

## Magbee Contractors Supply 2007 Code Update seminar Questions

**1 Q . What is a bedroom/sleeping room?**

**A. The IRC does not define a bedroom or sleeping room, therefore one has to look at what the IRC says about rooms and the dictionary definition of a bedroom.**

**The dictionary defines a bedroom as a room containing a bed and used especially for sleeping. Section R304 & 305 says a habitable room shall be not less than 70 sf, except kitchens, at least 7 feet long and 7 feet wide with a ceiling height 7 feet (Basement 6' 8"). In the past, most Code Enforcement Officers say if a room has a cloths closet it can be considered a bedroom and had shall have an egress exit. If the plans say bedroom, then it is considered a bedroom and shall have an egress exit and a smoke alarm.**

**2 Q. In an unfinished basement, what are the egress/smoke alarm requirements and what if the plans say future bedroom?**

**A. The basement shall have at least one egress and if a "bedroom" an egress exit with a sill height not more than 44 inches from the floor. There has to be at least one smoke alarm in the basement and if there is a possibility of a future bedroom, that bedroom area should be at least wired to meet the smoke alarm requirements. All smoke alarms are interconnected and if one goes off, all go off. In some jurisdictions, the local Code Official has permitted a possible basement sleeping area to be sprinkled when the walls are masonry and so far below grade that it would take a window well to meet the egress requirements. When this has been permitted, it has been pointed out that the room can not be counted as a bedroom (do not say bedroom on the plans or real estate listing) the room should only be considered as habitable space. This is something that has to be discussed with the Building Official and possibly the Fire Marshal.**

### **SECTION R304**

#### **MINIMUM ROOM AREAS**

**R304.1 Minimum area. Every dwelling unit shall have at least one habitable room that shall have not less than 120 square feet (11 m<sup>2</sup>) of gross floor area.**

**R304.2 Other rooms. Other habitable rooms shall have a floor area of not less than 70 square feet (6.5 m<sup>2</sup>).**

**Exception: Kitchens.**

**R304.3 Minimum dimensions. Habitable rooms shall not be less than 7 feet (2134 mm) in any horizontal dimension.**

**Exception: Kitchens.**

**R304.4 Height effect on room area. Portions of a room with a sloping ceiling measuring less than 5 feet (1524 mm) or a furred ceiling measuring less than 7 feet (2134 mm) from the finished floor to the finished ceiling shall not be considered as contributing to the minimum required habitable area for that room.**

### **SECTION R305**

#### **CEILING HEIGHT**

**R305.1 Minimum height. Habitable rooms, hallways, corridors, bathrooms, toilet rooms, laundry rooms and basements shall have a ceiling height of not less than 7 feet (2134 mm).**

**The required height shall be measured from the finish floor to the lowest projection from the ceiling.**

**Exceptions:**

- 1. Beams and girders spaced not less than 4 feet (1219 mm) on center may project not more than 6 inches (152 mm) below the required ceiling height.**
- 2. Ceilings in basements without habitable spaces may project to within 6 feet, 8 inches (2032 mm) of the finished floor; and beams, girders, ducts or other obstructions may project to within 6 feet 4 inches (1931 mm) of the finished floor.**
- 3. For rooms with sloped ceilings, at least 50 percent of the required floor area of the room must have a ceiling**

**EMERGENCY ESCAPE AND RESCUE OPENINGS**

**R310.1 Emergency escape and rescue required. Basements and every sleeping room shall have at least one operable emergency and rescue opening. Such opening shall open directly into a public street, public alley, yard or court. Where basements contain one or more sleeping rooms, emergency egress and rescue openings shall be required in each sleeping room, but shall not be required in adjoining areas of the basement. Where emergency escape and rescue openings are provided they shall have a sill height of not more than 44 inches**

