

DELIVERING THE GOODS

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FEATURE ARTICLE

Infrastructure

Essential to Asset Delivery
Pages 1-4



INSIDE THIS ISSUE

News Briefs

Pages 5-6

Acquisition Profile: Rear Adm. Bruce Baffer

Page 7

Ask the Master Chief Q&A

Page 8



**Acquisition
Directorate**

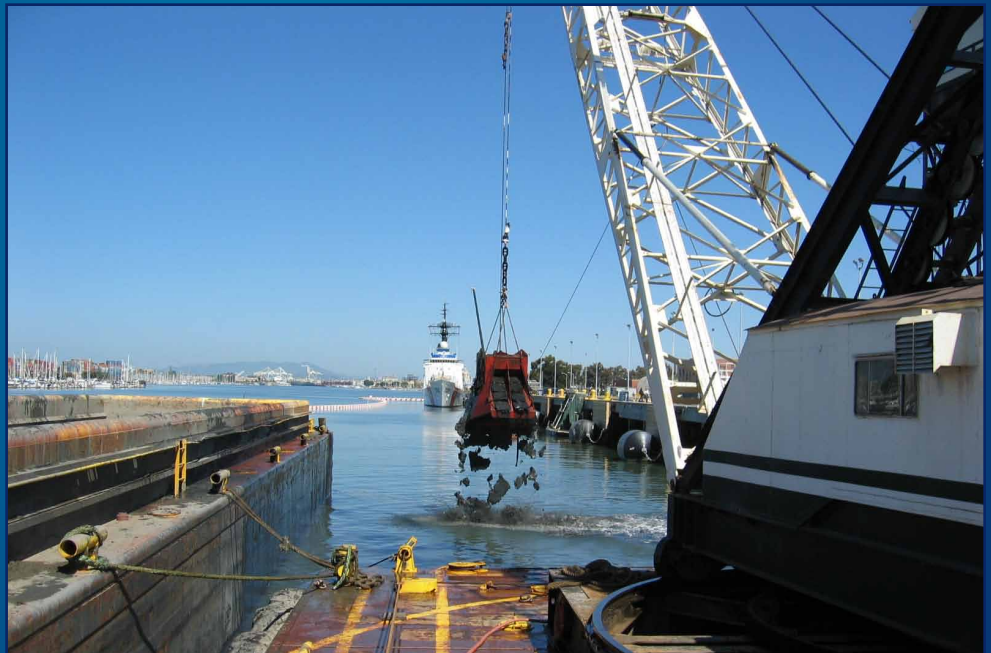
Infrastructure Program Ensures New Assets Have a Place to Call Home

By Rebekah Gordon



Before Alameda, Calif., could become the first homeport of the Coast Guard's new National Security Cutter (NSC)—which arrived there in the summer of 2008—someone had to make sure it could actually fit. The pier and channel in Alameda required significant improvements to accommodate the NSC's length, depth and electrical systems. Compared to the aging High Endurance Cutter it is replacing, the NSC is 40 feet longer, has a deeper draft and features mod-

ernized systems that require more electrical power. Although they do not receive the same fanfare as new assets, critical infrastructure updates—like pier extensions, electrical work and dredging—are essential elements of a successful delivery. These updates require planning, execution and completion in time for a cutter's arrival. Otherwise, said Cmdr. Rob Hengst, who recently took over from Capt. Paul Boinay as the manager of the Coast Guard Acquisition Directorate's Major Acquisition Systems Infrastructure (MASI) program, the vessel might not fit where it's supposed to be tied up.



A dredge removes sediment from the channel at the Coast Guard pier in Alameda, Calif., to ensure enough depth to accommodate the NSCs now homeported there. U.S. Coast Guard photo.

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Although they do not receive the same fanfare as new assets, critical infrastructure updates—like pier

“Or, certain places, even if the dredging is OK, even if you just show up, then maybe nobody else can fit there. Or the crew has to run on generator power the whole time if you don't have the right

Continued on Page 2

Continued from Page 1

electrical. There really would be crew fatigue issues forever if that was your homeport situation,” Hengst said.

