

Hurricane Shutters Go Inland

By David Damon, Owner

JP Roberts and Company Inc.

It was a long list of hurricanes in the 2004 and 2005 hurricane season. Names like Ivan, Dennis, Katrina, Wilma and most recently, Dean. They strike a nerve. Whether a fear of a past event or of a looming disaster, we watch Jim Cantore on the Weather Channel as he broadcasts along a tranquil town on the Gulf Coast as residence struggle in vain to protect their homes. Within 48 hours the place where he is standing will experience total devastation. A 25-foot wall of water will reach inland for many miles and destroy everything in its path. One hundred and twenty-five mile an hour winds will blow windows out of homes and sky-rises, leaving curtains blowing in the breeze. Glued to the radar screens we watch the agonizingly slow progress and hang on to words like wobble and jog, our new hurricane lexicon. We all watch in shock and in disbelief, hoping that a hurricane like that will never hit our part of the coast. Over the course of days and weeks after a hurricane we see the complete and utter devastation that has completely changed the lives and futures for thousands of people.

We once thought this type of devastation was limited to coastal areas. Hurricanes Charley, Frances, Ivan and Jeanne have forced homeowners and experts in this field to reevaluate their thinking. Each of these hurricanes crisscrossed the state leaving paths of destruction well inland. No longer can we feel any sense of safety living inland. A billboard on Capital Circle South, sponsored by HaveaHurricanePlan.com perhaps says it best.

“Homestead: 18 miles from the coast.
Tallahassee: 18 miles from the coast.
Think it can’t happen here?”

In the eyes of many people, all of Florida should be considered coastal.

Occasionally, we look at our homes, and we wonder if we are as prepared as we should be. In most cases, the answer is “no.” We may brush off those thoughts. We rationalize that if the eye of a hurricane hits us, there is nothing that could help us. What we fail to recognize is that the eye itself, might be only 30 miles across. Whereas, the path of destruction, particularly on the right side of the hurricane, is much more far reaching, and is very survivable for a well protected home. We may take some small comfort in that stack of plywood that we plan to throw up at the last minute; after all it’s got to be better than the duct tape we used last year.

At a seminar in Orlando that was sponsored by the International Hurricane Protection Association, there was a great deal of discussion over which structures survived and which structures failed. FEMA officials were quoted as saying that they found virtually no structural damage to homes built to current codes with hurricane shutters installed. In older homes, the survival rate was much higher for those homes with shutters. Homes without shutters were much more likely to sustain serious water damage from windows and doors that were blown out, or otherwise compromised.



*Tallahassee home protected by
Hurricane Shutters*

We have all seen the long lines at the hardware stores as people loaded up on plywood in an effort to board up windows and doors. It was found that in most cases, the homeowners used an insufficient number of screws or lag bolts to secure a piece of plywood to the house. As the winds rose, and the hurricane approached, the sheets of plywood became deadly projectiles hurtling through the air at 60 mph or more, creating even more destruction.

As we install shutters on homes, we have removed plywood from doors and windows put there by the well-intentioned homeowner. This plywood, usually only one half inch, is often held in place with a few sheet rock screws in each corner. No one likes putting those screw holes in their siding and trim. To understand the reason why plywood, or similar solutions may not work well, we need to understand more about what goes on with the wind forces as a hurricane approaches and then passes by.

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Scientists and engineers are doing a great deal of research into the cause and effect of damages from hurricane winds. Winds, we now know, have a pulsating effect. That sheet of plywood from the hardware store is not being pressed against that window with a steady, consistent, 100 MPH wind. That wind may be 60 MPH one-second, then a burst of wind at 120 MPH will hit. As the storm passes, and the winds will constantly change direction, that sheet of plywood has little chance of staying screwed to the wall.

That change in direction, when the storm passes, is why insurance companies now require that all openings need to be covered in order to get a discount on insurance premiums. Positive and negative pressures are both working to dislodge that piece of plywood. An example: Let's say, that for an hour, hurricane force winds are hitting the South side of your house. The wind is pressing against those walls, creating a positive pressure. As we experience a positive pressure from the South, we will have a negative pressure on the North side of the house. This negative pressure, pulling away on the North side may simply snatch your plywood protection off of your openings. Whether positive or negative pressure, once this happens, you will likely lose a window or door. Now that the window or door is gone, you face serious water intrusion, or even total structural failure.

Total structural failure often begins with a loss of windows and / or doors. Once lost, pressure builds and ceiling sheetrock and insulation won't last very long. Next, the plywood roof decking is blown off from the inside of the house, along with roofing material. In some cases the wind simply blows off the entire roof, as a complete unit. Needless to say, at his point, water damage, along with the structural damage will result in total loss of the home. These are the images we see on the news in the aftermath of an Ivan, Katrina or Dean.

What don't often make the news are the less sensational photos showing damage from water intrusion. In New Orleans we saw the affects of mold on a scale, which has never been seen before. In a "typical" hurricane water enters the house either from the loss of windows or doors or wind pressure forcing water in through gaskets and seals. Water intrusion alone will often result in all or a portion of the house being stripped back to bare stud walls. In some cases mold and mildew can be so invasive that an otherwise sound structure may actually have to be torn down. Most experts agree that any water damage should be dealt with in two to three days to avoid mold problems. Without electricity, sometimes for weeks, it can be very difficult to use dehumidifiers and air conditioners to dry out an area that has had water damage. Oftentimes, under post hurricane conditions, a home is completely inaccessible for days or weeks as mold and mildew permeate the structure. The removal of mold from a house at this point should be done carefully by mold specialists to avoid spreading it further.

There are several types of hurricane shutters available that can prevent or minimize such damage. There are the Storm Panels, Accordion Shutters, Roll-Up Shutters, Bahamas, and Colonials. Generally rated for 140 MPH winds, any one, or a combination of these types can make a huge difference in a home's ability to withstand hurricane force winds. All shutters are designed for a specific opening. The type of window or door may dictate the type of hurricane shutter that can be used. In the last issue of *Tallahassee Local Builder*, Summer 2007 we discussed at length the different types of Hurricane Shutters that are available. Go to www.tallahassee-local-builder.com to read "Understanding Hurricane Shutters" in its entirety.

The coastal real estate market has been hit hard in the past few years between skyrocketing insurance premiums and rising property taxes. As the insurance industry continues to try and find ways to bring insurance premiums under control, there is little argument that installing hurricane shutters may be the number one solution. As the risk to the insurance industry is reduced with hurricane shutters, that reduced risk will lead to greater premium discounts for homeowners with hurricane shutters. This should in turn get insurance rates under control, at least for those with hurricane shutters.

Many of us remember riding in our parent's cars as kids when there were no seatbelts. Things have changed; today we buckle up every time we get in our cars. Just as with seatbelts, we hope we will never need our hurricane shutters. Whether it's due to climate change, global warming or a twenty-year cycle, hurricane shutters have found a new importance in our lives.

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*Home being demolished due to mold
from water intrusion*