



Energy Compliance Certificate

2021 IRC/IECC - Residential

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

Permit No: _____

Project Address: _____

Builder Name: _____

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

	Inspection Phase	Results	Sign-Off by Responsible Party
REQUIRED PRIOR TO DRYWALL	1. Thermal Envelope/Insulation & Air Barrier Inspections shall be made before drywall to verify the following as required by code and approved plans: <ul style="list-style-type: none"> • <u>Insulation</u> installation (R-values), <u>fenestration</u> (U-factor & SHGC) with <u>continuous air barrier alignment</u> verified by a <u>3rd party rater</u> per Table N1102.4.1.1/R402.4.1.1. • Hot water <u>pipe insulation</u> shall be min. R-3 (1103.5.2/R403.5.2). 	<input type="checkbox"/> Pass May require more than one inspection.	_____ Company Name _____ Signature _____ Date(s): _____
	2. Duct Testing <ul style="list-style-type: none"> • <u>All duct systems</u> shall be tested for leakage by a <u>3rd party certified rater</u> (N1103.3.5/R403.3.5 and N1103.3.6/R403.3.6). Post-construction testing is permitted but <u>rough-in testing</u> is recommended to locate and repair leaks before being concealed. • <u>Building framing cavities</u> shall not be used as ducts or plenums unless ducted with sheet metal or lined with duct board and sealed. 	Duct Leakage Rate: <input type="checkbox"/> Rough-in Test <input type="checkbox"/> Post-constr. Test _____ CFM25 max. allowed _____ CFM25 measured <input type="checkbox"/> Pass	_____ Company Name _____ Signature _____ Date(s): _____
REQUIRED AFTER DRYWALL	3. Envelope Leakage Testing The building or dwelling unit shall be tested and verified as having an air leakage rate <u>not exceeding 5 air changes per hour for detached dwelling units</u> by a <u>3rd party certified rater</u> . <ul style="list-style-type: none"> • <u>Testing</u> (N1102.4.1.2/R402.4.1.2) 	Envelope Air Leakage Rate: _____ CFM50 max. allowed _____ CFM50 measured <input type="checkbox"/> Pass	_____ Company Name _____ Signature _____ Date(s): _____
	4. Whole House Mech. Ventilation Testing <ul style="list-style-type: none"> • <u>Mechanical ventilation and exhaust rate</u> shall be tested by <u>3rd party certified rater</u> with written <u>reported results</u> (N1103.6.3/ R403.6.3). • Outside air intakes and exhausts shall have <u>automatic or gravity dampers</u> (N1103.6/R403.6). • Mechanical system piping shall be insulated to a min. R-3 (N1103.4/R403.4). 	Ventilation Airflow Rates: _____ CFM min. allowed _____ CFM measured <input type="checkbox"/> Pass	_____ Company Name _____ Signature _____ Date(s): _____
	5. Hot Water Demand Circulation System <ul style="list-style-type: none"> • <u>Demand-controlled hot water circulation system</u> is required when the length of hot water supply piping from the source of water heater (e.g.- water heater, manifold, circulation loop piping) to the furthest fixture/fitting exceeds <u>50 ft. for 3/8" piping, 43 ft. for 1/2", 32 ft. for 5/8" & 21 ft. for 3/4" piping.</u> See IRC N1103.5.1.1/ R403.5.1.1 & amended N1103.5.1.1.1/ R403.5.1.1.1 for more details. 	<input type="checkbox"/> Pass	_____ Company Name _____ Signature _____ Date(s): _____

rev. 4/3/23

Compliance Statement: I certify that to the best of my knowledge the information above is in full compliance with the City of Scottsdale adopted IRC and IECC with amendments.

Permit Holder/Builder Signature: _____ Date: _____

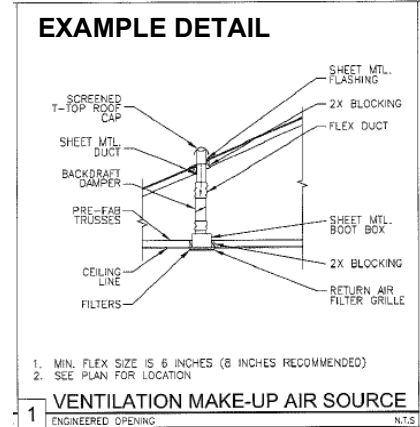


Whole-House Mechanical Ventilation Options

2021 IRC/IECC – Residential (IRC M1505)

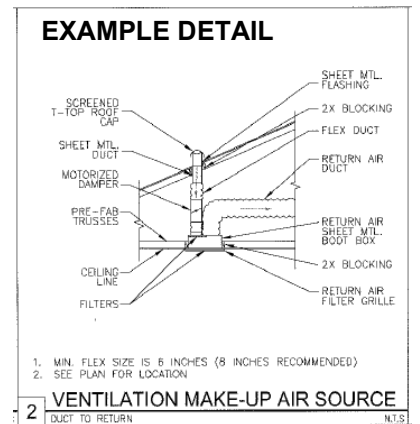
Option 1 - Bathroom Exhaust Fan

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 minimum airflow requirements per Section M1505.4.
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.



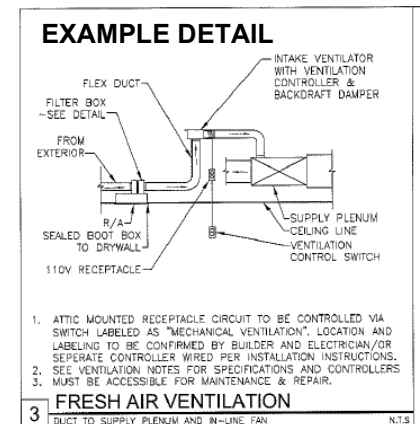
Option 2 - Make-up air inlet in return air box

1. 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 6 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 airflow rates - Section M1505.4.
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 per IRC Section M1505.4.



Option 4 – Energy or Heat Recovery Ventilation (ERV/HRV)

1. Builders and their trade contractors are responsible for sizing and installing ERV or HRV systems in accordance with IRC Section M1505.4 whole-house ventilation requirements.