

CNO Gilday Issues New 'Charge of Command' to Commanders



Adm. Mike Gilday, Chief of Naval Operations, addresses media in the hangar bay of Nimitz-class aircraft carrier USS Carl Vinson (CVN 70) as part of maritime exercise Malabar 2021, Oct. 14, 2021. U.S. NAVY / Mass Communication Specialist Seaman Emily Claire Bennett

WASHINGTON – Chief of Naval Operations Adm. Mike Gilday issued a new “charge of command” to commanders Jan. 10, the CNO’s public affairs said in a release.

The document highlights and lays out CNO’s expectations for commanders at every level and focuses on several key topics, including professional competency, integrity, character and preparing for and leading in combat.

“The responsibility of command is absolute, and we take our commanding officers’ performance very seriously,” said Gilday. “We place a great amount of trust and confidence in our commanding officers, rely on them to manage risk, make decisions, and communicate openly and honestly, especially in

crisis.”

Gilday said his expectation is that leaders use the charge as a foundational point for conversations about standards of performance.

“Above all, command, whether at sea or ashore, is fundamentally about preparing for and leading in combat,” the charge reads. “Never lose sight of this – seize absolute ownership of your assigned mission, and all that goes into its accomplishment. When called upon to sail into harm’s way, you and your team must be ready. Your command’s mission is absolutely essential to the Navy’s ability to fight and win. Imbue this belief in your team.”

Gilday also stressed the need for commanders to set the example for their Sailors.

“As the commander, you are the example your team reflects,” the charge reads. “Embody humility, selflessness, and complete transparency. Acknowledge the value of every Sailor and civilian. Take care of them and their families. Embrace diversity of thought and background. Foster inclusion and connectedness. Always do the right thing, especially when it is hard. In doing these things, keep close watch on your own mental, physical, and emotional health, and the health of those you lead.”

The last charge of command was issued by former CNO Adm. John Richardson in 2018.

The charge of command can be viewed here: <https://go.usa.gov/xt2hP>.

Commander, Naval Surface Force Releases Force Alignment Document



Vice Adm. Roy Kitchener released a new surface force alignment document, "Surface Warfare: The Competitive Edge," on Jan. 11. *U.S. NAVY*

ARLINGTON, Va. – Vice Adm. Roy Kitchener, commander of Naval Surface Forces released "Surface Warfare: The Competitive Edge," at the Surface Navy Association National Conference, Jan 11, the Navy said in a release.

The document was designed to better align the surface force in the face of increasing technological complexity and rising strategic challenges.

In the paper, Kitchener cites the strategic importance of the

surface force to America's forward-deployed conventional deterrence posture, a posture that depends on surface ships creating "...numerous operational dilemmas arising from present, powerful, networked, interoperable forces."

"The surface force and the surface warfare enterprise must better align in order to get in front of the challenges we face – challenges stemming from serious strategic competition and the complexity of the force we are becoming," said Kitchener.

Citing five main lines of operation along which the surface force must plan, Kitchener pointed to the coming decade as one of unprecedented complexity, in which 10 new or modified platforms will either join the fleet or begin production. Adding to this complexity will be the fielding of a new fleet radar, (the SPY-6 family), a new electronic warfare system (SEWIP Block III) and a new computer program that integrates them, Aegis Baseline 10.

"This document directs action to lead the target, thereby providing our ships and crews with the tools they need," said Kitchener. "Together, we will remove obstacles and break through barriers that impede our success."

The five lines of effort in the document (develop the leader, warrior, mariner, and manager; deliver more, ready ships; achieve excellence in fleet introduction; create clear and innovative operational concepts; and establish infrastructure for the future force) are each assigned to responsible flag officers, called LOE owners, for action, and include specific tasks with deadlines for completion.

Kitchener will lead these efforts and require periodic updates, as well as provide the surface warfare community with regular updates.

