

Integer Technologies Contracted to Create Strategic Technology Roadmaps for the Office of Naval Research

Release from Integer Technologies

Roadmaps to outline S&T framework for power and energy solutions and define ways to increase the diversity of the STEM workforce.

COLUMBIA, S.C.—May 22, 2023—Integer Technologies announced today that the Office of Naval Research (ONR) has selected the South Carolina-based engineering firm to create three unique roadmaps—a Naval Power Systems (NPS) Science and Technology (S&T) Roadmap, an Expeditionary Energy (E2) S&T Roadmap, and a Naval Diversity Equity and Inclusion Workforce Development (NDEI-WD) Roadmap.

“This assessment of needs for both technology and workforce development will help to inform the Office of Naval Research’s strategy in science & technology research and people,” said Integer Chief Operating Officer Josh Knight, Ph.D. “We are ready to lead this comprehensive collaboration between government, academia, and industry that will address future fleet capability needs and plan transformative innovation.”

The Naval Power Systems (NPS) Science and Technology (S&T) Roadmap will identify basic and applied research needs across multiple power and energy (P&E) technology areas, and the Expeditionary Energy (E2) S&T Roadmap will outline a similar

research framework for the energy systems that will support future expeditionary force operations conducted by the Navy and Marine Corps.

The two S&T roadmaps will also address how investments in P&E research can support the Navy's broader goals and meet the existential challenges that wait on the horizon. These include identifying how technology development can build climate resilience into Navy platforms and how that development can accommodate increasing risks to international supply chains.

"In the coming decades, the U.S. Navy Fleet and Expeditionary Forces will see an influx of new technologies that enable the successful completion of their evolving national security and humanitarian missions," said Knight. "It is crucial that the power and energy systems deployed with the future forces are able to support those advanced solutions."

In addition to investing in a broad range of technology development efforts, the Naval Research Enterprise (NRE) cannot accomplish its mission without a diverse workforce to complete it. The Navy, along with other groups in academia and industry, have implemented multiple strategies to increase the diversity of their workforce. The Naval Diversity Equity and Inclusion Workforce Development (NDEI-WD) Roadmap will outline an ONR-wide strategy for stabilizing and strengthening the science, technology, engineering, and math (STEM) workforce across the NRE.

USINDOPACOM Statement on Unsafe Maritime Interaction



[Release from U.S. Indo-Pacific](#)

From U.S. Indo-Pacific Command Public Affairs

In accordance with international law, USS Chung-Hoon (DDG 93) and HMCS Montreal (FFH 336) conducted a routine south to north Taiwan Strait transit June 3 through waters where high seas freedoms of navigation and overflight apply. During the transit, PLA(N) LUYANG III DDG 132 (PRC LY 132) executed maneuvers in an unsafe manner in the vicinity of Chung-Hoon. The PRC LY 132 overtook Chung-Hoon on their port side and crossed their bow at 150 yards. Chung-Hoon maintained course and slowed to 10 kts to avoid a collision. The PRC LY 132 crossed Chung-Hoon's bow a second time starboard to port at 2,000 yards and remained off Chung-Hoon's port bow. The LY 132's closest point of approach was 150 yards and its actions

violated the maritime 'Rules of the Road' of safe passage in international waters.

USCGC Dependable returns home following 42-day multi-mission patrol in the Florida Straits and Windward Passage



[Release from U.S. Coast Guard Atlantic Area](#)

June 4, 2023

USCGC Dependable returns home following 42-day multi-mission patrol in the Florida Straits and Windward Passage

VIRGINIA BEACH, Va. – The crew of USCGC Dependable (WMEC 626) returned to their home port in Virginia Beach, Sunday, following a 42-day patrol in the Florida Straits and Windward Passage.

Dependable's crew contributed to the interdiction, care and repatriation of over 300 migrants while patrolling the Seventh Coast Guard District's area of responsibility in support of Operation Vigilant Sentry and Homeland Security Taskforce – Southeast.

While operating in the Florida Straits, Dependable was supported by multiple Coast Guard air assets to interdict two known drug smugglers in the vicinity of the Old Bahama Channel. Dependable's small boat crew stopped the vessel and embarked the smugglers. Over 1,100 pounds of contraband was recovered, making this the first drug bust for the cutter in more than three years.

