Cutter Stratton Visits Fiji during Operation Blue Pacific Patrol

The crew of the Coast Guard Cutter Stratton conducts patrols in Fiji's exclusive economic zone with Fijian law enforcement personnel in February. The Coast Guard's mission to combat IUU fishing is essential in protecting maritime governance and a rules-based international order to ensure a free and open Indo-Pacific. *U.S. COAST GUARD*

SUVA, Fiji – The crew of the Coast Guard Cutter Stratton visited Fiji in February after being underway for 50-days in the Pacific combating illegal, unreported, and unregulated (IUU) fishing, the Coast Guard 14th District said Feb. 15.

During the visit, Capt. Stephen Adler, the Stratton's commanding officer, met with members of the Fijian media to

discuss the Coast Guard's partnership with Fiji and their combined effort to protect fisheries resources.

"Our relationships with our partner nations are more important than ever in combating illegal, unreported, and unregulated fishing," said Adler. "We are pleased to work with our Fijian partners to maintain maritime sovereignty and security throughout the region."

While in the country, the Stratton's crew welcomed aboard three Fijian ship riders who, with the assistance of Stratton's law enforcement boarding teams, will ensure compliance with applicable Fijian fishing laws within Fiji's exclusive economic zone.

The Coast Guard's mission to combat IUU fishing is essential in protecting maritime governance and a rules-based international order to ensure a free and open Indo-Pacific.

The fisheries industry is a significant source of food and income throughout the Pacific. Protecting this renewable resource is a priority for the United States and Pacific Island Countries as IUU fishing in the Pacific has global impacts and effects.

Recently IUU fishing has replaced piracy as the leading global maritime security threat and has the potential to have a global effect if unchecked.

Prior to visiting Fiji, the Stratton's crew had been working with British, Australian, New Zealand, and French allied naval forces as well as the U.S. Navy in support of the Tongan government following the volcanic eruption on Jan 15.

The crew also conducted a number of drills and exercises with allied partners including helicopter operations with the Armed Forces in French Polynesia, fueling at sea with the Royal New

Zealand Navy Ship Aotearoa, and multiple maneuvering exercises with the Royal Navy HMS Spey.

The Stratton is a 418-foot national security cutter capable of extended, worldwide deployment in support of homeland security and defense missions. NSCs routinely conduct operations throughout the Pacific and Atlantic oceans; their unmatched combination of range, speed, and ability to operate in extreme weather provides the mission flexibility necessary to conduct vital strategic missions.

Operation Blue Pacific is an overarching multi-mission Coast Guard endeavor, promoting security, safety, sovereignty, and economic prosperity in Oceania while strengthening relationships between partner nations in the Pacific.

Bell to Advance U.S. DoD High-Speed VTOL Capabilities

An artist’s conception of Bell Textron’s entry in the AFWERX High-Speed Vertical Take-Off and Landing Concept Challenge. *BELL TEXTRON*

Fort Worth, Texas – Bell Textron Inc. has advanced to the next phase of the AFWERX High-Speed Vertical Take-Off and Landing Concept Challenge, a crowdsourcing effort for the U.S. Air Force and Special Operations Command, the company said Feb. 16.

Bell is one of 11 companies from more than 200 challenge entrants selected to receive market research investments aimed at advancing solutions that enable optimal agility in austere environments.

“Bell is thrilled that our HSVTOL concepts have been selected for the next phase of the U.S. Air Force’s AFWERX Challenge,” said Jason Hurst, Bell’s vice president of Innovation. “In entering this next phase, Bell’s teams will continue to lay the groundwork for the production of another revolutionary military aircraft and provide USSOCOM and the U.S. Air Force with conceptual designs and development roadmaps to accelerate this capability to the warfighter.”

Bell’s HSVTOL vehicles blend the hover capability of a

helicopter with the speed, range and survivability features of fighter aircraft. This family of scalable aircraft concepts is designed to support a range of missions, including personnel recovery, autonomous ISR/Strike and tactical mobility, with low-downwash hover capability and jet-like speeds of more than 400 knots.

Bell's concepts are envisioned as part of a broader HSVTOL mission system framework that provides the next generation of speed, range, and survivability. These concepts provide the flexibility to carry out USAF and USSOCOM missions across the full spectrum of conflict and political scenarios. It emerged as a top-tier entrant in the HSVTOL Concept Challenge by meeting or exceeding rigorous evaluation criteria focused on technical merit, reliability, scalability, and other factors.

