



Storm Shutters Create Feeling of Security

Full Mitigation Best Practice Story

Harrison County, Mississippi

Biloxi, MS - Delores Sambuchino's 1,750 square-foot home, purchased in 1994, has several windows and doors. Although they let sunshine and fresh air into the home, they can also be hazardous during inclement weather.



"My first experience with hurricanes, in this home, was with Hurricane Georges [1998]. I was petrified," Ms. Sambuchino said. She wanted to feel safe and know that her home was secure during future storms. Before Hurricane Katrina made landfall on August 29, 2005, Ms. Sambuchino evacuated to Bay County, Florida. She left Biloxi feeling confident that her house would survive the hurricane because she had covered her windows and doors with storm shutters.

Storm shutters are not new to Ms. Sambuchino. The Erie, Pennsylvania, native lived and taught in Germany for eighteen years. "In Germany, they are called roladens. They are built into the houses. I had these on my windows all the time," she recalled. Her fear of a hurricane's destruction prompted Ms. Sambuchino to purchase shutters for her home in Biloxi. Her home is located less than a mile away from Biloxi Bay.

When Hurricane Katrina's 115 mile-per-hour winds pounded her home, the shutters did exactly what they were supposed to do – protect windows and doors from damage that could let water, wind, and debris into the house. "I truly believe they saved my house," she said. However, the windows on her sun porch were shattered. They were not protected by hurricane shutters, and broken glass was everywhere.

The force of the wind spread debris throughout her yard. "My yard was a disaster. It was horrible. A huge tree fell on part of my fence...at one point I had five chimneys in my yard [that blew in from neighboring houses]," Ms. Sambuchino added.

Today, roll-down shutters on her front windows and removable aluminum storm panels on other windows provide protection during severe weather events.

Ms. Sambuchino's roll-down shutter systems have a manual crank. Shutter systems are also available that have a fully-synchronized electric motor drive for ease of operation and maintenance. However, electric shutters should be manually operable in case of a power failure. Roll-down shutters are constructed of impact-resistant and durable aluminum. They add value to a home or business in hurricane-prone areas, and provide protection from extreme weather conditions and temperatures and noise.

The removable storm panels are also constructed of aluminum and provide cost-effective protection against hurricanes and tropical storms. The panels are designed to slip into an overhead track and fastened to a lower track with washers and wing nuts. The shutters are extremely durable and easy to set up. They can be easily removed and stored.

Ms. Sambuchino purchased her storm panels two weeks prior to Hurricane Katrina at a cost of approximately \$3,000. "The [shutters and panels] have paid for themselves," she asserted.

Activity/Project Location

Geographical Area: **Single County in a State**

FEMA Region: **Region IV**

State: **Mississippi**

County: **Harrison County**

City/Community: **Biloxi**

Key Activity/Project Information

Sector: **Private**

Hazard Type: **Hurricane/Tropical Storm**

Activity/Project Type: **Mitigation Planning/Disaster Resistant Universities**

Structure Type: **Masonry, Reinforced**

Activity/Project Start Date: **06/2005**

Activity/Project End Date: **08/2005**

Funding Source: **Property Owner, Residential**

Activity/Project Economic Analysis

Cost: **\$4,500.00 (Estimated)**

Activity/Project Disaster Information

Mitigation Resulted From Federal
Disaster? **Unknown**

Value Tested By Disaster? **Yes**

Tested By Federal Disaster #: **No Federal Disaster specified**

Year First Tested: **2005**

Repetitive Loss Property? **No**

Reference URLs

Reference URL 1: <http://www.msema.org>

Reference URL 2: <http://www.fema.gov/plan/prevent/>

Main Points

- Biloxi homeowner installed manual roll-down aluminum storm shutters and removable aluminum storm panels prior to Hurricane Katrina.
- The panels and shutters protected the windows and doors of her home from hurricane damage that could have let water, wind, and debris inside.
- The homeowner paid for these mitigation techniques herself and asserts that they have paid for themselves.



Roll down shutters on front of Ms. Sambuchino's Biloxi home.



Ms. Sambuchino installing hurricane panels on her Biloxi home.



Hurricane panels on patio doors of Ms. Sambuchino's Biloxi home.