



# STANDARD OPERATING PROCEDURES

## Construction Services Division

Subject: Tiny House Requirements

Last Updated: 10/23/2018

Purpose: To establish procedural guidelines in regard to plan review submittal requirements for site-built tiny house construction projects. Due to the complex nature of tiny house construction in regard to meeting minimum standards of code compliance, a section on deviations from the code via alternative materials, design, and construction methods is provided at the end of this document.

Disclaimer: This document is intended to be a guide to compliance, highlighting specific sections of the code particular to this type of residential building configuration, and is not intended to be comprehensive. Requirements for items such as structural design load, electrical, etc., though not specifically mentioned herein, may apply. Additionally, nothing in this document should be construed as an exemption from compliance with applicable City of Tampa Zoning and Land Development requirements in effect at time of application for permit.

### Procedure

#### **Plan Review Submittal Requirements for Tiny Houses**

For tiny houses to be considered for construction purposes, the applicant must demonstrate such a structure complies with the minimum standards of the Florida Building Code 6<sup>th</sup> Edition (2017) Residential, (FBC-R) by submitting to Construction Services a plan package to be reviewed by staff. This plan package must include not only a site plan that demonstrates conformance to City of Tampa requirements, but also building plans (on minimum plan size 18" x 24" if submitting paper), signed and sealed by a Florida-licensed architect or engineer, that demonstrate the proposed tiny house meets the minimum standard of structural integrity and construction provided by the code. Additionally, the signed and sealed building plans must demonstrate the proposed tiny house meets the following minimum requirements for construction:

#### Fire-Resistant Construction

- FBC-R R302.1 – Exterior walls must comply with Table R302.1.
- FBC-R R302.10-1 - Insulation materials must have a flame spread index not to exceed 25 with an accompanying smoke-developed index not to exceed 450 when tested in accordance with ASTM E 84 or UL 723.

#### Required Heating

- FBC-R R303.10 - Where the winter design temperature in Table R301.2 (1) is below 60°F (16°C), every *dwelling unit* shall be provided with heating facilities capable of maintaining a room temperature of not less than 68°F (20°C) at a point 3 feet (914 mm) above the floor and 2 feet (610 mm) from exterior walls in habitable rooms at the design temperature. The installation of one or more portable space heaters shall not be used to achieve compliance with this section.

### Minimum Room Dimensions

- FBC-R R304.1 - At least one habitable room that has a minimum 120 sq. ft. of gross floor area.
- FBC-R R304.2 and R304.3 - Other habitable rooms must have a floor area of at least 70 sq. ft. and cannot have a wall less than 7 feet in length.

*Note: When figuring the square footage of a room, any portions of the room with a sloped ceiling measuring less than 5 feet or a furred veiling measuring less than 7 feet from the finished floor to finished ceiling are not included as habitable space for the room (FBC-Residential R304.4).*

### Heights and Dimensions

- FBC-R R305.1 - Habitable space, hallways, bathrooms, toilet rooms, laundry rooms, and portions of basements containing these spaces cannot have a ceiling less than 7 feet.
- FBC-R R305.1 - Rooms with sloped ceilings must have a ceiling height of at least 7 feet in no less than 50% of the required floor area of the room, and no portion of the required floor area can have a ceiling height of less than 5 feet.
- FBC-R R305.1 - The ceiling in a bathroom must be at least 6 feet 8 inches over bathroom fixtures as well as at the center of the clearance area in front of the fixtures, which ranges from 21” to 24” depending on the fixture type. In a shower or tub area with a showerhead, there are minimum space requirements, which include a 30 inch x 30 inch area at the showerhead and a ceiling height of no less than 6 feet 8 inches.

### Window Glazing

- FBC-R R303.1 - All livable rooms must have a combined glazing area of not less than 8 percent of the floor area of that room. Natural ventilation should be provided through windows, doors, louvers, or other approved openings to the outside air. These openings need to be readily accessible and controllable by the building occupants. The minimum openable area to the outdoors should be 4 percent of the floor area being ventilated.