"The HSVTOL Concept Challenge has surfaced an impressive range and caliber of solutions to help us understand how to build a new class of air vehicles," said Dr. Reid Melville, chief innovation officer, Air Force Research Laboratory Transformational Capabilities Office. "We believe the organizations selected to receive market research investments at this stage have the potential to deliver truly groundbreaking innovation."

Over the next six months, Bell will further develop its HSVTOL solution, working closely with the USAF, USSOCOM, and Collaboration.Ai, the prime contractor facilitating the HSVTOL Concept Challenge.

U.S., U.K. Navy Chiefs Meet,

Discuss Cooperation and Interoperability

Chief of Naval Operations Adm. Mike Gilday, left middle, meets with Royal Navy Adm. Sir Ben Key, First Sea Lord and Chief of the Naval Staff of the United Kingdom. *U.S. NAVY / Mass Communication Specialist 1st Class Sean Castellano*

WASHINGTON – U.S. Chief of Naval Operations Adm. Mike Gilday met with his U.K. counterpart, Royal Navy First Sea Lord and Chief of the Naval Staff Adm. Sir Ben Key, at the Pentagon, Feb. 15, the CNO's public affairs office said in a release.

During the meeting, the leaders reaffirmed their commitment to deepen cooperation and discussed a wide range of issues including strategic competition, interoperability, capabilities and innovation.

"Today's global challenges and security environment emphasize the importance of partnerships and interoperability," said Gilday. "Our enduring and strong partnership with the United Kingdom helps us to ensure security, stability and

prosperity.”

This meeting marked the first between the First Sea Lord and CNO and was emblematic of the strong partnership between the two countries. Discussions were substantive and productive.

Gilday and Key exchanged views about security issues in Europe, the Middle East, and the Indo-Pacific, underscoring the importance of the U.S.-U.K. bilateral relationship and defense cooperation, as well as NATO alliance.

“I am delighted to be in Washington to see my U.S. counterparts. As the Chief of Naval Operations has said, our two navies share an incredible bond, which was most amply demonstrated last year with the many miles we sailed together on the Carrier Strike Group 21 deployment,” said Key. “We train, exercise and operate together because of our shared outlook, our shared values and our shared desire for peace and prosperity across the globe.”

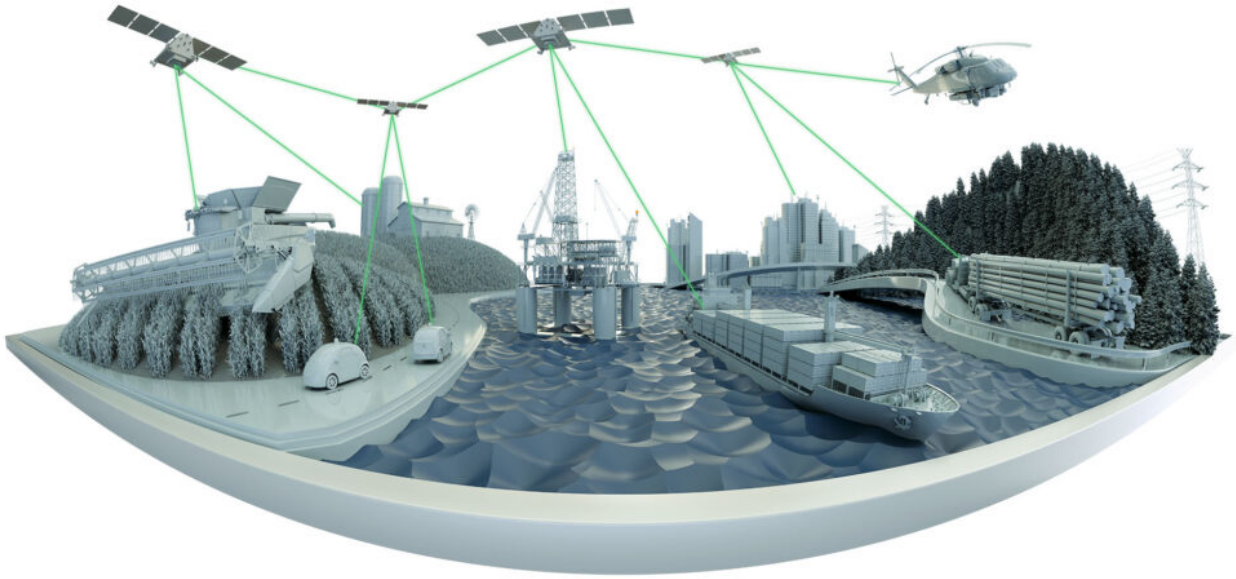
“The strength of our alliances and partnerships has never been more important and will continue to be imperative to take on the challenges of the 21st century,” said Gilday. “I look forward to the continued cooperation between our two countries and our two navies.”

