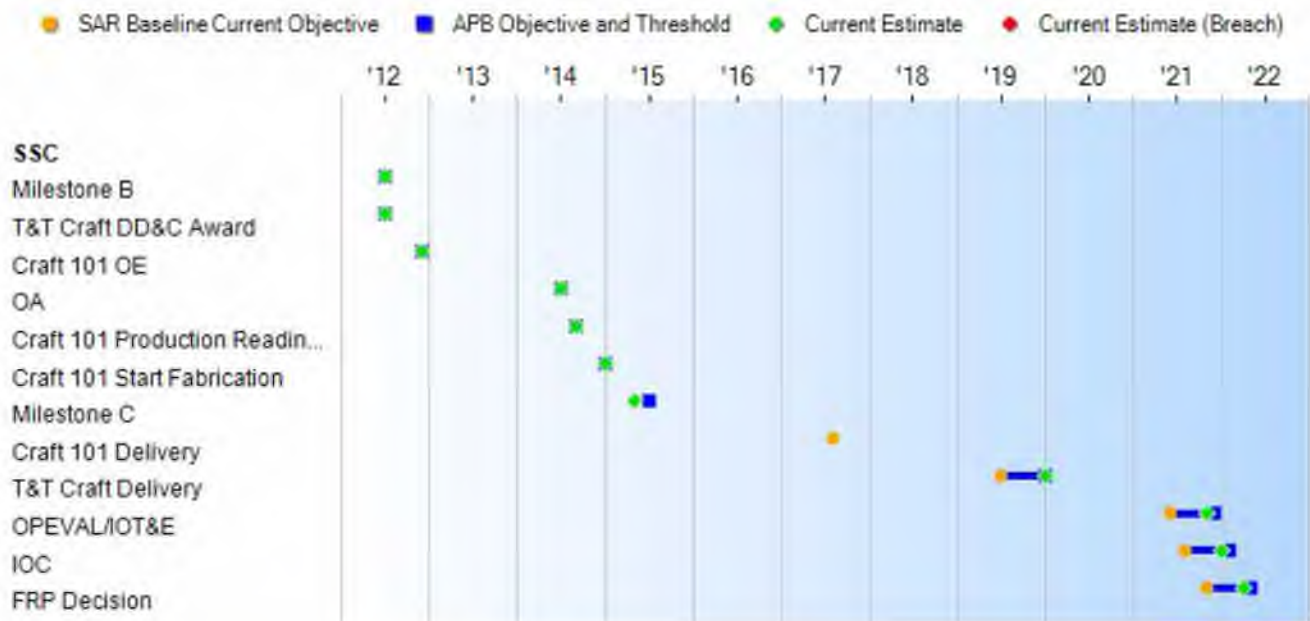
APB Breaches

- Schedule
- Performance
- Cost
 - RDT&E
 - Procurement
 - MILCON
 - Acq O&M
- O&S Cost
- Unit Cost
 - PAUC
 - APUC

Nunn-McCurdy Breaches

- Current UCR Baseline
 - PAUC None
 - APUC None
- Original UCR Baseline
 - PAUC None
 - APUC None

Schedule



Schedule Events				
Events	SAR Baseline Development Estimate	Current APB Production Objective/Threshold	Current Estimate	
Milestone B	Jul 2012	Jul 2012	Jul 2012	Jul 2012
T&T Craft DD&C Award	Jul 2012	Jul 2012	Jul 2012	Jul 2012
Craft 101 OE	Mar 2013	Dec 2012	Dec 2012	Dec 2012
OA	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	Nov 2014	Jul 2015	Jul 2015	May 2015
Craft 101 Delivery	Aug 2017	N/A	N/A	N/A
T&T Craft Delivery	Feb 2017	Jul 2019	Jan 2020	Jan 2020 (Ch-1)
OPEVAL/IOT&E	Apr 2018	Jun 2021	Dec 2021	Nov 2021 (Ch-1)
IOC	Aug 2020	Aug 2021	Feb 2022	Jan 2022 (Ch-1)
FRP Decision	Sep 2018	Nov 2021	May 2022	Apr 2022 (Ch-1)

Change Explanations

(Ch-1) The current estimates for T&T Craft Delivery, OPEVAL/IOT&E, IOC, and FRP Decision changed from December 2019 to January 2020, June 2021 to November 2021, August 2021 to January 2022, November 2021 to April 2022, respectively, due to delayed delivery of T&T Craft which is causing program delays.

Notes

SHIP	HULL#	DELIVERY	OWLD
LCAC	101	2020-06	2022-07
LCAC	102	2020-09	2022-07
LCAC	103	2020-10	2021-12
LCAC	104	2020-11	2021-12
LCAC	105	2021-04	2022-05
LCAC	106	2021-05	2022-07
LCAC	107	2021-07	2022-12
LCAC	108	2021-11	2022-12
LCAC	109	2022-01	2022-12
LCAC	110	2022-03	2023-09
LCAC	111	2022-06	2023-09
LCAC	112	2022-08	2023-09
LCAC	113	2022-10	2024-05
LCAC	114	2023-01	2024-05
LCAC	115	2023-03	2024-05
LCAC	116	2023-06	2024-12
LCAC	117	2023-08	2024-12
LCAC	118	2023-10	2024-12
LCAC	119	2024-01	2025-06
LCAC	120	2024-03	2025-06
LCAC	121	2024-05	2025-06
LCAC	122	2024-07	2026-05
LCAC	123	2024-08	2026-05
LCAC	124	2025-03	2026-05

