

Pentagon Allocates \$31 Million to Shore Up Shipbuilding Industrial Base

ARLINGTON, Va. – As part of the national response to COVID-19, the Defense Department entered into a \$31 million agreement with North American Forgemasters under Title III of the Defense Production Act, the Defense Department said in a July 31 release.

This investment will sustain and increase critical industrial base capability for domestic production of ultra-large iron and steel forging in support of the U.S. Navy and Naval Nuclear Propulsion Program.

Using funds authorized and appropriated under the CARES Act, these Title III funds will enable North American Forgemasters to maintain and protect a skilled workforce during the disruption caused by COVID-19 while strengthening a vital domestic industrial capacity to produce ultra-large iron and steel forgings through infrastructure investments and development of specialized tooling.

It is critical to national defense that North American Forgemasters and their affiliated companies remain viable and working to ensure the U.S. Government receives dedicated long-term industrial capacity to meet the needs of the nation for ultra-large iron and steel forging.

North American Forgemasters headquarters is in New Castle, Pennsylvania, which is the principal place of performance.

BAE Systems Completes Acquisition of Military GPS Business

NASHUA, N.H. – BAE Systems has completed its acquisition of the Collins Aerospace Military Global Positioning System (GPS) business from Raytheon Technologies Corp., BAE said in a July 31 release.

As announced in January, this asset purchase is a unique opportunity to acquire a high-quality, technology-based business that augments the existing BAE Systems Electronic Systems portfolio through the addition of world-class GPS anti-jamming and anti-spoofing technology that enables reliable navigation and guidance for a range of defense missions.

“Today marks the culmination of a tremendous team effort, and we are extremely proud to welcome the Military GPS employees to our company,” said John Watkins, vice president and general manager of Precision Strike & Sensing Solutions at BAE Systems. “Together, we will build on our rich histories of providing superior, innovative capabilities to help protect our U.S. and allied warfighters.”

Based in Cedar Rapids and Coralville, Iowa, with a workforce of about 700 employees, the Military GPS business has been a pioneer in its field for more than 40 years and has a global installed base in excess of 1.5 million devices on more than 280 airborne, ground, and weapon system platforms.

The business designs and produces advanced, hardened, and secure GPS products with a range of form factors, including products designed for space-constrained and harsh environments. It is also developing next-generation GPS technologies for the U.S. military – including M-Code – that

will further improve security and anti-jamming capabilities for critical defense applications.

Bollinger Delivers 40th FRC to Coast Guard



The 40th fast-response cutter, the Coast Guard's Oliver Henry. BOLLINGER SHIPYARDS

LOCKPORT, La. – Bollinger Shipyards has delivered the U.S. Coast Guard Cutter Oliver Henry in Key West, Florida, the company said in a July 30 release.

This is the 163rd vessel Bollinger has delivered to the Coast Guard over a 35-year period and the 40th fast-response cutter (FRC) under the current program.

The Oliver Henry is the second of three FRCs to be homeported in Apra Harbor, Guam, increasing the presence for the Coast Guard in the Indo-Pacific theater. Additionally, later in 2020, Bollinger deliver the first of six FRCs that will be based in Manama, Bahrain, which will replace the Island-class patrol boats supporting the Patrol Forces Southwest Asia, the Coast Guard's largest unit outside of the U.S.

"Bollinger is proud to continue enhancing and supporting the Coast Guard's operational presence and mission in the Indo-Pacific region with the delivery of the USCGC Oliver Henry," said Ben Bordelon, Bollinger's president and CEO.

Each FRC is named for an enlisted Coast Guard hero who distinguished himself or herself in the line of duty. Oliver Henry was the first minority service member to move from the

wardroom to the engine room and rose rapidly through the ranks of enlisted mechanics.

He was one of the Coast Guard's first minority warrant officers and served over 15 years of his 26-year career as a warrant. As a leader and role model, he mentored many of the next generation of service leaders, including officers and enlisted men.