The Five Lines of Effort

- Develop the leader, warrior, mariner, and manager: LOE owner is commander, Naval Surface Forces. “The surface force builds leaders, warriors, mariners, and managers, and each of these roles requires training, education and mentoring. While we continue to field increasingly sophisticated technology, the human element remains central.”
- Produce more ready ships: LOE owner is commander, Naval Surface Forces. “The essence of this LOE is to force new thinking about the force we have and consider ways of getting more out of it by planning, maintaining, and operating it more wisely.”
- Achieve excellence in fleet introduction: LOE owner is commander, Naval Surface Forces Atlantic. This LOE focuses on improving surface force performance in platform and capability introduction by applying lessons learned from both the successes and the challenges of the past 50 years.
- Create clear and innovative operational concepts: LOE owner: Commander, Surface and Mine Warfare Development Command. This LOE tasks SMWDC with developing the people, the concepts and the facilities necessary to derive and provide innovative warfighting concepts to accompany new platforms and capabilities.
- Establish infrastructure for the future force: LOE owners are OPNAV N95/96. This LOE focuses on the command and control infrastructure of surface forces, the physical infrastructure of surface forces, and the land-based, developmental infrastructure necessary to support Surface Force development.

Highlights of ‘The Competitive Edge’

- Recognizes both the complexity of platforms and capabilities entering the force in the next decade and the strategic challenges those platforms and capabilities are addressing.

- Assigns responsible parties with required dates of accomplishment.
 - Strengthens force emphasis on data analytics.
 - Considers the introduction of warfare tactics instructors to program offices to ensure tight coupling of concepts with acquisition.
 - Requires OPNAV N96 to produce an integrated combat system campaign plan and PEO IWS to produce an integrated combat system roadmap. The roadmap will have at least a 10-year horizon.
 - Considers the return of fleet introduction teams to enhance transition of new platforms to the force.
 - Assigns SMWDC to develop a capability introduction road map for Maritime Strike Tomahawk, as part of a larger emphasis on SMWDC growing into the center of warfighting innovation, experimentation and virtual warfighting.
 - Requires a 10-year roadmap for class-specific land-based facilities and infrastructure requirements to reduce technical risk in capability introduction.
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Bollinger to Build Pontoon Launcher for General Dynamics Electric Boat



An artist's rendering of the future U.S. Navy Columbia-class ballistic missile submarines. *U.S. NAVY*

LOCKPORT, La. – Bollinger Shipyards LLC will construct a new pontoon launcher for General Dynamics Electric Boat to support the construction and launching of the United States' Columbia-class ballistic-missile submarines (SSBNs), which will replace the aging Ohio-class of SSBNs and is a top strategic defense priority for the United States.

“Bollinger Shipyards is excited to expand our ongoing relationship with Electric Boat and to continue to support the capitalization and infrastructure improvements that Electric Boat has undertaken in reshaping and modernizing its Groton shipyard,” said Bollinger Shipyards President and CEO Ben Bordelon. “We’re honored to have been selected to build this pontoon launcher with the quality craftsmanship of the hardworking men and women of Bollinger Shipyard and we continue to be laser-focused and committed to being a leader in pushing our industry forward and ensuring that the U.S.

Industrial Base is fully self-sufficient.”

“Electric Boat continues to expand and upgrade its infrastructure to support construction of the Columbia class, the nation’s top strategic defense priority,” said Joe Drake, vice president, Real Estate and Facilities, General Dynamics Electric Boat. “Our partnership with Bollinger is an important part of that strategy.”

The concept and contract design for the 496-foot-by-95 foot pontoon launcher was performed by the Bristol Harbor Group in Rhode Island. The detail design engineering will be performed at the Bollinger facility in Lockport, Louisiana. The launcher is scheduled to be delivered to Electric Boat’s Groton, Connecticut, shipyard in 2024.

Electric Boat is the prime contractor on the design and build of the of the Columbia-class SSBN.

This is Bollinger Shipyards’ third contract awarded with Electric Boat. In late 2019, Bollinger Shipyards was selected to construct the ocean transport barge for Electric Boat, which was delivered in 2021 and in late 2020, Bollinger was selected to construct a floating dry dock, all of which support the construction and maintenance of the Columbia-class SSBN.

Fairbanks Morse to Provide Engine Parts for Coast Guard

Icebreaking Tugboats



The Coast Guard Cutter Katmai Bay (WTGB 101) was the first of nine 140-foot Bay Class tugs built for the Coast Guard's domestic icebreaking mission. *U.S. COAST GUARD*

BELOIT, Wis. – Fairbanks Morse Defense, a portfolio company of Arcline Investment Management, has been awarded a five-year indefinite-delivery/indefinite-quantity requirements contract by the U.S. Coast Guard Surface Forces Logistic Center, the company announced Jan. 10.