*Note: There are exceptions that allow for rooms without operable openings and/or glazing if mechanical ventilation and artificial lighting are provided.*

- FBC-R R308.1 - Each pane of glass must bear the manufacturer’s label, indicating the type and thickness of glass or glazing material, and this safety glazing label must be acid etched, sandblasted, ceramic-fired, embossed mark, or, once applied, unable to be removed without being destroyed.

*Note: Per FBC-R R308.4, some of the areas that incorporate glazing are considered hazardous by the building code and require special attention or detailing. Hazardous locations for glazing include:*

- *Swinging doors and storm doors.*
- *Sliding and bi-fold closet doors.*
- *Unframed swinging doors.*
- *Doors, enclosures, walls and fences enclosing hot tubs, saunas, bathtubs, and showers.*
- *An individual fixed or operable panel next to a door where the nearest vertical edge is within 24 inch arc of the door and the bottom edge is less than 60 inches above any walking surface.*
- *Railings.*
- *Next to stairways, landings and ramps within 36 inches of walking surface.*

- FBC 1609.1.2 (if applicable) - In wind-borne debris regions, impact-resistant windows or impact-resistant coverings may be required for protection of glazed openings in buildings.

#### Emergency Exits

- FBC-R R310.1 - Basements and each sleeping room need to have at least one operable emergency escape and rescue opening with a minimum clear opening of 5.7 square feet, which opens directly into a public street, public alley, yard, or court.
- FBC-R R310.1 - Emergency escape openings must have a sill height within 44 inches of the floor.
- FBC-R R310.1.2 and FBC-R310.1.3 - Emergency escape openings must have a minimum net clear opening height of 24 inches or a minimum width of 20 inches.
- FBC-R R310.1.4 - Emergency escape openings must be operable from the inside of the room without the use of keys or tools or special knowledge.

#### Means of Egress and Emergency Openings

- FBC-R R311.1 - There must be at least one egress door that has direct access from a continuous unobstructed path of travel from all portions of the dwelling to the exterior, without requiring travel through a garage.
- FBC-R R311.2 - The required exit door must be side-hinged and cannot be less than 32" wide by 6' 6" high. Other doors to the exterior are allowed to have smaller widths.
- FBC-R R311.3 - Each exterior door is required to have a floor or landing on each side of the door except when a stairway with two or fewer risers is located on the exterior side of the door. The width of the landing should not be less than the width of the door and should have a minimum dimension of 36 inches measured in the direction of travel.

#### Smoke Alarms

- FBC-R R314.1 - All smoke alarms need to be listed in accordance with UL 217, a standard for electrically operated single and double station fire alarms intended for residential applications. Smoke alarms should be installed in accordance with the household fire warning equipment provisions of the National Fire Protection Association, NFPA 72.
- FBC-R R314.3 and FBC-R R314.4 - Smoke alarms must be installed so as to receive primary power from the building's electrical wiring, but should also contain a battery-powered back up system; and if more than one alarm is required they should be interconnected so that if one alarm activates, all the alarms in the dwelling unit will sound.

#### Energy Conservation

- FBC-R N1101 – Comply with FBC EC R101.2 including mandatory compliance items for exterior thermal envelope and energy efficiency.

#### Accessibility

- FBC Accessibility AC201.1 – Provide minimum 29 inch clear opening at doors leading to ground floor bathroom per F.S. 553.504(2).

#### Ventilation

- FBC-R M1505.1 - Exhaust hoods must exhaust to the outside and have a backdraft damper or other means to control infiltration and exfiltration when not in use.

- FBC-R M1507.2 - Exhaust air from bathrooms and toilet rooms should not be recirculated within a residence or to another dwelling unit, but should instead be exhausted direct to the outdoors.
- FBC-R M1507.3 - Ventilation fans in bathrooms should have the capacity to exhaust a minimum of 50 cubic feet per minute intermittently or 20 cubic feet per minute continuously.
- FBC-R M1507.3 - The ventilation rate required for kitchen exhaust is 100 cubic feet per minute intermittently or 25 cubic feet per minute continuously.
- FBC-R M1901.2 - All household cooking appliances must be listed, labeled, and installed in accordance with the manufacturer's installation instructions.