The two leaders emphasized their navies shared commitment to uphold and advance the rules-based international system.

The U.S. and Royal Navy operate together around the globe regularly. Most recently, USS The Sullivans (DDG 68) took part in a six-month deployment as part of Carrier Strike Group 21 (CSG21) with HMS Queen Elizabeth (R08). Both navies also conducted multilateral naval training with Australia and Japan during Maritime Partnership Exercise (MPX) 2021 in October.

Key took office in November. The Navy Chiefs spoke via video conference on Key’s first day in office.

Lockheed Martin Selected to Prototype Next-Generation USMC 5G Communications



ANNAPOLIS JUNCTION, Md. – The U.S. Department of Defense has awarded Lockheed Martin a $19.3 million prototype project agreement to create a 5G communications network infrastructure testbed for expeditionary operations experimentation for the Office of the Under Secretary of Defense for Research and Engineering and the U.S. Marine Corps.

The testbed, known as Open Systems Interoperable and Reconfigurable Infrastructure Solution, or OSIRIS, is a key initiative of Lockheed Martin's 5G.MIL programs which are positioned to help its customers field, scale and integrate 5G technology rapidly and affordably across all operations on land, water, in air, space and cyber.

“OSIRIS will serve as a critical proof point of Lockheed Martin’s 5G.MIL capabilities,” says Deon Viergutz, vice president, Lockheed Martin Spectrum Convergence. “We are integrating the technical capabilities of 5G waveforms, software and hardware with higher bandwidth and low-latency data rates into our defense products to enhance their performance for our warfighters. We want to ensure that warfighters operating in communications contested and denied environments have resilient access to data to perform their missions anywhere in the world.”

The OSIRIS program will help address the need for test facilities that enable rapid experimentation and dual-use application prototyping. The testbed will identify areas for further compatibility between 5G network and DoD platforms that will enhance customer capabilities. The infrastructure will also allow for the connection of various 5G-ready user devices, sensors, vehicles and endpoints to explore the military utility of commercial 5G technologies and pave the way for onboarding of new technologies from other OUSD investments while addressing cybersecurity requirements. This capability will further enable and advance DoD’s joint all domain operations concept.

Teams from Lockheed Martin, along with subcontractors DISH Wireless, Intel, Radisys and Rampart Communications will create the 5G network testbed infrastructure at U.S. Marine Corps Base Camp Pendleton. The period of performance will begin immediately and conclude in September 2024.

U.S. Marine, British F-35Bs Flew Seamlessly with Israeli, Italian, Japanese F-35s during Queen Elizabeth Deployment

U.S. Marine Corps Brig. Gen. Simon Doran, U.S. Senior National Representative to the United Kingdom Carrier Strike Group 21, and Royal Navy Commodore Steve Moorhouse, commander of the CSG-21, stands in front of a Marine Fighter Attack Squadron 211 F-35B Lightning II aboard HMS Queen Elizabeth in the South China Sea Oct. 8, 2021. *U.K. ROYAL NAVY / LPhot Unaisi Luke*

ARLINGTON, Va. – The senior U.S. officer embarked on last year's deployment of the Royal Navy aircraft carrier HMS Queen Elizabeth, who also flew the F-35B Lightning II strike fighters from the ship, praised the F-35B and the Marine Corps

and Royal Air Force pilots who flew them and the crews who maintained them during the wide-ranging deployment and operated with F-35s from three other nations: Israel, Japan and Italy.

“It’s quite interesting having come from a background in F/A-18s to now be in the F-35 and to just see the manner in which this airplane can share information not just between U.S. and U.K. jets, but we had the opportunity to fly with Italian, Israeli and Japanese F-35s,” said Brig. Gen. Simon Doran, who served as U.S. senior national representative to Carrier Strike Group 21 (CSG-21), speaking to reporters during a Feb. 15 phone conference sponsored by Headquarters Marine Corps, along with Rear Adm. Steve Moorhouse, former commander of CSG-21, now the U.K. Royal Navy’s director of force generation.

