



## Construction Guidelines for Tiny Homes

*The following is a summary of codes and regulations with respect to the construction of "tiny homes".*

**Please note:** *This is not intended to be and all inclusive list of requirements. For any additional requirements please refer to the City of Knoxville Zoning Ordinances, 2018 International Residential Code including Appendix Q- Tiny Homes and/or the State of Tennessee Modular Building Program. For specific questions regarding your tiny home project please contact our office at (865) 215-2999.*

### What is a "Tiny House"?

A "tiny house" is defined by Section AQ102 of the 2018 International Residential Code as being a site built dwelling that is 400 square feet or less in floor area excluding lofts. Tiny houses regulated by the International Residential Code are NOT fabricated in a different location and relocated to a lot within the City of Knoxville. Structures built in accordance with the ANSI A119.5: Park Model Recreational Vehicle Standard whether custom built or mass produced are not suitable as dwellings within the City of Knoxville's jurisdiction.

### What is a Manufactured "Tiny House"?

Any dwelling built **off site** is a Modular Home and is regulated under the Tennessee Modular Buildings Act. This program is under authority of Tennessee Code Annotated 68-126-301. The Tennessee Modular Buildings Act was established in 1985 with the purpose of establishing building construction standards for factory built structures. The program includes housing that is produced in factories and transported to building sites to be installed. The Manufacturers of such "tiny" modular homes are licensed by the State of Tennessee, regulated under the supervision of the state program, and are required to have a permanently affixed Tennessee modular building label. The label is required to be attached by means of four (4) pop rivets or drive screws, on a permanent non-removable building component as evidence of compliance with the program. Manufactured "mobile homes" (permanently constructed on a frame with wheels) are excluded from the program. The regulation of manufactured "mobile homes" is the responsibility of the U. S. Department of Housing and Urban Development (HUD). Nonconforming single-wide manufactured "mobile homes" are only permitted in APPROVED mobile home parks within the City of Knoxville.

### Permit Requirements

Any new construction will require the submittal of construction drawings and a site plan (drawn to scale or dimensioned to all lot lines other structures on the same lot) indicating how the tiny house will be constructed and where it will be located on the building site. Upon approval, appropriate building and sub-trade permits may be issued at which time work may begin. Structures shall be inspected by City of

Knoxville inspectors throughout the construction process. No structure shall be occupied without a **Certificate of Occupancy**, which is issued after passing final inspection by the City of Knoxville.

## Space Limitations-Habitable Space

Habitable Space is defined as a space in a building for living, sleeping, eating or cooking. Bathrooms, toilet rooms, closets, halls, storage, or utility spaces and similar areas are not considered habitable space and do not contribute to minimum habitable space required.

- Habitable rooms shall have not less than 70 sq. feet of floor area (except for kitchens). (R304.1)
- Ceiling height effect on floor area: Portions of a sloped ceiling measuring less than 5 feet or a furred ceiling measuring less than 7 feet from the finished floor; floor areas below these ceilings shall not be permitted to contribute to the minimum required habitable area for that room. (R305.1)
- Habitable rooms must not be less than 7 feet in any horizontal dimension (except for kitchens). (R304.2)

## Construction Requirements- Overview

- **General Requirements**
  - Tiny homes shall be built upon permanent foundations meeting the requirements of Chapter 4 (Foundations) of the 2018 International Residential Code.
  - Electrical Systems Shall Be in accordance with the 2017 National Electric Code (as amended).
  - Tiny homes must meet ALL zoning requirement: setbacks, lot sizes, off street parking, etc. in addition to any community protective covenant requirements when applicable.
  - City Engineering regulates the building site requirements.
- **Emergency Escape and Rescue**
  - Tiny houses shall meet the requirements of Section R310 for emergency escape and rescue openings.
    - Exception: Egress roof access windows in lofts used as sleeping rooms shall be deemed to meet the requirements of Section R310 where installed such that the bottom of the opening is not more than 44 inches above the loft floor, provided the egress roof access window complies with the minimum opening area requirements of Section R310.2.1. (AQ105.1)
- **Sanitation**
  - Tiny homes shall be provided with permanent provisions for living, sleeping, eating, cooking and sanitation. (R202)
  - Tiny homes shall be provided with connection to an APPROVED method of sewage disposal and an APPROVED water supply providing hot and cold water. (R306.3/306.4)
  - Units shall be provided with a separate bathroom containing a water closet, lavatory and bathtub or shower. (R306.1)
  - Each tiny house shall be provided with a kitchen area with a sink. (R306.2)