SSC

LCAC	125	2025-05	2026-11
LCAC	126	2025-07	2026-11
LCAC	127	2025-09	2026-11
LCAC	128	2025-11	2027-02
LCAC	129	2026-01	2027-02
LCAC	130	2026-01	2027-02
LCAC	131	2026-03	2027-08
LCAC	132	2026-05	2027-08
LCAC	133	2026-07	2027-08
LCAC	134	2026-09	2028-02
LCAC	135	2026-11	2028-02
LCAC	136	2027-01	2028-02
LCAC	137	2027-03	2028-08
LCAC	138	2027-05	2028-08
LCAC	139	2027-07	2028-08
LCAC	140	2027-09	2029-04
LCAC	141	2027-11	2029-04
LCAC	142	2028-03	2029-04
LCAC	143	2028-05	2029-10
LCAC	144	2028-07	2029-10
LCAC	145	2028-09	2029-10
LCAC	146	2028-11	2030-06
LCAC	147	2029-03	2030-06
LCAC	148	2029-05	2030-06
LCAC	149	2029-07	2030-12
LCAC	150	2029-09	2030-12
LCAC	151	2029-11	2030-12
LCAC	152	2030-03	2031-08
LCAC	153	2030-05	2031-08

SSC

LCAC	154	2030-07	2031-08
LCAC	155	2030-09	2032-04
LCAC	156	2030-11	2032-04
LCAC	157	2031-03	2032-04
LCAC	158	2031-05	2032-10
LCAC	159	2031-07	2032-10
LCAC	160	2031-09	2032-10
LCAC	161	2031-11	2033-06
LCAC	162	2032-03	2033-06
LCAC	163	2032-05	2033-06
LCAC	164	2032-07	2033-12
LCAC	165	2032-09	2033-12
LCAC	166	2032-11	2033-12
LCAC	167	2033-03	2034-08
LCAC	168	2033-05	2034-08
LCAC	169	2033-07	2034-08
LCAC	170	2033-09	2035-04
LCAC	171	2033-11	2035-04
LCAC	172	2034-03	2035-04

Acronyms and Abbreviations

CE - Current Estimate
DD&C - Detail Design and Construction
IOT&E - Initial Operational Test and Evaluation
LCAC - Landing Craft Air Cushion
OA - Operational Assessment
OE - Option Exercise
OPEVAL - Operational Evaluation
T&T - Test and Training

Performance

Performance Characteristics				
SAR Baseline Development Estimate	Current APB Production Objective/Threshold	Demonstrated Performance	Current Estimate	
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 79 short tons over the threshold range in the threshold temperature operating range and threshold sea state.	The SSC should be capable of transporting 74 short tons over the threshold range in the threshold temperature operating range and threshold sea state.	TBD	The SSC is capable of transporting 74 short tons over the threshold range in the threshold temperature operating range and threshold sea state.
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.	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 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	TBD	The SSC is 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 permits 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 decks of amphibious ships while on cushion or in displacement mode (wet well only). SSC embarks on board the planned MLP, without ship alterations, as designed and built for the LCAC. SSC is able to operate with existing ships services, including the planned MLP, in place for the LCAC including ship's power,

		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.		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 is able to enter and exit allied amphibious ships Mistral (French) and Osumi (Japan).
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 - 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)	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 - Centric Data Strategy and Net-Centric Services Strategy, and the principles and rules identified in the DoD IEA, excepting	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 information exchanges. 2) Compliant with Net - Centric Data Strategy and Net-Centric Services Strategy, and the principles and rules identified in the DoD	TBD	The SSC fully supports 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 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

<p>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 ATO by the DAA. 5) Supportability requirements to include SAASM, Spectrum and JTRS requirements. See appendix A of the CDD for additional details on the NR-KPP.</p>	<p>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 ATO by the DAA. 5) Supportability requirements to include SAASM, Spectrum and JTRS requirements. See appendix A of the CDD for additional details on the NR-KPP.</p>	<p>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 requirements. See appendix A of the CDD for additional details on the NR-KPP.</p>	<p>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 requirements. See appendix A of the CDD for additional details on the NR-KPP.</p>
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Force Protection

<p>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.</p>	<p>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.</p>	<p>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</p>	<p>TBD</p>	<p>The SSC provides protection to the crew and internally carried embarked forces from small arms, crew served weapons and fragmentation. The SSC is 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.</p>
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		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.		
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.	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 is 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.
Manpower				
The SSC should be fully operable with a crew of no more than three (3).	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).	TBD	The SSC is fully operable, including conducting on load/offload operations, with a crew of five (5).
Materiel Availability (Am)				
The SSC should have a Materiel Availability of 63 percent.	The SSC should have a Materiel Availability of 63 percent.	The SSC shall have a Materiel Availability of 59.5 percent.	TBD	The SSC Materiel Availability is 60.7 percent.
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	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	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	TBD	The SSC is capable of operating over the high water mark. This includes movement over ice, mud, rivers, swamps, and marshes. While moving inland, the SSC is able to negotiate obstacles found in the complex operational environment (natural and

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.	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.	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.		man-made). The SSC is able to operate over a beach high water mark, rocks, rubble, obstacles and walls up to 4 feet high, grass, reeds and dunes.
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Requirements Reference

CDD dated June 10, 2010

Change Explanations

None

Notes

The following footnotes apply to Interoperability Threshold KPP:

1/ LSD-41 well deck can embark a fifth craft in a non-tactical capacity without ship services.

2/ LHD-1 Power converter for 3rd spot not part of Pack Up Kit footprint.

3/ MLP ship's power for SSC may require alteration or separate pieces of equipment which is not part of Pack Up Kit footprint.

4/ The Expeditionary Transfer Dock (ESD) is the new name of the Mobile Landing Platform (MLP).