Throughout the patrol, Dependable also collaborated with numerous other Coast Guard and partner assets, including a Coast Guard Law Enforcement Detachment embarked on the Navy ship USS Little Rock.

"The crew has been training to conduct migrant interdiction operations since July 2022," said Lt. Cmdr. Dana Prefer, Dependable's executive officer. "In preparation for the recent uptick in maritime migration ventures, we worked hard to qualify over 50 crew members to provide security and care for the migrants embarked aboard the cutter. All the training and preparation paid off as it was truly a team effort to interdict, process, and care for the well-being of migrants throughout our patrol."

Dependable is a 210-foot Reliance-class medium endurance cutter with a crew of 67. The cutter's primary missions

include counter drug operations, migrant interdiction, enforcement of federal fishery laws, and search and rescue in support of Coast Guard operations throughout the Western Hemisphere.

For information on how to join the U.S. Coast Guard, visit www.GoCoastGuard.com to learn about active duty and reserve, officer and enlisted opportunities. Information on how to apply to the U.S. Coast Guard Academy can be found at www.uscga.edu.

FRCE delivers final Harrier trainer to Marine squadron



The AV-8 team poses in front of the last TAV-8B Harrier trainer to be completed by Fleet Readiness Center East (FRCE) before it was delivered to Marine Attack Squadron (VMA) 223 at Marine Corps Air Station Cherry Point. The Marine Corps is replacing the aging AV-8 Harrier platform with the more high-

tech F-35 Lightning II. FRCE is expected to complete its AV-8 workload by the end of Fiscal Year 2024

[Release from Naval Air Systems Command](#)

Published:

Jun 2, 2023

MARINE CORPS AIR STATION CHERRY POINT, N.C.—Fleet Readiness Center East (FRCE) has reached another milestone toward the drawing down of its AV-8B Harrier program, with the completion of its last TAV-8B trainer aircraft. The two-seater trainer was delivered May 11 to Marine Attack Squadron (VMA) 223, located at Cherry Point.

The Marine Corps is moving to replace the Harrier with the short takeoff-vertical landing F-35B Lightning II by 2027, which means FRCE's AV-8 program will soon transition to supporting other platforms.

Many of the aircraft maintenance professionals on FRCE's Harrier program have spent a significant part of their careers repairing and maintaining AV-8 aircraft. They say that's why it's tough to see another piece of the program's workload come to an end.

"I've been at FRC East for almost 32 years, and this aircraft is almost 35 years old, which means it was flying before I came here," said Jeff Broughton, AV-8 planner at FRCE. "I've spent 20 years on this program, so you can imagine how many times I've seen this aircraft come through for Planned Maintenance Interval events. I worked on it once while I was a mechanic and twice while I was a planner, so you get to know the history of the aircraft each time it comes through."

Broughton said the Harrier program has established an impressive record of working under budget and ahead of

schedule, and its final TAV-8B is no exception. According to Broughton, FRCE's total combined work on this particular aircraft over the years was estimated to take nearly 11,000 work hours, but a tally of all the work actually completed on the aircraft came in at only 8,100 hours. Even on its last trip through the depot, it was delivered back to the fleet eight days early.

"Our FRCE AV-8 team prides itself on being ahead of schedule and under budget most of the time," Broughton said. "We might be considered out of sight, out of mind as a sundowning program, but the team is proud of being good stewards of the customer's money and being on or ahead of schedule to keep the customer happy."

With three more scheduled PMI inductions over the next year and a half, the AV-8 team will be disassembling, inspecting, repairing, reassembling and testing those aircraft. They are dismantling retired aircraft and removing good parts to be refurbished and returned to the supply system to be used on the aircraft remaining in the fleet. Artisans also continue to support the Marines with onsite in-service repairs.

Currently, FRCE's AV-8 program is scheduled to complete its final aircraft in September 2025. By that point, the personnel assigned to that team will be pursuing the next steps in their careers.

"We have a highly experienced team here, and many of them have been on this program for a long time," said Mike Stewart, AV-8 shop supervisor at FRCE. "They are extremely knowledgeable and can handle any issues with the AV-8."

Many will go on to support growing and incoming workload, such as the F-35, CH-53K and C-130 platforms. Stewart said these programs will benefit from the quality work and strong customer relationships formed by the AV-8 team, especially as the Marine Corps' former AV-8 squadrons have transitioned to

flying the F-35.

