



# BUILDING, PLANNING & DEVELOPMENT

260.925.6449 p | 260.920.3342 f | 210 S Cedar St / PO Box 506 Auburn, IN 46706 | [bpd@ci.auburn.in.us](mailto:bpd@ci.auburn.in.us)

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## RESIDENTIAL BUILDING CODE OVERVIEW

### BASIC CLIMATIC AND GEOGRAPHICAL DESIGN CRITERIA FOR DEKALB COUNTY

- Wind Speed 115 MPH – Shall be determined on a site-specific basis
- Seismic Zone “A”
- Snow Load 30 pounds per square foot (PSF)
- Foundation Depth 36 inches – Is minimum foundation depth to bottom of footing from the top of finished grade above the footing.
- Winter Design Temperature - 1 degree Fahrenheit
- Decay - Slight to Moderate
- Termite – Moderate to Heavy
- Weathering – Severe
- Ice Shield Underlayment Required – YES
- Air Freezing Index – less/minus 1500
- Mean Annual Temp - 50.0 F
- Grade of Masonry units shall be from ASTM C34, C55, C62, C73, C90, C129, C216 or C562.

### STAIR LANDING

There shall be a floor or landing at the top and bottom of each stairway. The floor or landing at the door shall not be more than 1.5 inches lower than the top of threshold. The landing at an exterior doorway shall not be more than one stair riser below top of threshold, provided the door, other than exterior storm or screen door does not swing over the landing.

### STAIRS

- Stairways – Required Exits, Interior
- Maximum Riser Height - 8 1/4 inches
- Maximum Tread Depth – 9 inches
- Note: The greatest riser height and tread depth shall not exceed the smallest by more than 3/8 inch within any flight of stairs.
- Note: The walking surface of the landing and stairway shall not exceed one unit vertical in 48 units horizontal. (2 % slope).
- Note: The minimum headroom height in all parts of the stairway shall not be less than 6 ft. 8 in.
- Stairways – Non-Required Exits Requiring 2 or fewer Risers
- Maximum Riser Height - 8 1/4 inches
- Minimum Tread Depth – 11 1/4 inches

### STAIR TREAD LOAD

Individual stair treads shall be designed for the uniformly distributed live load of 40 pounds per square foot or a 300-pound concentrated load acting over an area of 4 square inches, whichever produces the greater stress.

### HANDRAIL

Handrail Height is 34 to 38 inches on at least one side and shall serve each tread the full length of interior stairs with 4 or more risers and exterior stairs with two or more risers from a point directly above the top riser of a flight to a point directly above the lowest riser. Both ends shall be returned / terminated in newel posts or safety terminals.



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## UNDER STAIR PROTECTION

Enclosed accessible space under stairs shall have walls, under stair surface and any soffits protected on the enclosed side with 1/2 inch gypsum board.

## STAIRWAY ILLUMINATION

For interior stairs the artificial light source shall be capable of illuminating the landings and the treads to levels not less than 1 foot-candle (11) lux measured at the center of the treads and landings. Exterior stairways serving the emergency egress shall be provided with an artificial light source located at the top landing of the stairway. Exterior stairways providing access to a basement from the outside grade level shall be provided with an artificial light source located so that the bottom landing of the stairway is illuminated. The control for activation of the required interior stairway lighting shall be accessible at the top and bottom of each stair without traversing any step of the stairs. Illumination of the exterior stairs shall be controlled from inside the dwelling.

## FOOTING CONCRETE MINIMUM WIDTH

A one (1) story structure for all soil strengths is twelve (12) inches. Check the code for other foundation information.

