



Building Green

by Sara Gutterman, Green Builder®

A Woman's Privilege

Women have a unique capacity for nurturing, caretaking, and intuiting. We know when our partner is having a bad day or when our child is upset. We know when our girlfriend needs a helping hand. We know how to remedy most situations with a kind word or tender touch. Now it is time for women to extend their wings of protection to our precious planet by building green.

Green building can improve indoor air quality, an issue of particular concern to women because of its link to asthma and Attention Deficit Disorder (ADD) in children, as well as heart and lung problems, headaches, and blurred vision.

Poor indoor air quality can often be linked to materials that “off-gas,” letting off toxic particles and volatile compounds into the air. ADD, for example, can be caused by overexposure to deteriorating lead-based paint or lead-contaminated dust or soil (for more information, visit www.epa.gov/lead). High temperature and humidity levels can also increase mold and mildew within a living space.

Indoor air pollutants can be reduced by:

- ✓ installing systems that control indoor air climate;
- ✓ choosing materials that do not off-gas, such as formaldehyde-free cabinets, paints with low volatile organic compound (VOC) counts, and fabrics and rugs made from natural fibers such as cotton or wool;
- ✓ implementing appropriate ventilation and filtration techniques (exchanging indoor air with outdoor air dilutes emissions from indoor sources);
- ✓ utilizing alternative heating and cooling systems that do not blow dust particles from ducts into the air, for example, radiant under-floor heating from companies such as REHAU® (www.rehau.com).

Energy efficiency is another essential component of green building. According to the Sustainable Buildings Industry Council, buildings that are planned with passive design strategies can reduce energy demand by 30-50%. (See sidebar for more information on passive solar design strategies.)

Green building materials, such as sustainably harvested wood that is certified by the Forest Stewardship Council (www.fsc.org/en/), insulated concrete forms (ICFs) from companies like AMVIC Building Systems (www.amvic.system.com), or structural insulated panels (SIPs) from companies like Insulspan (www.insulspan.com), can reduce the impact that a home has on the environment while increasing its health and safety. They can also reduce costs (using ICFs, for example, can create 30-50% savings on energy bills according to Jennifer Usher, Marketing Manager for AMVIC).

TIPS to increase the health, safety, and durability of your home while protecting the environment:

■ When choosing your home, consider its proximity to public transportation, your work, schools, daycare, shopping, activities, and outdoor recreational venues. By reducing the distance you need to travel throughout the day, you can decrease the impact that you have on the environment (by using less oil and producing less air pollution).

■ Look for low-impact and healthy products such as bamboo flooring, natural fiber carpeting, natural plasters, low VOC paints and stains, natural cleaning products, as well as non-synthetic, natural furnishings and accessories (such as bedding and linens). By doing just a little homework, you can determine whether products have been harvested and created in a sustainable manner and if they will off-gas dangerous toxic particles in your home. Also, in certain climates, you may want to consider using products that inhibit the development and spread of mold, mildew, and other indoor contaminants.

■ In addition to using organic and natural products whenever possible, select products made with high levels of salvaged (natural stone, lumber), recycled (fly ash in concrete), or agricultural byproduct (wheatboard and linoleum) content. These types of products reduce resource demand and keep waste out of landfills.

■ Choose products that are durable and low-maintenance, which are desirable because they need to be refinished and replaced less often, saving money and energy in the long-term.

■ Try to use products that are produced locally or regionally. Local products require less energy and fewer resources during the production process.

■ To decrease energy use, incorporate renewable energy systems, high-efficiency appliances, and building components that reduce heating and cooling loads.

■ Use low flow plumbing devices and landscaping irrigation systems to reduce water use.

■ Enhance the health of your home by bringing the outdoors inside. Instead of relying on conditioned air, optimize natural ventilation whenever possible, and use natural lighting where appropriate.

■ Think about the companies from which you purchase products and technology. Do they have conscious, resource efficient manufacturing processes? Do they actively pursue beneficial environmental and social practices? Your purchasing power is more important than you may know. You have the ability to shape markets through consumer demand.

By building green, we can directly address the health of our families, our communities, and our planet. These components are inseparable. They are part of a delicately balanced system, and an ailment in one of them causes the entire system to become dysfunctional. Be a responsible steward and treat the planet like she is your best girlfriend. If you do, I promise that you'll feel tremendously satisfied. And you'll quickly learn that building green is not an inconvenience. It's a privilege. 🇺🇸

For more information on green building, visit www.TheGreenBuilder.com or contact Sara at sara@thegreenbuilder.com.

BELOW: A large window and a skylight above the island provide lots of natural light. Cabinets are made of alder (considered a renewable hardwood) and are formaldehyde-free.

BELOW: This bathroom has natural plaster on the walls and natural stone tiles on the floor, tubdeck, countertop and backsplashes. It also takes advantage of natural lighting and ventilation.

photos courtesy of Sara Gutterman



Ways to incorporate passive solar design:

- Remember masonry materials (tile, stone, or brick floors and walls) will absorb heat from the sun during the day and slowly release it overnight. Thermal mass will store excess heat gain, prevent the interior space from overheating, and moderate heat delivery to the building.
- If it is within your control, orient your home on an east-west axis with south facing glazing, allowing sun to enter the building between the hours of 9:00 a.m.

and 3:00 p.m. during the heating season. (This may be impossible if you are building in a subdivision with pre-determined lots.)

- Locate buildings to take advantage of beneficial site attributes.
- Shade appropriate windows with overhangs, porches, and landscaping (vines, trees, etc.). These features can help to cool a structure naturally and reduce unwanted solar gain.
- Consider window placement and choose windows with superior R-values and low-emissivity coatings. During the

heating season, a well-designed direct gain system can capture and use 60-75% of the heat that strikes the windows.

- Maximize ventilation with operable windows and other design features that provide airflow throughout the home. Not only does this reduce space-cooling demands, but it can also greatly contribute to improved indoor air quality. If a room is designed so that it can only have windows along one wall, it is better to have two widely spaced windows, as opposed to one large window.