3.0
Collecting Information from the Building Department

To plan the gable end retrofit, you will need three essential pieces of information:

1. Whether a building permit is required,
2. The **exposure category** for your house, and
3. The **basic design wind speed** for your house's location.

This information was used by engineers to determine the strength of the various retrofit components and is required to extract the correct information from **Tables 10.1 and 11.1**. You will need to learn about and determine the exposure category and the basic design wind speed for your house in order to use these tables.

The exposure category explains the level of exposure your house has to winds. For example, a building surrounded by trees and/or other houses would be exposed to wind that has been somewhat "broken up" and slowed down by these surroundings. Conversely, a building that faces a large body of water, a wide golf fairway or sits atop a prominence will face the full force of the wind. Because the difference in exposure can have a rather dramatic effect on the expected wind forces on your home, the exposure category is an important factor in determining risk and in designing retrofit measures that can be taken. Look at the area surrounding your house. If you live in the middle of a subdivision, are surrounded by trees for a quarter mile or so or live in a wooded area you can probably safely assume exposure B category, the lower risk category compared to category C retrofit information. However, if a 600' wide lake, large open field or golf fairway starts within about 300' or less of your house, it would be prudent to assume exposure C category, the higher risk category.

The other vital information is the basic design wind speed that reflects the likelihood that hurricane winds of some particular wind speed will hit your house. By studying the paths, sizes and intensities of hurricanes going back to 1850, engineers have determined the likelihood of hurricanes of various intensities occurring at any particular area of the hurricane prone coastline of the United States. According to the wind risk maps for hurricane prone areas, there is roughly a 40 percent chance that a hurricane will impact your house with wind speeds equal to or greater than the basic design wind speed during a 50 year period. This map can be found in chapter 3 of the *Florida Building Code - Residential* or a similar map can be found in the *International Residential Code* and in the *International Building Code.* Because these maps can be hard to read and because your building department may have legally defined the exact location of the lines of the map, you will be best served by calling your local building department to learn the design wind speed for your area. While you are doing that you could ask about the wind exposure. However, your local building department may be reluctant to tell you the exposure category because it may think that determination should be made by an engineer.

Do I need a Building permit? It depends on the building department. Once you have determined the need and the possibility of retrofitting you will need to determine if a building permit is necessary. Some building departments require a permit for this work because it is of a structural nature and they want to ensure it is done correctly. Making sure the retrofit is done correctly is for your protection. The Florida building code has a prescriptive method for retrofitting gable ends that if followed is deemed to comply with the building code. That is if the retrofit is done in accordance with the code, the services of an engineer are not needed. The 2012 International Existing Building Code has a similar provision.