A new cutter, boat or aircraft cannot aid frontline operators in executing their missions for long if it does not have a pier to moor it or hangar to house it, as well as adequate infrastructure to support it. Built upon Boinay’s work over the past few years, the MASI program closely collaborates with the Coast Guard’s acquisition projects as well as other offices in the service to help ensure that new or upgraded facilities are ready to accommodate new assets delivered under the service’s broad acquisition portfolio. In addition, in terms of both planning and project execution, the Coast Guard’s Office of Civil Engineering is essential to the process of delivering infrastructure and facilities.

Current MASI Projects

The Coast Guard is acquiring 36 new HC-144A Maritime Patrol Aircraft (MPA) to replace the retiring HU-25 Falcon jets, and some air stations don’t have enough space to accommodate them. Some hangars were built to tightly fit both Falcons and H-60 helicopters by overlapping low wings and high blades, but the more modern HC-144A has the same wing height as the H-60’s blades, making the staggered fit impossible and requiring new or modified space. At Air Station Cape Cod, Mass., construction is about 25 percent complete on a \$23.5 million, 93,000-square-foot hangar for the MPA. A similar hangar complex was completed in 2006 for Air Station Mobile, Ala.

Taking a MASI project from a concept on paper to ribbon cutting involves partnering early and often among several Coast Guard offices.

Shore infrastructure work has been ongoing for the Fast Response Cutter (FRC), the first of which is just months away from delivery to the Coast Guard. Miami, Key West, Fla., and San Juan, Puerto Rico, will be the first three homeports, taking six FRCs apiece.



Upgraded electrical shore ties in Alameda, Calif., provide sufficient electrical power at the pier for the modernized systems onboard NSCs. U.S. Coast Guard photo.

However, the FRC is 40 percent longer than the 110-foot Island-class patrol boat it is replacing, so these ports must undergo modifications to fit them. Pier and shore tie work was recently completed in Miami, the first FRC homeport, and a second phase of work to construct a 10,000-square-foot support building should be completed next fall. Key West, the second FRC homeport, has begun upgrades, including work on a support building and pier berthing construction. A contract for upgrades in San Juan should be awarded soon.

Though pier upgrades to Alameda are completed—the first NSC, Bertholf, and the second NSC, Waesche, are homeported there, and the third NSC, Stratton, which was just delivered to the Coast Guard, will arrive there soon—an additional 34,000-square-foot building is under construction to facilitate testing of an Off-Cycle Crew Support concept. Under this concept, four cutter crews would be stationed in Alameda to support three cutters, thus increasing operational days for the hulls. The building will provide administrative, training and support spaces for the fourth crew that is not aboard a cutter, plus permanent personnel. Occupancy for the \$22.4 million building is scheduled for September 2012.

Planning for construction of training facilities for the crews who will operate these assets also falls under MASI’s purview. Following an anticipated contract

Continued on Page 3

Continued from Page 3

award this fall, a training building for NSC and FRC hull, mechanical and electrical systems will be built at Coast Guard Training Center Yorktown, Va., complete with classrooms, laboratories and cutter engines. Previously completed training facilities include an NSC command-and-control training building at Training Center Petaluma, Calif., and an MPA simulator building in Mobile.

Partnership Within the Coast Guard

Taking a MASI project from a concept on paper to ribbon cutting involves partnering early and often among several Coast Guard offices. The MASI program works with acquisition projects to identify their infrastructure needs and keep abreast of delivery schedules for new assets. Meanwhile, the Deputy Commandant for Operations and the Assistant Commandant for Capability determine what new assets should go where—and in what order—in the Coast Guard’s areas of responsibility. The Office of Civil Engineering includes planners who assess infrastructure feasibility, estimate costs and oversee the actual design and construction.

“It’s kind of a circle between all those,” Hengst said. “You start with what’s executable, what the costs are going to be for the ideal places. If those work, great; if they don’t work, for whatever reason—budget or time or executability—then we have to go to plan B. Then



Coast Guard aircraft parked outside the HC- 144A hangar at Air Station Mobile, Ala. Hangar construction was part of the MASI program. U.S. Coast Guard photo.

we have to check again to make sure plan B works and we kind of go through this cycle in planning what actually gets done.”

