

Effective January 1, 2020

## **Building Inspections & 2018 Building Code Adoption**

In order to apply for a building permit you must provide a copy of a contractor's license with plumbing and HVAC license.

Inspection of your residential construction property will be made within three (3) working days after notification to TRDA's Building Inspector. Permit holder or contractor should contact the Inspector, Dwayne McMahan, by calling him directly at (865) 719-2145 for inspections.

**All items must be completed before scheduling any inspection, if not additional fees will apply.**

**Building Permit signs must be posted at Jobsite or no inspections will take place.**

**Footing Inspection-** Prior to placement of concrete  
After steel reinforcement has been placed  
After bulkheads are placed  
No Standing water at bottom of footings  
Either (3) # 4 steel reinforcement (rebar) or (2) #5 steel on chairs reinforcement (rebar) are required in all footings.

**Slab Inspection-** This is a three part Inspection

*1. Foundation Wall Inspection-* After foundation walls have been laid and prior to concrete being placed in wall. If wall is over 10'; in height then a Professional Engineer must prepare a letter stating how the wall and footing must be constructed.

*2. Under slab Plumbing Inspection-* Prior to stone backfill of pipes. Plans must be available for Drain Fixture Unit count. Either a water test or pressure test will be conducted. Water test with 5' head must be placed where it can be easily observed. Pressure tests are accepted, the applicant must provide a pressure gauge as specified in the code. Radon Gas, a 3" sanitary tee must be placed in stone.

*3. Thickened slabs & Foundation-* Plans must be available for thickened slab locations. Weatherproofing of foundation walls, Anchor bolts or straps placement and foundation drains will be checked.

\* If you are using a pre-cast foundation system, please contact the Building Inspector for inspections that are required.

**Floor Framing Inspection-**  
(Crawlspace Only)

Prior to placement of floor sheathing, after foundation wall, floor joists and masonry piers have been installed. Have floor truss or TGI layout available if applicable.

If no floor framing inspection is performed then an engineering certification is required

**Framing Inspection-**  
(Includes Plumbing & Mechanical)

This is a two part Inspection

1. Prior to Insulation, have pre-engineered truss layout available. Have all window and door installation instructions available. Plumbing drain lines and water supply lines must be tested. BTU gas loads must be known to check gas line sizes. ***All fireplaces must be installed prior to inspection.***
2. Insulation Inspection after framing rough-in. R-13 in walls R-19 in floors between conditioned and unconditioned .32 u factor in windows .55 in skylights. R38 in sloped ceiling and attics at final inspection.

**Final Inspection-**

After completion of all construction, including final grading and driveways. Prior to occupants moving in or storing contents in structure.

**CONTACT:**

**Dwayne McMahan, TRDA Building Inspector  
At (865) 719-2145**

## **2018 Significant IRC Code changes**

The building permit applicant is responsible for being familiar with the 2018 International Residential Code (IRC). TRDA has made local amendments to the Building Codes. If you would like to obtain a copy of these amendments please let us know. Listed below is a summary of some of the changes in the 2018 IRC.

1. R302.13 Fire protection of floors. Floor assemblies directly over a crawl space or unfinished basement intended for storage or for the installation of fuel-fired heating appliances shall be provided with a 1/2 inch gypsum wallboard membrane, 5/8 inch wood structural panel membrane, or equivalent on the underside of the floor framing member unless protected by a sprinkler system. For the purpose of this section a crawl space or basement shall be defined as having a greater opening than 36 inches by 48 inches in any dimension.
2. R308.4.2 Glazing adjacent to doors. Glazing in an individual fixed or operable panel adjacent to a door shall be considered to be a hazardous location where the bottom exposed edge of the glazing is less than 60 inches above the floor or walking surface and it meet either of the following conditions: 1) where the glazing is within 24 inches of either side of the door in the plane of the door in a closed position, or 2) where the glazing is on a wall less than 180 degrees from the plane of the door in a closed position and within 24 inches of the hinge side of an in-swinging door.
3. R310.3 Emergency escape and rescue doors. The code now allows sliding glass doors to be used for emergency egress. The 2012 code required the door to be sidehinged.
4. R311.7.3 Vertical rise of stairs. A flight of stairs shall not have a vertical rise larger than 151 inches (12'-7") between floor levels or landings.
5. R311.7.4 Stair winders. The stair winders shall have a minimum tread depth of 10" as measured 12" from the narrowest point of the stair.
6. R311.7.5.1 Stair risers. The riser height shall be not more than 7 3/4".
7. The greatest riser height within any flight of stairs shall not exceed the smallest riser height by more than 3/8".
8. R311.7.5.2 Stair treads. The tread depth shall be not less than 10"