“We have spent years building a good foundation with the AV-8 community, and now they will be our future customers with the F-35,” Stewart said. “The program may be ending, but we’ve paved a clear path for future endeavors with the customer for a long time to come.”

As a long-time member of the AV-8 team, both as a Marine and later as a civilian artisan at FRCE, F-35 and AV-8 Branch Head Ike Rettenmair, said he is proud of what the Harrier program has accomplished and looks forward to what lies ahead for the fleet.

“You always hate to see a platform sundown, but technology is changing, our threats are changing, and it is time to move to the F-35 and the capability it will bring to the warfighter,” Rettenmair said. “FRCE will continue to support team Harrier as we have always done, until the final Harrier lands on the runway, regardless of when that will be.”

FRCE is North Carolina’s largest maintenance, repair, overhaul and technical services provider, with more than 4,000 civilian, military and contract workers. Its annual revenue exceeds \$1 billion. The depot provides service to the fleet while functioning as an integral part of the greater U.S. Navy; Naval Air Systems Command; and Commander, Fleet Readiness Centers.

Keel Authenticated for Future

USS Pittsburgh



[Release from Naval Sea Systems Command](#)

By Team Ships Public Affairs

Pascagoula, MS – The keel for the future USS Pittsburgh (LPD 31), a San Antonio-class amphibious transport dock, was ceremonially laid at Huntington Ingalls Industries' Ingalls Shipbuilding division, June 2.

The ship is the fifth Navy vessel to be named for the city of Pittsburgh, Pennsylvania and its surrounding region, which play a central role in our national defense infrastructure. The most recent USS Pittsburgh (SSN 720) was a Los Angeles-class submarine, which served the Navy from December 1984 to August 2019.

The contemporary keel-laying ceremony represents the joining together of a ship's major modular components at the land level, and is a significant milestone in ship production. The keel is authenticated with the ship sponsors' initials etched

into a ceremonial keel plate that is later incorporated into the ship. The LPD 31 sponsor is Mrs. Nancy Urban. The speaker at the keel laying was Rear Adm. Tom Anderson, Program Executive Officer, Ships.

“Shipbuilding is a team sport and is one of the most technically complex and challenging things we do in the defense industrial base. I would like to acknowledge the professionalism, skill and perseverance of the HII shipbuilders,” said Anderson. “Thank you for spending yourselves in the worthy cause of bringing the future USS Pittsburgh into being.”

The San Antonio class is designed to support embarking, transporting, and landing Marines and their equipment by conventional or air-cushioned landing craft. The ship’s capabilities are further enhanced by its flight deck and hangar, enabling the ship to operate a variety of Marine Corps helicopters and the Osprey tilt-rotor aircraft (MV-22). Because of the ships’ inherent capabilities, they are able to support a variety of amphibious assault, special operations, expeditionary warfare, or disaster relief missions, operating independently or as part of amphibious readiness groups, expeditionary strike groups, or joint task forces.

“The future USS Pittsburgh’s keel laying is a momentous occasion and the Navy and its industry partners look forward to working together during the construction process,” said Capt. Cedric McNeal, program manager, Amphibious Warfare Program Office, Program Executive Office (PEO) Ships. “Ultimately, LPD Flight II ships will provide capability and power projection to support a myriad of employment scenarios as a key component of the Amphibious Force structure for decades to come.”

Ingalls Shipbuilding division is also currently in production on the future USS Richard S. McCool Jr. (LPD 29) and the future USS Harrisburg (LPD 30).

As one of the Defense Department's largest acquisition organizations, PEO Ships is responsible for executing the development and procurement of all destroyers, amphibious ships, sealift ships, support ships, boats and craft.

TEXTRON SYSTEMS AND ANDURIL INDUSTRIES COMPLETE SUCCESSFUL UNCREWED-UNCREWED TEAMING DEMONSTRATION

[Release from Textron Systems](#)

June 01, 2023

TEXTRON SYSTEMS AND ANDURIL INDUSTRIES DEMONSTRATE INTEROPERABILITY OF AEROSONDE® UAS AND LATTICE FOR MISSION AUTONOMY SOFTWARE

Hunt Valley, Maryland and Irvine, California, JUNE 1, 2023 – Textron Systems Corporation, a Textron Inc. (NYSE:TXT) company, and Anduril Industries, a defense technology company, completed a successful demonstration of a Textron Systems Aerosonde® Hybrid Quad (HQ) UAS operated with multiple payloads onboard to simulate and geolocate threat emitters.