“The manner in which this airplane processes information, … I can tell you, having flown it, it really does some tremendous things in the air that provides situational awareness that can be used by decision makers to hopefully give an advantage,” Doran said. “I truly do believe that in the world of aviation right now it’s an unmatched capability that was demonstrated by us moving around the world and operating with so many different nations – our allies and our partners.”

Moorhouse said the Queen Elizabeth’s F-35Bs operated over the Black Sea in support of a Royal Navy Type 45 destroyer and a Royal Netherlands Navy frigate and conducted sorties in support of Operation Inherent Resolve in Syria and Iraq.

Doran said the deployment was “a fantastic experience for us. We got to stress the system both in the material condition of the F-35, its ability to sustain sorties that were of longer duration, and also number of sorties per day. It was really interesting to see if we could demonstrate the unmatched capability of the F-35 against some of the Russian aircraft and we were quite fortunate in that we got to intercept and

escort more Russian aircraft than any other deployments, certainly since the Cold War.

“It was a really good experience for our aircrew as well a great experience for our maintainers to really stress the system while at sea and demonstrate that capability, to not just talk about something but actually do it in some strenuous conditions, while still maintaining a level of professionalism,” he said.

Doran said that VMFA-211deploed with 10 F-35Bs and flew more than 1,200 sorties and more than 2,000 flight hours during the Queen Elizabeth’s 6.5-month, May to December 2021 deployment, which ranged over 40,000 nautical miles, operated with more than 40 nations, and participated in 17 operations and named exercises. The squadron interacted with 13 of those nations.

Doran, who was born in Liverpool, England, was an F/A-18 Hornet pilot for six deployments in U.S. Navy aircraft carriers and has since learned to fly the F-35B. He was frocked to brigadier general while at sea on the Queen Elizabeth. He flew both U.S. and U.K. F-35Bs during the deployment.

“Operating from Queen Elizabeth was not difficult whatsoever,” he said. “With a ship that is purpose-built for a particular airplane and with an airplane as advanced as the F-35, most of your training in the F-35 goes into using it as a weapon system or as a system to gather and disseminate information. The actual takeoff and recovery of the airplane is thankfully quite easy. It really was a pleasure to fly to and from that ship.”

While deployed, the F-35Bs on the Queen Elizabeth also operated from the U.S Navy’s amphibious assault ships USS America and USS Essex and the Italian aircraft carrier Cavour.

Doran said planning for the deployment began more than a

decade ago, even while the Queen Elizabeth was under construction. VMFA-211 worked up on the carrier in 2020 well before deployment and completed a Red Flag exercise after shortly after 617 Squadron – the U.K. F-35B unit paired with VMFA-211 for the deployment – completed the exercise.

During the deployment, Doran served as adviser to then-Commodore Moorhouse and represented the U.S. geographic combatant commanders in maintaining operational control of all U.S. units assigned to the CSG. He also was on hand to address any issues that countered U.S. policy and could negotiate with the commodore "to make sure that everything complied with the guidance and intent that I was provided by the Office of the Secretary of Defense and the chairman of the Joint Chiefs of Staff."

"I think having the sons and daughters of the U.S. and the U.K serving side-by-side around the world, especially sharing some of the hardships of operating while a global pandemic is going on has lasting friendships that will serve both nations quite well," he said. "It was incredibly pleasing from a both a personal and professional level to see U.S. Sailors and Marines working alongside Royal Navy Sailors and airmen side-by-side over seven months and really learning how to operate at a very high level under some adverse conditions and still have a smile on their face and execute at a very professional level."

The general said, "the return on the investment [of the deployment] from the U.S. point of view was really good when it came down to the tactical level of warfighting and training together."

Doran said the visit of Queen Elizabeth II to her namesake ship "really cemented in our minds the importance of this deployment from the very beginning and what is does to reinforce the special relationship between our two nations to demonstrate that on the high seas is absolutely incredible."