The agreement, worth up to \$13 million, makes FMD the required source of supply for all opposed piston engine parts listed in the contract's schedule of supplies. These parts primarily support OP engines on nine 140-foot Bay Class Icebreaking Tugboats (WTGBs).

Since 1977, WTGBs have been used as critical icebreakers on many Northeast and Midwestern U.S. rivers and the Great Lakes, ensuring waterways remain open year-round. More than 15

million tons of cargo such as food and petroleum products, as well as 90% of the nation's home heating oil, are transported annually in January and February along Northeast waterways, making it essential that these channels are kept open to avoid supply chain disruptions.

The contract also includes provisions for engine parts onboard the U.S. Coast Guard's decommissioned high endurance cutters (WHECs) that have been transferred or are in the process of being transferred to foreign navies.

"Fairbanks Morse Defense delivers an advantage to the U.S. Coast Guard by offering best-in-class marine technologies, OEM [original equipment manufacturer] parts, and turnkey services," said FMD CEO George Whittier. "As a trusted partner to the Coast Guard, we live our ironclad commitment to the fleet and crew every day, on every job. Manufactured in the U.S. and serviced worldwide, our proven marine technology is engineered for excellence to ensure reliable operation and minimal downtime."

**HII Launches Amphibious
Transport Dock Richard M.
McCool Jr.**



Huntington Ingalls Industries launched amphibious transport dock ship Richard M. McCool Jr. on Jan. 7. *HUNTINGTON INGALLS INDUSTRIES*

PASCAGOULA, Miss. – Huntington Ingalls Industries’ Ingalls Shipbuilding division announced Jan. 7 the successful launch of amphibious transport dock Richard M. McCool Jr. (LPD 29).

Richard M. McCool Jr., the 13th LPD in the San Antonio class of amphibious assault force ships, will support U.S. amphibious assault, special operations and expeditionary warfare missions through the first half of the 21st century.

“The LPD class ships, like all of our programs, are critically important to U.S. national security,” said Kari Wilkinson, president of HII’s Ingalls Shipbuilding division. “In addition, thousands of Americans, from engineers to electricians, have worked on LPD 29 over the years. Ingalls Shipbuilding is proud to build them and even more proud of the talented people that make up our shipbuilding team.”

With the assistance of tugs, Richard M. McCool Jr. came off

the floating dry dock Wednesday morning, after first being translated via Ingalls' rail car system. The dock was moved away from the pier and then ballasted to float off the ship.

Launching Richard M. McCool Jr. is the first of a series of significant milestone events in bringing the ship to life, and eventual delivery to the U.S. Navy which is planned for later next year.

Ingalls Shipbuilding is building the entire San Antonio class of ships, the newest addition to the Navy's 21st century amphibious assault force. The 684-foot-long, 105-foot-wide ships that displace 25,000 tons are used to embark and land Marines, their equipment and supplies ashore via air cushion or conventional landing craft and amphibious assault vehicles, augmented by helicopters or vertical takeoff and landing aircraft such as the MV-22 Osprey.

USCGC Stone Returns to Homeport after 61-Day Patrol



The crews of U.S. Coast Guard Legend-class national security cutter USCGC Stone (WMSL 758) and the Colombian navy OPV-80 offshore patrol vessel ARC Victoria (PZE-48) conduct passing exercises in the Eastern Pacific Ocean, Dec. 4, 2021. *U.S. Coast Guard / Petty Officer 2nd Class Shannon Kearney*

NORTH CHARLESTON, S.C. – USCGC Stone (WMSL 758) returned to its homeport in Charleston following a 61-day patrol in the Caribbean Sea and Eastern Pacific Ocean in support of the U.S. Coast Guard Pacific Area, the Coast Guard’s Joint Interagency Task Force South and the Coast Guard 11th District, the Coast Guard Atlantic Area said Jan. 7.