**R310.1 Emergency escape and rescue required. Basements and every sleeping room shall have at least one operable emergency and rescue opening. Such opening shall open directly into a public street, public alley, yard or court. Where basements contain one or more sleeping rooms, emergency egress and rescue openings shall be required in each sleeping room, but shall not be required in adjoining areas of the basement. Where emergency escape and rescue openings are provided they shall have a sill height of not more than 44 inches (1118 mm) above the floor. Where a door opening having a threshold below the adjacent ground elevation serves as an emergency escape and rescue opening and is provided with a bulkhead enclosure, the bulkhead enclosure shall comply with Section R310.3. The net clear opening dimensions required by this section shall be obtained by the normal operation of the emergency escape and rescue opening from the inside. Emergency escape and rescue openings with a finished sill height below the adjacent ground elevation shall be provided with a window well in accordance with Section R310.2.**

**bedroom** *n*: a room containing a bed and used esp. for sleeping

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**3 Q. R311.4.3 has been interpreted by one jurisdiction that a basement threshold shall not be higher than 1 ½" above grade/landing.**

**A. It is RA Edwards's opinion and the opinion of the Code Enforcement Officers at the seminar that the exceptions make it clear that the height can be up to 7 ¾". In fact, to prevent water from entering the basement the floor should be a minimum of 3"- 4" above the landing, thus putting the height of the threshold 6" – 7" above the landing/grade.**

**4 Q. R313.2 Smoke alarm placement. How far from the bedroom can the smoke alarms be located?**

**A. Smoke alarms are by Georgia protocol/law under control of the Fire Marshal's Office and they have not yet adopted the requirement for a smoke alarm in each bedroom and in the immediate vicinity of each bedroom. While waiting on that ruling from the Fire Marshal's office, it is suggested that the old DCA opinion of no more than 10' from a bedroom or the manufacturer's recommendations that can be from 3' – 10' be followed. Check with the electrical contractor to see what is the manufacture's recommendations on the smoke alarms being installed.**

**5 Q. 502.2.2.1 Spacing of bolts on deck attachment.**

**A. Spacing and diagram is in the GA Amendments Table 502.2.2.1 and Figure 502.2.2.1**

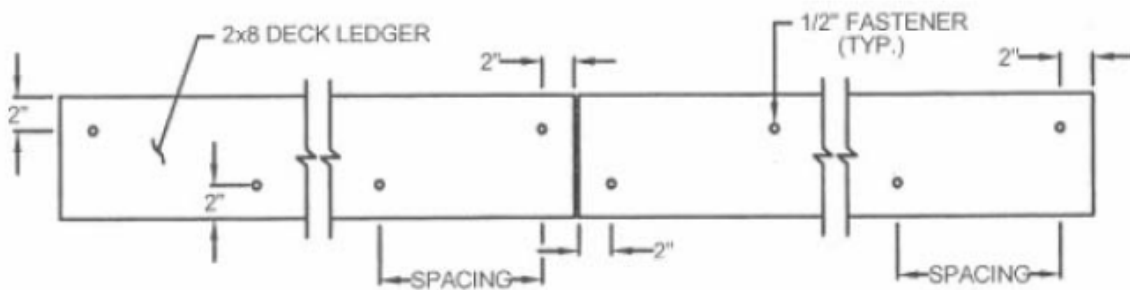
**TABLE R502.2.2.1**  
**FASTENER SPACING FOR A RESIDENTIAL SOUTHERN PINE DECK LEDGER AND A 2-INCH**  
**(51 mm) NOMINAL SOLID-SAWN BAND JOIST (50 psf (2.39 kPa) TOTAL LOAD)<sup>1,2</sup>**

JOIST SPAN (feet)	6' and Less	6'-1" to 8'	8'-1" to 10'	10'-1" to 12'	12'-1" to 14'	14'-1" to 16'	16'-1" to 18'
	ON-CENTER SPACING OF FASTENERS <sup>3,4</sup>						
½" BOLT WITH WASHERS	36"	36"	34"	29"	24"	21"	19"

Notes:

1. The maximum gap between the face of the ledger board and face of the house band joist shall be ½-inch (13 mm).
2. Ledgers shall be flashed to prevent water from contacting the house band joist.
3. Bolts shall be staggered as depicted in Figure R502.2.2.1.
4. Deck ledger shall be 2x8 PPT No. 2 Southern Pine (minimum) or other approved method and material as established by standard engineering practice.

