290442

Energy Compliance Certificate

2015 IRC/IECC - Residential

One- and Two-Family Dwellings and Multiple Single-Family Dwellings

Plan Review No.: _____ Permit No.: _____

Project Address: 9820 E Thompson Peak Pkwy • Scottsdale, AZ 85255 Lot 837

Builder Name: Tom Archer Custom Homes & Design LLC

To be completed by responsible parties, signed by builder and submitted to inspector at final inspection.

Inspection Phase	Results	Sign-Off by Responsible Party
1. Thermal Envelope/Air Barrier (N1102/R402) Inspections shall be made before application of interior finish to verify the following in accordance with code, approved plans and specifications: • Insulation installation (R-values), fenestration (U-factor and SHGC) and continuous air barrier alignment verified by a qualified 3rd party (certified rater).	☑ Pass	Best Energy Rating [redacted] Date(s): 1.24.2024
2. Envelope Leakage Testing (N1102.4/R402.4)) The building or dwelling unit shall be tested and verified as having an air leakage rate not exceeding 5 air changes per hour for detached dwelling units and 7 air changes per hour for attached dwelling units by a qualified 3rd party (certified rater). • Testing (N1102.4.1.2/R402.4.1.2)	Envelope Air Leakage Rate: 4.676 Air Changes per Hour ☑ Pass	Best Energy Rating [redacted] Date(s): 1.24.2024
3. Plumbing (Rough-In) Inspection Inspections at plumbing rough-in shall verify compliance as required by the code, approved plans and specifications as to the following: • Pipe insulation, corresponding *R*-values, hot water circulation system controls (N1103.5/R403.5) or manifold distribution system.	☐ Pass	Company Name Signature Date(s):
4. Mechanical (Rough-In) Inspection Inspections shall verify compliance as required by the code, approved plans & specs following (N1103/R403): • Installed HVAC equipment type and size, controls, system insulation and corresponding *R*-values; • Whole-house ventilation and local exhaust (M1507). • Where the ducts and air handlers are outside the building thermal envelope, provide a duct leakage test by a qualified 3rd party (certified rater).	Duct Leakage Rate: Exempt cfm per 100 sf ☐ Rough-in Test ☑ Post-constr. Test ☑ Pass	Best Energy Rating [redacted] Date(s): 1.24.2024
5. Final Inspection The final inspection shall verify the proper installation of the following (N1103/R403): • HVAC system, programmable thermostats, whole-house ventilation (M1507), local exhaust, damper controls and proper operations. • High-efficacy lamps and fixtures (N1104/R404).	☑ Pass	Best Energy Rating [redacted] Date(s): 1.24.2024

rev. 11/13/18

Compliance Statement: I certify that to the best of my knowledge the information above is in full compliance with the City of Scottsdale adopted International Energy Conservation Code (IECC) and amendments.

Permit Holder/Builder Signature: _____ Date: _____

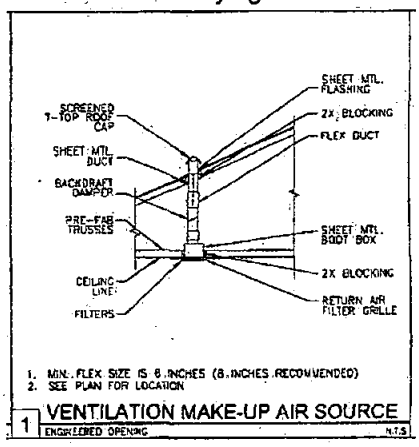
290442

Whole-House Mechanical Ventilation Options

2015 IRC/IECC – Residential (IRC M1507)

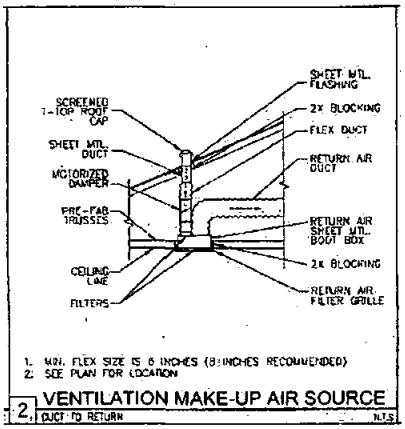
Option 1 - Bathroom Exhaust Fan with Make-up Air Inlet in separate area.

1. To minimize energy consumption and reduce run times on bathroom fans, it is recommended that the bathroom fan run intermittently rather than continuously to meet IRC/IMC minimum air flow requirements.
2. Fan Controller
   a. Shall be sized to run continuously or controlled to run intermittently by a stand-alone controller or built-in controls by fan manufacturer.
   b. The air conditioning contractor shall ensure the start-up technicians program the controllers and verify the required ventilation rates.
   c. A readily-accessible ventilation override control shall be provided with an identifying label if its function is not obvious.
   d. By sizing the fan to enable intermittent operation, intelligent controls can be used to time-shift ventilation to off-peak heating and cooling hours of the day.
3. Make-up air duct
   a. This duct shall be a minimum of 6 inches (recommended 8 inches).
   b. The make-up air duct shall have a backdraft damper and not be located in the same room as the exhaust fan.
   c. To maximize draw through the make-up duct, locating the duct close to the return air filter box would be a best practice. Alternatively, locating the duct in the Laundry Room would have the added benefit of providing make-up air for the dryer. Either location is acceptable.
   d. Provide filtered intake grille with washable filter.



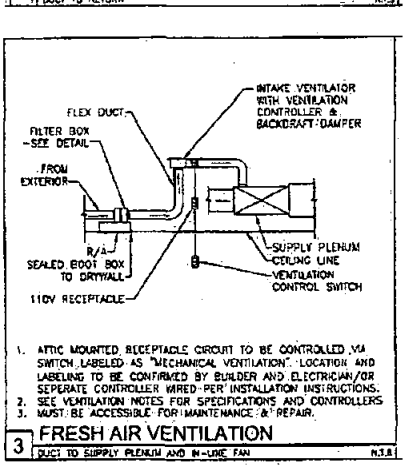
Option 2 - Bathroom exhaust fan with make-up air inlet in return air box

1. This option is identical to Option 1, with the one exception that the make-up air duct runs directly to the return air filter box with a motorized damper and filtered intake.
2. The make-up air duct shall be a minimum of 6 inches (recommended 8 inches).
3. The make-up air duct shall include a motorized damper. Outdoor air intakes shall restrict outdoor air intake when not in use. The motorized damper shall be controlled automatically and operate in sequence with the exhaust bathroom fan to allow sufficient make-up air to meet IRC/IMC minimum ventilation rates.



Option 3 - Air Intake Duct to supply plenum with inline fan

1. Inline supply fan shall meet IRC/IMC minimum ventilation rates.
2. System shall be controlled by a stand-alone controller or built-in controls by the fan manufacturer. To minimize energy consumption and reduce run times, controls are recommended to enable time-shifting ventilation away from peak heating and cooling hours.
3. The builder shall ensure the electricians properly wire the inline fan that is installed by the air conditioning contractor.
4. The air conditioning contractor shall ensure the start-up technicians program the controllers and verify the required ventilation rates.



Option 4 - Energy or Heat Recovery Ventilator (ERV or HRV)

1. Builders and their trade contractors are responsible for vetting ERV/HRV systems for meeting IRC/IMC ventilation requirements.

1/27/17