



SPOTLIGHT ON WAKE ISLAND

** Part Two of a two-part series on Wake Island.*



Cost-Competitive Construction at its Best

On Wake Island, best value delivery of construction and environmental projects calls for contractors with a commitment to teamwork and expertise in remote logistics planning.


By Karina Quintans, M.SAME, and Jamie Oakley, PG, LHG, M.SAME

For the U.S. Air Force, best value delivery of construction and environmental projects on Wake Island calls for contractors with an eye for the long-term backed by expert skills in remote logistics planning.

Everything required to execute work on the remote coral atoll must be imported. A four-week barge trip originating from the continental United States is the most cost-effective means of mobilizing the heavy equipment, parts, and supplies needed to complete a job.

The Air Force's Pacific Regional Support Center (PRSC), which provides Arctic and Pacific surveillance weapon system and installation support services, manages operations on Wake Island from Joint Base Elmendorf-Richardson, Alaska. Though just 2.81-mi² in size, Wake Island is home to the longest strategic runway in the Pacific Islands, at 9,800-ft. Throughout the last century, the base has supported many different missions in response to evolving U.S. requirements, but its primary purpose as a transpacific military and commercial aircraft fueling and maintenance depot has remained steadfast.

With renewed national security concerns across the Indo-Pacific Region and increased attention on the area, the PRSC has begun strengthening Wake Island's infrastructure and facilities through a \$155 million portfolio of sustainment, restoration, and modernization projects along with a \$43 million environmental program. Similarly, PRSC tenants have been upgrading and repairing their respective facilities as well.



A barge arrives at Wake Island carrying heavy equipment and supplies that will support construction and environmental work. PHOTO BY JAKE MUIRHEAD



Contractor personnel conduct upgrades to Wake Island's power distribution system. PHOTO BY KARINA QUINTANS

Planning and executing this sizeable workload is no small feat on the most isolated Air Force installation in the world. Though barging may be the most cost-effective means of mobilizing, it still remains the single largest line item in a project bid. Fortunately, millions of dollars have been saved in barging costs during the bid-build of various construction

FROM PROJECT TO PROGRAM

In 2015, the Air Force, through the Alaska District of the U.S. Army Corps of Engineers, awarded a contract to Brice Environmental Services to perform the removal of World War II-legacy solid waste from Wake Island over the course of three summers. A chartered barge would sail to

heavy equipment were needed to execute the bid-build of critical sustainment, restoration, and modernization projects. Wake Island's water distribution system had begun to show signs of failure and required upgrades. That led to nearly 35,000-ft of pipe being installed, as well as 35 hydrants, and a 20-ft by 30-ft pumphouse. Additionally, the Missile Defense Agency (a tenant on the island) had awarded a mission-critical project to build a flight test communications building. Availing of the barge headed to Wake Island each year for three years, a total of \$3.5 million in heavy equipment was mobilized by the summer of 2018 to support a cadre of projects.

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projects in the last three years by combining requirements. These savings bring new meaning to best value delivery of projects located on Wake Island.

the island once annually where it would be loaded with solid waste for transport and disposal back on the mainland.

Concurrently, numerous pieces of



Storage area being built as part of a staging and equipment yard on Wake Island. PHOTO BY KARINA QUINTANS

contractors began to take advantage of these local resources to cost-effectively bid on and execute construction contracts. In 2018, for instance, a year-long project to upgrade the island's electrical distribution system was subcontracted to and self-performed by Brice, which had both the equipment and boots on the ground to perform the installation of 2-mi to 3-mi of new primary conduit, up to 0.5-mi of secondary conduit, 208 vaults and pads, and the demolition and removal of old transformers, transformer pads, and conduit. All together, over \$3 million was saved by combining barge mobilization for multiple projects (by comparison, one roundtrip barge costs at least \$1.5 million).

