

## WHAT DOES GREEN MEAN? THOUGHTS FROM AN ENGINEER

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You, a future new home-owner, know what you want. You have educated yourself about all the issues facing you regarding new home construction. You may be concerned on a large scale with our earth's depleting resources, or may be looking for a clean, healthy house to raise your family in. Fuel and heating prices keep rising, materials cost more, and what is this "green" thing that's on everyone's tongue? Is building green just a buzzword, or is it a vital necessity in our changing world?

Building green, or sustainable as the movement is also referred to, means thinking about our actions and their consequences. In a pure and literal sense, a sustainable house would be one that is built from materials on the owners property, does not need any outside resources to function, and does not deposit anything beyond the boundaries of that property, while still maintaining its purpose. This is not practical, or even possible, in our non-hermitic world (not many of us are hermits). In consideration of the larger issues facing us, a broader, more appropriate definition for sustainable means meeting the needs of the present without compromising the ability of future generations to meet their needs. Our "piece of property" was best seen by the crew of Apollo 11, in the famous Earthrise photo, which truly showed all of us that our little ball is finite and all that we have right now. Robert Gilman said: "In its broadest scope, sustainability refers to the ability of a society, ecosystem, or any such on-going system to continue functioning into the indefinite future without being forced into decline through the exhaustion or overloading of key resources on which that system depends."

Those are some very large issues facing us regarding construction of our new home, when all we thought we had to deal with is the color of our carpet. According to the US Department of Energy (DOE), "more energy is used in buildings than in any other sector of the US economy". It's commendable that you have your eye on that new hybrid car, ride your bike to work, or turn down your thermostat. When you build your new house, take the correct measures to truly curb the "hungry beast". Take advantage of, and learn more about, the new innovations in "whole building" design. A tighter, better insulated envelope (the exterior walls and roof) can lead to a smaller heating/cooling

load. Paying more attention to room use and window placement allows "daylighting" to replace electricity to light our daily activities. Utilizing new design techniques, such as Sarah Susanka's "Not So Big House" ideas can aid in reducing the footprint our homes square footage makes: on our budgets; on the resources to build and run the home; on the earth's delicate ecosystems. Continue taking the steps necessary to ensure our children a home, our earth, to live in/on for generations to come.

The US DOE Building Technologies Program has ideas to help your home use 30% less energy than a comparable home. In a few years, DOE's goal is to help us build net-zero energy homes, operating 60-70% more efficiently, and utilizing renewable energy sources for the remainder. Many of those methods are in place now, just waiting for you to take the step.

Being aware of the issues, and accepting responsibility for our part in the problem, and solution, is a big start. Crown Jade Design and Engineering, Inc., can help in your new home design. While we don't have all the answers, together we can explore these new innovations in design and construction, and find the answers. We are experienced in new and/or alternative construction methods, such as insulated concrete form (ICF), structural insulated panels (SIPs), passive solar, healthy house, optimum value engineering (OVE) and any other system you want to explore. We work with you and your design ideas to put your plan on paper (including 3D views), review the plan for structural and code issues, and produce all the architectural plans necessary to get a building permit. Rather than sending your plan out to an engineer, who may be unfamiliar with, or unsympathetic to, your preferred construction method, we can analyze the structure and produce all engineer stamped plans also needed to get a building permit. We are available to your builder for consultation as he needs, when construction starts.

Call us today so that we may discuss your needs, and how we can help meet them. We will sit down with you, listen to your needs and ideas, and start you on the road to a more sustainable future.

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