During the demonstration, an operator conducted missions using Anduril's Lattice for Mission Autonomy to command and control multiple first and third-party UAS with mixed sensor payloads and capabilities including one Textron Systems' Aerosonde HQ UAS and three variants of from Anduril's ALTIUS-600 Launched

Effects family loitering munitions to demonstrate an autonomous Suppression/Destruction of Enemy Air Defenses (SEAD/DEAD) mission in support of an Army Aviation Air Assault mission. Textron Systems and Anduril integrated multiple sensors, platforms and networks across teams of manned and unmanned systems, molding together hardware and software across domains.

The Aerosonde HQ has vertical takeoff and landing (VTOL) capability and performs as a modular workhorse for land and sea-based intelligence, surveillance and reconnaissance (ISR) missions. The aircraft has mission-tailorable agility that addresses the need for increased capability, lethality and survivability. Aerosonde has been expanding into the maritime domain, providing real-time situational awareness for surface combatants internationally.

“Building off the technology that we demonstrated last year at the U.S. Army’s [Cyber Quest](#) and [Project Convergence](#) exercises, this is the latest exercise to show our cross-domain interoperability and how easily our systems can integrate with others to meet our user’s requirements,” said Wayne Prender, Senior Vice President of Air Systems. “This exercise with Anduril allowed us to showcase how our capabilities are directly applicable to next-generation Army programs like FTUAS, SCI and Launched Effects.”

Anduril’s Lattice for Mission Autonomy is a hardware-agnostic end-to-end software platform that enables teams of robotic assets to work together under human supervision to dynamically perform complex missions in any domain. Lattice for Mission Autonomy performs the core functions that are essential for mission planning and execution—including autonomous piloting, the ability to sense and make sense of the battlespace, identification of threats and objects of interest, managing signature and communications to enhance survivability, orchestrating multi-asset maneuvers, and synchronizing the delivery of effects. The software platform is built with an

open and extensible architecture enabling the integration and interoperability of third-party hardware and software, like the Aerosonde HQ UAS.

“When you view the pace of technology development through a software lens, you approach the problem differently,” said Andrew Carter of Anduril. “Modern software platforms can allow you to iterate much faster and focus on bringing an ecosystem of technologies, behaviors, and networks together to accomplish a mission outcome. Anduril and Textron Systems were able to integrate, test, and execute in 15 weeks, highlighting the modular open systems architecture of Lattice for Mission Autonomy and the Textron Systems Aerosonde HQ platform.”

U.S., Philippine, Japan Coast Guards to conduct trilateral engagements



RELEASE DATE: 01JUN

[Release from U.S. Coast Guard Pacific Area](#)

HEADLINE: U.S., Philippine, Japan Coast Guards to conduct trilateral engagements

MANILA, Philippines – The U.S. Coast Guard Cutter Stratton (WMSL 752) and crew arrived in Manila on Thursday to conduct professional exchanges and joint operations with members of the Philippine and Japan Coast Guards during Stratton's months-long Indo-Pacific deployment.

Members from the three Coast Guards will engage in the first ever group of trilateral activities at sea and in port during

a multi-day visit building upon enduring partnerships between the nations.

“We’re eager to join the Philippine and Japan Coast Guards and participate in meaningful engagements with our allies and partners both in port and at sea,” said U.S. Coast Guard Capt. Brian Krautler, Stratton’s commanding officer. “This first trilateral engagement between the Coast Guards of these nations will provide invaluable opportunities to strengthen global maritime governance through professional exchanges and combined operations. Together we’ll demonstrate professional, rules-based standards of maritime operations with our steadfast partners to ensure a free and open Indo-Pacific.”

Operating under the tactical control of Commander, U.S. 7th Fleet, Stratton’s crew plans to engage in professional and subject matter expert exchanges with partners and allies throughout the region.

The U.S. Coast Guard’s steadfast partnerships and presence in the Indo-Pacific have increased in recent years. Stratton’s current Indo-Pacific patrol is the cutter’s second patrol in the region and one of seven national security cutter deployments to the Indo-Pacific since 2019.

