

Santa Fe REAL ESTATE Guide

Artisan/craftsman/**builder**

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On the subject of green building

by Kurt Faust

It is the goal of "green" building to increase the efficiency of the use of materials, energy and other resources and to reduce the impact on the environment and the health of the occupants. This is accomplished for the entire life-cycle of the building through better site design, better system design, and better construction methods and materials. Green building is an essential component of the bigger overall concept of sustainability. Here are some tips in four aspects of green building:

Indoor Air Quality - The biggest pollutants are paints, stains, and sealers, as well as the adhesives and glues used in such things as particle board, cabinets, and carpet. Include systems to control, condition, ventilate, and filter the air inside the home; and make sure the systems can recover the energy (heating or cooling). Isolate the air from your garage and mechanical room from the interior of the home. Use cement-type board under wet applications like bath tile. Fix all water leaks immediately, don't let mold get started. Use integrated pest management for insect control.

Thermal Performance - Insulation and air infiltration are two of the biggest factors in how much energy is required to operate a building. The most efficient insulator is an uninterrupted wall surface or roof such as spray foam, or structural insulated panel. Also important is the solar orientation and thermal mass of the building. Maximize solar gain in the winter with south-facing glazing along the long side of the house, but protect the house from solar gain in the summer. Use enough thermal mass to absorb the heat from the winter sun and coolness from the summer nights. Efficient heating and cooling equipment and appliances have a dramatic effect on energy consumed. Use fluorescent lighting as much as possible, especially in lights that are used all the time. Solar water heaters and photovoltaic electric systems will further reduce energy consumption.

Embodied Resources - There are large amounts of energy and/or other resources used in the manufacture and transportation of many building materials. For instance, the manufacture of Portland cement used to make concrete requires a tremendous amount of heat. Compare that to an adobe made on site and baked in the sun. Also consider the amount of clean-up needed, waste generated, the recycleability of the materials, and the "hazard" to the environment and employees.



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Water Conservation - Reduce water use with water-saving dishwashers and washing machines, low-flush toilets, and low-flow faucets. Use point-of-use water heaters or hot-water recirculating loops so that it is not necessary to run the water to get it hot. Use drip irrigation with a weather-activated timer and zone plantings according to water needs. Reclaim waste water and capture rainwater.

Green buildings are more energy-efficient, healthier, and reduce the environmental impact of a structure. They can reduce some short- and long-term costs and provide a more enjoyable living solution for any new home or remodel.

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