IASM Members Chosen for Gulf Coast Pilot Stabilization Program

Commended for ‘making a difference’

On August 29, 2005, Hurricane Katrina made landfall near the Louisiana/Mississippi border as a category 4 hurricane with winds in excess of 145 mph. In the coastal region of Mississippi, a storm surge as high as 35-feet created a zone of destruction covering over 70 miles of coastline. Wind damage extended far into the interior, and there were eleven confirmed tornadoes.

The physical damage in Mississippi is far beyond what has been reported in the media. Many areas were completely obliterated, including the complete destruction of more than 65,000 homes and hundreds of commercial buildings. The conditions are almost impossible to communicate in words or with a few photos. The structural damage is extreme, having more in common with earthquake or blast damage than with most hurricanes in modern memory.

In an unsolicited e-mail to IASM, Patrick Sparks, President of Sparks Engineering, Inc., in Round Rock, Texas wrote: “You should know that structural movers are making a difference in the recovery after (Hurricane) Katrina on the Mississippi coast.”

Sparks said he had been working with Jimmy Hays of Hays Brother House Moving and John Williams of Kosciusko House Movers, both of whom are members of IASM.

“As a structural engineer on the coast right after the storm, I saw immediately that to save buildings devastated by the storm surge, many of which were

(Above and right) IASM members Hays Brothers and Kosciusko House Movers, both of Mississippi, doing reclamation work on a large two-story Victorian structure built in 1906 that was flooded and knocked from its pilings supports at Biloxi Beach. The house is owned by Chevis Swetman, president and CEO, People’s Bank, Biloxi, MS. Mr. Swetman was unaware the structure could be saved by structural movers.
displace off their foundations, we would need structural movers,” he wrote. “These guys are doing a great job.”

“Structural movers have the skills needed to respond to the physical damage caused by this type of event. I recognized that immediately. As an engineer, I can evaluate the building’s structural stability and devise a stabilization scheme, but I can’t actually do anything. Ultimately, it is the availability of a competent contractor that makes the project a success. Most contractors are naturally unfamiliar with this type of extreme damage and don’t know how buildings behave when they have lost a large part of their support. Structural movers, on the other hand, have the experience, skill, and equipment to brace, lift, and stabilize a severely damaged structure.”

“The challenges are many: Logistics: 1) no place to stay, 2) difficult access because of debris, 3) tough working conditions, 4) few services (food, tools, materials), 5) communications, etc. All are very difficult. Also, the people of the area are devastated…they have in many cases lost everything. So often the building, or what is left of it, is the only thing they have, and they are not sure if it can be saved, or if they can afford to save it. So giving people advice on what is feasible and what is not is an important thing right away, so they can mentally process the information in making decisions.”

“Another problem,” said Sparks, “is assessing the extent of the damage. Currently, estimates indicate that there were approximately 65,000 homes completely destroyed in Mississippi. There are about 60,000 more that were damaged but still survived. The amount of damage is impossible to convey in words or a few photos. We have been attempting to pull together more detailed estimates, but that has proven difficult. Right now, I’d say there are possibly 5000 historic homes and commercial buildings that are critically damaged but could be saved. That is not counting the tens of thousands of badly damaged buildings.

Photographs: Courtesy of David Preziosi, MHT and Patrick Sparks, SEI.
that do not necessarily need structural stabilization.

"Many of the damaged structures are ordinary homes in middle to lower income areas. Only 15% of the homeowners on the coast had flood insurance because most areas were above the FEMA flood plain. While there will be some future assistance for repairs, there is no federal money for stabilization right now, which is the critical need."

Mississippi Heritage Trust

Likewise, The Mississippi Heritage Trust, in conjunction with the National Trust for Historic Preservation, developed a Pilot Stabilization Program for several historic damaged by Katrina. The goal of the demonstration program was to show that damaged historic buildings could be stabilized and saved rather than demolished.
The Walter Anderson cottage, former home of depression era artist Walter Anderson, was one of the houses selected for the program due to its architectural and cultural significance. The cottage was constructed circa 1850 and is still in the Anderson family. It is a pivotal structure in the Shearwater National Register Historic District in Ocean Springs.

David Prezoisi, Executive Director of the Mississippi Heritage Trust, said he chose Hays Brothers House Moving for the pilot project because of recommendations of Sparks Engineering and one of his own board members who had used Hays on another job in Cleveland, MS. "Jimmy is skilled and equipped in what he has done for us," Prezoisi said. "Yes, I am satisfied with Jimmy’s work as well as the owners of the houses we moved." (See article about Hays Brothers House Moving, Inc. on page 63).

Prezoisi indicated the Trust has four projects. Houses were selected in each one of three coastal counties. Three were knocked completely off their foundations and were flat on the ground. Crews had to dig under the houses to install jacks to get the structure high enough off of the ground to

"We have had the best experiences with the people of Mississippi. They have been amazingly resilient and positive throughout the disaster recovery."
place I-beams under the structures. Once that was accomplished the houses were lifted to their original height and location. The houses were elevated temporarily while foundation crews built new foundation piers. Afterwards the houses were placed on the new piers.

According to Praziosi, the demand for house movers on the coast is definitely greater than available supply. The greatest challenge, however, is finding monetary assistance for historic buildings in order for homeowners to have their buildings repaired and stabilized. Many homeowners who were outside the flood areas didn't have flood insurance so their damaged isn't covered by insurance. Still others did not have adequate insurance or insurance at all in some of the lower income areas.

Another challenge the Heritage Trust faces is deadlines from FEMA for the demolition of houses. “People are having to make decisions about what to do with their damaged homes. Many don't have insurance claims settled so they are agreeing to have their house demolished by FEMA to avoid paying for the demolition in case their house can't be saved or they don't receive enough insurance reimbursement,” he said. Praziosi said he had no idea how many homes need to be moved or elevated but would guess that it is in the hundreds for historic homes and in the thousands for non-historic home. The mission of the Mississippi Heritage Trust is to preserve the prehistoric and historic resources of Mississippi.

Any structural moving companies desiring to offer physical assistance, and/or any individuals, companies, foundations, governments or organizations desiring to offer financial assistance to restore and preserve residences, businesses, churches, etc along the US Gulf Coast (Alabama, Louisiana and Mississippi) damaged by Hurricane Katrina may do so by contacting David Praziosi, Executive Director, Mississippi Heritage Trust, P.O. Box 577, Jackson, MS 39205, Telephone: 601-354-0200, Facsimile: 601-354-0220. To learn more about Mississippi Heritage Trust and the National Trust's efforts to help save historic structures damaged by Katrina, visit: www.mississippiheritage.com.

Patrick Sparks is president of Sparks Engineering, Inc., a consulting engineering firm based in Austin, Texas specializing in the investigation, analysis, and rehabilitation of existing structures. He first went to Mississippi during the week of September 19-24, 2005 as part of a special assessment team at the request of the Mississippi Heritage Trust and Mississippi Department of Archives and History. Subsequent work has included technical consulting to FEMA for structural triage and evaluations throughout the coastal areas of the disaster zone. In December 2005 Sparks Engineering, Inc. established a field office in Biloxi.