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**Shaw's Internal
Resources Essential
to Building
World's Largest
Surge Barrier**



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The U.S. Army Corps of Engineers (Corps) contracted Shaw for the largest civil-works design-build project it ever awarded: the **Inner Harbor Navigation Canal (IHNC) Surge Barrier**. For the project, Shaw utilized teams from multiple internal business units and subcontractors to achieve cost and scheduling objectives under an aggressive client schedule.

“The IHNC project required a great deal of collaboration within our own team and with our client,” said Charlie Hess, senior vice president of operations in Shaw’s Environmental & Infrastructure Group and program manager for the project. “We established teamwork for greater efficiency and effectiveness.”

An important part of the Corp’s Greater New Orleans Hurricane and Storm Damage Risk Reduction System, the IHNC project was designed to provide 100-year-level storm protection. Shaw’s Environmental & Infrastructure Group led the overall effort, while the Plant Services Division of Shaw’s Power Group provided fabrication and modular construction services.

The project consists of a nearly two-mile, 26-foot high surge barrier wall at the confluence of the Mississippi River Gulf Outlet and the Gulf Intracoastal Waterway. It is made of 1,271 concrete cylinder piles, 647 36-inch steel batter piles, a barge gate, sector gates, a vertical lift gate and rock-reinforced T-style floodwalls that tie into existing levee systems.

“The IHNC project is a significant accomplishment in design, construction and execution,” said George Bevan, president of

Shaw’s Environmental & Infrastructure Group. “Shaw worked tirelessly to obtain this heightened level of storm protection, using innovative strategies to achieve speed and precision.”

Constructing the project in a maritime environment called for creative concepts and innovative solutions. Shaw constructed and assembled many components off-site to reduce the amount of work that needed to be performed in that environment.

“We divided the work into a number of defined, deliverable elements that were independently designed and constructed,” Hess said.

From Shaw’s Delcambre, La., facility, the project team performed work on batter piles and other steel components and constructed the vertical lift gate and sector gates.

“We looked at who could fabricate gates of a large size, who had the precision welding experience and who had the capability,” Hess said. “Those are skills we have internally.”

Employees at the 60-acre facility specialize in fabrication work for the petrochemical, power and offshore oil and gas industries. For the IHNC project, the team built the 84-foot radius, 600-ton leaves of the sector gates and the 36-by-60-foot vertical lift gate, along with its support towers and bridges.

“It was a large effort,” said Doug Fussell, Shaw’s Plant Services Division project director. “The sector gates have nearly 10,000 pieces, and each piece had to be detailed, prepared and welded into the gate structure to exact specifications.”

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The facility's load-out capabilities and large slip and bulk-head size allowed for the successful transport by barge to the IHNC project site. In March 2011, the vertical lift gate was transported from Delcambre and installed near New Orleans. Installing the sector gates on May 24, 2011, was the final task in achieving the project milestone of 100-year-level storm surge protection.

“The dimensional tolerance required for the large sector gate leaves was very tight and had to be maintained for the gates to operate properly,”
Fussell said.

Meanwhile, Shaw used its program management experience to lead its own workforce, subcontractors and external vendors at the barrier site. Precision was achieved in the concrete cylinder pile placements by using a trestle system for simultaneous installations along several locations of the barrier wall. A trestle system used for simultaneous installations along several locations of the barrier wall achieved precision during the concrete cylinder pile placements. Template equipment on the trestle created accuracy.

Once the concrete cylinder piles were placed, closure piles were installed for a tight seal, and angled batter piles against the structure for added strength. A concrete cap and parapet structure top the barrier wall.

Overall, Shaw demonstrated its ability to manage a large, complex project that has a critical impact on the protection of an entire region.

“Shaw understands the importance of working on a historic project that will help protect the New Orleans area from another hurricane,” Hess said.
“This is a real success story.”

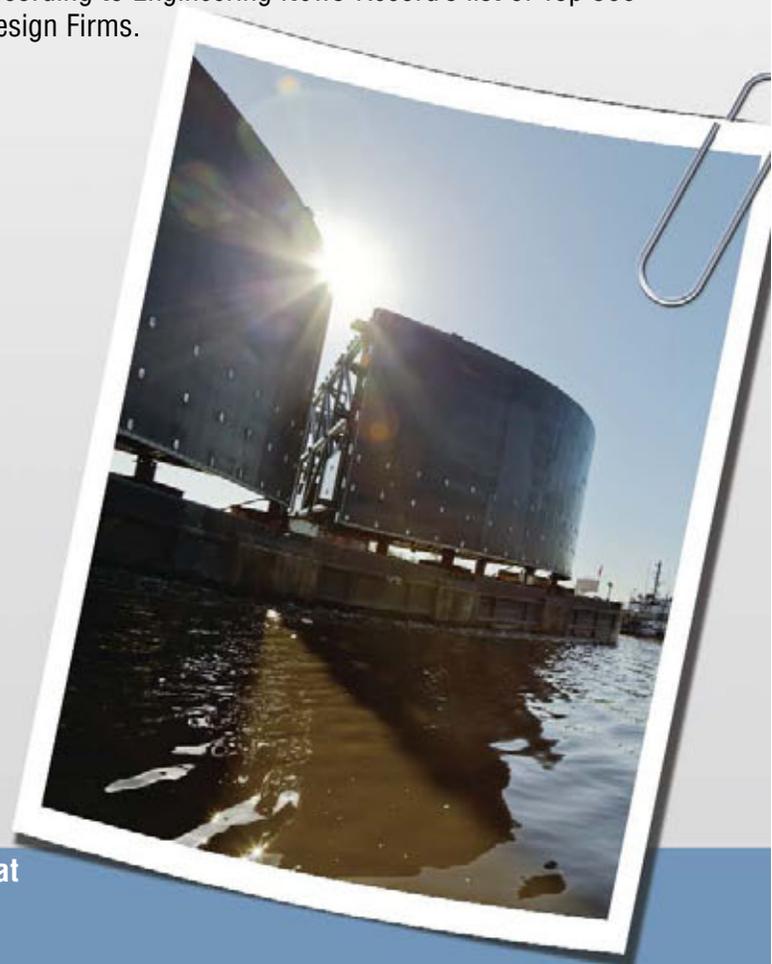
Project Facts:

The IHNC Surge Barrier project consists of:

- A bypass barge gate and sector gate at the Gulf Intracoastal Waterway
- A vertical lift gate at Bayou Bienvenue
- A braced concrete barrier wall
- Floodwalls that tie into the risk reduction systems in Orleans Parish and St. Bernard parishes

About Shaw:

The Shaw Group Inc. (NYSE:SHAW) is a leading global provider of engineering, construction, technology, fabrication, remediation and support services for clients in the energy, chemicals, environmental, infrastructure and emergency response industries. A Fortune 500 company with fiscal year 2011 annual revenues of \$5.9 billion, Shaw has approximately 27,000 employees around the world and is a power sector industry leader according to Engineering News-Record's list of Top 500 Design Firms.



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