Acronyms and Abbreviations

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
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
US - United States
USN - United States Navy

Track to Budget

RDT&E

Appn	BA	PE	
Navy	1319	04	0603564N
	Project	Name	
	3127	Preliminary Design and Feasibility Study	(Shared) (Sunk)
	Notes:	Preliminary Design and Feasibility Study/SSC Design	
Navy	1319	05	0604567N
	Project	Name	
	3133	Ship to Shore Connectors Contract Design	(Sunk)
	3137	SSC Construction	(Sunk)
Navy	1319	05	0605220N
	Project	Name	
	3133	Ship to Shore Connectors Contract Design	
	3137	SSC Construction	
	Notes:	T&T Craft only.	
	C410	SSC Composite Research	(Sunk)
	Notes:	2019	

Procurement

Appn	BA	PE	
Navy	1611	05	0204411N
	Line Item	Name	
	5110	Outfitting	(Shared)
Navy	1611	05	0204228N
	Line Item	Name	
	5112	Ship to Shore Connector	
	Notes:	Ship to Shore Connector End Cost	
	5300	Completion of Prior Year Shipbuilding	(Shared) (Sunk)
Navy	1810	04	0204228N
	Line Item	Name	
	5664	Surface Training Equipment	(Shared)
	Notes:	See FMT funding issue.	

MILCON

Appn	BA	PE
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Navy 1205 01 0712776N

Project	Name	
P176	Facilities New Footprint - Utilities	(Shared) (Sunk)
Notes: Electrical Upgrades at ACU-4		
P5002	Facilities New Footprint - Utilities	(Shared) (Sunk)
Notes: Electrical Upgrades at ACU-5		

Navy 1205 01 0815976N

Project	Name	
P5001	Facilities New Footprint - Training	(Shared) (Sunk)
Notes: Trainer Facility		

Cost and Funding

Cost Summary

Total Acquisition Cost							
Appropriation	BY 2011 \$M			BY 2011 \$M	TY \$M		
	SAR Baseline Development Estimate	Current APB Production Objective/Threshold		Current Estimate	SAR Baseline Development Estimate	Current APB Production Objective	Current Estimate
RDT&E	552.7	552.7	608.0	537.9	571.9	571.9	560.2
Procurement	3354.4	3354.4	3689.8	3673.3	4137.5	4137.5	5099.9
Flyaway	--	--	--	3592.7	--	--	4988.8
Recurring	--	--	--	3592.7	--	--	4988.8
Non Recurring	--	--	--	0.0	--	--	0.0
Support	--	--	--	80.6	--	--	111.1
Other Support	--	--	--	0.0	--	--	0.0
Initial Spares	--	--	--	80.6	--	--	111.1
MILCON	18.5	18.5	20.4	14.3	21.7	21.7	17.3
Acq O&M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	3925.6	3925.6	N/A	4225.5	4731.1	4731.1	5677.4

Cost Notes

No cost estimate for the program has been completed in the previous year.

Total Quantity			
Quantity	SAR Baseline Development Estimate	Current APB Production	Current Estimate
RDT&E		2	2
Procurement		71	71
Total		73	73

Cost and Funding

Funding Summary

Appropriation Summary									
FY 2021 President's Budget / December 2019 SAR (TY\$ M)									
Appropriation	Prior	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
RDT&E	535.2	19.9	5.1	0.0	0.0	0.0	0.0	0.0	560.2
Procurement	1561.0	76.1	19.7	157.9	158.3	372.0	379.3	2375.6	5099.9
MILCON	17.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17.3
Acq O&M	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PB 2021 Total	2113.5	96.0	24.8	157.9	158.3	372.0	379.3	2375.6	5677.4
PB 2020 Total	2129.1	17.5	313.9	484.8	365.6	373.0	342.2	1422.3	5448.4
Delta	-15.6	78.5	-289.1	-326.9	-207.3	-1.0	37.1	953.3	229.0

Funding Notes

Quantity Summary										
FY 2021 President's Budget / December 2019 SAR (TY\$ M)										
Quantity	Undistributed	Prior	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Development	1	0	0	0	0	0	0	0	0	1
Production	0	26	1	0	2	2	5	5	31	72
PB 2021 Total	1	26	1	0	2	2	5	5	31	73
PB 2020 Total	1	26	0	4	7	5	5	5	20	73
Delta	0	0	1	-4	-5	-3	0	0	11	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
2006	--	--	--	--	--	--	14.0
2007	--	--	--	--	--	--	13.0
2008	--	--	--	--	--	--	27.0
2009	--	--	--	--	--	--	24.9
2010	--	--	--	--	--	--	33.5
2011	--	--	--	--	--	--	95.5
2012	--	--	--	--	--	--	51.0
2013	--	--	--	--	--	--	112.7
2014	--	--	--	--	--	--	68.2
2015	--	--	--	--	--	--	41.7
2016	--	--	--	--	--	--	8.2
2017	--	--	--	--	--	--	12.6
2018	--	--	--	--	--	--	31.5
2019	--	--	--	--	--	--	1.4
2020	--	--	--	--	--	--	19.9
2021	--	--	--	--	--	--	5.1
Subtotal	1	--	--	--	--	--	560.2

Annual Funding							
1319 RDT&E Research, Development, Test, and Evaluation, Navy							
Fiscal Year	Quantity	BY 2011 \$M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
2006	--	--	--	--	--	--	15.1
2007	--	--	--	--	--	--	13.7
2008	--	--	--	--	--	--	27.9
2009	--	--	--	--	--	--	25.4
2010	--	--	--	--	--	--	33.7
2011	--	--	--	--	--	--	93.7
2012	--	--	--	--	--	--	49.2
2013	--	--	--	--	--	--	107.6
2014	--	--	--	--	--	--	64.2
2015	--	--	--	--	--	--	38.8
2016	--	--	--	--	--	--	7.5
2017	--	--	--	--	--	--	11.3
2018	--	--	--	--	--	--	27.6
2019	--	--	--	--	--	--	1.2
2020	--	--	--	--	--	--	16.8
2021	--	--	--	--	--	--	4.2
Subtotal	1	--	--	--	--	--	537.9