**FIGURE R502.2.2.1**  
**PLACEMENT OF BOLTS IN DECK LEDGERS (BANDS)**



6 Q. Headers over a garage door, do they have to extend all the way to the exterior wall/corner.

A. A complex issues, that has to consider the stories above the garage, if the space above the garage can be habitable, the live load and dead load and the width of the garage door. The maximum height from the ground is 10 feet. The header has to be a minimum of 3" x 11.25". If the garage is on a corner of the house, then the header has to extend to the outside wall or be connected to the wall in an approved manner. The garage door wall normally will be sheathed with a structural panel (plywood/OSB) 16" – 24" past the door and above the door. If there is one or more stories above the garage the 24" space should have studs 12" OC and may have to be blocked horizontally every 24". If the garage doors are 10' or less in width, it is possible to engineer separate headers for each door as long as the headers extend 6" past the door opening and there is 2 or 3 studs (probably 2x6's). This is a Code interpretation issue and one to be discussed prior to doing any framing.

Note: the old 2000 IRC bracing requirements are in effect until the National IRC task force completes a study on the 2006 IRC bracing requirements and then it is reviewed by SCAC. GA R602.10.5 Continuous structural panel sheathing. When continuous wood structural panel sheathing is provided in accordance with Method 3 of Section R602.10.3, including areas above and below openings, braced wall panel lengths shall be in accordance with Table R602.10.5. Wood structural panel sheathing at corners shall be installed in accordance with Figure R602.10.5. The bracing amounts in Table R602.10.1 for Method 3 shall be permitted to be multiplied by a factor of 0.9 for walls with a maximum opening

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height that does not exceed 85 percent of the wall height or a factor of 0.8 for walls with a maximum opening height that does not exceed 67 percent of the wall height.

**Exception:** Vertical wall segments, in the first story of one- or two-story buildings, next to garage openings shall be permitted to have a 6:1 height-to-width ratio (with height being measured from top of header to sill plate) when constructed in accordance with the following provisions. Each panel shall have a length of not less than 16 inches (406 mm) and a height of not more than 10 feet (3048 mm). Each panel shall be sheathed on one face with a single layer of  $\frac{3}{8}$ -inch (9.53 mm) minimum thickness wood structural panel sheathing nailed with 8d common or galvanized box nails in accordance with Figure R602.10.6.2. The wood structural panel sheathing shall extend up over the solid sawn or glued laminated header and shall be nailed in accordance with Figure R602.10.6.2. The header shall extend between the inside faces of the first full-length outer studs of each panel. The clear span of the header between the inner studs of each panel shall be not less than six feet (1829 mm) and not more than 18 feet (5486 mm) in length. A strap with an uplift capacity of not less than 1000 pounds (454 kg) shall fasten the header to the side of the inner studs opposite the sheathing. Two anchor bolts shall be installed in accordance with Section R403.1.6, and plate washers shall be a minimum of 2 inches by 2 inches by  $\frac{3}{16}$  inches (51 mm by 51 mm by 4.76 mm) thick and shall be used on each bolt. This exception is only permitted in Seismic Design Categories A-C. (Effective January 1, 2007)

TABLE R602.10.5  
LENGTH REQUIREMENTS FOR BRACED WALL PANELS IN A CONTINUOUSLY SHEATHED WALL<sup>a, b, c</sup>

MINIMUM LENGTH OF BRACED WALL PANEL (inches)			MAXIMUM OPENING HEIGHT NEXT TO THE BRACED WALL PANEL (% of wall height)
8-foot wall	9-foot wall	10-foot wall	
48	54	60	100
32	36	40	85
24	27	30	65

