

R4410.3.7 Expansion joints. Glass veneer units shall be separated from each other and from adjoining materials by an expansion joint at least $1/16$ inch (1.6 mm) in thickness. There shall be at least $1/64$ inch (0.4 mm) clearance between bolts and the adjacent glass.

SECTION R4410.4 HIGH-VELOCITY HURRICANE ZONES—STORM SHUTTERS/EXTERNAL PROTECTIVE DEVICES

R4410.4.1 General. Unless exterior wall components including but not limited to structural glazing, doors and windows of enclosed buildings have specific Product Approval to preserve the enclosed building envelope against impact loads as set forth in Section R4403, all such components shall be protected by product approved storm shutters.

R4410.4.2 The storm shutters shall be designed and constructed to insure a minimum of 1 inch (25 mm) separation at maximum deflection with components and frames of components they are to protect unless the components and frame are specifically designed to receive the load of storm shutters, and shall be designed to resist the wind pressures as set forth in Section R4403 by methods admitting of rational analysis based on established principles of design. Storm shutter shall also be designed to comply with the impact load requirements included within Section R4403.

R4410.4.3 The storm shutter design calculations and detailed drawings, including attachment to the main structure, shall be prepared by and bear the seal of a qualified Florida-registered delegated engineer, or if qualified to prepare such design, by the engineer or architect of record, which architect or engineer shall be proficient in structural design. The architect or engineer of record shall, in all instances, review and approve documents prepared by the delegated engineer.

R4410.4.4 Storm shutters shall be approved by the product control section and shall bear the name of the company engraved in every section of the system.

R4410.4.5 Deflection shall not exceed the limits set forth in Section R4403.

R4410.4.6 Unless storm shutters are permanently attached to the main structure, all such storm shutters shall, where practicable, be neatly stored at all times in a designated and accessible area within the building.

R4410.4.6.1 Shutters used to protect openings above the first story of any building or structure must be permanently installed and closable from the inside of the building or structure unless such openings are accessible without the use of a ladder or lift, or shutters can be installed from the interior of the building or structure.

Exception: Group R3 detached single-family residences not exceeding two stories.

R4410.4.7 Storm shutters must completely cover an opening in all directions.

R4410.4.7.1 On any side of an opening, the maximum side clearance between the shutter and a wall or inset surface shall be $1/4$ inch (6.4 mm). Any distance in excess of $1/4$ inch (6.4

mm) shall require end closure or shutter overlap, where applicable.

R4410.4.7.2 Shutter overlap shall be a minimum of one and one-half times the side clearance between the shutter and wall.

R4410.4.7.3 End closures shall be designed to resist wind loads specified in Section R4403, based on rational analysis.

SECTION R4410.5 HIGH-VELOCITY HURRICANE ZONES — CURTAIN WALLS

R4410.5.1 Scope. This section prescribes requirements for curtain walls of buildings or structures regulated by this code.

R4410.5.2 Definition. A curtain wall is any prefabricated assembly of various components to enclose a building usually attached to and/or supported by the building frame other than a single door, or window, masonry units, poured in place concrete and siding of single membrane metal, wood or plastic.

R4410.5.3 Curtain walls, as defined in Section R4410.5.2, shall be designed and constructed in accordance with the requirements of this section.

R4410.5.4 Structural glazing in curtain walls shall also comply with the requirements of Section R4410.6.

R4410.5.5 General.

R4410.5.5.1 All structural elements of curtain wall systems and their attachments (including embedments) to the main structural frame shall be designed by and bear the seal of a qualified Florida-registered delegated engineer, or if qualified to prepare such design, by the engineer or architect of record, which architect or engineer shall be proficient in structural design. The engineer of record shall, in all instances, review and approve documents prepared by the delegated engineer.

R4410.5.5.2 Curtain wall systems supported from more than two adjacent floors shall be designed to withstand all imposed loads without exceeding allowable stresses in the event of destruction or failure of any single span within the system. Documents for the main building permit shall include sufficient details describing the curtain wall system attachment to the main structure. This portion of the contract documents, if not prepared by the qualified engineer or architect of record, shall bear the signature and seal of the qualified Florida-registered delegated engineer charged with the responsibility for the design of the curtain wall system.

R4410.5.5.3 Individual mullions acting as a continuous member shall transfer loads through supports from no more than three adjacent floors.

R4410.5.5.4 Materials. The materials used in any curtain wall shall comply with the applicable provisions of this code.

R4410.5.6 Fire protection.

R4410.5.6.1 Curtain wall supports, spandrel panels, anchors and the connections at the intersection of the floor and wall shall be fire protected based on building distance separation as required in this code.