

## VPIS Benefit Green Remodeled Home and Garden Tour

Welcome to our green home. There are many ways to approach a green remodeling project. We looked at the following criteria: 1) is there a green, environmental or low impact product or service available? 2) has the product or service been tested and tried for considerable time? 3) is it easy to maintain and 4) what are the cost parameters.

When approaching a project of this size you can go down many roads as to what is environmental and what is not. We could have scrapped the house and put up a hay bale house with a green roof but then we would have disturbed the local environment, put in over two tons of mass into landfills and released many toxins into the environment. The house also would not have fit into the look of the neighborhood.

Using the four criteria above, we wanted to create a house that was comfortable and efficient for everyday living, for entertaining, and for working (the homeowners work from home 75% of the time) — all fitting into a building form that compliments the architecture of the neighborhood. Design, style, and feel of the house were important. We were very fortunate to find a local design-build firm that not only wanted to embrace environmental design but take it to the next level while maintaining a craftsman style home. We want to thank Carnemark and their team for contributing countless hours to researching the products and working with many trades people on educating them on green alternatives to providing and installing items in the home.

### Key Design Aspects:

- No expansion of the footprint to maintain the trees around the house
- Roof line built to support solar panels
- Work office area situated on south facing for most sunlight
- Central flow shaft for air circulation with whole-house fan
- No windows on northern (colder) facing wall and fireplaces put in for additional heating.

After one year of design and reviewing green products and services, we were ready to begin. The first step in the process was gutting the house, which was deconstructed rather than demolished. Over 80% of the house was donated to Habitat for Humanity and reused. There are many deconstruction services listed on the City of Falls Church website.

After viewing the house, we invite you to talk with the many green vendors we have on site. These include:

Carnemark Systems and Design  
Universal Floors  
Switch On Energy  
J&J Seamless Gutters  
FSC Certified Millwork

Pella Windows  
JNR Landscaping  
JMG Cabinets  
NOVA Spray Foam Insulation

We want to thank all of these vendors for their participation in our project and being with us today. We want to thank you for your interest in green remodeling and supporting the Neighborhood Tree Program with your ticket purchase.

## **Main Floor**

Paint: Benjamin Moore, Eco Spec (low VOC). Furnished and installed by CLI Painting and Home Improvement.

Fireplace mantels, custom columns, and corbels: FSC certified wood. Fabricated by Gordon Albert Millwork and Design.

Furniture – It is tempting to buy all new furniture when you have a new home. We found a wonderful furniture restorer to diminish our need for new furniture. Bethesda Restorations, Gaithersburg, MD. 301-417-2505.

Rugs by Davis and Davis Rugs of Tennessee, purchased along with the curtains through Gilded Manor, Fairfax, Va.

Flooring: Salvaged hardwood (first floor) installed by Universal Floors, Inc. Universal Floors, South Lynn, 4625 41st St, NW, Washington, DC 20016,(202) 537-8900 [south@universalfloors.com](mailto:south@universalfloors.com)

Toilets: Caroma, Caravelle one-piece, dual flush. Two different buttons, for the different uses. 0.8 and 1.6 gallons of water, depending on the flush. This single innovation with its Half Flush and Full Flush technology can reduce water usage by up to 67% compared with the traditional toilet that uses 2.9 gallons in a single flush. Supplied by Fergusson Enterprises. (We love them!)

Appliances: Supplied by Appliance Distributors Unlimited. All appliances with the exception of the Viking stove are Energy Star rated.

Kitchen Floor: Marmoleum – Pressed Linseed Oil

## **Second Floor**

Master Bathroom

Tile: Oceanside Glasstile, Tessera, Spruce #36 (master bath shower) supplied by Architectural Ceramics. Terra Classic, Peridot (master bath floor) supplied by DAL Tile.

Bamboo Bath cabinets: Fabricated by JMG and Associates. Marcia Gorski, 6508 Appletown Rd, Boonsboro, MD 21713 301-416-2883 <http://www.jmgcabinets.com>

Flooring: Bamboo furnished and installed by Universal Floors, Inc. Universal Floors, South Lynn, 4625 41st St, NW, Washington, DC 20016,(202) 537-8900 [south@universalfloors.com](mailto:south@universalfloors.com)

Fireplace mantels, custom columns, and corbels: FSC certified wood. Fabricated by Gordon Albert Millwork and Design.

Toilets: Caroma, Caravelle one-piece, dual flush. Supplied by Fergusson Enterprises.

## **Basement**

Flooring: Cork (basement) furnished and installed by Universal Floors, Inc. Universal Floors, South Lynn, 4625 41st St, NW, Washington, DC 20016,(202) 537-8900 [south@universalfloors.com](mailto:south@universalfloors.com)

Paint: Benjamin Moore, Eco Spec (low VOC). Furnished and installed by CLI Painting and Home Improvement.

