

## FRAMING INSPECTION – GENERAL

### Tips

Check habitable rooms for minimum light, ventilation and sanitation requirements.

Check that stair framing meets headroom, width, and rise and run requirements.

Check for improper cutting or notching of framing members.

Check that emergency escape and rescue openings are installed and properly sized.

Look for safety glazing locations on the approved plan and verify them on site.

Verify the location of electrical boxes for hard-wired smoke alarms.

Check the construction of any rated wall system.

Check that the attic access opening is framed.

Verify if the elevation certificate (in flood zones) was approved.

- **Inspection** – After the wood framing is constructed, and the rough-in electrical, rough-in plumbing and rough-in mechanical portions of the project have been inspected and approved, the code requires a framing inspection. The following are those provisions that should be included in the inspection process at an early stage. A few of these, such as glass and glazing, and handrails and guards, should also be double-checked on the final inspection.

### I. LOCATION ON LOT

- **Fire Separation Distance** – For dwellings without an automatic fire sprinkler system, a one-hour fire-resistance rating is required for exterior walls with a fire separation distance of less than 5 feet (1524 mm). The distance is reduced to less than 3 feet (914 mm) for dwellings with sprinkler protection. **R302.1, Table R302.1(1), Table R302.1(2)**
- **Projection from Exterior Walls** – Projections shall not extend to less than 2 feet of the lot line. Projections within the 5-foot fire separation distance shall be 1-hour rated on the underside, if dwelling is not sprinklered. Projections within the 3-foot fire separation distance shall be 1-hour rated if the dwelling has an

automatic fire sprinkler system. NOTE: Check the exceptions in the Table footnotes. **R302.1, Table R302.1(1), Table R302.1(2)**

- **Openings in Protected Area** – Openings are not permitted in walls with less than 3 feet (914 mm) separation. Openings are limited to 25% of the wall area between 3 feet and 5 feet from the property line. **Table R302.1(1)**
- **Accessory Structures** – When accessory structures are exempt from permits, exterior wall protection is not required. **R302.1**
- **Detached Garage** – When located within 2 feet (610 mm) of a lot line, the roof eave may project 4 inches. **R302.1**
- **Foundation Vents** – Foundation vents in compliance with code are permitted in rated exterior walls. **R302.1**
- **Dwellings With Automatic Fire Sprinkler System** – The minimum fire separation distance for determining exterior wall and opening protection is reduced as noted in Table R302.1(2). **R302.1**

## II. LIGHT, VENTILATION AND HEATING

### A. HABITABLE ROOMS

- **Natural Lighting** – Natural light shall not be less than 8% of the floor area of habitable rooms unless artificial light is provided equal to 6 foot-candles at 30 inches from the floor. **R303.1**
- **Natural Ventilation** – Ventilation openings shall be 4% of the floor area of habitable rooms unless whole-house mechanical ventilation is provided in accordance with Section M1507. **R303.1**
- **Adjoining Rooms** – For light and ventilation, 10% of the floor area of an interior room is required for opening, but no less than 25 square feet (2.3 m<sup>2</sup>) when at least one-half of a common wall is open and unobstructed. See the Exception for thermally isolated sunrooms. **R303.2**
- **Mechanical Ventilation** – When the air infiltration rate is less than five air changes per hour when tested with a blower door, whole-house mechanical ventilation is to be provided in accordance with Section M1507.3. **R303.4**

### B. BATHROOMS

- **Natural Light** – Natural light shall not be less than 3 square feet (0.3 m<sup>2</sup>), unless artificial light is provided. **R303.3**

- **Natural Ventilation** – One and one-half square feet of openable glazing is required, unless a local exhaust system is provided in accordance with Section M1507. A minimum exhaust rate of 50 cfm (24 L/S) is required for intermittent operation; 20 cfm (10 L/S) is required for continuous operation. Exhaust air from the space shall be exhausted directly outside. **R303.3, Table M1507.4**

### C. AIR INTAKE OPENING LOCATION

- **Intake Location** – Mechanical and gravity outside air intake openings shall be a minimum of 10 feet (3048 mm) from any vent, chimney, plumbing vent, street, alley, parking lot or loading dock unless they are 3 feet (610 mm) below the contaminant source. Exhaust from dwelling units, toilet rooms, bathrooms and kitchens are not considered hazardous or noxious. **R303.5.1**
- **Exhaust Location** – Exhaust air shall not be directed onto walkways. **R303.5.2**
- **Opening Protection** – Outside openings shall be protected by corrosion-resistant screens, louvers or grills with a minimum opening size of  $\frac{1}{4}$  inch (6 mm) and a maximum of  $\frac{1}{2}$  inch (13 mm). Openings shall be protected against local weather conditions. **R303.6**
- **Location on Property** – Outdoor openings shall be protected as required for exterior wall openings. **R303.6**

### D. STAIRWAY ILLUMINATION

- **Stairway Lighting** – Lighting is to be provided at interior and exterior stairways. **R303.7**
- **Light Activation** – Interior stairways with six risers require wall switches at each floor level unless continuously illuminated or automatic controlled. **R303.7.1**
- **Exterior Lights** – Exterior stairs are to be provided with a light source at the top landing. **R303.8**
- **Basement Stairs** – Exterior stairways providing access to the basement from outside grade shall have a light at the bottom landing. **R303.8**