The homeporting of three FRCs in Guam is part of the Coast Guard's "doubling down on Oceania," allowing more frequent and longer patrols in an area where the Coast Guard has increased its presence over the past 18 months and is aligned with the U.S. position on maritime security in the Indo-Pacific.

In a speech last year, Coast Guard Commandant Adm. Karl L. Schultz stressed the strategic importance of the service's presence in the region saying, "We're on a trajectory where the geostrategic importance of the Oceania region has not been higher here in decades, and it's a place that the Coast Guard's looking to be part of the whole-of-government solution set."

While the last 20 weeks of the Oliver Henry's build occurred during the COVID-19 pandemic, Bollinger took precautions to ensure the health and safety of employees and keep its delivery schedule. In addition to enhanced sanitization practices across the shipyard, Bollinger enacted more liberal leave and remote work policies as well as altered shift schedules to promote social distancing.

Bordelon continued, "Delivering vessels on schedule and on budget to the Coast Guard in these unprecedented times given the COVID-19 challenges that we are all facing shows the resiliency and dedication of our incredibly capable workforce."

FRCs are consistently being deployed in support of the full range of missions within the Coast Guard and other branches

of the U.S. armed services. FRCs have conducted operations as far as the Marshall Islands – a 4,400 nautical mile trip from their homeport. Measuring in at 154-feet, FRCs have a flank speed of 28 knots, ultramodern command, control, communications, computers, intelligence, surveillance and reconnaissance and stern launch and recovery ramp for a 26-foot, over-the-horizon interceptor cutter boat.

Sea Machines Partners With Maine Maritime Academy, MARAD to Include Intelligent Vessel Systems in Curriculum

BOSTON – Boston-based Sea Machines Robotics has partnered with Castine-based Maine Maritime Academy (MMA) and representatives of the U.S. Maritime Administration (MARAD)'s Maritime Environmental and Technical Assistance (META) Program to bring education about autonomous marine systems into the MMA curriculum, the company said in a July 30 release.

The MMA will provide instruction to cadets using the academy's 41-foot U.S. Coast Guard cutter-class workboat R/V Quickwater, which is being outfitted now with Sea Machines' SM300 autonomous control system, and a shoreside command station located on campus.

With education of the next generation of mariners being the primary focus of this partnership, the group will also demonstrate and document autonomous vessel technology's ability to increase at-sea situational awareness, safety,

energy efficiency, operational performance and the environmental impact thereof.

MMA students will command and control the autonomous vessel in the Castine Harbor and surrounding areas from the shoreside station. While learning about autonomous systems and their impact on the future of the commercial marine industry, project managers and MMA students will measure the vessel's emissions output to determine the precise efficiencies gained, documenting differences among various engines, equipment and sea states. During these hands-on trials, participants will collect additional data about the vessel's situational awareness and operational performance, predictability and safety during missions.

"The importance of this partnership extends beyond providing quantitative data for what we already know – that autonomous technology can be leveraged to improve vessels' operational efficiency, productivity and predictability while reducing at-sea navigation incidents. This project is ultimately about preparing future Merchant Marine officers with the training and skills they will need to command the digital, data-driven commercial fleets of the 21st century."

"The goal of this initiative is to expand Maine Maritime's current research portfolio and to provide our students with the opportunity to gain education and training on new smart-vessel technology," said MMA's Jennifer Norwood, assistant professor, marine transportation.

Navy Awards Studies Contract

to Halter Marine for New T-AGOS(X)

PASCOUGLA, Miss. – Halter Marine Inc., a company of ST Engineering North America, has been awarded the contract for industrial studies for the auxiliary general ocean surveillance ship (T-AGOS(X)) program, the company announced.

The U.S. Navy awarded the \$981,000 contract for the T-AGOS class series of vessels, which ultimately will replace the existing fleet of four T-AGOS 19 and one T-AGOS 23 small-waterplane area twin-hull (SWATH) ships. They are reaching the end of their service lives. The contract is for a 12-month study to perform trade-off studies and analyses of the Navy design.