Stone’s crew successfully interdicted two suspected drug smuggling vessels, recovering approximately 2,246 pounds of cocaine and 4,870 pounds of marijuana with an estimated combined street value of \$57.1 million. The cutter’s crew subsequently transferred 20 suspected narcotics smugglers to the 7th Coast Guard District and U.S. Drug Enforcement Administration personnel, signaling the culmination of a successful joint interagency effort in the Eastern Pacific.

The Stone embarked observers from Panama, Costa Rica, Colombia, Ecuador, and the National Oceanic and Atmospheric Administration to perform joint operations to combat illegal, unreported, and unregulated fishing and conduct counter-drug operations off the coast of South America.

An embarked MH-65 helicopter aircrew from the U.S. Coast Guard's Helicopter Interdiction Tactical Squadron was integral in counter-drug operations. Interagency partners provided additional aerial surveillance and reconnaissance support throughout the patrol.

During the cutter's port call in Manta, Ecuador, Stone's commanding officer, Capt. Clinton Carlson, attended an international IUUF symposium with Arthur Young, the embarked National Oceanic and Atmospheric Administration enforcement officer, to share experiences and increase awareness of the regional issue. The crew of the Stone also participated in a friendly soccer match with Cuerpo de Guardacostas de la Armada personnel from the local coast guard station while in Manta.

"This is our crew's first patrol outside of their initial shakedown cruise, and I am extremely proud of the dedication and pride they have shown toward getting qualified to conduct the missions expected of a national security cutter crew," said Carlson. "Throughout these past months, everyone aboard displayed enthusiasm during the drills we've run every week and have proven that through teamwork and a shared understanding of the mission, we can accomplish even the most difficult tasks. I am honored to lead this impressive crew of Coast Guard women and men."

The fight against drug cartels in the Eastern Pacific Ocean and the Caribbean Sea requires unity of effort in all phases from detection, monitoring, and interdictions, to criminal prosecutions for these interdictions by U.S. attorney's offices from the Middle District of Florida, the Southern District of Florida and the Southern District of California.

The law enforcement phase of counter-smuggling operations in the Eastern Pacific Ocean is conducted under the authority of the 11th Coast Guard District, headquartered in Alameda. The interdictions, including actual boardings, are led and conducted by U.S. Coast Guard members.

The Stone is the ninth Legend-class national security cutter in the Coast Guard fleet and currently is homeported in Charleston, South Carolina. The national security cutters can execute the most challenging national security missions, including support to U.S. combatant commanders.

The Charleston-based Legend-class cutters fall under the command of the U.S. Coast Guard Atlantic Area. Based in Portsmouth, Virginia, U.S. Coast Guard Atlantic Area oversees all Coast Guard operations east of the Rocky Mountains to the Arabian Gulf. In addition to surge operations, they also allocate ships to work with partner commands and deploy to the Caribbean and Eastern Pacific to combat transnational organized crime and illicit maritime activity.

Lockheed Martin Upgrading SPY-1 Radars on 21 DDGs to Counter Evolving Threats



Arleigh Burke-class guided-missile destroyer USS Barry (DDG 52) pulls into Commander, U.S. Fleet Activities Sasebo, Japan, in 2016. *U.S. NAVY / Mass Communication Specialist 3rd Class Kristopher S. Haley*

ARLINGTON, Va. – Lockheed Martin is continuing to upgrade primary radars on a number of the U.S. Navy’s guided-missile destroyers (DDGs), a company official said. Older SPY-1 versions are being modified with digital Low Noise Amplifiers, or LNAs, which can improve their sensitivity and thereby improve the accuracy, range and discrimination of the radar.

“How do you develop a low-cost, high-payoff solution to keep SPY-1 relevant as the threat evolves?” Jon Rambeau, Lockheed Martin’s vice president and general manager for Integrated Warfare Systems and Sensors, asked rhetorically in an interview with *Seapower*, pointing to the LNA as a step in that direction.

The SPY-1 radar is the primary sensor of the Aegis Combat System on the U.S. Navy’s Ticonderoga-class cruisers and

Flight I, II and IIA Arleigh Burke DDGs and is used to detect and track aircraft, cruise missiles and ballistic missiles.

The LNA is part of the upgrade of the 21 Flight I and II DDGs to enable a “full BMD [ballistic missile-defense] capability in accordance with the 2030 Missile Defense Review,” Rambeau said.

