



Green Building¹

What is “Green Building”?

“Green building” is the practice of constructing energy efficient and sustainable buildings in a way that reduces impact on the local and global environment and creates environmental sustainability. To accomplish “green” building, environmental and energy impacts are best addressed prior to the start of construction and as a collaborative effort with the owner, developer, building designer, engineer, contractor, and building department.

“Green” Materials and Products

Materials and products promoted as “green” should be evaluated in terms of benefit to the environment and contribution to energy conservation. Many companies that manufacture or sell “green” products have websites providing descriptions and specifications of these products. Government and private organizations also maintain databases of “green” products. Many products and simple building renovations (such as changing to ultra low-flow toilets and Energy Star™ fixtures and appliances) are easy and inexpensive to install. Some of these products cost more than their non-energy or resource efficient counterparts, but many produce much greater savings over time.

Options

The best time to consider and include features of “green” building is at the point of design and planning, and evaluation should continue throughout the project. For existing structures, many of the features and benefits of “green” building can be achieved with minor or routine changes or at the time of renovation. Elements such as energy and water efficiency and conservation, lot choice, construction site management, interior health conditions, building materials, and disaster mitigation all play a role in building “green.” To start, there are many design and construction options that support green building, including:

- **Buying forest certified wood** - Verifying that forests are well-managed and ensuring that certain wood and paper products come from responsibly managed forests.
- **Buying ultra-low flow toilets and/or waterless toilets and urinals** – Using these appliances will aid in water conservation and save money on your water bill.

- **Buying heating devices that heat floor surfaces** – This keeps the home warmer than conventional heating and air conditioning units and is more cost effective and energy efficient.

- **Buying materials made from post-consumer waste products** – Buying items such as carpeting made from recycled plastics or countertops made from recycled glass are among the creative ways to conserve.

Energy Conservation

Consideration of energy conservation during the design phase is critical and should include components and features such as:

- High efficiency and properly sized heating and air-conditioning systems and equipment
- Passive solar space heating and day-lighting
- Energy Star™ Advanced Lighting Package (ALP) and appliances

Water Conservation

The demand for water is a growing issue, but there are a number of steps we can take to conserve this valuable resource, including:

- Low-flow water fixtures
- Gray water reuse (waste water reuse from bathtubs, showers, washing machines, etc.)
- Rainwater harvesting
- Reclaimed water reuse for irrigation
- Xeriscape landscaping

Lot Choice

Some factors for consideration:

- Purchase in a certified green community
- Site within quarter mile of basic community resources
- Site within quarter mile of mass transit
- Site lot construction that allows passive solar design

Site

Site selection considering existing natural resources, including:

- Native trees and plants
- On site waste management
- Erosion control and topsoil preservation
- Good drainage

Health Considerations

- Combustion by-products capture and control

¹ **DISCLAIMER** - This piece is intended to give the reader only general factual information current at the time of publication. This piece is not a substitute for professional advice and should not be used for guidance or decisions related to a specific design or construction project. At a minimum, you should refer to any updated laws, rules, codes, and regulations for requirements applicable to your specific project. This piece is not intended to reflect the opinion of any of the entities, agencies, or organizations identified in the materials and, if any opinions appear, are those of the individual author and should not be relied upon in any event.

- Moisture control, including properly sized heating and air-conditioning systems
- Ventilation
- Volatile organic compound source control (VOCs) (materials such as paint)
- Ease and efficiency for cleaning
- Use of daylight and solar passive design

Materials

- Low VOC building components
- Construction waste reduction
- Use of renewable resource materials
- Use of recycled/reused materials
- Durability (to increase product life)
- Sustainability
- Green demolition for material resale, reuse, recycling

Disaster and Other Damage Mitigation

Building “green” includes protecting property from natural and other disaster damage:

- Storms (wind, rain, storm surge, lightning)
- Flood
- Fire
- Termite or other infestation

CAUTIONS:

Some “green” options may not be allowed for either residential or commercial use. Professional expertise is recommended before making any purchases or commitments.

Some methods or alternatives may be climate-specific or useful only in certain seasons or conditions. For example, passive solar methods that work well in Arizona or New Mexico may be insufficient for year-round use in Florida. Some alternatives may only be feasible if used in conjunction with other, possibly more traditional, methods. Professional expertise is recommended to determine applicability and feasibility.

