



Windows and Windborne Debris Protection

A permitting guide for replacing windows in a residential dwelling.

The IRC, IBC, and ASCE-7-05 all define Windborne Debris Region in the same way

CHAPTER 2 of the IRC

Windborne Debris Region:

1. Portions of hurricane-prone regions that are within 1 mile of the coastal mean high-water line where the basic wind speed is 130 mph (49 m/s) or greater; or
2. Portions of the hurricane-prone region where the ultimate wind speed is equal to or greater than 140 mph (54 m/s); or Hawaii.”

Hurricane-prone Regions: Areas vulnerable to hurricanes, defined as:

1. The U.S. Atlantic Ocean and Gulf of Mexico coasts where the basic wind speed is 90 mph (40 m/s), and 2. Hawaii, Puerto Rico, Guam, Virgin Islands, and American Samoa.

The adopted wind maps of the SC Building Codes Council have the City of Goose Creek listed in a zone with ultimate wind speeds from 140-145mph, thereby requiring protection.

To comply with the Code, there are several options.

- An architect or engineer, certified in the State of South Carolina, can design and draw installation guidelines that are code compliant.
- There are several companies that offer “approved” panel and shutter designs that meet code requirements.
- Impact resistant glazing that meets ASTM E 1886 and 1996 is compliant and offers continuous protection without having to install panels or shutters.
- There are off-the-shelf hardware products available from local building supply and hardware stores that are code compliant, if installed correctly. The code offers prescriptive methods of compliance on how to make the panels and what size/spacing of hardware to meet code minimums. The applicable sections are **R301.2.1.2** and Table **R301.2.1.2** in the residential building code.

Regardless of the method chosen, information on proposed compliance must be submitted for review at the time of application and approved by the Building Official prior to installation. This includes any manufacturer’s or design professional’s instructions and guidelines.

For any additional information contact the Building Inspection Bureau at 843.553.8350 ex1407.