*Note: Per FBC-R G2407.1, gas-fired appliances such as stoves, ranges, heaters, and lamps require a supply of air for fuel combustion and ventilation of the space in which the appliance is installed must be provided. Fuel-fired appliances may not be located in bedrooms, bathrooms, or storage closets. They can however, be located in spaces that can only be accessed from and open into such rooms, but only if all combustion air is obtained from the outdoors through permanent openings with a solid weatherstripped door and self-closing device.*

### Plumbing

- FBC-R R306.1 and FBC-R R306.2 - Must provide, at a minimum, a kitchen sink, lavatory, and a bathtub or shower.
- FBC-R R306.4 - All plumbing fixtures must be connected to an approved water supply and a sanitary sewer or an approved private sewage disposal system, and bathroom, kitchen, and laundry outlets must be supplied with hot and cold water.
- FBC-R R307.1 - Bathroom fixtures must meet the following spacing requirements:
  - The centerline of the toilet or bidet must be at least 15" from a wall or other obstruction, and needs 21" of forward clearance.
  - Sinks should be 4" off the wall and have 21" of forward clearance.
  - Double sinks should be separated by a minimum space of 4".
  - A sink next to a toilet also needs 4" separation space, but a sink next to a tub needs only 2" of separation.
  - The minimum dimensions allowed for a shower is 30" x 30" (that's 900 square inches), and there should be a minimum of 24" forward clearance at all shower entrances.
- FBC-R R307.2 - Walls and floors in shower and tub spaces must be of a nonabsorbent surface material that extends at least 6 feet above the floor.

*Note: Per FBC-Residential R702.3.8 and R702.3.8.1, such material cannot be water-resistant gypsum board. Although water-resistant gypsum board is permitted for use as a backer for tiles or wall panels in showers and tubs, it cannot be installed over the vapor retarder, as this would create a waterproof membrane on both sides of the gypsum board, trapping moisture and ultimately causing it to fail. Ideally, gypsum board should not be used in wet areas.*

- FBC-R P2701.1 - Plumbing fixtures, faucets, and fittings must have smooth impervious surfaces, free of defects, and constructed of approved materials. Fixtures must be provided with a supply of potable water adequate to flush the fixture and maintain a clean and sanitary condition, without danger of backflow or cross connection.
- FBC-R P2708.1 - There must be 70" of minimum height provided above the shower drain.

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- FBC-R P2708.1 and FBC-R P2708.1.1 - Shower openings must have a clear and unobstructed finished width of not less than 22", and hinged shower doors, if used, must open outward.
- FBC-R P2708.3 - Shower valves and shower/tub combination valves must be equipped with pressure-balance controls, thermostatic mixing, or a combination of the two. They must also include a high limit stop, set to limit the water temperature to 120 degrees maximum.
- FBC-R P2801.1 - Hot water shall be supplied by an approved automatic water heater or other type of domestic water-heating system sufficient to supply hot water to fixtures and appliances in spaces intended for bathing, washing or cooking.
- FBC-R P2801.1 and FBC-R P2801.3 - Storage tanks for hot water heaters must be constructed or lined with non-corrosive metal and must be connected and located where they can be maintained, serviced, and replaced.

### **Alternative Materials, Design and Methods of Construction and Equipment**

In accordance with Section 104.11 of the Florida Building Code, the Building Official has the authority to approve, on a case by case basis, alternate materials or construction methods on projects in which it becomes impractical to meet the strict requirements of the adopted code, provided that the intent of the code in question is met and the proposed solution does not result in a compromise of structural integrity, life safety, quality, durability, and fire protection. Such a request must demonstrate, unequivocally, that the alternate method of construction or design is equivalent to and/ or exceeds the strict standards of the code being petitioned.

Requests for alternative materials, design, and methods of construction can be made by either the property owner (if owner is acting as an owner-builder), or a Florida-licensed architect or engineer, provided this request is made in writing. The proposal must list the specific code(s) and section(s) for which alternate methods are being requested. A detailed explanation must be provided which describes how the adopted code currently in place creates an impractical situation in regard to construction. Design submittals such as building plans should be provided as scalable documents, no smaller than size 18" x 24" (if submitting the request in paper), and any drawings or detailed explanations must be signed and sealed by an architect or engineer licensed in the state of Florida.

*Note: Appendix Q of the 2018 International Residential Code for One- and Two-Family may be accepted as an alternative method.*