He said Lockheed Martin is under contract for upgrading nine SPY-1 arrays under funding provided by the Navy and the Missile Defense Agency. The arrays are being tested and made ready for installation of the DDGs.

Rambeau there was “some discussion around the Navy’s future plans for those 21 ships and that’s something we’re watching very carefully.”

He said the LNA upgrade may be something the company thinks can be relevant for international customers as well.

Marine Corps ACVs Set to Return to Unrestricted Amphibious Operations



A U.S. Marine Corps amphibious combat vehicle, with 3d Assault Amphibian Battalion, 1st Marine Division, is loaded onto the amphibious assault dock landing ship USS Anchorage (LPD 23) during a strategic mobility exercise Oct. 19, 2021. *U.S. MARINE CORPS / Corps Cpl. Cameron Hermanet*

ARLINGTON, Va. – Marine Corps Amphibious Combat Vehicles are set to return to unrestricted waterborne operations following the development of a new tow rope solution designed to address previous issues with the vehicle's towing mechanism, the Marine Corps said Jan. 6.

In September 2021, the Marine Corps suspended ACV operations in unprotected waters while it worked to resolve the towing issues that were identified in several after action reports from the field.

“Amphibious operations, including the use of amphibious ship-to-shore connectors, is a foundational aspect of Marine Corps operations and is critical to the future force and its ability to remain the Nation's premier expeditionary force in readiness,” said Lt. Gen. David Furness, deputy commandant for

plans, policies and operations.

Once equipped with and trained to employ the new tow rope solution, units are authorized to use the ACV to conduct unrestricted amphibious operations, including self-recovery operations in the open ocean and through the surf zone.

Prior to the receipt and installation of the new replacement tow ropes, ACV operation remains restricted to land mobility, gunnery operations, and amphibious operations in protected waters.

In addition to the new equipment and training requirements are the 18 tasks that units must complete, validate and certify prior to the resumption of waterborne operations. These tasks stem from the comprehensive investigation into the facts and circumstances surrounding the July 2020 AAV tragedy.

The tasks cover a variety of requirements, including ensuring training and qualifications for crew and embarked personnel are properly equipped, vehicles have passed required inspections and operations are conducted with safety boats, sea state assessments and positive communication.

**Q&A: Mark Vandroff, CEO,
Fincantieri Marinette Marine**



The 21st Littoral Combat Ship, the future USS Minneapolis-Saint Paul, launches sideways into the Menominee River in Marinette, Wisconsin, on June 15, 2018. *LOCKHEED MARTIN* Mark Vandroff, a retired Navy captain and engineering duty officer, was installed last summer as CEO of Fincantieri Marinette Marine, shipbuilder of the U.S. Navy's Freedom-class littoral combat ship and now the Constellation-class frigate. A former ship program manager, he brings extensive customer experience to his company.

Vandroff was interviewed by Senior Editor Richard R. Burgess. Excerpts follow.

With some experience now as a shipyard official, what has surprised or impressed you about being on this side of the shipbuilding equation?

VANDROFF: Surprised would be a strong word, but I'm impressed by the dedication and hard work of the men and women who build ships. And by "building ships" I mean a very wide range of activity.

One of my mentors, teachers and former bosses, Sean Stackley – the former LPD 17 program manager, former ASN RDA [assistant secretary of the Navy for research, development and acquisition] and now senior executive with L3Harris – used to tell us when he was coaching shipbuilding program managers that if you can build a ship, you can do anything because nothing is harder or more complicated than building a ship, the most complex of all human undertakings. What the government program managers deal with is certainly a complicated process on the government side, but now, with a few months as the head of the yard here in Marinette, it's an even renewed appreciation for just how complicated and just how many things have to go right to get a ship built, everything from the industrial trades, welding, cable pulling, painting to all of the planning and industrial methods, to the engineering design to the purchasing to the contracting, a myriad of legal compliance for us, and all the finance and economics of a business of that size.

It's not just running a complicated business, but it's running a complicated business with a very complicated product and a series of complicated relations both with customers and with sub-suppliers.

What insight has your experience as a Navy ship procurement official given you that can help improve the shipbuilding industrial base?

VANDROFF: When you take someone with program management leadership on the government side and put them into industry you certainly bring an intimate knowledge and understanding of what the customer wants.

