

# HURRICANES: STRUCTURAL LESSONS LEARNED

*By: Paul H. Racette, PE*



**After performing dozens of structural investigations related to hurricane damage claims, the following observations may be useful in helping our readers as they make future home renovation and/or landscape decisions.**

**Two major sources of damage dominated the claims investigated. While these sources seemed painfully obvious after the fact, what we learn from them could help us prevent considerable future heartache and cost. The culprits in almost every claim investigated were water intrusion and tree damage. Weather experts hint that we may be on the cusp of a twenty year cycle of considerably higher tropical storm activity, thus planning ahead seems prudent.**

**Newer homes resisted damage in a very respectable manner. Water intrusion due to loss of shingles was mainly confined to homes with considerably older shingles. For roofs that are 15+ years old, it may be wise to consider having the roof inspected by a professional for storm resistance capability. However, installing a new roof before the next hurricane season should be planned with careful consideration. Newer homes which sustained considerable shingle damage, and thus water intrusion, had shingles which had been installed in the few months immediately preceding the hurricanes. Shingles have tabs of tar which, over a few months of exposure to the sun, melt and bind the shingles to each other, greatly decreasing the probability that the shingles will lift in the wind and be torn from the roof. The lesson to learn here is that, now that the hurricane season has come to a close, the time to install a new roof is now, within the next few months, which will provide ample time for the shingles to bind.**

**The second prime cause of major storm damage was the result of trees falling onto houses. While we prize our oaks, pines and others for their shade, beauty and potential energy savings, it may be wise to think twice about either building among large trees or planting trees close to a structure, as most trees have the potential to grow to a size which could cause considerable damage if it falls onto a building. If large trees are already near a building, keeping them trimmed and**



**free of any dead/damaged limbs is important, and it may be worth considering having them removed.**

**As for windows, it appears that most standard windows withstood the force of the hurricane winds. Damage and water intrusion through window openings was mainly the result of trees or limbs first breaking the window, not from being “blown out”.**

**In summary, homes/buildings built to code during the past 10 to 15 years performed rather well in the storms. Timely roof replacement and smart landscaping could be the two most important areas addressed to protect one’s property.**

***Paul Racette is a Department Head/Senior Project Engineer for Chastain-Skillman’s Structural Department in Lakeland. Paul received a Bachelor of Civil Engineering degree from the University of South Florida in 1977. He can be reached at (863) 646-1402 or***

***pracette@chastainskillman.com.***