Carl Vinson Carrier Strike Group Returns Home for Valentine's Day

The Nimitz-class aircraft carrier USS Carl Vinson (CVN 70) returns to its homeport of Naval Air Station North Island, San Diego. The Carl Vinson Carrier Strike Group returned to San Diego after an eight-month deployment to U.S. 3rd and 7th Fleets in support of regional stability and a free and open Indo-Pacific. *U.S. NAVY / Mass Communication Specialist 2nd Class Kevin Johnson*

SAN DIEGO – The Carl Vinson Carrier Strike Group returned to San Diego on Feb. 14, Valentine's Day, marking the end of an eight-month deployment to U.S. 3rd and 7th Fleets areas of operation, said U.S. 3rd Fleet Public Affairs.

After an accelerated departure from San Diego, the Carl Vinson CSG supported integrated operations in the Hawaiian Islands operating area with the U.S. Marine Corps, Air Force and Coast Guard as part of the Defense Department's ongoing presence in the Indo-Pacific region. They continued into the western Pacific demonstrating U.S. commitment to partnerships and alliances in the region while upholding a free and open Indo-Pacific.

"The tireless dedication and professionalism of our Sailors, through a global pandemic, challenging operational tempo, and sacrificed time away from family, is truly humbling," said Capt. P. Scott Miller, commanding officer of Nimitz-class aircraft carrier USS Carl Vinson (CVN 70), the strike group's flagship. "Their efforts have demonstrated flexibility and resiliency and ensured mission success in every task. They have directly supported a free and open Indo-Pacific and have underscored our Navy's readiness, strength, and lethality."

Ships in the Carl Vinson CSG sailed more than 80,000 nautical miles while underway for 262 days, conducted dual carrier operations and multinational exercises, including maritime security operations, integrated training between surface and air units, long-range maritime strike, anti-submarine warfare, information warfare operations, maritime interdiction operations, personnel recovery, air defense operations, multiple ship navigation and formation maneuvering and refueling-at-sea operations. While deployed, the strike group operated in some of the most heavily navigated waters of the Indo-Pacific including the South China Sea and the Philippine Sea.

Carl Vinson is the first aircraft carrier to deploy with a combination of fourth- and fifth-generation platforms within Carrier Air Wing (CVW) 2 that predominantly represent the "Air Wing of the Future," including the F-35C Lightning IIs of Strike Fighter Squadron (VFA) 147, the CMV-22B Ospreys of

Fleet Logistics Multi-Mission Squadron (VRM) 30, the F/A-18E/F Super Hornets of VFAs 2, 113, and 192, the EA-18G Growlers of Electronic Attack Squadron (VAQ) 136, the E-2D Advanced Hawkeyes of Airborne Command & Control Squadron (VAW) 113, the MH-60R Sea Hawks of Helicopter Maritime Strike Squadron (HSM) 78, and the MH-60S Sea Hawks of Helicopter Sea Combat Squadron (HSC) 4. The complete Air Wing of the Future will also include the MQ-25 Stingray unmanned aircraft system, which is planned to be incorporated into carrier air wings in 2025.

During the deployment, the air wing executed more than 15,000 fixed-wing and helicopter flight hours comprising of 7,791 sorties, 7,702 launches and 7,761 aircraft arrestments.

The strike group successfully completed operations and exercises alongside multiple partners and allies including navies from Australia, Canada, Germany, India, the Netherlands, New Zealand and the United Kingdom as well as the Japan Maritime Self-Defense Force.

Notable multinational, bilateral, and U.S.-only exercises included Large Scale Exercise 2021 in August, Operation Malabar and Maritime Partnership Exercise 2021 in October, Annual Exercise 2021 in November, U.S. and Australia's bilateral exercise in December and Expeditionary Strike Force and dual carrier operations in January 2022.

"Alongside our partners and allies, we have aggressively pursued every opportunity to elevate our combat readiness in a drive to continue upholding regional stability," said Rear Adm. Dan Martin, commander, Carrier Strike Group (CSG) 1. "We've been doing this for 75 years and I'm proud to say that our team has relentlessly paid tribute to this legacy with many long hours of sweat and determination that started well before we left San Diego."

The Carl Vinson CSG consists of Carl Vinson, embarked staffs

of CSG 1, CVW-2 and Destroyer Squadron (DESRON) 1; nine embarked air wing squadrons; guided-missile cruiser USS Lake Champlain (CG 57); and DESRON 1 guided-missile destroyers USS Chafee (DDG 90), USS O'Kane (DDG 77), USS Stockdale (DDG 106), and USS Michael Murphy (DDG 112).