For SI: 1 inch = 25.4 mm, 1 foot = 305 mm, 1 pound per square foot = 0.0479 kPa.

a. Linear interpolation shall be permitted.

b. Full-height sheathed wall segments to either side of garage openings that support light frame roofs only, with roof covering dead loads of 3 psf or less shall be permitted to have a 4:1 aspect ratio.

c. Walls on either or both sides of openings in garages attached to fully sheathed dwellings shall be permitted to be built in accordance with Section R602.10.6.2 and Figure R602.10.6.2 except that a single bottom plate shall be permitted and two anchor bolts shall be placed at 1/3 points. In addition, tie-down devices shall not be required and the vertical wall segment shall have a maximum 6:1 height-to-width ratio (with height being measured from top of header to the bottom of the sill plate). This option shall be permitted for the first story of two-story applications in Seismic Design Categories A through C.

TABLE R602.10.6  
MINIMUM WIDTHS AND TIE-DOWN FORCES OF ALTERNATE BRACED WALL PANELS

SEISMIC DESIGN CATEGORY AND WINDSPEED	TIE-DOWN FORCE (lb)	HEIGHT OF BRACED WALL PANEL				
		Sheathed Width				
		8 ft. 2' - 4"	9 ft. 2' - 8"	10 ft. 2' - 8"	11 ft. 3' - 2"	12 ft. 3' - 6"
SDC A, B, and C Windspeed < 110 mph	R602.10.6.1, Item 1	1800	1800	1800	2000	2200
	R602.10.6.1, Item 2	3000	3000	3000	3300	3600
SDC D <sub>0</sub> , D <sub>1</sub> and D <sub>2</sub> Windspeed < 110 mph		Sheathed Width				
		2' - 8"	2' - 8"	2' - 8"	Note a	Note a
	R602.10.6.1, Item 1	1800	1800	1800	—	—
	R602.10.6.1, Item 2	3000	3000	3000	—	—

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm.  
a. Not permitted because maximum height is 10 feet.