Annual Funding 1810 Procurement Other Procurement, Navy							
Fiscal Year	Quantity	TY \$M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
2019	--	0.8	--	--	0.8	--	0.8
2020	--	--	--	--	--	--	--
2021	--	14.5	--	--	14.5	--	14.5
Subtotal	--	15.3	--	--	15.3	--	15.3

Annual Funding 1810 Procurement Other Procurement, Navy							
Fiscal Year	Quantity	BY 2011 \$M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
2019	--	0.7	--	--	0.7	--	0.7
2020	--	--	--	--	--	--	--
2021	--	11.9	--	--	11.9	--	11.9
Subtotal	--	12.6	--	--	12.6	--	12.6

Cost Quantity Information		
1810 Procurement Other Procurement, Navy		
Fiscal Year	Quantity	End Item Recurring Flyaway (Aligned With Quantity) BY 2011 \$M
2019	--	0.7
2020	--	--
2021	--	--
Subtotal	--	12.6

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	
2015	3	155.4	--	--	155.4	4.2	159.6	
2016	5	203.4	--	--	203.4	7.5	210.9	
2017	2	125.0	--	--	125.0	3.1	128.1	
2018	8	525.8	--	--	525.8	12.2	538.0	
2019	8	511.5	--	--	511.5	12.1	523.6	
2020	1	74.6	--	--	74.6	1.5	76.1	
2021	--	5.2	--	--	5.2	--	5.2	
2022	2	154.9	--	--	154.9	3.0	157.9	
2023	2	155.2	--	--	155.2	3.1	158.3	
2024	5	364.2	--	--	364.2	7.8	372.0	
2025	5	371.5	--	--	371.5	7.8	379.3	
2026	5	379.8	--	--	379.8	7.8	387.6	
2027	5	374.4	--	--	374.4	7.8	382.2	
2028	5	374.4	--	--	374.4	7.8	382.2	
2029	5	374.4	--	--	374.4	8.0	382.4	
2030	5	374.4	--	--	374.4	8.0	382.4	
2031	6	449.4	--	--	449.4	9.4	458.8	
Subtotal	72	4973.5	--	--	4973.5	111.1	5084.6	

Annual Funding								
1611 Procurement Shipbuilding and Conversion, Navy								
Fiscal Year	Quantity	BY 2011 \$M						
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program	
2015	3	133.7	--	--	133.7	3.6	137.3	
2016	5	171.4	--	--	171.4	6.3	177.7	
2017	2	103.2	--	--	103.2	2.5	105.7	
2018	8	425.1	--	--	425.1	9.9	435.0	
2019	8	405.5	--	--	405.5	9.6	415.1	
2020	1	58.0	--	--	58.0	1.1	59.1	
2021	--	4.0	--	--	4.0	--	4.0	
2022	2	115.7	--	--	115.7	2.2	117.9	
2023	2	113.7	--	--	113.7	2.2	115.9	
2024	5	261.5	--	--	261.5	5.6	267.1	
2025	5	261.5	--	--	261.5	5.5	267.0	
2026	5	262.1	--	--	262.1	5.4	267.5	
2027	5	253.3	--	--	253.3	5.3	258.6	
2028	5	248.3	--	--	248.3	5.2	253.5	
2029	5	243.5	--	--	243.5	5.2	248.7	
2030	5	238.7	--	--	238.7	5.1	243.8	
2031	6	280.9	--	--	280.9	5.9	286.8	
Subtotal	72	3580.1	--	--	3580.1	80.6	3660.7	

The 2015 Defense Appropriations Act directed the completion of Craft 101 with the Shipbuilding and Conversion, Navy, appropriation.

Cost Quantity Information		
1611 Procurement Shipbuilding and Conversion, Navy		
Fiscal Year	Quantity	End Item Recurring Flyaway (Aligned With Quantity) BY 2011 \$M
2015	3	133.7
2016	5	171.4
2017	2	103.2
2018	8	425.1
2019	8	405.5
2020	1	58.0
2021	--	--
2022	2	119.7
2023	2	113.7
2024	5	261.5
2025	5	261.5
2026	5	262.1
2027	5	253.3
2028	5	248.3
2029	5	243.5
2030	5	238.7
2031	6	280.9
Subtotal	72	3580.1

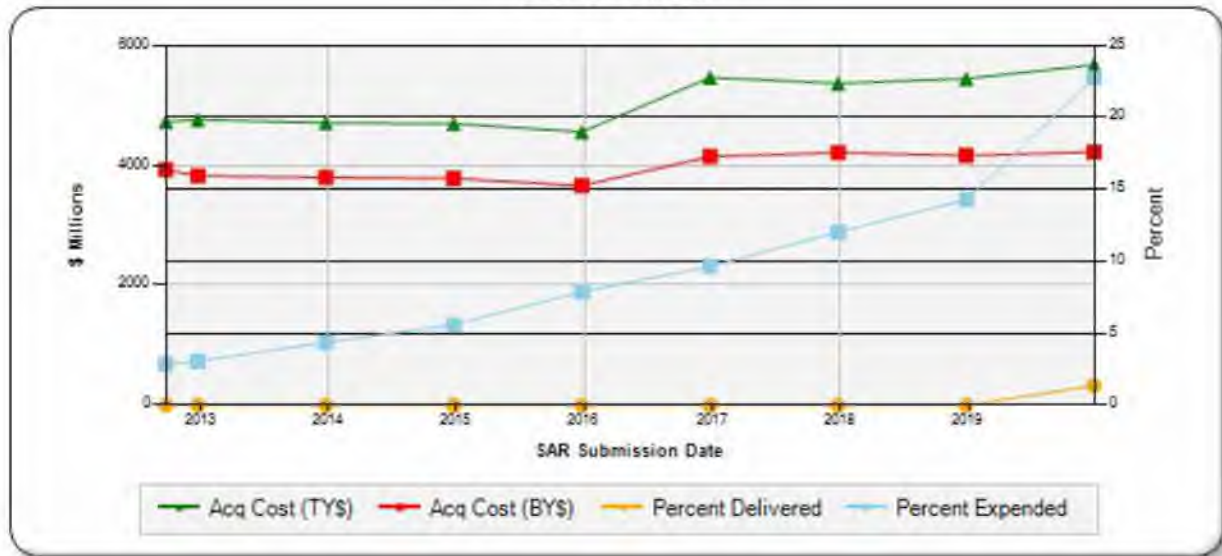
Annual Funding 1205 MILCON Military Construction, Navy and Marine Corps	
Fiscal Year	TY \$M
	Total Program
2018	2.6
2019	14.7
Subtotal	17.3