Early on in my tenure, some of the folks on my leadership team seemed puzzled during a meeting by something that our primary government partner on the frigate program had asked us to do. Everyone was scratching their heads and were like 'Why would they want us to do that?' I said, back in my days in the DDG

51 program, if I were the government PM, I would want us to do exactly what Capt. Smith had just said even though it didn't necessarily make sense to someone who didn't have the background of the kind of dynamics that play in at NAVSEA [Naval Sea Systems Command] and within the OPNAV [Office of the Chief of Naval Operations] and Pentagon staff. I immediately understood what the government customer was looking for and I could translate that to my industry colleagues.

This will sound odd as the head of the Mariette Marine shipyard: One of the things about our current shipbuilding industrial base is that it's very highly specialized. My yard is highly specialized, given the fact that I'm constrained by the St. Lawrence seaway into the size of ships that I can build. Huntington Ingalls Newport News Shipyard really wouldn't ever build something small because given the overhead of maintaining facilities to build aircraft carriers. The economics constrain them to build big and for other yards each have their niche. While niches are very efficient and people can get very good at doing their special thing, I worry that the future will require a great deal more flexibility of yards that can do lots of things because the future is always uncertain. This is one of the reasons Fincantieri Marine Group is creating a system of yards across our Wisconsin sites, to continue supporting our customers' future requirements and missions.



Mark Vandroff, CEO of Fincantieri Marinette Marine.

What kind of supply-chain issues currently are of concern to Marinette Marine?

VANDROFF: Supply chain is a hot topic across the shipbuilding industry. Certainly, COVID had a major impact on a lot of our sub-suppliers, mostly in their ability to hold schedule. We've seen that across both commodities and finished products especially electronics and anything that has a microchip as a component, but we've also seen it in things like switch gear and transformers. Most shipbuilders today rely on a just-in-time delivery system because you want to avoid the warehousing costs of keeping large amounts of material warehoused. One of my top concerns right now is the supply chain impacts we're seeing.

What capital improvements are in work to get ready for the frigate program?

VANDROFF: We're making four extensive capital improvement investments in Marinette Marine in order to be able to build the frigate.

Investment No. 1 is in a shiplift. Currently, we build the LCS on land and then introduce it to the water via the time-honored system of a side-launch. We're not going to be able to stern-launch or side-launch a frigate. It's too big and we would have to install certain equipment – vertical launch systems, for example – after we side-launched it because of alignment issues. That's not a very economically efficient way to build a ship.

I would urge you and your readers to Google 'shiplift' and look at YouTube, there's some great videos from around the world. It's really cutting-edge shipbuilding technology. There's a transfer platform held in place by, in our case, a set of 58 winches that run attached, 29 on each side, to the platform. You can translate the ship from the land onto the platform, and the winches take tension as the ship rolls onto the platform in order to keep the platform level. And then when you're ready to put the ship into the water, the winches lower the platform until you get to the point where the ship is then floating from its own buoyancy.

For someone who's building a ship on the Great Lakes here in the Menominee River floating out into Lake Michigan, the ability to do that with a shiplift is very attractive. The shiplift construction is ongoing and we expect it to complete by the end of 2022.

Right now, we build the littoral combat ships and multi-mission surface combatants in a two-bay erection facility. We can assemble an entire LCS indoors. Building indoors is very important in the Wisconsin winters. That erection bay is not big enough for a frigate. The frigate-size erection bay, Building 34, is nearing completion for May. It will have two bays, each big enough to hold an entire erected Constellation-

class frigate.

A new state-of-the-art panel line will be done in a few weeks. This will take steel, cut it into panels, stiffen it up, and then weld it together into modules and sub-assemblies all in one covered area.

We do also have plans sometime early in the frigate process to add to our blast-and-paint capability. When we go to two frigates a year, we will need more blast-and-paint capability and we have a plan to repurpose an old building.

Do you have any plans to increase the size of your force?

VANDROFF: My No. 1 area of effort is the workforce. I will need to increase the workforce in order to fully man the Navy's plan for the frigate program. Between now and the end of 2023, we'll need another 400 workers: about 300 in the trades – welders, painters, shipfitters, electricians – and another 100 engineers and other white-collar workers.