“We have designed, constructed and delivered more oceanographic research and surveillance vessels than any other single U.S. shipyard,” said Bob Merchant, president and CEO of Halter Marine. “In fact, we finished the T-AGOS 23, named the USNS Impeccable, in 1995. For generations, Halter Marine’s shipbuilders have proudly supported our armed forces, and we are honored to continue that tradition today.”

Halter Marine has teamed with Gibbs & Cox as the ship designer. T-AGOS has a SWATH style design and is built to tow a surveillance towed array sensor system. The catamaran design prevents it from rolling in heavy seas. T-AGOS will be designed for a 30-year service life.

“Gibbs & Cox has nine decades of designing naval ships, and we are excited about this partnership,” said Kevin Amis, executive vice president of operations. “We have assembled partners that have excellent performance records for capability and technology requirements of the T-AGOS program.”

The Navy is expected to award the design detail and construction contract for T-AGOS in 2022 with an anticipated delivery of the first vessel in 2025. It is expected the design and construction contract will include one vessel and options for six others.

ONR Helps Develop Ventilators in Fight Against COVID-19

ARLINGTON, Va. – One of the most dangerous effects of the novel coronavirus is the inability to breathe on one's own – requiring the help of a ventilator to push air through the lungs.

Consequently, the severity of the COVID-19 pandemic has resulted in ventilator shortages, causing some hospitals to assign multiple patients to one machine, limiting effective treatment.

To fight this threat, the Office of Naval Research (ONR) recently sponsored work to develop low-cost, easily built ventilator prototypes for both hospital and field settings, said Warren Duffie Jr., an ONR spokesman. The ventilators would be valuable in emergency situations involving large patient surges and a lack of life-sustaining equipment.

“These ventilators could serve multiple naval scenarios,” said Dr. Timothy Bentley, a program manager in ONR's Warfighter Performance Department. “Not just combat or tactical situations but also supporting humanitarian response during natural disasters and health crises. The ventilators can be constructed fast and are relatively simple to operate.”

This effort involves ONR; ONR Global, the command's international arm; and the University of California San Diego (UCSD).

The prototypes are based on hand-held ventilators – composed of a mask and squeeze bag – used by paramedics to manually pump air into patients' lungs. The UCSD team created enhanced ventilators with commercially available sensors, electronics and motors, allowing the machines to pump air automatically. The prototypes also can monitor whether air pressure is too high or low – a vital function, since dramatic pressure shifts can limit air flow and damage lung capacity.

The partnership stems from a recent nationwide Department of Defense (DoD)-held Hack-A-Vent Innovation Challenge. Participants designed ventilators that could be built quickly with locally sourced commercial parts, rapidly prototyped and easily operated.

Derek Ikehara – an ONR Global science advisor assigned to U.S. Naval Air Forces in San Diego – heard about the challenge and encouraged local performers to submit entries. One performer was Dr. James Friend, a UCSD engineering professor. Friend quickly assembled a team of engineering and medical students to build four prototypes using onsite manufacturing equipment and 3-D printers.

Ikehara also contacted ONR's Bentley, who agreed to sponsor the prototype development.

“This was a remarkable success story that occurred within only a few weeks,” said Ikehara. “ONR provided the funding within days of my request, UCSD did all the design work in-house and the result was multiple ventilators ideal for surge support in a crisis.”

The UCSD prototypes performed well during the Hack-A-Vent Innovation Challenge, finishing 22nd out of 172. UCSD currently is partnering with local manufacturing companies to

produce the four ventilator types on a larger scale and distribute them to naval and civilian hospitals.

“This is an inspiring example of how ONR and the Navy recognize urgent emergencies and fund innovative solutions,” Friend said. “They said, don’t worry about money – worry about solving the problem. This allows us to respond to a pressing need and make a difference in society.”