Annual Funding 1205 MILCON Military Construction, Navy and Marine Corps	
Fiscal Year	BY 2011 \$M
	Total Program
2018	2.2
2019	12.1
Subtotal	14.3

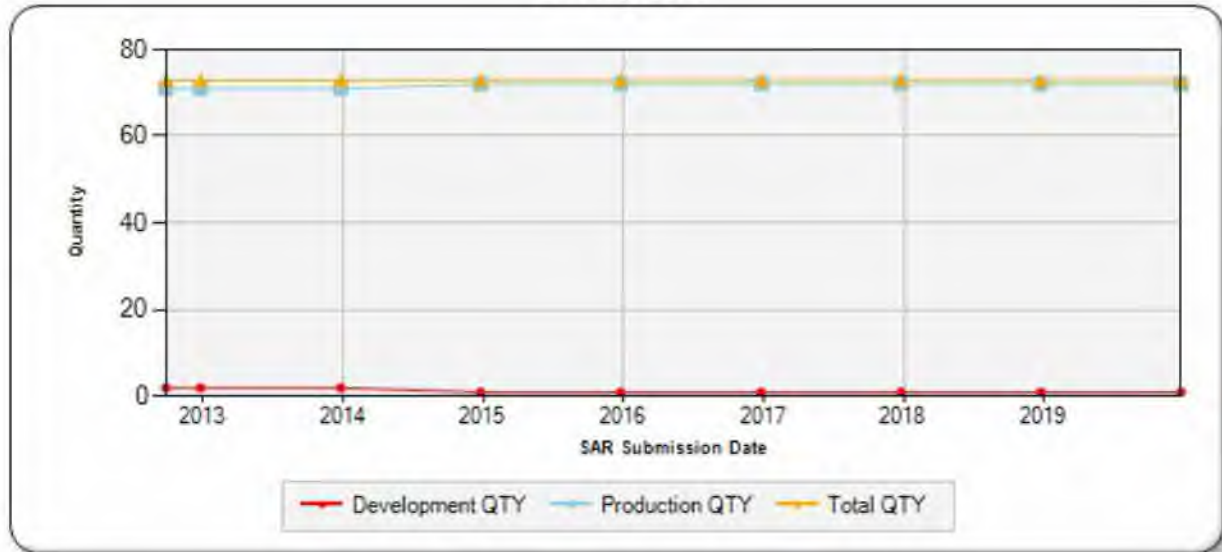
Charts

SSC first began SAR reporting in September 2012

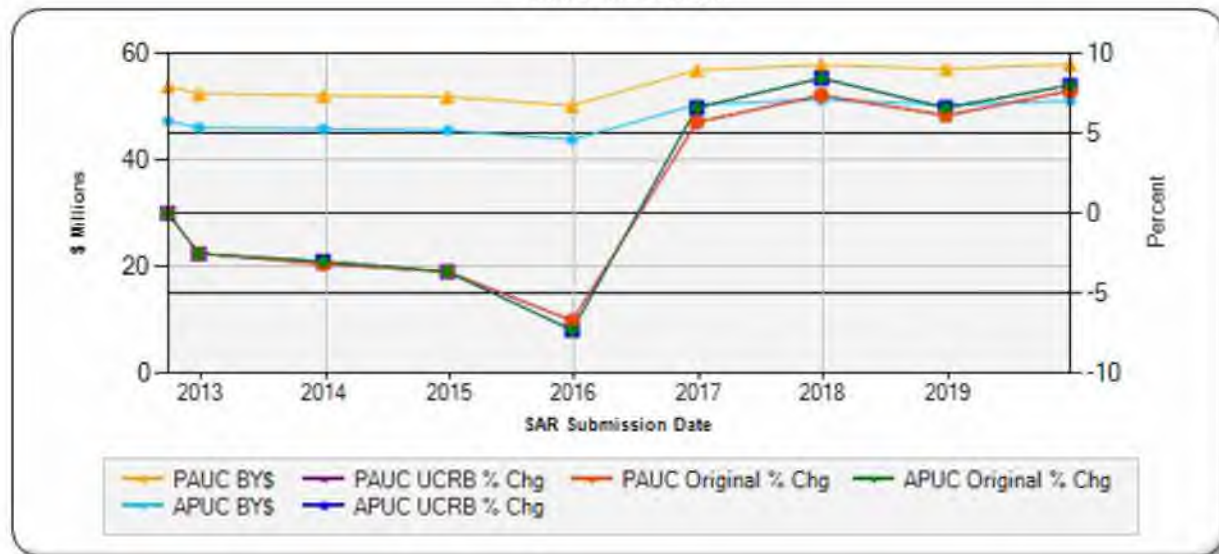
Program Acquisition Cost - SSC
Base Year 2011 \$M