### E. HEATING

- Heating facilities are required for dwellings located where winter design temperature is below 60°F (16°C). Minimum room

temperature of 68°F (20°C) must be maintained at 3 feet (914 mm) above the floor and 2 feet (610 mm) from exterior walls in all habitable rooms. **R303.10**

### III. MINIMUM ROOM DIMENSIONS

- **Minimum Area** – Habitable rooms, except kitchens, shall not be less than 70 square feet (6.5 m<sup>2</sup>). **R304.1**
- **Minimum Dimension** – Habitable rooms, except kitchens, shall not be less than 7 feet (2134 mm) in any horizontal dimension. **R304.2**
- **Sloped Ceilings** – Portions of a room with a sloped ceiling less than 5 feet (1524 mm) or a furred ceiling less than 7 feet (2134 mm) shall not be considered a portion of the required area. **R304.3**

### IV. CEILING HEIGHT

- **Minimum Height** – The minimum ceiling height in habitable space, hallways and portions of basements containing these spaces shall be 7 feet (2134 mm). Bathrooms, toilet rooms and laundry rooms shall have a ceiling height of not less than 6 feet, 8 inches. **R305.1**

#### **Exceptions include:**

1. Rooms with sloped ceilings not less than 5 feet and at least 50% of the required area at 7 feet, and
  2. Bathrooms and toilet rooms shall have a ceiling height above the fixtures that allows them to be used. A shower or tub equipped with a shower head shall have 6 feet, 8 inches and above a minimum area 30 inches by 30 inches (762 mm by 762 mm) at the showerhead.
  3. Beams, girders, ducts or other obstructions in basements with habitable space shall be permitted to project to within 6 feet, 4 inches of the finished floor.
- **Ceiling Heights in Basements without Habitable Space** – Minimum ceiling height of basements that do not contain habitable space or hallways shall be 6 feet, 8 inches (2032 mm).

**Exceptions include:** Beams, girders, ducts or other obstructions may project to within 6 feet, 4 inches (1931 mm) of the finished floor. **R305.1.1**

## V. SANITATION

- Every dwelling unit shall have **R306**
  1. a water closet
  2. a lavatory
  3. a bathtub or shower
  4. a kitchen area
  5. a kitchen sink
  6. a connection to sanitary sewer or private sewage disposal system
  7. an approved water supply
  8. hot and cold water.

## VI. TOILET, BATH AND SHOWER SPACES

- **The following minimum spaces shall be provided for fixtures:** **R307**
  1. 21 inches (533 mm) in front of lavatory
  2. 21 inches (533 mm) in front of water closet
  3. 15 inches (381 mm) from center line of water closet to wall or bathtub. Refer to IRC Section P2705.1, item 5 for additional requirements.
  4. 30 inches (762 mm) by 30 inches for shower.
  5. 24 inches (610 mm) in front of the shower opening

## VII. GLAZED OPENINGS

- **Glazing Location** – Required glazed openings shall open directly onto the street or public alley, yard or court. **R303.9**
- **Porches** – Required glazed openings may face into a roofed porch that abuts street, yard or court. The long side of the porch shall be a minimum 65% unobstructed, and the ceiling height not less than 7 feet (2134 mm). **R303.9**
- **Sunrooms** – Required glazed openings may open into sunroom additions or patio covers that abut a street, yard or court. The exterior sunroom walls shall be 40% open or enclosed only with insect screening, and the ceiling height shall be not less than 7 feet (2134 mm). **R303.9.1**
- **Louvered or Jalousies** – Glass in louvered windows or jalousies shall not be less than  $\frac{3}{16}$ -inch (5 mm) thick or longer than 48

inches (1219 mm). Exposed edges shall be smooth. Wired glass shall not be used in jalousies or louvered windows. **R308.2**

## **A. HAZARDOUS LOCATIONS REQUIRING SAFETY GLAZING**

- **Human Impact Loads** – Individual glazed areas, including glass mirrors in hazardous locations, must comply with the provisions in this section. **R308.3**
- **Label** – Each pane of glazing installed in a hazardous location shall be permanently labeled as safety type. Exception for approval by the building official. **R308.1**
- **Glazing must be safety glazing in the following locations:** **R308.4**
  - **Doors** – Glazing in fixed and operable panels of swinging, sliding and bifold doors, except decorative glazing and glazed openings that do not allow a 3-inch (76 mm) sphere to pass.
  - **Bath Enclosures** – Enclosures for or walls within 60 inches measured horizontally and in a straight line facing hot tubs, whirlpools, saunas, steam rooms, bathtubs and showers where the bottom edge of the glazing is less than 60 inches (1524 mm) above any standing or walking surface.
  - **Adjacent to Doors** – Individual fixed or operable panel adjacent to a door and bottom edge less than 60 inches (1524 mm) above the floor and it meets either of the following conditions:
    1. Glazing is within 24 inches (610 mm) and in the plane of the door.
    2. Glazing is perpendicular to the plane of the door and within 24 inches (610 mm) of the hinge side of an in-swinging door.

### **Exceptions:**

1. Decorative glazing.
2. There is an intervening barrier between the door and the glazing.
3. The door opens to a closet no more than 3 feet (914 mm) deep.
4. Glazing is adjacent to the fixed panel of patio doors.