NOTE: The 2008 Florida Legislature passed House Bill 7135, chapter 2008-227, Laws of Florida, relating to energy, that, among other things:

- Transfers powers and duties to a newly created Florida Energy and Climate Commission in the Executive Office of the Governor
 - Requires the Florida Department of Management Services to develop the Florida Climate-Friendly Preferred Products List
- New information, including websites and other contacts, should be made available through www.flclimatechange.us

Resources - Government Agencies/Offices:

Energy Star™, 1-888-782-7937, <http://www.energystar.gov/>

Florida Governor’s Energy and Climate Team, 1-850-488-4441
www.flclimatechange.us

Florida Department of Community Affairs, Florida Building Commission, 1-850-487-1824
<http://www.myfloridagreenbuilding.info/index.htm>

Florida Department of Environmental Protection, 1-850-245-2118
www.dep.state.fl.us/

Florida Department of Health, Division of Environmental Health
1-850-245-4250, www.doh.state.fl.us/environment/index.html

St. Johns River Water Management District, Florida Water Star™ Program, 1-386-329-4500, <http://www.floridawaterstar.com/>

U.S. Department of Energy, Building America, 1-877-337-3463
http://www.eere.energy.gov/femp/renewable_energy/renewable_purchasepower.html

U.S. Environmental Protection Agency, WaterSense™ Program
1-866-987-7367, <http://www.epa.gov/WaterSense/index.htm>

Other Resources:

Arizona Solar Center (AZSC), passive solar space heating
1-602-952-8192, <http://www.azsolarcenter.com/technology/pas-2.html>

Building Green LLC Publishing, product guides and reviews
1-802-257-7300, <http://www.buildinggreen.com/>

Deconstruction Institute, 1-941-358-7730
<http://www.deconstructioninstitute.com/>

Florida Green Building Coalition, 1-850-894-3422
<http://www.floridagreenbuilding.org/db/>

Florida’s Showcase Green Envirohome, 1-321-615-7847
www.fsge.net
<http://www.fsge.net/documents/FSGE%203-11-2008%20Press%20Release.pdf>

Forest Stewardship Council, Sustainable Forestry
1-703-438-6401, www.fscus.org

Green Building Initiative, Green Globes, 1-877-424-4241
www.greenglobes.com
<http://www.thegbi.org/commercial/about-green-globes/>

International Code Council, International Energy Conservation Council, 1-888-422-7233, www.iccsafe.org

National Association of Home Builders (NAHB) Research Center, ToolBase Services, 1-202-266-8200
<http://toolbase.org/TechSets/path-green-building>
<http://www.toolbase.org/TechInventory/ViewAll.aspx>

National Institute of Building Sciences, Building Enclosure Technology and Environmental Council, Whole Building Design Guide, 1-202-289-7800, <http://www.wbdg.org/> / <http://www.nibs.org/betec.html>

Northwest Science and Technology, *Issue Winter 2006: Going Green: New Approach to Sustainable Building*, 1-206-616-4826
www.depts.washington.edu/nwst/issues/index.php?issueID=winter_2006&storyID=785

Southface Energy Institute, 1-404-872-3549
www.southface.org/solar/index.htm

United States Green Building Council (USGBC), Leadership in Energy and Environment Design (LEED), 1-800-795-1747
<http://www.usgbc.org>

University of Central Florida, Florida Solar Energy Center (FSEC), *How Home Design Contributes to Energy Efficiency*, 1-321-638-1000
<http://www.fsec.ucf.edu/en/consumer/buildings/homes/designs/index.htm>

University of Florida, Green Building, 1-352-392-1971
http://solutionsforyourlife.ufl.edu/sustainable_living/building.html
Powell Center for Construction and Environment, 1-352-273-1172
<http://www.cce.ufl.edu/>

University of West Florida, Best House, 1-850-474-2300
<http://www.uwf.edu/besthouse/>

Don’t know where to go for an answer to a specific question?
Contact: Building A Safer Florida, Inc. 1-850-222-2772 or
www.buildingasafeflorida.org

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