The Coast Guard Cutter Midgett (WMSL 757) [conducted an at-sea search-and-rescue exercise](#) with the Philippine Coast Guard following a port call to Manila in 2022. Midgett’s crew conducted professional engagements and subject matter expert exchanges between the two services during the multi-day port visit.

The Coast Guard Cutter Kimball (WMSL 756) [conducted combined operations and search-and-rescue exercises](#) with the Japan Coast Guard in Kagoshima, Japan during their Western Pacific patrol in February in support of Operation Solid Alliance for Peace and Prosperity with Humanity and Integrity on the Rule

of law-based Engagement (SAPPHIRE). SAPPHIRE is a joint agreement between the U.S. and Japan Coast Guards signed in 2022 for enhancing cooperation between the two sea services.

The Coast Guard provides expertise in all aspects of maritime governance, within the mission sets of: search and rescue; illegal, unreported and unregulated fishing; maritime environmental response; maritime security; maritime domain awareness; maritime aviation operations; and humanitarian assistance and disaster relief.

As both a federal law enforcement agency and a branch of the armed forces, the Coast Guard is uniquely positioned to conduct security cooperation operations in support of combatant commanders. The service routinely provides forces in joint military operations worldwide, including the deployment of cutters, boats, aircraft and deployable specialized forces.

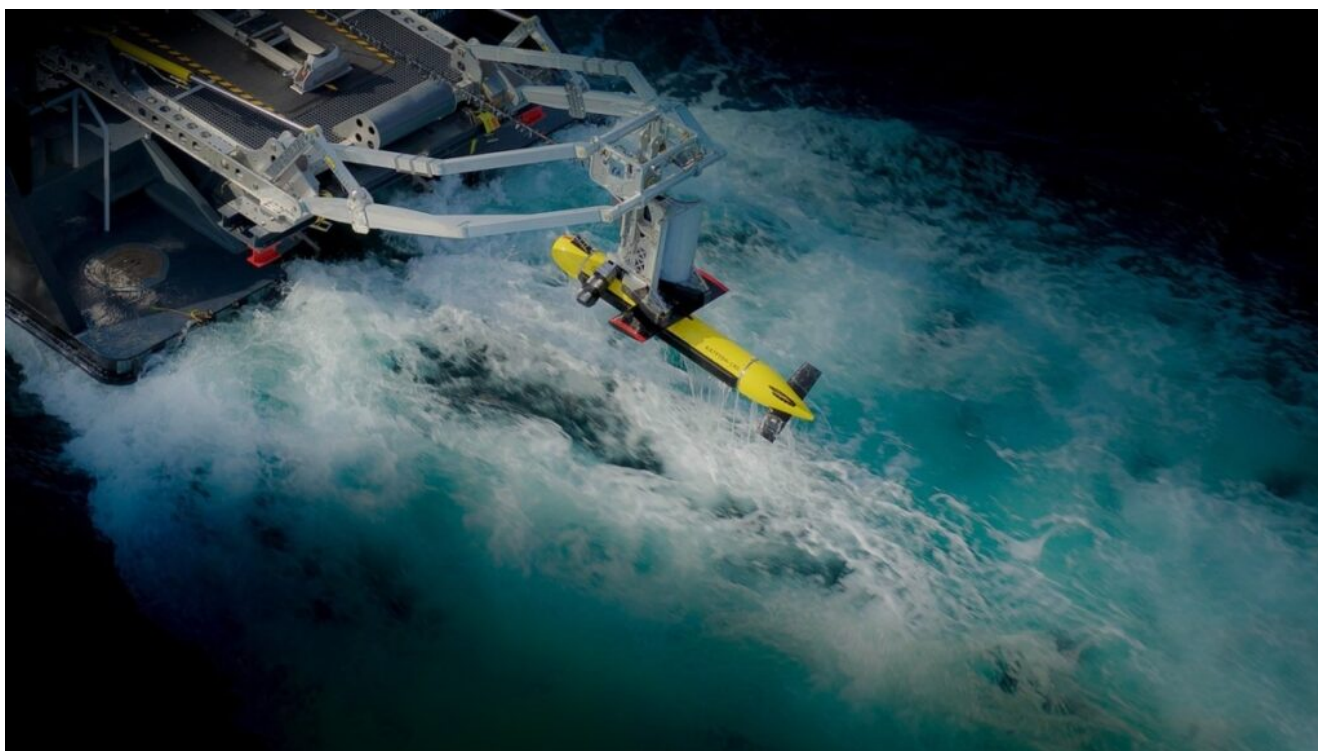
Commissioned in 2012, Stratton is one of four Coast Guard legend-class national security cutters homeported in Alameda, California. National security cutters are 418-feet long, 54-feet wide, and have a 4,600 long-ton displacement. They have a top speed in excess of 28 knots, a range of 12,000 nautical miles, endurance of up to 90 days and can hold a crew of up to 170.