Once the Office of Civil Engineering has an approved plan and monies from the Acquisition Directorate to execute the MASI project, the project is assigned to the Coast Guard’s Facilities Design and Construction Center in Norfolk, Va. Simple jobs are usually designed in-house by the service’s engineers. More complex jobs are contracted out, with one contractor to both design and build the project, said Cmdr. Pete Carroll, the chief of program management for the Office of Civil Engineering.

“While they’re doing foundation work and actually digging up, doing construction work, their designers are then still continuing on with the design concurrently. And that’s where the time savings comes in.” - Cmdr. Pete Carroll

“We’ve had a lot of success with it, mainly because it can expedite the point at which design starts to ribbon cutting,” Carroll said. “Typically, the design-builder starts out with the design, and they won’t necessarily complete the design to the hundred-percent aspect. They may get to the 35-percent design and immediately begin breaking ground. So they’ll complete the

Continued on Page 4



Structural steel is set for the new hangar at Air Station Cape Cod, Mass., which will house HC-144A aircraft. Construction of the hangar is about 25 percent complete. U.S. Coast Guard photo.

Continued from Page 4

foundation work design, and the Coast Guard will acknowledge that yes, that's a good design, go forth and proceed. So while they're doing foundation work and actually digging up, doing construction work, their designers are then still continuing on with the design concurrently. And that's where the time savings comes in."

"What we've been trying to do is use the money we have to get the things that we can get in place as soon as we can and as best we can."

- Mike Watson

Timing is of the essence. For infrastructure to be ready for a new asset delivery, the Office of Civil Engineering needs about three years for planning, design and construction in the continental United States and about four years for projects overseas. According to Carroll, that benchmark has kept the Coast Guard on time and on budget for MASI projects. The economy, with contractors eager for work, has helped as well.

Funding and Schedule Challenges

One of the challenges facing the MASI program is the fluid nature of funding and delivery schedules, said Mike Watson, the Acquisition Directorate's acquisition logistics program manager. The Coast Guard looks five years out in planning its budgets, but an annual appropriation may be less than what the service anticipated. "What we've been trying to do is use the money we have to get the things that we can get in place as soon as we can and as best we can," Watson said.

The MASI program and the larger acquisition logistics program it falls under get involved early in the acquisition process to try to anticipate challenges as much as possible. For example, though the Offshore Patrol Cutter (OPC) is in earliest design phases, the MASI and acquisition logistics programs routinely review various scenarios, such as examining what the infrastructure needs would be if a crew rotation concept



A radar tower built under the MASI program stands outside the NSC command-and-control systems training building at Coast Guard Training Center Petaluma, Calif. U.S. Coast Guard photo.

similar to the NSC's were to be implemented or if there were changes to the homeporting plan for the OPC fleet.

"We're already doing some research for them and providing them information on what it would cost if they were to go down that road," Watson said. "It involves facilities, it involves other parts of logistics too, but our people are involved in that along with the project. The project manager, the deputy project manager and the logistics manager, we're right there with them trying to work things like that out."

HC-144A Simulator Contract Awarded

A contract to build a flight simulator for pilot training on the HC-144A "Ocean Sentry" Maritime Patrol Aircraft was recently awarded. Construction of the flight simulator, which will include a full-size replica of the HC-144A's cockpit at the Coast Guard's Aviation Training Center in Mobile, Ala., is expected to take approximately 30 months following the Sept. 2 firm-fixed price contract award to Aero Simulation, Inc. The 13,500-square-foot building that will house the simulator was completed under a separate contract.



A full-size replica of the HC-144A's cockpit will be built at the Coast Guard's Aviation Training Center in Mobile, Ala. U.S. Coast Guard photo.

The HC-144A's modern command-and-control systems and endurance give the Coast Guard a medium-range surveillance aircraft capable of performing many missions, such as search and rescue, law enforcement, drug and migrant interdiction, marine environmental protection, and cargo and personnel transport.

In August, the Coast Guard exercised a contract option to purchase the service's 15th HC-144A from EADS North America for \$41 million. This is the fourth HC-144A purchased under this contract, which was awarded in July 2010 for three aircraft and included four options for up to six more. The Coast Guard accepted delivery of its 12th HC-144A in late July, four months earlier than the contractual delivery date. The 13th and 14th aircraft are already under

contract and expected to be delivered by March and July 2012, respectively. The service plans to acquire 36 fully missionized HC-144As.

