

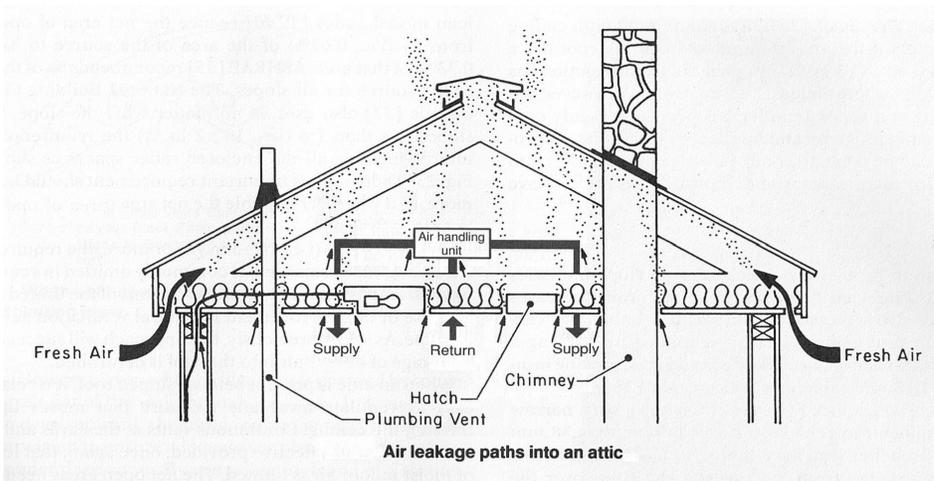
Build it back right!

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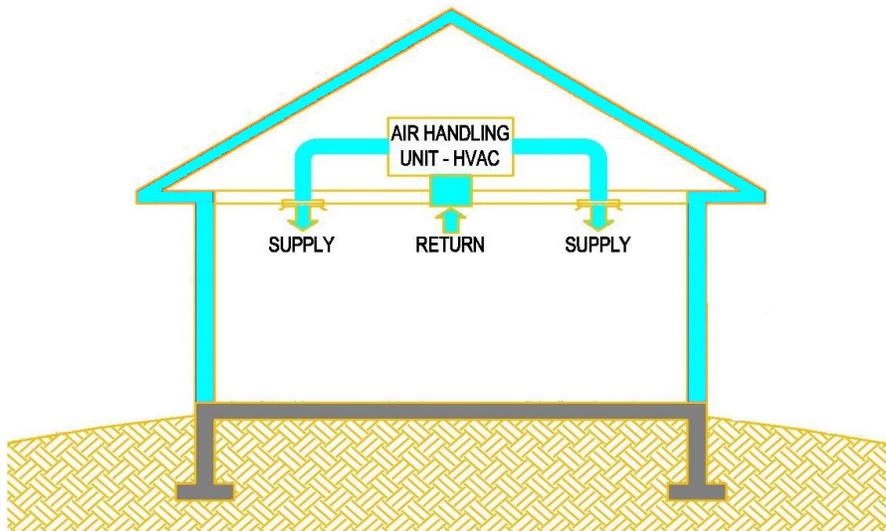


Sustainable Tip One: Cathedralized Attic

A consortium of non-profit organizations and their allies have released this as a public service



Typical Attic Now



Shading depicts the building's thermal barrier and pressure boundary which together enclose the conditioned space.

Your Attic can be — a Cathedralized Attic!!

Save 25% of your heating and cooling bills by insulating your attic right below the roof!*

Recent building science research and experience has shown that the holes in your attic floor allow airflows that waste lots of energy, these include holes in and around: electrical wiring, ducts, ceiling lamps fixtures, bathroom fans, ceiling registers and the attic access door,. This situation is more wasteful than leaving windows open while running the heater or air conditioner. It is important to understand that most types of insulation are not airflow barriers. Because it is very difficult to seal the holes in the attic floor, an effective and affordable solution is to insulate the attic with a cathedral ceiling. The attic then becomes part of the conditioned space, and leaks to the attic become internal leaks.

Reduce energy bills while you enhance comfort, health, safety and your home's durability.

See details on the other side.

What To Do:

- Seal all vents to outside and make all “attic ventilation” inoperable including: attic fans, ridge vents, gable vents, soffit vents; these openings should be repaired on both sides of the roof decking, i.e., the roof perforations and protrusions should be removed and the area re-roofed — except as noted in the last step. Carefully seal the area between the rafters at the low end of the roof. Do not remove, close-up or disable the kitchen exhaust stack, the exhaust vents for water heaters, furnaces or plumbing stacks.
- Using light-weight fiberglass or nylon cloth, drape and then staple the material to the studs of the attic gable walls and rafters of the attic ceiling to enclose the cavities between them.
- Blow high-density, high-borate-content cellulose insulation into the cavities between rafters, studs of gable walls and the areas between the joists of the attic floor that do not cover conditioned space.
- If you have a gas water heater or gas furnace in your attic or home or an attached garage, enclose the equipment in air-tight cabinets connected on the top and bottom to the outside via two 12” ducts and install digital carbon monoxide detectors in those areas (to comply with M1703 of the 2003 IRC).

What It Costs:

- The actual cost of cathedralizing your attic will depend greatly on whether the roof/attic components were recently replaced or have yet to be “fixed.” If timed with other repairs, the roof work, proper insulation installation and mechanical system integration can lead to major cost savings.
- Installation of the cellulose insulation should be done professionally. Expect the installed cost to be less than \$1 per sq foot of roof, wall or floor area. In estimating the total cost, consider that an attic with 1500 sq ft of attic floor area has less than 2200 sq ft of roof area unless the roof has a very high pitch.
- The total cost for an average attic is conservatively estimated at around \$3000.*

Benefits:

- If your AC, heating or duct system is in your attic, expect to save 25% on heating and cooling.*
- For most homes, this improvement will pay for itself in less than five years.*
- Your next air conditioner could be 40% smaller.*
- A more comfortable home during the heating and cooling seasons and even during a power outage.
- Increased resistance to hurricanes and a safer shelter.
- Roof leaks will be less likely, and when they occur, they will do less damage.
- Better protection against termites, wood-rotting fungus and fire.
- Better place for recessed lighting cans.
- Helps to keep your home from leaking, sweating and pulling in moisture, mold or pollen.
- Better and more storage and living areas because the attic will now avoid extreme temperatures.
- Code compliant, safer, healthier, more durable and more comfortable home with lower energy bills.
- More advanced energy options that can save much more energy are easier to add after this improvement.
- Be “part of the solution” rather than “part of the problem.”

At www.EnergyRater.com you can get a PDF copy of this flyer as well as additional detailed information.

- Find out how to include a radiant barrier in the insulation system for added efficiency and durability.
- Additional humidity control or fresh air may be needed.*
- Get complete directions on how to provide combustion air with the two 12” ducts.
- Learn about the processes to help you qualify for a \$2000 tax credit or a \$2000 rebate.*
- Get inspections of your home before, during and after construction to insure it is done right.

The principal author of this flyer, Myron Katz, PhD, is a New Orleans native. He has been the Energy, Moisture and Building Science Consultant to Wisznia Associates (Architects), AIA since 1997 and has worked as an energy consultant in Louisiana since 1985. Certified as a Home Energy Rater and an Indoor Environmentalist (from the Indoor Air Quality Association), he has provided continuing education training to Energy Raters for the Louisiana Department of Natural Resources. He is a Past-President of the National Energy Raters Association and co-founder of the Alliance for Affordable Energy.

*Homeowners, you should employ a Certified Home Energy Rater to confirm this information for your home.