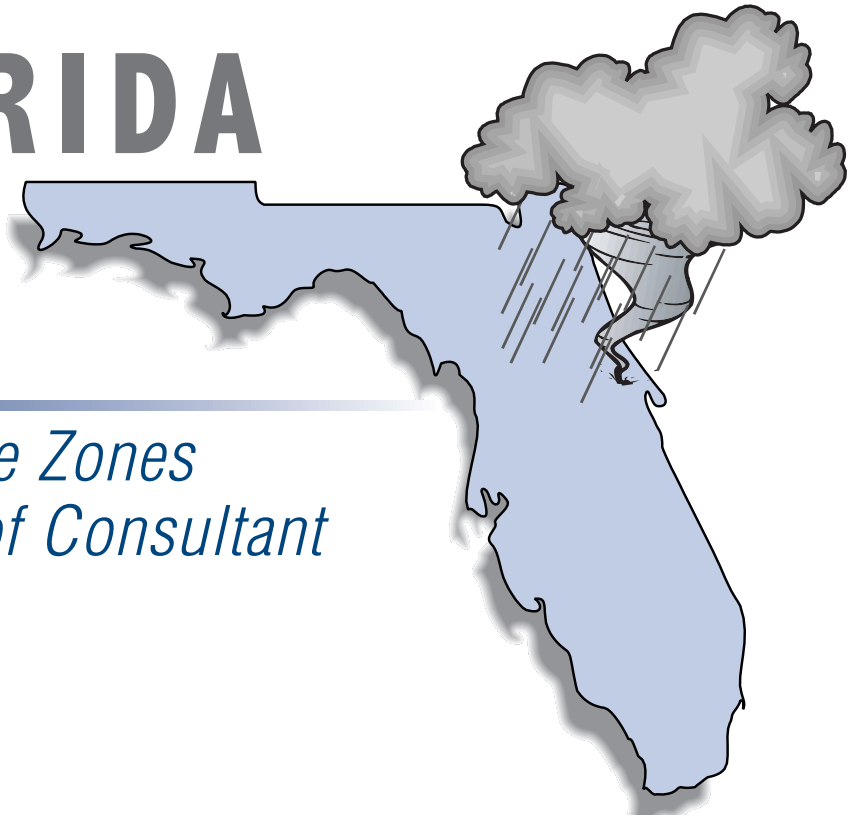
THE FLORIDA BUILDING CODE



High Velocity Hurricane Zones and the Registered Roof Consultant

By Michael L. Goolsby, RRC

The Florida Building Code

To eliminate the confusion that existed in the construction industry in regard to the numerous building codes that were in use within the state, a unified statewide code was created. In order to form this code, the Florida Building Commission was established. Its task was to designate a model upon which to base the Florida Building Code as well as develop this new code. Several model codes were examined with the Standard Building Code (SBCCI) ultimately being chosen as the foundation for the Florida Building Code. The purpose of the statewide code was to provide a single code that would take the place of the patchwork of local codes that was in existence, while leaving the administration and enforcement of the new unified code with the individual jurisdictions within the state.

The Florida Legislature adopted this Florida Building Code in the 2000 legislative session; however, the Florida Building Commission was directed to effect some necessary changes. The implementation of the Florida Building Code was set by the Legislature for January 1, 2001. Making the changes and getting the code up and running by this date proved to be too difficult a task; consequently, the implementation date was pushed back to July 1, 2001. Further delays were encountered, and as a result, the 2001 session of the Florida Legislature revised the implementation date of the code again and set a new and final start-up date of January 1, 2002. The Florida Building Code is now printed and available for purchase, with the State of Florida holding the copyright. The Florida Building Code is provided in five volumes, consisting of:

- Building.
- Mechanical.
- Plumbing.
- Fuel Gas.
- Test Protocols for High Velocity Hurricane Zones.

High Velocity Hurricane Zones

There are chapters within the Florida Building Code that deal with structural and roofing issues. Each of these chapters includes a section identified as the "High Velocity Hurricane Zones." The term "High Velocity Hurricane Zones" is used to denote the specific code requirements applicable only to Miami-Dade and Broward counties. The term "High Velocity Hurricane Zones" should not be misunderstood as being used to identify a specific geographic area of Florida. Rather, it is merely a title that was chosen for those sections of chapters that contain specific and more stringent requirements in regard to structural and roofing issues. These sections of the code, with the more strict provisions, do not apply to all jurisdictions within Florida. By definition, the "High Velocity Hurricane Zones" refers only to Miami-Dade County and Broward County. These counties, situated along the densely populated Southeast coast of Florida, have seen first hand the devastation that a powerful hurricane can deliver. Any relaxation of building code requirements in this area was understandably resisted. Inclusion of the "High Velocity Hurricane Zones" provisions into the Florida Building Code allowed Miami-Dade and Broward counties to keep their more strict building code requirements. Many of these requirements were initially developed and instituted following Hurricane Andrew. Those chapters of the code that do not have sections identified as the "High Velocity Hurricane Zones" are applicable to all jurisdictions within Florida, including Miami-Dade and Broward counties.

