

PROJECT MANAGEMENT

Storm-Battered Superdome Gets New Roof in a Big Hurry 6/19/2006

By E. Michael Powers



A Texas contractor is racing to replace by Sept. 1 the nearly 10-acre roof of the New Orleans Superdome, heavily damaged by Hurricane Katrina last August. Eager to have the facility repaired in time for football season, the state gave Brazos Urethanes, College Station, just 180 days to demolish 450,000 sq ft of old roof decking section by section and replace it with new polyurethane-coated decking.

The job is 75% complete and “ahead of schedule,” says Danny Vincens, the Superdome’s vice president of engineering and assistant general manager for SMG, Philadelphia, the arena’s facility management firm. The \$32-million roof project is the centerpiece of a \$134.6-million Superdome repair package. The job has an estimated \$50-million more in additional upgrades.

Vincens confirms that razing the Superdome was a possibility. “If the damage had gone above 50% [of facility replacement value, the Federal Emergency Management Agency] probably would have recommended tearing it down,” he says. There was initial fear damage would reach that threshold, but it turned out to be less than 30% of the arena’s estimated replacement cost of \$500 million to \$700 million, says Vincens. FEMA is paying 90% of repair costs.

The new roof will be stronger than the previous structure and should withstand a Category 5 hurricane, says Vincens, a claim backed by material supplier Bayer Material Science, Pittsburgh. The original polyurethane roof survived for 26 years before being replaced in 2000 with a 60-mm-thick rubber surface that was glued in place, says Wally Scoggins, Brazos president. With a product “that is glued together, once it starts to come apart, the rest can follow,” says Vincens. But the new polyurethane surface bonds directly to the decking. It cannot peel off in large tracks, but it can be damaged by windborne debris.

Logistics on new installation are “a nightmare,” says Tom Keller, Brazos project manager. “We’ve got 9.8 acres of roof that are basically on a ball 300 ft in the air,” he says. Brazos must share the floor space inside with Broadmoor, Metairie, La., the interior repair CM and its subs who are also using



the field as a staging area. And Brazos is spending \$20,000 per day in hotel bills for 110 specially trained workers, adds Scoggins.

The new decking, composed of 3 x 16-ft sheets of 16-gauge corrugated galvanized steel, is initially treated with polyurethane on the Superdome's field. After a layer of polyurethane smoothes decking flutes, panels are hoisted to the rooftop.

Panels are then placed on one of five wheeled hoists atop the dome used for moving material up and down its curved surface. Next, the decking is coated with 2.5 in. of polyurethane foam and primed. Finally, the completed surface will be coated with six layers of elastomeric urethane to protect polyurethane foam from degrading. This system should prove to be more reliable, Keller asserts. "There is similar roof in Biloxi that survived a direct hit from Katrina."