9. R311.7.8.2 Handrail projection. Handrails shall not project more than 4 1/2 inches on either side of the stairway. Exception: where nosings of landings, floors, or passing flights project into the stairway reducing the clearance at passing handrails, handrails shall project not more than 6 1/2 inches into the stairway, provided that the stair width and handrail clearance are not reduced to less than that required.
10. R311.7.8.3 Handrail clearance. Handrails adjacent to a wall shall have a space of not less than 1 1/2 inches between the wall and the handrails.
11. R311.7.8.5 All stairs shall have graspable handrails.
12. R314.4 All smoke alarms shall be interconnected. The exemption for interconnection of alarms during alterations based on feasibility has been removed from the code.
13. R315.2.2 Alterations, repairs, and additions. Where alterations, repairs, or additions requiring a permit occur, the individual dwelling unit shall be equipped with carbon monoxide alarms located as required for new dwellings.
14. R408.3 Unvented crawl space. In lieu of a conditioned air supply in sealed crawl spaces, a dehumidification system sized to provide 70 pints of moisture removal per day for every 1,000 square feet of crawl space floor area.
15. R507.2.3 Deck fasteners and connectors. Metal fasteners and connectors used for all decks shall be in accordance with Section R317.3 and Table 507.2.3.
16. R507.3 Deck footings. Decks shall be supported on concrete footings or other approved structural systems designed to accommodate all loads in accordance with Section R301. Deck footings shall be sized to carry the imposed loads from the deck structure to the ground as shown in Figure R507.3. The footing depth shall be in accordance with Section R403.1.4. Exception: 1) freestanding decks consisting of joists directly supported on grade over their entire length.
17. R507.4.1 Deck post to deck footing connection. Where posts bear on concrete footings in accordance with Section R403 and Figure R507.4.1, lateral restraint shall be provided by manufactured

connectors or a minimum post embedment of 12 inches in surrounding soils or concrete piers.

18. R507.5.1 Deck beam bearing. Where multi-span beams bear on intermediate posts, each ply must have full bearing on the post.
19. Table R602.7(1) R602.7(2) Girder and header span charts. The new span charts reduce the allowable span of girders and headers when using #2 Pine.
20. Table R602.7.5 Minimum number of studs required at each end of header. The length of the header before two studs are required has increased from 6' to 10'. Anything less than 10' now only requires one stud at each end.
21. R1005.8 Insulation shield. Where factory-built chimneys pass through insulated assemblies, an insulation shield constructed of steel. Having a minimum thickness of 0.0187 inch (No. 26 gage) shall be installed to provide clearance between the chimney and the insulation material. The clearance shall not be less than the clearance to combustibles specified by the chimney manufacturer's installation instructions. Where chimneys pass through attic space, the shield shall terminate not less than 2" above the insulation materials and shall be secured in place to prevent displacement. Insulation shield provided as part of a listed chimney system shall be installed in accordance with the manufacturer's installation instruction.
22. Table N1102.1.2 (R402.1.2) Table U-factor for windows is reduced from U-0.35 to U-0.32
23. N1102.4.1 Table N1102.4.1.1 Recessed lighting fixtures installed in the building thermal envelope shall be sealed to the finished surface.
24. N1102.4.2 New wood-burning fireplaces shall have tight fitting flue dampers or doors and outside combustion air. Where using tight fitting doors on factory-built fireplaces listed and labeled in accordance with UL-127, the doors shall be tested and listed for the fireplace.
25. N1103.3.5 Building cavities. Building framing cavities shall not be used as ducts or plenums.

26. N1103.3.6 Ducts buried within ceiling insulation. Where supply and return air ducts are partially or completely buried in ceiling insulation, such ducts shall comply with all of the following:
  - 1) the supply and return ducts shall have an insulation value of not less than R-8;
  - 2) at all points along each duct, the sum of the ceiling insulation R-values above the top of the duct, and against and below the bottom of the duct shall be not less than R-19, excluding the duct R-value.
27. N1104.1 Not less than 90% of permanently installed lighting shall contain only high efficacy lamps.
28. M1502.3.1 Dryer exhaust termination outlet and passageway size. The passageway of dryer exhaust duct terminals shall be undiminished in size and shall provide an open area of not less than 12.5 square inches. (4" round duct)
29. M1502.4.2 Dryer duct installation. Where dryer exhaust ducts are enclosed in wall or ceiling cavities, such cavities shall allow the installation of the duct without deformation.
30. M1503.3 Domestic range hood exhaust discharge. Domestic cooking exhaust equipment shall discharge to the outdoors through a duct. The duct shall have a smooth interior surface, shall be air tight, shall be equipped with a backdraft damper and shall be independent of all other exhaust equipment. Ducts serving domestic cooking equipment shall not terminate in an attic or crawl space or areas inside the building.
31. G2406.2 Clothes dryers may be located in a residential bathroom or toilet room having a permanent opening with an area of not less than 100 square inches that communicates with a space outside of a sleeping room, bathroom, toilet room, or storage closet.
32. P2713.1 Bathtub waste outlets and overflows. The requirement for overflow outlets on bathtubs has been removed.

CONTACT: Dwayne McMahan at Cell: (865) 719-2145  
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