

## USS Arizona Memorial Visitor Center Replacement Project Oahu, Hawaii

April 2009

The Naval Facilities Engineering Command (NAVFAC) Hawaii is the Navy's Administrative Contracting Officer (ACO) for the USS Arizona Memorial Visitor Center Replacement project. The plan includes the construction of new buildings to support exhibits, education, security, other offices, restroom and resting areas. In addition, the existing theaters will be renovated and the current visitor center structure demolished. The project's customer is the National Park Service (NPS) and the new facility will be located on 17.4 acres of Pearl Harbor shoreline across from the Arizona Memorial.



*Rendering of new, replacement complex from the waterside.*

### History/Background

The USS Arizona Memorial, which spans the sunken ship, was built in 1962 with privately raised funds and a Congressional appropriation. The USS Arizona Memorial Visitor Center, on Halawa Landing, was built with a Congressional appropriation by the United States Navy for visitors to the USS Arizona Memorial. It was dedicated in 1980 and the Navy turned over operations of the facility to the National Park Service.

The current one story, open air, visitor center and museum includes a book store, interpretive center, two 152-seat theaters and assembly area for the tour boats that carry visitors to the memorial. The facility is on an 11 acre site owned by the Navy and operated by the National Park Service. It was designed to accommodate 750,000 visitors a year. However, today approximately 4,500 visitors use the facility daily and approximately 1.5 million people visit the attraction every year.



*Photo of existing Visitor Center facility from the waterside and the Ford Island Bridge.*

The original site of the visitor center was built on “re-claimed” land where good fill material was used to expand the Halawa Basin area. The land was designed to settle 18 inches. Unfortunately, the visitor center has settled 30 inches in some areas, far exceeding expectations. As a result, the lower level of the facility is nearing the water table. The structure was designed to be raised using hydraulic jacks and concrete shims. Over the years, it has been raised four times elevating the facility to the maximum extent possible. All of the lifting has also caused problems with the facility’s concrete support structure allowing it to crack and permit moisture to permeate and sometimes reach the rebar. Assessment of the deterioration has resulted in engineers predicting a life expectancy of five to ten years (in 2003).

In addition to the physical issues with the current facility, other concerns have initiated the Arizona Memorial Visitor Center Replacement project:

- (1) *Lack of Space* – The center’s yearly visitation is double the original intent.
- (2) *Inadequate Museum Condition* – The existing museum lacks sufficient space to display many of the thousands of artifacts that have been donated and remain in warehouses unavailable to the visiting public. The current design of the museum, originally built with open-air exhibits to take advantage of the warm Hawaiian weather, does not allow for adequate atmospheric control and prohibits the display of many irreplaceable artifacts. Exhibit areas are often over-crowded.
- (3) *Incomplete Story* – The current museum tells only the basic story of Pearl Harbor. New exhibits will allow for a more comprehensive story and better recognition of those who fought and sacrificed at Pearl Harbor.

The Arizona Memorial Museum Association (AMMA) launched a capital campaign to construct a new, larger, world-class visitor center that will house artifacts and information surrounding the Pearl Harbor attack. It will have a state-of-the-art museum and a new research and educational teleconferencing center, designed for distance learning, improved curatorial facilities and enhanced amenities to enrich the visitor experience. The new facility is a joint project between the AMMA and the National Park Service.

### Contract Award

NAVFAC Pacific awarded a \$32.6 million firm-fixed price contract on Sept. 24, 2008, for the FY08 USS Arizona Memorial Visitor Center Replacement project, to Watts Constructors, LLC, Honolulu, Hawaii. NAVFAC Hawaii’s Facilities Engineering & Acquisition Division (FEAD) at Pearl Harbor is administering the contract. Construction will provide approximately 17,750 sq feet of building space (not including the two theater renovations).

The estimated completion date for this construction project is September 2010.

### Project Overview/Specifics

The USS Arizona Memorial Visitor Center Replacement project will be built on 17 acres. Not only will it provide a larger visitor facility, but the whole project will create an “open campus” setting offering visitors a better experience.

The new complex will house state of the art exhibits, and accommodate 1.5 million people 362 days a year. It will include a ticket office; concession, administrative and support areas; exhibit space, theaters, restrooms, administrative and support area; plus various site improvements to assist with vehicle and bus parking and drop-off areas, crosswalks, walkways, security walls, fencing, pavements signs and landscaping. The new structures will include pile foundations, reinforced concrete floor slabs, steel joists and decking, flashing and sheet metal work, concrete masonry work, photovoltaic panels, shade structures, air conditioning and fire protection.



*Rendering of new, replacement facility from landside.*

Supporting work includes landscaping, asphalt concrete pavements, connecting utilities, electrical and communication ducts, fencing, and site improvements.

To assist the National Park Service with its mission to provide continuous operations during construction, the contractor will work closely with the Navy and Park Service personnel to make sure all visitors are safe and able to experience as much as possible of the current USS Arizona Visitor Center's offerings and amenities.

Phased construction will be the key to making this possible. Construction work should allow visitors and staff access to public areas at all times, with minimal interference. This effort will require excellent coordination and constant vigilance by the Navy, the NPS and Watts Constructors personnel. Current plans identify two phases in the construction of the new Arizona Memorial Visitor Center Replacement project with three sub phases.

- **Phase 1: North Portion of the Site Plus Waysides.** The existing Visitor Center will remain in operation while new facilities are constructed on the North and West portions of the site.
  - 1A – Set up service access for loading/deliveries to existing Visitor Center during construction.
  - 1B – Build new Visitor Center elements at North portion of site.
  - 1C – Prepare parking area, fence, entry and walkway for Phase 2 use.
- **Phase 2: Demolition of Existing Visitor Center and Construction of New Exhibit Pavilions.** New facilities on North portion of the site are open, including access around West edge wayside paths to dock. Existing Visitor Center is demolished (except for the two theaters) and new facilities are constructed at the South portion of the site.
  - 2A – Modify bus turn around and visitor access for use with new Visitor Center entry.
  - 2B – Demolish existing Visitor Center and build at South part of site (to include theater renovations).
  - 2C – Provide final access, paving and planting.

Healy Tibbits Builders, Inc. has been hired as the project's pile driving subcontractor. During the phased construction of the new complex, approximately 187 octagonal piles (depending on construction, use of the building, and weight requirements), will be driven for 10 buildings. The piles are 16.5 inches in diameter and 125 feet to 200 feet in length.



Test pile driving. Photo provided by Watts.

Test pile driving took place March 27 – April 1, 2009 when 12 piles were installed. Production pile driving, involving the installation of 102 piles, will occur between April 30 and May 27, 2009. The remaining 73 piles will be installed in early 2010. During pile driving operations, loud noises may be heard by visitors, Pearl Harbor employees, and members of the public living and traveling along Kamehameha Highway, fronting the USS Arizona Memorial Visitor Center Replacement project.

Watts Constructors, LLC, began Phase 1 (1A) in late December 2008. They are currently entering Phase 1 (1B).

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