

Mitigation best practices



FEMA

Galveston neighborhood gets high marks in hurricane test

“We have to build for the long term.”



Photo Courtesy Evia

Hurricane Ike left little damage in Galveston's new Evia neighborhood because of the design and building systems used.

Galveston, TX – Hurricane Ike may have devastated most of Galveston, but one of the city's newest neighborhoods – Evia – suffered only minor wind damage. The developers say it is thanks to features in the subdivision designs.

Crystal Ruiz, who runs the neighborhood coffee shop, was filled with apprehension when she came back on the island a couple of weeks after the September 2008 storm. “When you drive into Galveston, you are hit by what happened here,” she said from

the counter of the Sugar Bean Coffee and Cream. She said everything was damaged and described the scene with people dragging their belongings out of ruined homes.

“You drive past that big mountain of trash; you don't know what you will find. You get to Evia and it is – beautiful! A couple of street signs were down. Some siding was missing. But the sun was shining, the grass was green, the lakes were sparkling, and the homes – even the little details like the gardens – were spotless. It was fantastic!” said Ruiz.

At a glance

A new Urbanist community being built in West Galveston made it through Hurricane Ike with little damage because the land and homes are elevated and shielded against high winds and floods.

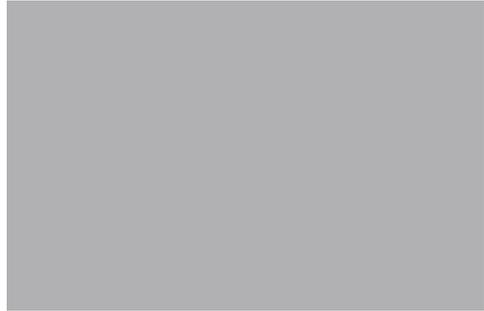
It is no accident that the subdivision survived the storm so well. It was carefully planned to offer gracious living and classic design with structural integrity and sustainability.

“Galveston is not a cookie-cutter kind of place, and we didn't want to be a cookie-cutter neighborhood,” said Kelley Sullivan, sales and marketing director. She and her three brothers are Evia's developers.



One of the speciality designed homes.

The first new neighborhood in the city in three decades, Evia is named for Jose Antonio de Evia, an 18th Century Spaniard credited with discovering the island and naming it “Galveston” after his patron, Bernardo de Galvez.



Evia is what planners call a New Urbanist community. It’s a traditional, mixed-use neighborhood that echoes the past. Curving streets encourage neighbors to visit and walk or bike around. Pastel houses in Victorian, Craftsman, and classical designs are scattered across the landscape. All houses feature generous front porches; garages and cars are relegated to the rear.

The 361-lot, 93-acre subdivision is also a green, sustainable community, designed to protect the environment and to minimize disaster losses that are ultimately huge, wasteful burdens for the environment.

“We are a sixth-generation Galveston family,” Sullivan said. “We’ve been here a long time. My great-grandmother survived the 1900 hurricane in a tree with a possum and a rattlesnake. We know we live on an island. We choose to live here, we want to live here. We know we will be hit by a storm one day, and so we have to do what we can to protect our property.”

What helped the Evia neighborhood survive Hurricane Ike?

•**Location:** It’s in the island’s interior and behind Galveston’s protective seawall, which helped reduce the storm’s power and surge from the Gulf of Mexico.

•**Elevation:** The development was elevated to 11 feet above sea level, making it one of the highest spots on the barrier island. Developers dug out three lakes, mounded the fill on the land, and then carved in streets. The result is a gently rolling terrain. Builders then raised building pads higher, to at least 13 feet, as required by the city.

•**Land design:** The recessed roads, lakes, and a 5-acre man-made wetland served as a secondary water-detention system that helped ameliorate flooding. These design features provide an aesthetic benefit, too; viewed from front porches, streets seem to disappear, giving the neighborhood a pastoral charm.



Landscape mounds protect homes.

•**Building design:** Evia was the first Texas project to use the tie-down system from Florida’s Dade County, which calls for metal clips, cable tie-downs, and fortified wind construction.

•**Storm planning, preparation and recovery:** Residents removed anything that could become flying debris, such as lawn chairs, trash cans and flower pots. Cleanup began immediately before evacuated residents returned.

“We got a test in Rita,” Sullivan said. “Our first 10 townhouses were under construction.



Todd and Kelley Sullivan, Evia developers.

We had the roofs on, but all the walls were exposed. We had 80-mph winds in Rita, but we held up very well in that storm, too.”

What prompted their investments in hazard mitigation to avert or reduce losses in Hurricanes Ike, Rita, and future storms? Ultimately, their commitment is to embrace a graceful past while building for the long haul.

“We’ve been here a long time,” Sullivan said. “We are willing to confront whatever the circumstances may be so we can continue to live here. That is the reality we understand all too well, so we have to build for the long term. Our intent is for this community to be here for hundreds of years.”



Homeowners had little or no damages.

FEMA provides free wind, rain and flood construction fact sheets at www.FEMA.gov/library or call; 800-480-2520, ask for FEMA-499