We have a unique concern in the Marinette Menominee area: a missing middle in housing. We pay a nice living wage to our workforce such that they're thankfully making too much to qualify for low-cost government-subsidized housing and yet there's high-end housing, especially along the lake and the river and other places where you would see nice homes. What we really could use is more middle-class apartments in the area of Menominee and Marinette. We've talked to both states about that and they're thinking of creative ways of helping the natural market forces respond to that. Right now, we've got a lot of folks who commute a fairly long way to get to the yard. What I would really like is the available housing to keep the workforce close to the shipyard so that it's convenient for the workers to get to the yard. If we provide a convenient place to work, we will be able to attract the workforce we need.

We still have not received formal requirements from the

federal government that would cause us to have to mandate that our workforce be vaccinated against COVID-19. We've taken steps to provide vaccinations very conveniently and at no expense or time to the employee. We've had a reasonably good turnout, but I fear that there is some percentage as yet unknown of my workforce that would just not feel comfortable being told to take a COVID vaccine. We'll do everything we can to continue to make it convenient for employees to get vaccinated. But if the government lays that mandate upon me, I am very concerned that would have a negative impact on my ability to maintain a sufficiently sized workforce to execute all the work that the yard currently has under contract.

Some shipyards – like Huntington Ingalls for example – have an apprentice training program. Do you have anything similar?

VANDROFF: We do have an equivalent that I'm very excited about that will serve us well in the future and can easily be expanded via the Northeast Wisconsin Technical College [NWTC], a system of technical community colleges in northeast Wisconsin. We have a fabulous relationship with them, and they have gone so far as to hire retired Marinette employees to their faculty. They provide technical training in a variety of shipyard-related skills at their campus, which is within walking distance of the shipyard. They're teaching welding with our welding procedures, using our welding equipment, so a graduate of NWTC, whether it's in welding or ship-fitting or electrical work, cable-pulling or journeyman electrician or entry-level electrician, comes out of NWTC work-ready and we can hire them. As we recruit, those students know that they've got a guaranteed path to a job with us and a career in shipbuilding. We've also reached out to local high schools and their shop programs to encourage the kind of skills set that is useful to us in the shipbuilding industry.

At the white-collar level, the University of Wisconsin Green Bay has reached out to my head of engineering for discussions. They've allowed us to shape their engineering curriculum.

Someone coming out with a mechanical engineering degree has got an academic background and a skillset that is well-matched to our needs for entry-level engineers.

What is the status of the Constellation-class frigate?

VANDROFF: We're in the detail design phase. The next big milestone of that phase is the critical design review scheduled for February 2022. I have great teammates on the Constellation team: L3Harris, Gibbs & Cox and Trident Maritime Systems. The Navy has been great. I could not ask for a better partner than the current leadership in PMS-515, and so, that's a big milestone for us. It's not the end of detail design but it basically marks the completion of the functional design and shows that we have established the right technical baseline to move forward.

After that, we'll have a production readiness review in March as we continue to achieve a level of production maturity so that we can confidently start building the ship in April of 2022. That review will show that we have the level of design maturity such that we can start building the ship with the right expectation of 'measure twice, cut once.' We don't want to build a ship to an immature state and then have a significant level of rework because it's not good enough for either us or the Navy. We're driving for a very high level of maturity so that we have an efficient start of production in April.

From that point on, we'll go through all the normal milestones that a ship would have after it starts production – the laid keel, eventual float off, trials – and we're looking forward to a delivery to the Navy of the first ship in 2026.

Are there challenges to using a foreign-designed hull?

VANDROFF: When you take a design that is not U.S. and translate it to the United States to build, you do run into the U.S. Navy technical standards of performance, which are

different than a lot of our partner navies, especially in the area of damage control. That induces modifications to the design. The U.S. Navy's philosophy and standards are more steel and more frequent water-tight bulkheads for different compartmentation.

We now have the Buy American Act and whenever you take perhaps a piece of equipment that would be sourced from a European supplier and sourced out to a U.S. supplier, there will be design changes with that and that's, again, something that we've accounted for and are executing.

What can the Navy and Congress do to make it easier for you to deliver ships on time and on cost?

VANDROFF: Shipbuilding is really hard. There's nothing that the Navy or Congress can do to make it less hard. I will say the Navy always helps when they really understand their requirements and that they have stability in those requirements.

