



# Alberta Green

## Builder Adds Green Features to Spec-Built Housing

### BUILDER PROFILE

David Hassin of Terra firma Building is committed to the design and construction of new homes that fit into their neighborhoods, are a good value, are functional and attractive, and include green features. As a speculative builder, he must predict which green features will appeal to a future buyer, and what a buyer would be willing to pay for such features. He has to balance his personal values and support for the environment with maintaining a successful and profitable home building business.

Dave starts with house designs that draw from the Craftsman style of Portland's bungalows, while the floor plans accommodate more modern lifestyles. The houses are space-efficient; this house includes three bedrooms in 1600 SF of floor area. By comparison, the average new house is about 2150 SF in size, so Dave's houses will use fewer materials to build and less energy to operate over their entire lifetime.

Dave worked closely with the Portland General Electric 'Earth Advantage' program. Glenn Waer, PGE Energy Specialist, advised him on energy efficiency, indoor air quality, and resource-efficient materials. Glenn also verified the proper installation of energy and air quality measures during construction. He tested the tightness of the house and its ductwork, to make sure that conditioned air would not leak out. This extra quality control will ensure the resident greater comfort and lower energy bills.

Building a green home is a team effort, so Dave works closely with specialty trades and vendors. For example, when they select materials, they know to choose safer, low-toxic alternatives that won't introduce hazardous pollutants. The heating contractor told Dave about a fresh air ventilation system that could be added to the furnace for a low extra cost. Few Oregon homes have this feature, so Dave is offering his buyers extra value and a healthier home.



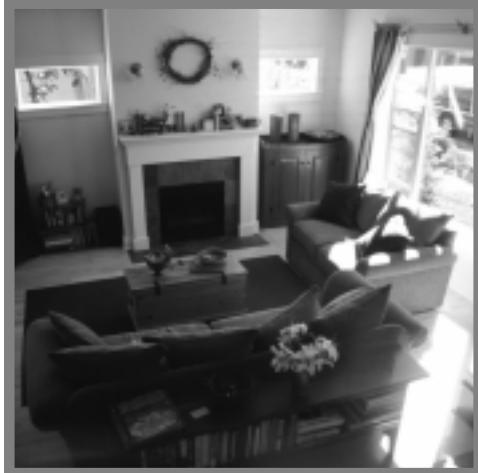
Dave Hassin

photo: Mike O'Brien



One of the G-Rated houses at Alberta Green

photo: Mike O'Brien



Daylight streams into the living room

photo: Mike O'Brien

### AT A GLANCE

<b>Project Owner</b>	Ajay & Brooke Date
<b>Location</b>	5036 NE 30th Avenue
<b>Project Type</b>	New Spec-Built SFR
<b>Completion Date</b>	August 2001
<b>Sale Price</b>	\$229,000
<b>Cost of Green Measures</b>	\$3,500
<b>Prime Contractor</b>	Terra firma Building, Inc.
<b>Designer</b>	Thomas Shaw/Terra firma
<b>Vendors &amp; Suppliers</b>	Environmental Building Supplies, Champion Heating, Modern Plumbing, Milgard Windows
<b>Green Materials Used</b>	Green River certified maple flooring, Marmoleum Linoleum, Wirsbo 'PEX' polyethylene plastic plumbing, high performance windows, Broan QT bath fans, Hardiplank siding, Sherwin-Williams low VOC primer & paint, Image low VOC recycled PET carpet

Office of Sustainable Development · Green Building Division

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## **LESSONS LEARNED**

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### **What were your successes? What helped you achieve them?**

This house sold quickly to a young family moving up from an older home in the neighborhood. A single mother with two children and an 'empty nest' couple purchased the other two houses. This cross-section of buyers affirms the marketability of a house that offers this mix of design, location, amenities and environmental features. These buyers already have some awareness and education about the value of green features; whereas it might be harder to market in the suburbs. "Change will follow these houses" as the market adopts green ideas and practices.

### **What did you decide not to do? What were the reasons?**

In the first house, I installed carpet upstairs instead of wood flooring, but in the other two houses put in the wood on upper floors.

### **What were barriers or problems you encountered?**

I could not find cabinets made with formaldehyde-free materials that were affordable.

### **Where did you get information?**

About fifteen years ago I built a house for a chemically sensitive client, and at that time, I extensively researched the health effects of building materials. However, It takes a lot more thought to build a green home—changes in the design, more evaluation of materials. I got most of my information from vendors, other building professionals, programs like Earth Advantage, and I'm a member of the Northwest Ecobuilding Guild.

### **What was your experience with contractors? With vendors and suppliers?**

Specialty trades, including painters, plumbers, electricians, insulators, heating and framing were very cooperative. The framers did all their cutting for the three houses from a central work station, to maximize efficient use of wood and minimize waste.

### **Which green measures cost extra? Why did you think they were worth extra cost?**

The flooring cost extra. I think it was worth it though because it comes from a forest that is sustainably harvested and well managed, so it can continue to supply wood and provide jobs for generations to come. Another item that cost more was the fresh air ventilation system. This was worth the extra cost because it will ensure the house always has fresh air, even in winter when it's closed up, yet will stay comfortable. The furnace also cost extra, it's a 92% efficient furnace, which will provide better comfort, energy efficiency, and quieter operation. Finally, the paints were more expensive because they are safer, healthier, odor-free paints which don't load up the house with pollutants. The costs were a little extra - but the long term payback is priceless.

### **What would you like to tell others about your experience?**

Building green does require extra commitment and effort, but it's definitely possible, and it gets easier the more you and your team learn.

### **What would you not do again or do differently?**

I'd like to find out about new types of structures like the foam-core panels or the concrete-filled forms and how practical they are. In future projects I'll be looking for ways to include building materials and products that are green.

### **What were your most important environmental goals?**

To show that it is possible to be sensitive to the environment and to the health of customers and still have a successful product and business.

### **Follow-up Information:**

Take an Earth Advantage 'home tour' at [www.earthadvantage.com/main\\_benefits.asp](http://www.earthadvantage.com/main_benefits.asp).