

# 2018 IRC Residential Energy Code

## Inspections Need Field Review - Approved Plans on Job Site at all Inspections

**Infiltration Control** – seal all penetrations & openings at building envelope. Foam or other approved sealant. (No daylight showing).

1. Caulk or seal top & bottom plate penetrations, around all window and exterior door openings.
2. Seal attic & floor penetrations electrical and plumbing - ex. tub trap opening 2<sup>nd</sup> floor.
3. Seal exterior sheathing penetrations.
4. Return air must be ducted. No chases.
5. Glazing and Door U-Factors: (Labeling required: SHGC \\ NFRC).
6. **Glazing (Prescriptive) – glass must have a maximum .25 SHGC (Solar Heat Gain Coefficient) and a maximum .35 U-factor.**
7. **Windows Must be NFRC (National Fenestration Rating Council) certified.**
8. Rough openings for door & window sizes shall comply with plans.
9. Walls separating conditioned from unconditioned & are located in concealed spaces, will now need to be insulated at frame insp.

### Electrical Rough Inspections

Recessed luminaries installed in the building thermal envelope shall be IC rated and labeled as meeting ASTM E 283.

### Mechanical Rough Inspections

1. Supply and return air ducts insulation requirements:  
**Prescriptive method requires:** Supply ducts R-8 and all other ducts R-6 **Performance method requires:** All ducts R-6.
2. Duct Tape is not permitted as a sealant on any ducts, Mastics required.
3. For return air installations, return air must be ducted. No walled chase returns.
4. A/C condenser lines require piping insulation of (fluid temperature range 40-55 degrees Fahrenheit) .75 wall thickness or R-3.
5. The main HVAC trunk line plenum in direct contact with heating or cooling equipment on the supply or return side must be constructed of sheet metal (no duct board), or equivalent material approved by the Building Official.
6. Insulation must be pulled back at connections for rough inspections.

### Insulation Inspections (Called after frame, & before drywall)

1. Insulation R-values shall be equal to or greater than the R-values indicated on the approved Code Review Sheet.
2. Review for missing pieces of insulation.
3. Vapor retarder is NOT REQUIRED; but when installed, shall not trap moisture.
4. Insulation at roof/ceiling (vaulted ceiling) requires 1" cross ventilation. Foam baffles permitted.
5. Insulation batts installed in walls shall be totally surrounded by an enclosure on all sides consisting of framing lumber, gypsum, sheathing, wood structural panel sheathing or other equivalent material approved by the building official. This material needs to be in place at this stage, in areas like concealed spaces, attic side of attic walls, etc.

### Final Mechanical Inspections

1. Check HVAC equipment for size and ratings.
2. Programmable Thermostatic controls shall be capable of being set locally and or remotely. Minimum temperature ranges (55-85) degrees Fahrenheit.
3. Pull down ladders used to access equipment must be rated a minimum 300 lb. capacity.

### Final Energy Inspections

1. Weather-stripping of doors, windows, & attic access.
2. Attic Insulation – correct R-value, prescriptive method requires attic access opening to maintain surrounding R-Values. A wood frame retainer is required around horizontal openings if loose fill insulation is installed.
3. Caulk at required exterior envelope openings.
4. New manufacturer recommended filters have been installed for all heating and cooling equipment after construction is complete but prior to the homeowner occupying the structure.
5. Vinyl wallpaper not allowed inside exterior walls or either side of wet walls such as bathrooms, kitchen, or laundry rooms.
6. Metal drip edge is installed for all exposed roof decking.
7. A portable drip irrigation bag or zoned bubbler system has been installed for each installed tree.
8. Mulch is applied consistently and that there are no bare spaces.
9. Plant selection will be reviewed.
10. Energy Certificate posted on electrical distribution panel.
11. A minimum of 50% of the lamps in permanently installed lighting fixtures shall be high efficacy lamps.
12. New wood burning fireplaces shall have tight fitting flue dampers and outdoor combustion air.

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FM624RY025 REV 12/05/19