Roofing Application Standards

The roofing provisions of the Florida Building Code are contained in Chapter 15, "Roof Assemblies and Rooftop Structures." The "High Velocity Hurricane Zones" sections of this chapter

make reference to the Roofing Application Standards (RAS) and the Testing Application Standards (TAS). These standards were first developed for the Miami-Dade County edition of the South Florida Building Code (SFBC) and are sometimes referred to as "Protocols." These same standards have now been incorporated into the Florida Building Code as a volume entitled "Test Protocols for High Velocity Hurricane Zones." Roofing Application Standards are documents that provide in-depth requirements for the installation of a particular roofing system or roofing component. For example, there are specific Roofing Application Standards that apply to:

- **RAS 109:** Spray-Applied Polyurethane Foam Systems
- **RAS 111:** Perimeter Woodblocking and Metal Flashing
- **RAS 115:** Asphalt Shingle Roof Systems
- **RAS 117:** Insulation and Anchor/Base Sheet Attachment
- **RAS 118, 119 and 120:** Concrete and Clay Tile Roof Systems
- **RAS 127:** Calculations for Roof Tile Attachment
- **RAS 128:** Simplified Wind Design Pressures for Low-Sloped Roof Systems
- **RAS 130:** Wood Shakes and Wood Shingle Systems
- **RAS 133:** Metal Roof Systems
- **RAS 137:** Mechanically-Attached, Single-Ply Roof Systems

Many of the Roofing Application Standards contain instructions for calculating the attachment of various roofing components. Of the Roofing Application Standards, only RAS 137 currently mentions Registered Roof Consultants. RAS 137 contains instructions on the correct installation of mechanically-attached, single-ply roof covers. Additionally, information regarding enhanced fastening at elevated pressure zones and methods for calculating fastener density are also outlined. The Florida Building Code currently allows Registered Roof Consultants to perform the fastener density calculations of RAS 137; however, efforts have been initiated to question and possibly eliminate the role of the RRC from any Protocol that is anything but testing oriented.

Testing Application Standards

Testing Application Standards are documents that specify how various tests of roof systems and roof components are to be carried out. Some of these Testing Application Standard procedures are carried out in the field and some are conducted in the laboratory. For example, some of the Testing Application Standards that are performed in the field are:

- **TAS 105:** Field Fastener Withdrawal Testing
- **TAS 106:** Verification of Concrete and Clay Roof Tile Attachment
- **TAS 124:** Uplift Testing of Roof Systems
- **TAS 126:** Moisture Surveys

There are 39 separate Testing Application Standards. The code requires that all of these Testing Application Standard reports be signed and sealed by either a Professional Engineer or a Registered Architect. It is important to note that, in addition to the Professional Engineer and the Registered Architect, the Registered Roof Consultant is also specifically identified as being equally qualified to sign and seal many of these Testing Application Standard reports.

RRC in the Florida Building Code

The role of the Registered Roof Consultant (RRC) was diminished with the implementation of the new roofing chapter of the South Florida Building Code 1999 edition. This 1999 adaptation of the roofing code replaced the roofing requirements as contained in the 1994 Miami-Dade County edition of the South Florida Building Code. Many of the code mandated functions that once could be performed by Registered Roof Consultants were rewritten, eliminating references to Registered Roof Consultants while preserving the role of the Professional Engineer and Registered Architect exclusively.

The revision of the 1994 roofing code was brought about by legal action initiated by the roofing industry. In order to facilitate the revision, a committee was formed to make decisions on content and establish a new roofing code. The committee included substantial representation from the roofing industry that wished to see a reduction in the role of the RRC. The revised 1999 version of the South Florida Building Code roofing chapter, along with the Roofing Application Standards and the Testing Application Standards, are, almost in their entirety, what was incorporated into the Florida Building Code. The revised roofing chapter, as well as other already existing sections of the South Florida Building Code containing structural requirements, became the "High Velocity Hurricane Zones" sections of various chapters within the Florida Building Code.

The fact that references to Registered Roof Consultants exist in the Florida Building Code in any capacity is a direct result of the efforts made by a very few individuals throughout the committee process and beyond. In the face of industry opposition, these individuals made every attempt to preserve the standing of the Registered Roof Consultant and prevent a complete elimination of their function during the rewriting of the South Florida Building Code. Some success was realized, and the important role of the Registered Roof Consultant was to a certain extent maintained. With the incorporation of the South Florida Building Code roofing sections into the Florida Building Code, Registered Roof Consultants are, as a consequence, a presence in the new state code. ■

About the Author

Michael L. Goolsby is the Roofing Specialist with the Miami Dade County Building Code Compliance Office. In this capacity he is involved in all code related roofing issues, which include providing continuing education seminars for both industry and building code enforcement professionals. His duties also encompass providing technical assistance to respective building departments as well as to industry profes sionals and the general public. Michael is a Registered Roof Consultant, Registered Roof Observer, a Construction Documents Technologist, and a State of Florida Licensed Roofing Contractor.