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Building Science

Adventures In Building Science

presented by www.buildingscience.com
Headlines In 25 Years
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Cubs Out of Playoffs Again
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Have Not Won The World Series in 132 Years
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United Nations Special Committee on Climate Predicts Catastrophic Cooling
Evolution of Weatherization and Building Science......
Energy Conservation
There Is No Such Thing As A Free Thermodynamic Lunch
There Is No Such Thing As A Free Thermodynamic Lunch
Saving Energy Reduces Air Change
There Is No Such Thing As A Free Thermodynamic Lunch
Saving Energy Reduces Air Change
Saving Energy Reduces Drying Potentials
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There Is No Such Thing As A Free Thermodynamic Lunch
Saving Energy Reduces Air Change
Saving Energy Reduces Drying Potentials
Done Wrong Kills You
Done Wrong Kills The House
Done Right Magic Happens
Health and Safety
Durability
Comfort
Energy
Sealed Combustion
Control Pressures
Install Controlled Ventilation
Get Rid of Big Holes
Insulate
Maybe Save Some Energy….Maybe Not
Figure 3.14
**Leaky Ductwork and Air Handlers in Basements**
- Air pressurization patterns in a house with leaky ductwork in the basement.
Grille located high in wall on bedroom side to avoid blockage by furniture

Cavity is sealed tight, drywall glued to studs and plates on both sides

Grille located low in wall on hallway side
Hot attic air is drawn through opening around supply duct

Supply duct

Air handler is located in a room without adequate provision for return air

Return grille
Backdrafting occurs at the base of the water heater vent stack.

- Wall cavity
- Leaks in return air ducts depressurize the mechanical room
- Supply duct
- Vent
- Air handler
- Water heater
- Potential flame rollout
- Return plenum