## **Exterior**

Vinyl Siding Certaineed, Cedar Impressions. Furnished and installed by J.J. Seamless Gutters. <http://www.certainteed.com/buildingresponsibly/siding/>

Metal Roof: Englert, PermaColor 3500, Patina Green. Furnished and installed by J.J. Seamless Gutters. <http://www.englertinc.com/roofing-colorss.aspx?Page=1> J&J Seamless Gutters, 1061 Taft Street, Rockville, MD 20850, (301) 231-3750

Windows Pella supplied by K.C. Company

## **Insulation, Heating, Cooling and Energy**

Insulation: Demilec Sealection 500 Spray Foam (attic and exterior walls) furnished and installed by NOVA Spray Foam; Ultratouch Cotton insulation (interior sound insulation around baths) [www.greendepot.com](http://www.greendepot.com) ; Soybean blown-in insulation (basement) furnished and installed by NOVA Spray Foam. NOVA Sprayfoam Insulation LLC, Ken Thacker, P.O. Box 6131, Leesburg, VA 20178,(703) 404-2224 [ken@novasprayfoam.com](mailto:ken@novasprayfoam.com)

Whole-house fan This was installed to lower the need for air conditioning by drawing up the cool air in the basement into the rest of the house and the hot air resting in the second floor out. This in combination with the insulation keeps the house comfortably cool. Tamarack Technologies, HV1600GOLD (fan with motorized insulation panels that keep it sealed when off). HVAC equipment: (2) units total, 16 SEER efficiency Carrier units. Furnished and installed by Argent Heating and Cooling.

Fireplaces Thermoglow fireplaces were installed to replace mason fireplaces. These fireplaces are set on a thermostat to warm up the room to a specific temperature and then turn off.

Compact Fluorescent Lights Throughout most of the house, the lights have been changed to compact fluorescent lights. These lights are recessed and some are dimmable. While compact fluorescents have been around for awhile, recessed and dimmable compact fluorescents have not, so we are still trying out light bulbs to find those that will work in a recessed fixture. Light bulbs: # FC23R4027DIM and # FC15R3027DIM ([www.1000Bulbs.com](http://www.1000Bulbs.com) ). Various bulb sizes ([www.e3living.com](http://www.e3living.com))

Tankless Water Heater The tankless water heater has saved us a lot of room and energy. Since the kitchen and master bath are on the opposite side of the house from the water heater, a 5 gallon water heater was installed with a circulating pump to provide instant hot water. Takagi tank-less water heater: Supplied by T. Somerville.

## Solar Power

The system is intertied with Dominion power so that when the system is producing more power than we need it is being sold back to Dominion Power. This required filling out an application with Dominion Power and when approved an intertie meter was connected to the house. There is also a three day back-up battery in case of losing power. This system is connected to four critical outlets in the house and not the whole house.

The system was installed by Chesapeake Solar but they were not able to join us today. We are very grateful to Chris Graves of Switch Energy to join the tour to answer questions about solar and wind energy.

The components include: 3.424 kW System with a Grid Intertie and a three day back-up, PV Modules and Make: 18 Evergreen 180; Inverter Make and Model Outback VFX 3648-1, Sunwize Battery Back-Up.

## Garden

The garden has been transformed over the last 10 years. It originally contained a lawn in the front yard as well as most of the back yard. An asphalt driveway and parking pad took over a third of the back yard. There were also drainage issues due to the slope of the land and the street. There are two areas of the garden which are being converted to vegetable and fruit growing areas as we move toward being locally sustainable in our food supply.

Permeable pavers were installed to remove the remaining asphalt on the property and to alleviate the drainage issue. Permeable Pavers, Techno Bloc Permea Jeff Michaelis, JNR Landscaping, 703-304-5494

Composting: For more than 6 years, kitchen waste has been composted using an Envirocycle to create compost as well as compost juice. Both are used to augment and enrich the garden and soil. [www.envirocyclesystems.com](http://www.envirocyclesystems.com)

Cisterns Two 500 gallon cisterns collect rainwater to water the garden. Another two cisterns will be installed in the front of the house. While large, the cisterns only water about 20% of the garden. Used storage tanks of various sizes and shapes are available at Polyprocessing in Winchester VA. [www.polyprocessing.com](http://www.polyprocessing.com)

Thank you for your interest in green remodeling and being with us today! We invite you to visit the Village Preservation and Improvement Society website for more information on ways to better our community and environment. [www.vpis.org](http://www.vpis.org).