Quantity - SSC



Unit Cost - SSC
Base Year 2011 \$M



Risks

Significant Schedule and Technical Risks

Significant Schedule and Technical Risks	
Milestone A (May 2009)	
1.	RISK: Technical - Gearbox Life Cycle. In accordance with Section 830(a)(2) of the FY 2020 National Defense Authorization Act, which requires a SAR to be submitted "in unclassified form without any designation relating to dissemination control" this SAR section has omitted information that is For Official Use Only .
2.	RISK: Technical - Drive Train Integration. In accordance with Section 830(a)(2) of the FY 2020 National Defense Authorization Act, which requires a SAR to be submitted "in unclassified form without any designation relating to dissemination control" this SAR section has omitted information that is For Official Use Only .
3.	RISK: Technical - C4N Control System. In accordance with Section 830(a)(2) of the FY 2020 National Defense Authorization Act, which requires a SAR to be submitted "in unclassified form without any designation relating to dissemination control" this SAR section has omitted information that is For Official Use Only .
Milestone B (July 2012)	
1.	RISK: Technical - Drive Train Integration. In accordance with Section 830(a)(2) of the FY 2020 National Defense Authorization Act, which requires a SAR to be submitted "in unclassified form without any designation relating to dissemination control" this SAR section has omitted information that is For Official Use Only .
2.	RISK: Technical - Main Engine Development. In accordance with Section 830(a)(2) of the FY 2020 National Defense Authorization Act, which requires a SAR to be submitted "in unclassified form without any designation relating to dissemination control" this SAR section has omitted information that is For Official Use Only .
3.	RISK: Programmatic - FY 2013 Craft Construction concurrency with Test & Training (T&T) Craft Design and Construction. In accordance with Section 830(a)(2) of the FY 2020 National Defense Authorization Act, which requires a SAR to be submitted "in unclassified form without any designation relating to dissemination control" this SAR section has omitted information that is For Official Use Only .
4.	RISK: Technical - C4N Control System. In accordance with Section 830(a)(2) of the FY 2020 National Defense Authorization Act, which requires a SAR to be submitted "in unclassified form without any designation relating to dissemination control" this SAR section has omitted information that is For Official Use Only .
Milestone C (May 2015)	
1.	RISK: Programmatic - LCAC 101- 108 Construction concurrency with T&T Craft construction and Testing. In accordance with Section 830(a)(2) of the FY 2020 National Defense Authorization Act, which requires a SAR to be submitted "in unclassified form without any designation relating to dissemination control" this SAR section has omitted information that is For Official Use Only .
2.	RISK: Programmatic: FRP Initiation Schedule. In accordance with Section 830(a)(2) of the FY 2020 National Defense Authorization Act, which requires a SAR to be submitted "in unclassified form without any designation relating to dissemination control" this SAR section has omitted information that is For Official Use Only .
3.	RISK: Technical - C4N Control System. In accordance with Section 830(a)(2) of the FY 2020 National Defense Authorization Act, which requires a SAR to be submitted "in unclassified form without any

designation relating to dissemination control" this SAR section has omitted information that is ~~For Official Use Only.~~

Current Estimate (December 2019)

1. RISK: Technical - Gearbox Life Cycle. In accordance with Section 830(a)(2) of the FY 2020 National Defense Authorization Act, which requires a SAR to be submitted "in unclassified form without any designation relating to dissemination control" this SAR section has omitted information that is ~~For Official Use Only.~~
2. RISK: Technical - Propeller Life Cycle Integrity. In accordance with Section 830(a)(2) of the FY 2020 National Defense Authorization Act, which requires a SAR to be submitted "in unclassified form without any designation relating to dissemination control" this SAR section has omitted information that is ~~For Official Use Only.~~

Risks

Risk and Sensitivity Analysis

Risks and Sensitivity Analysis	
Current Baseline Estimate (February 2019)	
1.	APB Change 1 was approved in September 2017. No changes were made to the Cost sections therefore the Current Baseline Estimate remains the Original Baseline Estimate.
Original Baseline Estimate (July 2012)	
1.	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.
Revised Original Estimate (N/A)	
None	
Current Procurement Cost (December 2019)	
1.	The Current Procurement Cost remains the Original Baseline Estimate.

Low Rate Initial Production

Item	Initial LRIP Decision	Current Total LRIP
Approval Date	7/5/2012	9/21/2017
Approved Quantity	13	29
Reference	Milestone B ADM	Gate 6 Sufficiency Review ADM
Start Year	2013	2013
End Year	2021	2022

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 2020.

The Service Acquisition Executive authorized an increase in LRIP quantities to 29 in order to cover fluctuating procurement quantities.