The HC-144A has been involved in several high-profile missions, including the Coast Guard's responses to last year's earthquake in Haiti and the Deepwater Horizon oil spill. For more information on the HC-144A, please visit www.uscg.mil/acquisition/MRS.

17th and Final 110-foot Patrol Boat Begins Mission Effectiveness Project

The Coast Guard's 17th and final 110-foot patrol boat, Chandeaur, recently arrived at the Coast Guard Yard in Baltimore to begin extended refurbishment under the Mission Effectiveness Project (MEP). MEP significantly improves a cutter's mission capability and reduces its operating and maintenance costs by replacing obsolete systems.



Petty Officer 3rd Class Suren Chandrasena, a boatswain's mate, watches from the side port door as a small boat launches from the National Security Cutter Bertolf to receive personnel from the Chandeaur. U.S. Coast Guard photo by Petty Officer 3rd Class Michael Anderson.

Refurbishing the 110-foot Island-class patrol boats will help bridge the gap until the Sentinel-class Fast Response Cutters (FRCs) are delivered. Of eight on

Continued on Page 6

Continued from Page 6

order, the first FRC was launched in April, and the second FRC was launched in August. Delivery of the first FRC to the Coast Guard is expected sometime this winter.

Under MEP, 17 of the 110-foot patrol boats, 14 of the 210-foot Reliance-class Medium Endurance Cutters (WMECs) and 13 of the 270-foot Famous-class WMECs have been undergoing extended refurbishment at the Coast Guard Yard. Last October, the 14th and final 210-foot WMEC, Steadfast, completed MEP.

MEP is the most cost-effective way to provide equipment upgrades and structural repairs that maintain the core mission effectiveness of selected in-service vessels. Since MEP began in 2005, the project has consistently achieved its goals on time and on budget. For more information on MEP, please visit www.uscg.mil/acquisition/MEP.

did you know?

The Coast Guard's largest annual event—Innovation Expo—will be held in Tampa, Fla., from Oct. 25 to 27? This year's theme is "Innovation: Steering the Course for Enduring Excellence."

Mission execution begins [here](#).

Contract Awarded for Production of Fifth National Security Cutter



The third NSC, Stratton, gets underway during builder's trials this summer off the coast of Pascagoula, Miss. Photo courtesy of Huntington Ingalls Industries.

On Sept. 9, the Coast Guard awarded a fixed-price incentive contract valued at approximately \$482 million to Huntington Ingalls Industries for production of the fifth National Security Cutter (NSC). Following prefabrication activities, construction of NSC 5 is expected to begin six months after the contract award.

Huntington Ingalls Industries began fabrication work on the fourth NSC on Aug. 29. Approximately 100 tons of steel plate have been cut and fabricated, marking the beginning of NSC 4's production phase.

The third NSC, Stratton, was delivered to the Coast Guard during a Sept. 2 ceremony in Pascagoula, Miss. The ceremony acknowledged preliminary acceptance of NSC 3 by the Coast Guard and placed the cutter in "in-commission special" status, meaning the Coast Guard crew took possession of the cutter and moved aboard.

The first two NSCs, Bertholf and Waesche, are already executing Coast Guard missions in the field. The service plans to acquire eight NSCs. For more information on the NSC, please visit <http://www.uscg.mil/acquisition/NSC>.

www.uscg.mil/acquisition

Acquisition Profile: Rear Adm. Bruce Baffer

Program Executive Officer and Director of Acquisition Programs

By Michael Valliant

Rear Adm. Bruce Baffer is a kind of prototype for Coast Guard acquisition. He is the first Program Executive Officer (PEO) for the service's Acquisition Directorate to be a certified acquisition professional before receiving the flag officer assignment, and his career may serve as a model for future acquisition leadership in the service.

“Acquisition is a unique skill set and historically the Coast Guard really didn't have a military career path for it,” Baffer said. “With the new education opportunities and certification requirements, that has all changed. Acquisition is now recognized throughout the service as a key mission enabler and the skills are highly regarded. We see military personnel coming back for second and even third tours, applying their past experience. That's the military career path that we need.”

