**Residential High Impact Item Checklist**

 for 2x4 wood frame slab on grade homes in climate zone 2 & 3

(Sunrooms, CZ 4 slab insulation - also high impact)

**The 2015 IECC requires the inspector to use the inspection checklist generated by the approved compliance software used for permit. If the checklist is unavailable the inspector can only assume that the building if following the prescriptive path. It that case the following table highlights the high impact items:**

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| Phase |  Code Requirement | What to look for  |
| Plan Review | Construction drawings and documentation demonstrate energy code compliance for the building envelope, lighting and mechanical systems | Check compliance documentation for the correct code edition, unusual items i.e. unusually high SEER ratings and HVAC efficiencies, wall and ceiling r-values over 15 & 38 respectively, unusually low SGHC and U-factors, unusually low duct leakage and blower door leakage values, other irregularities |
| Plumbing Rough-in | Hot water lines insulated with minimum R-3 | All hot water lines 3/4" in diameter or larger, buried, under slab, part of a recirculation system, piping to a manifold, outside conditioned space or serving multiple dwelling units |
| Framing / Insulation Inspection | Window SGHC & U-factor, Door U-factor | Check SGHC and U-factor numbers on NFRC labels. Typically in CZ2 you are looking for a U-factor ≤.40 and a SHGC ≤.25, in CZ3 U-factor ≤.35 and a SHGC ≤.25 and in CZ 4 a U-factor ≤.35 and a SHGC ≤.40 |
|  | Air and thermal barrier installed correctly and as per Table R402.4.1.1 | Is air barrier continuous? All penetrations through the air barrier are sealed. If you can see daylight through the wall from the inside of the house the air barrier is not sealed well enough. Attic "hot walls" have an approved air barrier on the attic side. Base plates sealed to floor, foam used in headers, penetrations through top plate sealed, gaps around the perimeter of windows are sealed, can lights gasketed, air tight and IC rated, corners allow for insulation (California corners), ladder framing T's  |
|  | Insulation installed correctly | Check for proper R-value, no gaps, voids, compression of batts or misalignment (double check it's properly cut around wiring and other obstacles), HVAC walkways and other ceiling areas where blown may not reach are properly insulated, rim joists must be insulated, baffles installed @ soffit vents, see this video for proper batt insulation - https://www.youtube.com/watch?v=OXSV1Ws-HCcAlso see that attic access hatches are sealed and insulated |
|  | Supply duct at least R-8, return duct at least R-6 | Ducts are properly sealed, supported and installed per manufacturer's instructions - http://www.flexibleduct.org/images/ADC~IR5E.pdf |
|  | Combustion air | Check for outdoor combustion air to all fuel burning appliances and fireplaces |
| Final | Ceiling insulation R-values and depth markers | Generally you are looking for R-30 minimum in CZ2 and R-38 minimum in CZ3. Did the installer leave a certificate? |
|  | Envelope and Duct Leakage Tests | Envelope Leakage - ≤5ACH 50 in CZ2 and 3 ACH50 in CZ 3&4Duct leakage - Total leakage ≤4 cfm per 100 square feet of conditioned floor area |
|  | Lighting | At least 75% high efficacy lighting installed |
|  | HVAC and Water Heating Efficiency | Check that HVAC and Water Heating equipment meets minimum national standards and the installed equipment efficiency is the same as on plan submittal docs.  |