Foreign Military Sales

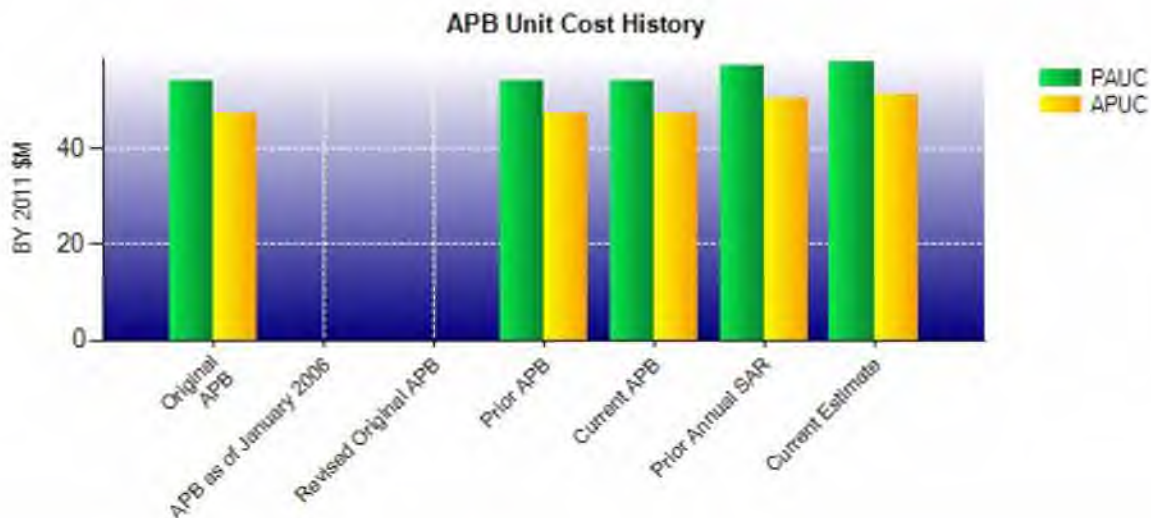
None

Nuclear Costs

None

Unit Cost

Current UCR Baseline and Current Estimate (Base-Year Dollars)			
Item	BY 2011 \$M	BY 2011 \$M	% Change
	Current UCR Baseline (Feb 2019 APB)	Current Estimate (Dec 2019 SAR)	
Program Acquisition Unit Cost			
Cost	3925.6	4225.5	
Quantity	73	73	
Unit Cost	53.775	57.884	+7.64
Average Procurement Unit Cost			
Cost	3354.4	3673.3	
Quantity	71	72	
Unit Cost	47.245	51.018	+7.99
Original UCR Baseline and Current Estimate (Base-Year Dollars)			
Item	BY 2011 \$M	BY 2011 \$M	% Change
	Original UCR Baseline (Jul 2012 APB)	Current Estimate (Dec 2019 SAR)	
Program Acquisition Unit Cost			
Cost	3925.6	4225.5	
Quantity	73	73	
Unit Cost	53.775	57.884	+7.64
Average Procurement Unit Cost			
Cost	3354.4	3673.3	
Quantity	71	72	
Unit Cost	47.245	51.018	+7.99



APB Unit Cost History					
Item	Date	BY 2011 \$M		TY \$M	
		PAUC	APUC	PAUC	APUC
Original APB	Jul 2012	53.775	47.245	64.810	58.275
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	Sep 2017	53.775	47.245	64.810	58.275
Current APB	Feb 2019	53.775	47.245	64.810	58.275
Prior Annual SAR	Dec 2018	57.059	50.354	74.636	67.858
Current Estimate	Dec 2019	57.884	51.018	77.773	70.832

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	
64.810	2.995	-0.022	3.932	0.000	5.785	0.000	0.273	12.963	77.773

Current SAR Baseline to Current Estimate (TY \$M)									
Initial APUC Development Estimate	Changes								APUC Current Estimate
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
58.275	3.046	-0.297	3.986	0.000	5.546	0.000	0.276	12.557	70.832

SAR Baseline History				
Item	SAR Planning Estimate	SAR Development Estimate	SAR Production Estimate	Current Estimate
Milestone A	N/A	N/A	N/A	N/A
Milestone B	N/A	Jul 2012	N/A	Jul 2012
Milestone C	N/A	Nov 2014	N/A	May 2015
IOC	N/A	Aug 2020	N/A	Jan 2022
Total Cost (TY \$M)	N/A	4731.1	N/A	5677.4
Total Quantity	N/A	73	N/A	73
PAUC	N/A	64.810	N/A	77.773

Cost Variance

Summary TY \$M				
Item	RDT&E	Procurement	MILCON	Total
SAR Baseline (Development Estimate)	571.9	4137.5	21.7	4731.1
Previous Changes				
Economic	-1.2	+211.3	+0.3	+210.4
Quantity	-38.4	+36.9	--	-1.5
Schedule	--	+153.1	--	+153.1
Engineering	--	--	--	--
Estimating	+13.0	+327.1	-4.7	+335.4
Other	--	--	--	--
Support	--	+19.9	--	+19.9
Subtotal	-26.6	+748.3	-4.4	+717.3
Current Changes				
Economic	+0.1	+8.0	+0.1	+8.2
Quantity	--	--	--	--
Schedule	--	+133.9	--	+133.9
Engineering	--	--	--	--
Estimating	+14.8	+72.2	-0.1	+86.9
Other	--	--	--	--
Support	--	--	--	--
Subtotal	+14.9	+214.1	--	+229.0
Total Changes	-11.7	+962.4	-4.4	+946.3
Current Estimate	560.2	5099.9	17.3	5677.4

Summary BY 2011 \$M				
Item	RDT&E	Procurement	MILCON	Total
SAR Baseline (Development Estimate)	552.7	3354.4	18.5	3925.6
Previous Changes				
Economic	--	--	--	--
Quantity	-35.8	+31.8	--	-4.0
Schedule	--	-3.1	--	-3.1
Engineering	--	--	--	--
Estimating	+8.5	+229.8	-4.1	+234.2
Other	--	--	--	--
Support	--	+12.6	--	+12.6
Subtotal	-27.3	+271.1	-4.1	+239.7
Current Changes				
Economic	--	--	--	--
Quantity	--	--	--	--
Schedule	--	--	--	--
Engineering	--	--	--	--
Estimating	+12.5	+50.1	-0.1	+62.5
Other	--	--	--	--
Support	--	-2.3	--	-2.3
Subtotal	+12.5	+47.8	-0.1	+60.2
Total Changes	-14.8	+318.9	-4.2	+299.9
Current Estimate	537.9	3673.3	14.3	4225.5