“Being PEO provides the opportunity to ensure the next generation of Coast Guard operators has the quality assets they will need to perform our many missions, now and in the future.”

Baffer previously served as the Acquisition Directorate's surface domain program manager, where he oversaw sea trials and delivery

of the first two National Security Cutters (NSC) to the Coast Guard. He then spent a year as the prospective commanding officer for the third NSC, Stratton, prior to his return to Washington, D.C., and his current job as PEO.

Before his time in acquisition, Baffer spent time at sea as a cutterman, but still considers himself an engineer first. He graduated from the Coast Guard Academy in 1984 and served on 210-foot, 270-foot and 378-foot medium- and high-endurance cutters.

In August, Baffer's current job and his previous role with Stratton came together when he went to the Gulf of Mexico for the cutter's acceptance trials. Stratton was delivered to the Coast Guard on Sept. 2, and its commanding officer and crew will now prepare the cutter for commissioning in Alameda, Calif., next spring.

“I have obviously strong feelings for Stratton because we put her on contract right as I came on the program. And over the last four years, either as program manager, as the prospective commanding officer and now as the PEO, I've been involved. So it is very nice to see it come out successfully at the other end,” he said.

Baffer and his wife, Perfecta, have eight children ranging in



Rear Adm. Bruce Baffer, PEO and Director of Acquisition Programs. U.S. Coast Guard photo.

age from 25 to 3 years old. The Coast Guard is a family affair for the Baffers, as their oldest son, Brian, also graduated from the Coast Guard Academy and just finished his first tour as an engineer officer-in-training aboard the 270-foot Coast Guard Cutter Mohawk.

As an operator, Baffer knows the importance and impact of the Coast Guard's work in acquisition and welcomes his role in delivering new cutters and aircraft to the front lines.

“Being PEO provides the opportunity to ensure the next generation of Coast Guard operators has the quality assets they will need to perform our many missions, now and in the future,” Baffer said. “That is something unique with the acquisition field—you really have a long-term impact.”



*Master Chief
Petty Officer Brett Ayer*

ASK THE MASTER CHIEF

Q. I don't understand why the new Offshore Patrol Cutter (OPC) has to be so big. If it is replacing the Medium Endurance Cutter (WMEC), why is it as big as a High Endurance Cutter (WHEC)?

A. Let me start by saying that since we do not have a final design for the OPC, we don't know for sure how big or small it will be. What I can say is that in order to meet operational requirements, it will most likely be larger than our current 210-foot and 270-foot WMECs. It will not, however, be anywhere near as large as a 418-foot National Security Cutter.

As with all the assets we acquire, the OPC's final design will be based on operational requirements. These requirements are based on a thorough study of current and anticipated mission needs as well as expected areas of operation, which change over the years. The missions and conditions under which we built the WMECs and the 378-foot WHECs are not the same missions and conditions under which we expect to operate the OPC. The planned mission of the OPC shows that we need a combination of the capabilities from the legacy WHECs, WMECs and 110-foot patrol boats. This reality, along with the need to design an environmentally compliant vessel for mixed-gender crews and with increased crew habitability standards, adds up to a larger footprint.



Conceptual rendering of the Offshore Patrol Cutter, the design of which is not yet final.

We need a vessel that can launch and recover helicopters in significantly greater sea conditions than our current WMECs. We need the increased range and speed to get to the mission areas and the improved endurance to perform the mission and get back. We also need the power and space to operate systems that did not exist in the 1950s and 60s when we were designing the WMECs. Our current WMECs significantly limit our ability to conduct the types of operations we need to conduct, and where and when we need to conduct them. There is a reason you don't see a lot of WMECs hanging out in Kodiak, Alaska, or Seattle.

In the end it's all about math. With fewer vessels overall, each one needs to be more capable. If we could build a smaller vessel that still met all the requirements, trust me, we would. No one likes the idea of going bigger just for the sake of going bigger. Everything from homeporting to dry-docking would be easier if we could build a smaller vessel and still meet all of the critical requirements.

But as they say, you don't have to like reality, but you do have to live in it.

*To submit a question for an upcoming Acquisition Directorate newsletter, please e-mail
Master Chief Petty Officer Brett F. Ayer directly at Brett.F.Ayer@uscg.mil or acquisitionweb@uscg.mil.*