DTIC Awards Navy Postgraduate School Contract for Unmanned, Robotics Research

MONTEREY, Calif. – The Defense Technical Information Center (DTIC) has awarded a \$42 million contract to Adams Communication and Engineering Technology (ACET) to support the Navy Postgraduate School (NPS) in its effort to expand partnerships in developing and fielding of autonomous systems and robotics, a July 28 NPS release said.

ACET, with support from their exclusive subcontractor Arizona State University Research Enterprise (ASURE), will provide NPS coordination and management for the contract’s deliverables.

Military students at the NPS have firsthand experience with complex challenges in the fleet and the field. They come to NPS to work alongside expert faculty researchers to develop solutions to key operational problems.

Combining the art and science of their NPS education, students engage in solutions-focused experimentation, invention and innovation to realize the full potential of emerging

technologies, many of which are in the growing arena of intelligent autonomous systems.

NPS is already the largest single contributor to the DTIC library, which supports all the Defense Department, and this contract ensures that the knowledge generated by NPS and its partners will be rapidly incorporated and accessible.

The new contract vehicle increases access to work with NPS alongside student-faculty teams and collaboratively reach optimal results faster leveraging the readily accessible test ranges, labs and facilities. Sponsoring activities send funded projects to NPS who will work with DTIC to place task orders on the contract.

“NPS provides the interdisciplinary, defense-focused environment needed for the right mix of development and exploratory innovation,” said Ray Buettner, NPS associate professor of information sciences and director of the Sea Land Air Military Research initiative. “The Navy has many labs full of scientists and engineers, but the one thing they need, that NPS has, is the experience of our military student body to help guide development, and this new contract makes working with NPS very easy to do.”

The new contract award is timely. Recognition of NPS’ ability to combine operational experience with research came in two recent developments: first, an update to the school’s mission directing it to be more outcome-focused on “technological leadership,” and second, the formal inclusion of NPS into the Naval Research and Development Establishment (NR&DE), which comprises all Naval Warfare Centers, the Naval Research Laboratory and the Office of Naval Research.

A new memorandum of understanding between NPS and the Naval Undersea Warfare Center (NUWC) in Keyport, Washington, builds upon existing research relations in unmanned systems and will focus on expanding technical coordination with NR&DE labs.

Navy Awards \$6.7 Million to Logos Technologies for Infrared Wide-Area Sensor

FAIRFAX, Va. – Logos Technologies recently received approval to disclose that it has been awarded a \$6.7 million contract from the U.S. Naval Air Systems Command to develop, deliver, and perform proof-of-concept flight tests on a wide-area motion imagery (WAMI) sensor, the company said in a July 28 release. The sensor system will be called Cardcounter and is being developed to integrate onto the Navy and Marine Corps RQ-21A small tactical unmanned aircraft system (UAS).

Cardcounter will be a missionized capability derived from Logos Technologies' BlackKite sensor. BlackKite is an ultra-lightweight WAMI prototype with infrared capability.

“We see this contract as a major step for us, the Navy/Marines, and the warfighter in general,” said Doug Rombough, vice president for business development at Logos Technologies. “In embracing miniaturized wide-area motion imagery systems for tactical UAS, the Department of Defense is taking a technology that has already proven itself on the battlefield with aerostats and providing the tactical commander with guardian angel-like overwatch.”

BlackKite, upon which Cardcounter will be based, weighs fewer than 28 pounds, yet is powerful enough to image an area of more than 12 square kilometers (about 5 square miles) in coverage. Within that vast coverage area, sensor operators can detect and track all vehicles in real time.

“There's nothing like BlackKite out there in the market

today,” said Rombough. “It is a force multiplier in terms of enhanced situational awareness. The system catches and records the entire area in real time and streams multiple video ‘chip-outs’ down to handheld devices on the ground.”