Previous Estimate: December 2018

RDT&E	\$M	
	Base Year	Then Year
Current Change Explanations		
Revised escalation indices. (Economic)	N/A	+0.1
Revised estimate due to T&T Craft Test and Evaluation prior to delivery. (Estimating)	+12.6	+14.9
Adjustment for current and prior escalation. (Estimating)	-0.1	-0.1
RDT&E Subtotal	+12.5	+14.9

Procurement	\$M	
	Base Year	Then Year
Current Change Explanations		
Revised escalation indices. (Economic)	N/A	+8.0
Stretch-out of procurement buy profile from FY 2029 to FY 2031. (Navy). (Schedule)	0.0	+133.9
Revised estimate due to execution realignment. (SCN) (Estimating)	-16.3	-19.3
Revised estimate for extended acquisition plan from FY 2025 to FY 2031. (Estimating)	+72.3	+100.4
Revised estimate to reflect Navy Capital Working Fund FY 2020 - FY 2025. (Estimating)	-0.3	-0.7
Adjustment for current and prior escalation. (Estimating)	-1.6	-2.2
Revised estimate to reflect application of new outyear inflation indices. (Estimating)	-4.0	-6.0
Adjustment for current and prior escalation. (Support)	-0.2	0.0
Decrease Initial Spares estimate as a result of a change in Navy buy profile (SCN). (Support)	-2.1	0.0
Procurement Subtotal	+47.8	+214.1

MILCON	\$M	
	Base Year	Then Year
Current Change Explanations		
Revised escalation indices. (Economic)	N/A	+0.1
Adjustment for current and prior escalation. (Estimating)	-0.1	-0.1
MILCON Subtotal	-0.1	0.0

Contracts

Contract Identification

Appropriation: RDT&E
Contract Name: SSC Detail Design & Construction
Contractor: Textron, Inc
Contractor Location: 19401 Chef Menteur Hwy
 New Orleans, LA 70129-2565
Contract Number: N00024-12-C-2401
Contract Type: Fixed Price Incentive(Firm Target) (FPIF)
Award Date: July 06, 2012
Definitization Date: July 06, 2012

Contract Price							
Initial Contract Price (\$M)			Current Contract Price (\$M)			Estimated Price At Completion (\$M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
N/A	N/A	N/A	N/A	N/A	N/A		

Cost and Schedule Variance Explanations

Cost and Schedule Variance reporting is not required on this (FPIF) contract.

General Contract Variance Explanation

In accordance with Section 830(a)(2) of the FY 2020 National Defense Authorization Act, which requires a SAR to be submitted "in unclassified form without any designation relating to dissemination control" this SAR section has omitted information that is ~~For Official Use Only~~.

Notes

The December 2019 Contract Performance Report is used in this report.

Deliveries and Expenditures

Deliveries				
Delivered to Date	Planned to Date	Actual to Date	Total Quantity	Percent Delivered
Development	1	1	1	100.00%
Production	0	0	72	0.00%
Total Program Quantity Delivered	1	1	73	1.37%

Expended and Appropriated (TY \$M)			
Total Acquisition Cost	5677.4	Years Appropriated	15
Expended to Date	1292.4	Percent Years Appropriated	57.69%
Percent Expended	22.76%	Appropriated to Date	2209.5
Total Funding Years	26	Percent Appropriated	38.92%

The above data is current as of February 10, 2020.

Operating and Support Cost

Cost Estimate Details

Date of Estimate:	February 19, 2015
Source of Estimate:	SCP
Quantity to Sustain:	73
Unit of Measure:	Craft
Service Life per Unit:	30.00 Years
Fiscal Years in Service:	FY 2018 - FY 2057

Unit of Measure equals Craft. A Craft is defined as one Ship to Shore Connector. One Test and Training Craft and 72 fleet service craft will be sustained for a total of 73 O&S Craft.

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 Information

The Antecedent System is the Landing Craft Air Cushion (LCAC). LCAC Model (-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 CARD for the SSC.

Cost Element	Annual O&S Costs BY2011 \$M	
	SSC Average Annual Cost Per Craft	LCAC (Antecedent) Average Annual Cost Per Craft
Unit-Level Manpower	1.525	1.291
Unit Operations	0.454	0.460
Maintenance	1.090	1.357
Sustaining Support	0.463	0.463
Continuing System Improvements	0.264	0.329
Indirect Support	0.819	0.410
Other	0.000	0.000
Total	4.615	4.310

Item	Total O&S Cost \$M			
	SSC			LCAC (Antecedent)
	Current Production APB Objective/Threshold		Current Estimate	
Base Year	10171.3	11188.4	10106.0	9437.0
Then Year	18058.9	N/A	15657.0	0.0

The total program O&S cost estimate is determined to be \$15,657 TY\$M. This total was de-escalated by the Naval Center for Cost Analysis to arrive at a total O&S Current Estimate of \$10,106.0 BY 2011 \$M.

Equation to Translate Annual Cost to Total 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 \text{ BY 2011 } \$M \times 73 \times 30 = \$10,106.0 \text{ BY 2011 } \M .

O&S Cost Variance		
Category	BY 2011 \$M	Change Explanations
Prior SAR Total O&S Estimates - Dec 2018 SAR	10106.0	
Programmatic/Planning Factors	0.0	
Cost Estimating Methodology	0.0	
Cost Data Update	0.0	
Labor Rate	0.0	
Energy Rate	0.0	
Technical Input	0.0	
Other	0.0	
Total Changes	0.0	
Current Estimate	10106.0	

Disposal Estimate Details

Date of Estimate: February 19, 2018
Source of Estimate: Antecedent System actual disposal costs
Disposal/Demilitarization Total Cost (BY 2011 \$M): 14.2

The SSC disposal cost estimate is based on the actual disposal costs of the ten LCAC disposed as of February 2018.