National security cutters feature advanced command and control capabilities, aviation support facilities, stern cutter boat launch and increased endurance for long-range patrols to disrupt threats to national security further offshore.

U.S. Coast Guard Pacific Area is responsible for U. S. Coast Guard operations spanning across six of the seven continents, 71 countries and more than 74 million square miles of ocean. It reaches from the shores of the West Coast of the United States to the Indo-Pacific, Eastern Pacific, Arctic and

Antarctic. Pacific Area strives to integrate capabilities with partners to ensure collaboration and unity of effort throughout the Pacific.

Kraken Robotics Announces \$9.5 Million Contract with the Navy of a Large Asia Pacific Country



[Release from Kraken Robotics](#)

ST. JOHN'S, NEWFOUNDLAND, May 31, 2023 /GLOBE NEWSWIRE/ – Kraken Robotics Inc. (TSX-V: PNG, OTCQB: KRKNF) announces a \$9.5 million contract to supply high-resolution seabed mapping sonar equipment to a navy in Asia-Pacific. The customer cannot

be named at this time. Under the scope of the contract, Kraken will deliver its KATFISH™ high-speed minehunting solution. The contract also includes a variety of support and sustainment options, including training, spares and operational support.

Under the acquisition contract, Kraken will deliver its KATFISH towed Synthetic Aperture Sonar, Tentacle® Winch and Autonomous Launch and Recovery System (ALARS) in Q2, 2023. Kraken's equipment will be integrated onboard a vessel of opportunity selected by the customer. Continuing to build off successful KATFISH deliveries with various NATO navies, this represents Kraken's first KATFISH system sale in the Asia-Pacific region.

This contract follows the results of a successful in-country demonstration of KATFISH™ for the customer in Q1 of this year. Kraken's team worked in concert with a local survey company to complete a 200 km seabed survey that provided real-time ultra-high-resolution imagery and bathymetry of the seafloor along coastal waters.

Kraken is seeing continued opportunities for growth in all regions of the world as several trends are driving demand for Kraken's synthetic aperture sonar technology. These include:

- A heightened focus on maritime security and protection of subsea infrastructure.
- An industry upgrade cycle and a gradual shift to smaller unmanned surface vessels for mine hunting. There are over 300 manned mine hunting vessels that are more than 20 years old and need to be upgraded over the next 5-10 years. Many of these will be replaced with smaller, unmanned vessels.
- Strong growth in the commercial market from growing requirements for high resolution data for seabed surveys and subsea asset inspection in the offshore oil and gas

and offshore wind sectors.

ABOUT KATFISH

The KATFISH is a high-speed seabed survey system providing ultra-high resolution seabed imagery and bathymetry for defense and commercial customers. The acoustic imagery and bathymetry collected by KATFISH systems provides customers with actionable intelligence about subsea assets and infrastructure such as subsea pipelines and fiber optic cables, as well as important hydrographic information about the safety of key transit routes for ocean going assets. Kraken has integrated KATFISH to a variety of manned and unmanned vessels of opportunity, providing both standalone turnkey seabed mapping as well as optional integration to a customer's combat mission management systems.

NAVY RELEASES DRAFT ENVIRONMENTAL ASSESSMENT FOR HOMEPORTING OF COLUMBIA CLASS SUBMARINES AT NAVAL SUBMARINE BASE KINGS BAY

[Release from U.S. Fleet Forces Command](#)

26 May 2023

NORFOLK, Va. – The Navy has released a Draft Environmental Assessment (EA) for the homeporting of the Columbia Class submarines at Naval Submarine Base (NSB) Kings Bay.