Navy Team Christens First Snakehead Advanced UUV Prototype

Cheryl Mierzwa, Naval Undersea Warfare Center Division Newport's technical program manager for the Snakehead Large Displacement Unmanned Undersea Vehicle, christens the underwater vehicle at the Narragansett Bay Test Facility in Newport, Rhode Island, on Feb. 2. *U.S. NAVY*

WASHINGTON – A Navy team led by the Naval Undersea Warfare Center Division Newport and the Program Executive Office for Unmanned and Small Combatants conducted a vehicle christening for the first Snakehead Large Displacement Unmanned Undersea Vehicle prototype Feb. 2 at the Narragansett Bay Test Facility in Newport, Rhode Island, PEO USC said Feb. 11.

Snakehead is a modular, reconfigurable, multi-mission LDUUV deployed from submarine large ocean interfaces. It is equipped with a government-owned architecture, mission autonomy capabilities and vehicle software, employing innovation in the areas of hull materials and lithium-ion battery certification. Deployed from a submarine dry deck shelter, Snakehead provides guidance and control, navigation, situational awareness, propulsion, maneuvering and sensors in support of undersea missions.

The Navy continues to invest in a family of unmanned undersea vehicles to meet the mission requirements for maintaining undersea domain superiority. Snakehead is the Navy's largest submarine-launched UUV, providing increased endurance, depth capability, and payload capacity beyond small and medium UUVs.

Coast Guard Cutter Valiant Returns Home after 30-day Patrol

The Coast Guard Cutter Valiant (WMEC 621) crew transfers migrants to Coast Guard Cutter Joseph Doyle (WPC 1133) crew in the Caribbean Sea during a 30-day patrol on Feb. 11. The Valiant crew repatriated over 200 migrants interdicted in the high seas. *U.S. COAST GUARD*

JACKSONVILLE, Fla. – The Coast Guard Cutter Valiant (WMEC 621) and crew returned to Naval Station Mayport on Feb. 11 after completing a 30-day patrol in the Caribbean Sea, the Coast Guard 7th District said in a release.

The Valiant's crew patrolled over 6,300 miles in the Caribbean Sea, conducting a variety of operations in support of Coast Guard District 7.

The crew partnered with both foreign and domestic military agencies in the detection, interdiction and repatriation of over 200 migrants interdicted in the high seas.

During their patrol, they received word that a suspected migrant vessel had suddenly and unexpectedly sank, leaving 39 people in the water. The Valiant crew assumed on-scene command of the situation upon arrival and coordinated with Fuerzas

Unidas de Rapida Acción assets operating out of Aguadilla, Puerto Rico, to ensure the safe rescue and care of all persons in the water.

The crew conducted two joint operations with forces from the Dominican navy involving the transfer and repatriation of migrants interdicted by Valiant crew and other U.S. Coast Guard assets. Combined, the evolutions conducted between the Valiant crew and the Dominican Republic navy vessel Aldebarán ensured the safe and efficient return of over 120 migrants to their home country. Such operations continue to showcase the value of partner nation operations and joint efforts to combat human trafficking.

“Combating illegal immigration and protecting the safety of life at sea are extremely challenging missions that require the utmost flexibility and dedication,” said Cmdr. Jeff Payne, Valiant’s commanding officer. “I could not be more proud of the crew executing the missions flawlessly, saving over 200 lives and working with multiple government agencies to keep our nation safe.”

The Valiant is a multi-mission 210-foot medium-endurance cutter. Missions include search and rescue, maritime law enforcement, marine environmental protection, homeland security and national defense operations.

Navy to Deliver Next-Generation Ship-to-Shore

Connectors to Assault Craft Unit

The next generation landing craft, ship-to-shore connector, landing craft, air cushion (LCAC), successfully completed well

deck interoperability testing with USS Carter Hall (LSD 50) and demonstrated the craft are another step closer to fleet integration. *NSWC PANAMA CITY / Ron Newsome*

ARLINGTON, Va. – The Navy is set to deliver the first two operational next-generation landing craft, air cushion 110-class ship-to-shore connectors on Feb. 11 to an assault craft unit in Little Creek, Virginia, Navy officials said.