I am fortunate in Marinette in my relationship with my Navy supervisor of shipbuilding partner – the organization that does oversight – has been entirely reasonable. They have been very responsible partners. They're clearly representing the Navy's interest, but they're not doing it in a way that is at all punitive or looking to impact my progress. They're just looking to make sure that the Navy is getting the quality product that they want. For that, I'm very grateful.

If you look at big trends broadly – cost and schedule, but especially cost – a good chunk of our overhead goes to paying the employee healthcare costs. That is getting worse, not better. And that overhead cost gets passed right on to the customer in terms of cost on a contract.

The government has shown some flexibility in the ability for us to have a favorable cash flow. Certainly, COVID helped that, but it helps our financing costs from a business

standpoint to have a quicker flow of cash to have a higher percentage of the ultimate cost of a vessel in available progress payments which were done in order to keep the defense industrial base healthy during COVID. Some of those should probably be made permanent, and for a company like mine you would see lower financing costs. Because financing costs make their way into overhead rates, that would then allow us to deliver product more effectively and more cost-effectively to the ultimate customer.

Bollinger Delivers to Coast Guard Sixth FRC for Basing in Bahrain



The U.S. Coast Guard Cutter Clarence Sutphin, now delivered to the service in Key West, Florida, and bound for Bahrain. *BOLLINGER SHIPYARDS LLC*

LOCKPORT, La. – Bollinger Shipyards LLC has delivered the USCGC Clarence Sutphin to the U.S. Coast Guard in Key West, Florida, the company said Jan. 6. This is the 170th vessel Bollinger has delivered to the U.S. Coast Guard over a 35-year period and the 47th Fast Response Cutter delivered under the current program.

The Clarence Sutphin is the final of six FRCs to be homeported in Manama, Bahrain, which will replace the aging 110-foot Island-class patrol boats, built by Bollinger Shipyards 30 years ago, supporting the Patrol Forces Southwest Asia, the U.S. Coast Guard's largest overseas presence outside the United States.

“Ensuring that the brave men and women of the U.S. Coast Guard have the most state-of-the-art, advanced vessels as they work

to build and maintain the necessary regional alliances to ensure maritime security in the region is a top priority," said Bollinger President and CEO Ben Bordelon. "Bollinger is proud to continue enhancing and supporting the U.S. Coast Guard's operational presence in the Middle East and ensuring it remains the preferred partner around the world."

Earlier this year at the commissioning ceremony of the USCGC Charles Moulthrop, U.S. Coast Guard Commandant Adm. Karl Schultz lauded the "enhanced seakeeping" capabilities of the PATFORSWA-bound FRCs, saying "these ships are truly going to be game changing in their new theater of operations" and "offer increased opportunities for integrated joint operations with our Navy and Marine Corps colleagues" as the Coast Guard seeks to be part of the whole-of-government solution set in the region.

PATFORSWA is composed of six cutters, shoreside support personnel, and the Maritime Engagement Team. The unit's mission is to train, organize, equip, support and deploy combat-ready Coast Guard Forces in support of U.S. Central Command and national security objectives. PATFORSWA works with Naval Forces Central Command in furthering their goals to conduct persistent maritime operations to forward U.S. interests, deter and counter disruptive countries, defeat violent extremism and strengthen partner nations' maritime capabilities in order to promote a secure maritime environment.

Each FRC is named for an enlisted Coast Guard hero who distinguished themselves in the line of duty. Clarence Sutphin, Boatswain Mate First Class, USCG, was awarded the Bronze Star Medal for his courageous actions during the invasion of Saipan Island in 1944. His citation reads: "For heroic achievement in action against enemy Japanese forces during the invasion of Saipan, Marianas Islands, on June 15 and 16, 1944. Swimming with a line through heavy surf to a tank lighter stranded on a reef, SUTPHIN remained aboard under

mortar and artillery fire until the boat was salvaged. Returning to the beach, he aided in salvaging another tank lighter under enemy fire and, when a mortar shell struck a group of eight Marines, promptly treated the wounded and moved them to a first aid station. His courage and grave concern for the safety of others reflects the highest credit upon SUTPHIN and the United States naval service."