## FOOTING SIZES

Detached Garages, Detached Carports, or Accessory Structures

Construction Requirements	Local Code-Portable 120 Square Feet Maximum	Monolithic Footings 721 Square Feet Maximum	Structures with Conventional Foundation
Footings & Foundation	No Requirements	8" W x 18" D – 12" W x 12" D	Indiana Residential Code
Floors	No Requirements	Indiana Residential Code	Indiana Residential Code
Exterior Walls	No Requirements	Indiana Residential Code	Indiana Residential Code
Girders & Headers	No Requirements	Indiana Residential Code	Indiana Residential Code
Roof System	No Requirements	Indiana Residential Code	Indiana Residential Code
Electrical Power Limits	One 15 Amp Circuit	Indiana Residential Code	Indiana Residential Code
Water Supply/Sanitation	No Requirements	(1)	Indiana Residential Code
Permanent Heat	No Requirements	(1)	Indiana Residential Code
Max Number of Stories	1	1	3

### Notes:

1. In structures utilizing monolithic floor systems, the water and sanitation systems and permanent heating facilities may be installed when approved flexible connectors are provided.
2. 6 x 6 - W2.9 x W2.9 welded wire fabric or equivalent is required when monolithic slab footing system is used.
3. One (1) Story unless otherwise approved by the building official.



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### EMERGENCY ESCAPE AND RESCUE OPENINGS

Every sleeping room shall have at least one (1) openable emergency escape rescue opening. This includes those in a basement.

Doors on required exits can swing out over landing.

Egress windows in bedrooms and basement the sill height has to be 44 inches maximum above finished floor have a minimum net clear opening of 5.7 square feet., plus the required minimum net clear opening height of 22 inches and minimum net clear opening width of 20 inches. Window well dimensions shall have horizontal dimensions that allow the door or window escape opening to be fully opened. The horizontal dimensions of the shall have a minimum net clear area of 9 square feet with a minimum horizontal projection and width of 36 inches. Window wells will depths greater than 44 inches shall be equipped with permanently fixed stairs or ladder for the full height of well.

### TRUSSES

Truss design drawings shall be provided to the building official. Trusses shall be braced to prevent rotation and to provide lateral stability. Truss members shall not be cut, notched, drilled, spliced, or otherwise altered in any way.

### DRILLING AND NOTCHING - STUDS

Any stud in an exterior wall or bearing partition may be cut or notched to a depth not exceeded 25 percent of its width. In non-bearing partitions 40 percent of a single stud width.

Any stud may be bored or drilled provided that the diameter of the resulting hole is no greater than 60 percent of the stud width, the edge of the resulting hole is a minimum of 5/8 inch from the edge of the stud and it is not located in the same cross section as a cut or notch.

A Stud may be bored to a diameter not exceeding 60 percent of its width, provide those located in a bearing partition or exterior wall are doubled and not more than two successive studs are bored.

### DRILLING AND NOTCHING – TOP PLATE

When piping or ductwork is placed in or partly in an exterior wall or interior, braced or load bearing wall necessitating a cutting of the top plate by more than 50 percent of its width a galvanized metal tie rod not less than 0.054 inch thick and 1.5 inches wide shall be fastened to each plate across and to each side of the opening with not less than six 16d Nails. Or when wood structural panel sheathing shall cover the entire side of the wall with the notch or cut.

### HOUSE / GARAGE SEPARATION

Openings from a private garage directly into a sleeping room are not permitted, other openings between garage and the residence shall be equipped with a 20-minute fire rated door or approved alternate. Ducts in the garage and ducts penetrating the walls or ceilings separating the garage and dwelling shall be of 26-gage sheet steel or alternate approved material and shall have no openings to the garage.

The garage and dwelling shall be separated as will the attic area by not less than 1/2-inch gypsum board applied to the garage side.

Fire blocking shall be provided to cut off all concealed draft openings both vertically and horizontally and form an effective barrier between stories and between top story and the roof space. Chimneys and fireplaces as well as, any penetrations between stories including any shafts, wiring, piping and ducts.



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### **ANCHOR BOLTS**

Placement of all bolts shall be a maximum of (6) feet on center and located no more than twelve (12) inches from each end of each plate section. Bolts shall have a minimum diameter of one-half (1/2) inch and extend into the masonry or concrete a minimum of seven (7) inches and tighten with a nut and washer on each bolt to the top of the plate. Other approved fasteners may be used. Approved, means a tested and listed fastener with a report number by an approved agency for its' intended purpose. When used the manufacturer's instructions must be followed and the report given to the local building inspector at time of inspection.