The two SSCs are on board the dock landing ship USS Carter Hall (LSD 50) inside the ship's well deck en route to Joint Expeditionary Base Little Creek-Fort Story, Virginia, after having completed well deck interoperability testing in Panama City, Florida. The two craft will be delivered to ACU-4, which has long operated the SSC's predecessor, the LCAC 01 class, said Thomas Rivers, executive director, Amphibious, Auxiliary and Sealift Ships, Program Executive Office-Ships, speaking Feb. 10 at the National Defense Industrial Association's Expeditionary Warfare Conference.

Four LCAC 100s have been delivered to the Navy so far, with delivery of three or four more expected in 2022, said Capt. Scot Searles, program manager, Amphibious Assault and Connectors Programs, PEO-Ships, also speaking at the conference. A total of 24 are on contract, with 12 under construction.

Rivers said initial operational capability of the LCAC 100 class will be reached when the ACU is equipped with six craft.

Capt. Kevin Lane, the Navy's resource sponsor for Amphibious Warfare, also speaking at the conference, said IOC is expected in 2023, with first deployment of the craft expected in 2024.

The deck operability testing "was conducted as part of the first phase of ship interface testing and helped validate user requirements by performing multiple well deck entries and exits from USS Carter Hall," said Team Ships Public Affairs in a release. "LCACs are built with similar configurations,

dimensions, and clearances to the legacy LCAC – ensuring the compatibility with existing well deck equipped amphibious ships."

"The success of the well deck testing and other recent evolutions validates these modernized craft will be a game changer for the Navy-Marine Corps team as they execute various missions in the maritime domain," Searles said.

The test event, a collaboration between, PEO Ships, USS Carter Hall, Naval Surface Warfare Center Panama City Division and other stakeholders, was the culmination of months of preparation. The testing also has historical significance, as Panama City is the location of the Navy's Air Cushion Vehicle Center of Excellence with the first-ever well deck operations occurring off Panama City in 1985 between legacy LCAC 01 and USS Whidbey Island (LSD 41).

Navy, Marine Corps Labs Exploring How to Keep Advanced Bases Supplied and Safe

Marines hold a support-by-fire position in an amphibious combat vehicle during exercise Iron Fist, a joint amphibious exercise with Japan, at Marine Corps Base Camp Pendleton, California, Jan. 14. *U.S. MARINE CORPS / Cpl. Sydney Smith*

ARLINGTON, Va. — In addition to developing expeditionary warfare concepts like Marine Littoral Regiments and the light amphibious warship that would transport and supply them, the Office of Naval Research is looking into how to keep both safe and unseen by adversaries.

The first Marine Littoral Regiment, or MLR, an evolution of a traditional Marine infantry regiment, is being built in Hawaii and expected to be fully operationally capable next year for live force experimentation, complemented by war gaming and simulations, Marine Corps Brig. Gen. Benjamin Watson told the National Defense Industrial Association's virtual Expeditionary Warfare Conference Feb. 10.

The light amphibious warship, an anticipated bridge between traditional big L-class amphibious warfare ships and smaller ship-to-shore connectors like the across-the-beach air

cushioned landing craft, is still in the concept stage, said Watson, the commanding general of the Marine Corps Warfighting Laboratory/Futures Directorate and vice chief of the Office of Naval Research.

Both the MLR and LAW are expected to be key factors in the expeditionary advanced base operations concept, which envisions littoral operations by specialized mobile, low signature units within larger distributed maritime operation areas. Small, maneuverable expeditionary advanced bases will conduct sea control and denial operations using advanced sensors and long range missiles and artillery.

But the heat and radiation emitted by such high-powered platforms can be a liability in a very degraded and denied environment, said Marine Corps Col. William DePue Jr., ONR's Expeditionary Portfolio director. "In this environment, if you emit, you're a target. If you don't, you're blind," he said.

ONR is working on technologies that will allow the expeditionary advanced base Marines to passively sense the environment and sense what adversaries are doing while managing their own signatures "so that we emit when it's smart to do so and in ways that limit or avoid detection by the enemy," DePue said.

Researchers are also working ways to reduce food and fuel demands, particularly the shipment of liquids to advanced bases that make them and their supply vessels vulnerable. How to access more energy is a multi-faceted problem, according to Watson.

"It's one we really need industry's help with," he said. "You can't just solve the problem with enhanced distribution and sustainment capabilities. You need to reduce demand."