Cardcounter will leverage BlackKite’s high-performance, multi-modal edge processor, which can store six or more hours of mission data. With this technology, users can forensically analyze the recorded imagery to better contextualize what is currently unfolding in the real-time imagery, drawing connections between people, places and events. The initial \$6.7 million award from NAVAIR will cover the development of two Cardcounter prototypes, with a planned delivery by the end of September 2020 and ready to begin flight testing on the RQ-21A Blackjack.

Diligence Arrives in New Homeport After 64-Day Patrol



Capt. Tim Kinsella, commanding officer of Naval Air Station Pensacola, Florida, greets the crew of the Diligence as they arrive at their new homeport on July 27. U.S. NAVY / Petty Officer 1st Class Timothy Schumaker

NEW ORLEANS – The crew of Coast Guard Cutter Diligence arrived at the cutter’s new homeport in Pensacola, Florida, at the end of a 64-day patrol in the Caribbean, July 27, the Coast Guard 8th District said in a release.

The Diligence crew performed counter-drug, search and rescue, and migrant interdiction operations in support of the Coast Guard’s 7th District.

This patrol began May 25 when the ship departed Wilmington, North Carolina, for the last time. The Diligence spent the prior 28 years homeported on Wilmington's historic downtown Riverwalk, along the bank of the Cape Fear River. The cutter marked the completion of its third homeport shift throughout its service history after mooring on July 27 at Naval Air Station Pensacola.



The Diligence at its new homeport at Naval Air Station Pensacola, Florida. U.S. NAVY / Jason Bortz

The Diligence crew patrolled the Windward Pass between Cuba, the Bahamas, and Haiti alongside interagency and international partners to prevent and respond to dangerous illegal maritime migration and narcotics smuggling from Central and South America. The crew also completed necessary shipboard training to maintain qualifications and operational readiness during a summer period that featured an approximate one-third turnover of the ship's crew.

"Diligence's departure from Wilmington, North Carolina, was bittersweet, and we look forward to starting the next chapter of Diligence's long and storied history in Pensacola," said Cmdr. Luke Slivinski, Diligence's commanding officer. "The crew's commendable professionalism and proficiency enabled Diligence's successful patrol execution amidst the challenges posed by the global COVID-19 pandemic."

The Diligence is a 56-year-old, 210-foot medium-endurance cutter and has a crew of 70 personnel. The cutter's primary missions are counter-drug operations, migrant interdiction, enforcing federal fishery laws, and search and rescue in support of Coast Guard operations throughout the Western Hemisphere.

USS Shamal Interdicts Drugs From Go-Fast Vessel



The Cyclone-class patrol ship USS Shamal with embarked U.S. Coast Guard LEDET team conducts enhanced counter narcotics operations on July 4. U.S. COAST GUARD

CARIBBEAN SEA – The Cyclone-class patrol ship USS Shamal with an embarked U.S. Coast Guard law enforcement detachment (LEDET) recovered more than 3,900 pounds of suspected marijuana on July 4, U.S. Naval Forces Southern Command/U.S. 4th Fleet public affairs said in a July 27 release.

While on routine patrol in the Caribbean Sea, Shamal spotted the go-fast vessel. Once detected, the crew observed suspected drug smugglers aboard jettisoning packages overboard.

In a coordinated effort, Shamal launched their small boat and the LEDET was deployed to the scene to further investigate.

Upon arriving on scene, the Shamal and the embarked LEDET recovered a total of 708 bales of suspected marijuana, totaling more than 3,940 pounds worth over an estimated wholesale value of \$6.9 million.

“The Shamal team performed very well during the interdiction and safely boarded the vessel,” said Shamal’s commanding officer, Lt. Cmdr. Daniel O’Neill. “We received outstanding training in preparation for this patrol, and it really motivates the Shamal team when we’re able to demonstrate our abilities with a successful bust.”

USS Shamal is deployed to the U.S. 4th Fleet area of operations supporting U.S. Southern Command’s enhanced counter drug operations mission in the Caribbean.