A full-fledged cost-competitive construction program had been born. The decision to make this investment has been a boon for the Air Force mission. The availability of extensive onsite resources reduces performance risk and saves taxpayer dollars for critical work in a location where the lack of appropriate equipment, parts, or materials could result in hundreds of thousands in additional mobilization costs. Likewise, continuity has made programming

easier for the Air Force and its tenants. Years of institutional knowledge and established working relationships, backed by on-the-ground resources, allows client and customer needs to

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be addressed more aptly and in real time—achieving cost and schedule efficiencies that would otherwise not be possible. This is vital for conducting operations on Wake Island, where conditions change rapidly due to an intense and variable climate.

MORE THAN A JOBSITE

For the Air Force, getting the job done right the first time is a mission multiplier. Making that possible requires a team of talented and dedicated individuals. Finding the right people to



A good attitude, a collaborative spirit, and a willingness to share resources is critical to successful performance on Wake Island.



The largest single fleet of heavy equipment on Wake Island was established over the course of three barge seasons. PHOTO BY KARINA QUINTANS

work on Wake Island though can be a challenge, despite the unique career opportunity and the atoll's rich history and stunning natural beauty.

Multi-skilled personnel are essential for maximizing productivity, but they are hard to come by to bring some 4,300-mi from the mainland United States. Once identified, each person must be willing to work the rotation required to ensure cost-effective project delivery, before rotating off the atoll. On the island, contractor personnel face whole new tests, failure of which results in their removal on the next flight out.

Whether on the clock or off, Wake Island is a 24/7 assignment. Success demands more than technical and managerial competency. At Wake, the work is not just about being on a jobsite and getting things done. It is about representing our country and our military, and delivering the mission in support of national security. Contracting there is also about being a part of a small community with limited infrastructure and few amenities. A good attitude, a collaborative spirit, and a willingness to share resources whether a ream of paper or a 75-T crane is part of both surviving and thriving on this distant locale where up to 100 people live and work together seven days a week.

FOCUS ON SAFETY

Because it takes from 24 hours to 72 hours for a medevac airplane to reach Wake Island at a six-figure cost (the nearest tertiary care center is 2,300-mi away in Hawaii), there are strict rules, regulations, and guidelines to promote a practice of "safety always" for island residents and visitors.

Sturdy closed-toe shoes should be worn when walking the coral beaches in order to avoid injury. Drinking water must be carried at all times to prevent heat exhaustion and dehydration. The "buddy system" is enforced due to the lack of an island-wide communications system. In fact, for day trips to Peale Island (Wake Island is a coral atoll comprised of three islands—Wilkes, Wake, and Peale), the buddy system is required, and departure and return times must be called

in to the fire department. Collectively, these practices keep the island's community intact and functioning seamlessly for all of its residents, whether transient, temporary, or long-term.

A LEGACY SUSTAINED

Few have the opportunity to see Wake Island firsthand. For those lucky enough to experience this historic battlefield site and Pacific Remote Island Marine Monument, cooperation, respect and a unifying sense of teamwork ensure their time there is as positive and memorable as the ocean around them is vast.

As the United States furthers attention on the Indo-Pacific, Wake Island is poised to sustain its legacy as an "airbridge" for the nation.

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ALL HANDS ON DECK

Once a year, Wake Island receives fuel, delivered from a barge, to support island operations. Too large to enter the marina, the barge has to remain anchored offshore in open water secured between two mooring buoys. A 1,500-ft fuel line is run to shore.

In 2018, the Air Force needed to fly a new 10,000-lb mooring buoy to Wake Island to replace one that had been lost at sea. In possession of the only mobile crane large enough to lift the enormity of this massive buoy, Brice supported the mission-critical operation. First, the Air Force moved the buoy from the C-5 Galaxy to a K-Loader. The 75-T crane then transferred the buoy to a flatbed trailer for transport to the marina.

The Air Force and contractors, along with members of a U.S. Navy dive team, executed the transfer successfully over the course of two hours.