- **Light, Ventilation and Heating**
  - Habitable rooms shall be provided with light and ventilation via operable glazing not less than 8% of floor area. (R303.1)
  - Bathrooms shall be provided with operable window(s) of not less than 3 square feet or provided with local exhaust. (R303.3)
  - Tiny homes shall provide a heating facility capable of maintaining a minimum 68°F. (R303.10)
- **Energy Conservation**
  - Tiny homes shall meet all building thermal envelope, mechanical ventilation and systems requirements of Chapter 11- Energy Conservation of the 2018 International Residential Code.
- **Lofts**
  - *Minimum area:* Lofts shall have a floor area of not less than 35 square feet. (AQ104.1.1)
  - *Minimum dimensions:* Lofts shall be not less than 5 feet in any horizontal dimension. (AQ104.1.2)
  - *Height effect on loft area:* Portions of a loft with a sloped ceiling measuring less than 3 feet from the finished floor to the finished ceiling shall not be considered as contributing to the minimum required area for the loft. (AQ104.1.3)
  - *Height effect on loft area-Gable Roofs:* Under gable roofs with a minimum slope of 6 units vertical in 12 units horizontal (50-percent slope), portions of a loft with a sloped ceiling measuring less than 16 inches from the finished floor to the finished ceiling shall not be considered as contributing to the minimum required area for the loft. (AQ104.1.3)
  - **Loft Access**
    - *Stairways*
      - ❖ *Width:* Stairways accessing a loft shall not be less than 17 inches in clear width at or above the handrail. The width below the handrail shall be not less than 20 inches. (AQ104.2.1.1)
      - ❖ *Headroom:* The headroom in stairways accessing a loft shall be not less than 6 feet 2 inches, as measured vertically, from a sloped line connecting the tread or landing platform nosings in the middle of their width. (AQ104.2.1.2)
      - ❖ *Treads and risers:* Risers for stairs accessing a loft shall be not less than 7 inches and not more than 12 inches in height. Tread depth and riser height shall be calculated in accordance with one of the following formulas: 1.The tread depth shall be 20 inches minus four-thirds of the riser height. 2. The riser height shall be 15 inches minus three-fourths of the tread depth. (AQ104.2.1.3)
      - ❖ *Landing platforms:* The top tread and riser of stairways accessing lofts shall be constructed as a landing platform where the loft ceiling height is less than 6 feet 2 inches where the stairway meets the loft. The landing platform shall be 18 inches to 22 inches in depth measured from the nosing of the landing platform to the edge of the loft, and 16 to 18 inches in height measured from the landing platform to the loft floor. (AQ104.2.1.4)

- ❖ *Handrails*: Handrails shall comply with Section R311.7.8. (AQ104.2.1.5)
- ❖ *Stairway guards*: Guards at open sides of stairways shall comply with Section R312.1. (AQ104.2.1.6)
- *Ladders*
  - ❖ *Ladders*: Ladders accessing lofts shall comply with Sections AQ104.2.1 and AQ104.2.2. (AQ104.2.2)
  - ❖ *Size and capacity*: Ladders accessing lofts shall have a rung width of not less than 12 inches, and 10-inch to 14-inch spacing between rungs. Ladders shall be capable of supporting a 200-pound load on any rung. Rung spacing shall be uniform within 3/8 inch. (AQ104.2.2.1)
  - ❖ *Incline*: Ladders shall be installed at 70 to 80 degrees from horizontal. (AQ104.2.2.2)
- *Alternating Tread Devices*
  - ❖ *Alternating tread devices*: Alternating tread devices accessing lofts shall comply with Sections R311.7.11.1 and R311.7.11.2. The clear width at and below the handrails shall be not less than 20 inches. (AQ104.2.3)
  - ❖ *Ships ladders*: Ships ladders accessing lofts shall comply with Sections R311.7.12.1 and R311.7.12.2. The clear width at and below handrails shall be not less than 20 inches. (AQ104.2.4)
  - ❖ *Loft Guards*: Loft guards shall be located along the open side of lofts. Loft guards shall be not less than 36 inches in height or one-half of the clear height to the ceiling, whichever is less. (AQ104.2.5)