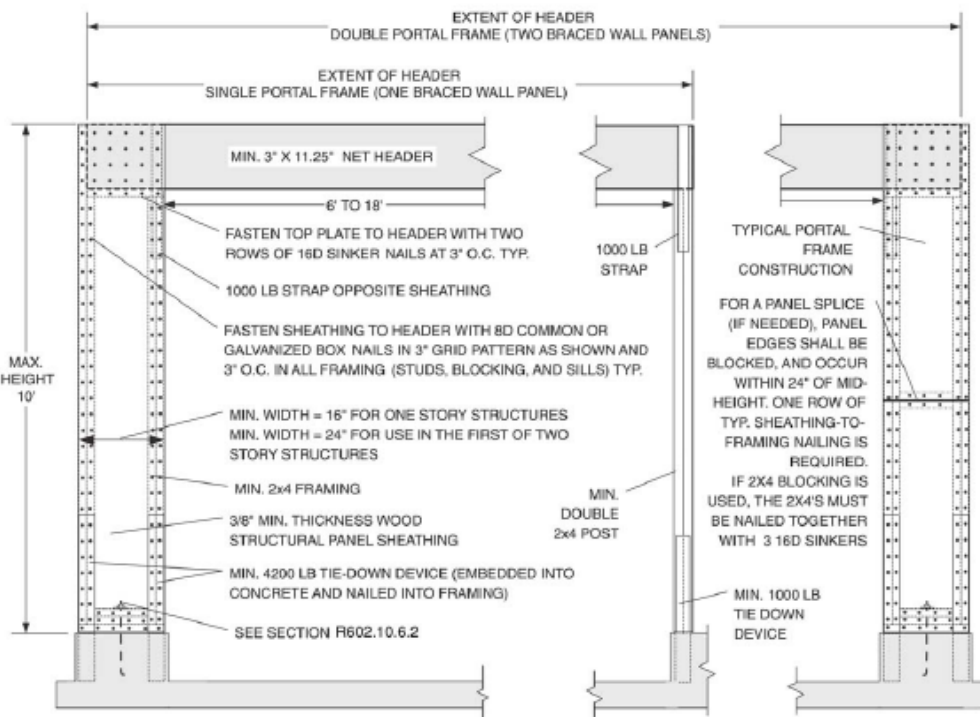


FIGURE R602.10.6.2  
ALTERNATE BRACED WALL PANEL ADJACENT TO A DOOR OR WINDOW OPENING

7 Q. If the foam sheathing with taped seams qualifies as a water resistant barrier, how is the Plywood/OSB protected?

A. If the foam sheathing with taped seams qualifies as a water resistant barrier; then the felt or approved water resistant barrier house wrap would lap over the foam a minimum of 6" vertical. It could be taped to the foam sheathing or nailed/fastened to a vertical framing member that is minimum 6" from the OSB/Plywood. If nailed it is a corrosive resistant nail/fastener - that could roofing nails, roofing caps or staples.

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8 Q. R703.8 Window flashing on wood windows, what is an approved flashing method?

A. Drip caps and flashing under the window is required to extend from water resistant barrier to the outside. Window side flashing is per window manufacturer's application instructions or extends from the water resistant barrier to the outside. In the case of siding, may have to be shingle fashion (step flashed).

R703.8 Flashing. Approved corrosion-resistant flashing shall be applied shingle-fashion in such a manner to prevent entry of water into the wall cavity or penetration of water to the building structural framing components. The flashing shall extend to the surface of the exterior wall finish. Approved corrosion-resistant flashings shall be installed at all of the following locations:

1. Exterior window and door openings. Flashing at exterior window and door openings shall extend to the surface of the exterior wall finish or to the water-resistive barrier for subsequent drainage.

R703.2 Water-resistive barrier. One layer of No. 15 asphalt felt, free from holes and breaks, complying with ASTM D 226 for Type 1 felt or other approved-resistive barrier shall be applied over studs or sheathing of all exterior walls. Such felt or material shall be applied horizontally, with the upper layer lapped over the lower layer not less than 2 inches (51 mm). Where joints occur, felt shall be lapped not less than 6 inches (152 mm). The felt or other approved material shall be continuous to the top of walls and terminated at penetrations and building appendages in a manner to meet the requirements of the exterior wall envelope as described in Section R703.1. *NOTE: APA rescinded their bulletin that said Plywood/OSB was a weather resistant. Structural panels (Plywood/OSB) shall have water resistant barriers.*

9 Q. Is there new 2007 silt fence and erosion control requirements?

A. Yes, New requirements were effective Jan 1, 2007. Now require someone that has taken and passed the tests for erosion control and has a Blue Card. Some jurisdictions have postponed the requirement 90 days because of the long time it is taking to get a Blue Card after taking the test. Gwinnett County sent out a notice to builders about the new stream buffer requirements:

### **Attention Developers, Engineers, & Builders**

**April 1, 2007 Deadline**

**A building permit must be obtained by April 1, 2007 on a property that has a 25' stream buffer in order to be exempt from the 50'/75' stream buffer requirement.**

This is a reminder, Gwinnett County Stream Buffer Protection Ordinance adopted and effective April 1, 2005 grandfathering states:

Houses or buildings that are part of a Concept Plan or a Preliminary Plat that has a complete application for a permit submitted by April 1, 2005 and receives approval or a development permit by June 30, 2005 are exempt from the ordinance if the future building permit is obtained by April 1, 2007.

Note: If a building permit on a property with a 25' stream buffer is not obtained by April 1, 2007 a 50' stream buffer with a 75' impervious surface setback applies to the lot. The lot is required to have a RDP (Residential Drainage Plan).