The Navy proposes to establish facilities and functions at NSB Kings Bay to support the homeporting of Columbia Class submarines as replacements for the retiring Ohio Class submarines currently homeported at NSB Kings Bay. Under the Proposed Action, the Navy would construct eight facilities, modify five facilities, and demolish three facilities across three locations on NSB Kings Bay. Facility changes and development activities would be phased over a period of five years and completed coincident to the first Columbia Class submarines in 2028. The Proposed Action does not modify any existing dry-docks or conduct any in-water activity.

During the 2028 – 2042 transition period from the Ohio Class to the Columbia Class and at completion, the Columbia Class (SSBNs) will be phased in as the Ohio Class are phased out, and thus total numbers of submarines homeported at NSB Kings Bay during this time will not exceed the number of Ohio Class submarines currently homeported at the base.

The personnel numbers associated with the Columbia Class submarines are expected to be comparable to those associated with the Ohio Class submarines. Personnel numbers are also not anticipated to increase. Therefore, the Proposed Action will not increase the number of personnel employed at NSB Kings Bay, although an increase in temporary workers will result during the demolition, modification, and construction of 16 facilities and various functions scheduled for completion in 2028.

This Environmental Assessment evaluates the potential environmental impacts associated with the Proposed Action

alternative and the No Action Alternative to the following resource areas: air quality, water resources, geological resources, cultural resources, biological resources, utilities and infrastructure, public health and safety, and hazardous materials and wastes.

The Proposed Action is needed because the Ohio Class SSBNs are reaching the end of their service lives and need to be replaced before degrading to unacceptable conditions. Even with additional maintenance, these submarines would continue to suffer from reduced reliability and increased costs associated with the obsolescence of legacy Ohio system components.

The Draft EA is available for review at www.Nepa.Navy.Mil/columbia-class. The Navy has prepared this Draft Environmental Assessment (EA) to inform the public of the Proposed Action and to allow the opportunity for public review and comment. The Draft EA will be released for public comment for 30 days. The Navy invites public comments on the Draft EA, which will help the Navy arrive at the best possible informed decision about the proposal. Comments may be submitted during the public comment period from May 26 through June 25, and be postmarked no later than June 25 to ensure consideration in the Final Environmental Assessment. Written comments may be submitted on the website, or mailed to: ATTN: Ms. Sara Goodwin, code: EV22.SG, 6506 Hampton Blvd, Norfolk, VA 23508-1212.

Northrop Grumman Rapidly

Prepares for Next-Generation Relay Ground Stations in the Pacific Region



[Release from Northrop Grumman](#)

BOULDER, Colo. – June 1, 2023 – Northrop Grumman Corporation (NYSE: NOC) recently completed a successful preliminary design review (PDR) of Relay Ground Station-Asia (RGS-A) for the U.S. Naval Information Warfare Center (NIWC) Pacific.

- RGS-A will connect critical legacy and next-generation satellites and end users.
- The successful PDR confirms the company is on track to transform the existing missile-warning system.
- The review was completed a month ahead of schedule,

demonstrating the company's ability to rapidly meet changing customer requirements.

Expert:

Aaron Dann, vice president, strategic force programs, Northrop Grumman: "The preliminary design review exceeded our customers' expectations and is the next step in delivering much-needed new capabilities to the Pacific region. Our advanced technologies will deliver what is needed to support missile-warning and missile-tracking satellites that protect our nation and its allies."

Details:

The U.S. Space Force is working to transform the existing missile-warning system with the Future Operationally Resilient Ground Evolution (FORGE) system. A cornerstone of the FORGE architecture includes developing relay ground stations capable of supporting existing and new satellite constellations with the ability to handle changes in bandwidth and availability.

Northrop Grumman was awarded a \$99.6 million five-year contract from NIWC Pacific last year to design, develop, integrate, test and deliver the relay ground station. The majority of the work will take place at Northrop Grumman's campus in Boulder, Colorado.

NIWC Pacific will develop six antennas for RGS-A to enable the Space Systems Command (SSC) next generation Space-Based Infrared System (SBIRS) ground system which keeps legacy satellites in geosynchronous orbit. RGS-A will be deployed to Guam and is on schedule to be installed by late 2025.

Northrop Grumman is a leading global aerospace and defense technology company. Our pioneering solutions equip our customers with the capabilities they need to connect and protect the world, and push the boundaries of human

exploration across the universe. Driven by a shared purpose to solve our customers' toughest problems, our 95,000 employees define possible every day.