

TRADITIONAL HOME BEAUTIFUL AND THOROUGHLY "GREEN"

Project Goal: Produce a Healthy Environment, Mindful of Sustainability and Tailored Design

PROJECT BACKGROUND:

Located in the Spring Valley area of Washington, D.C., this 1940's Colonial Revival house is in the midst of a complete gut-rehabilitation. Rather than demolish the home and send it to the landfill, the project team and owners chose the "green" approach: to renovate and add onto the home to make it liveable for the family and sensitive to the environment.

The design shows that traditional design aesthetics can be respected and maintained while creating a modern home that:

- uses less energy and natural resources
- generates less waste
- provides a healthier indoor environment for the occupants

This project will be one of the first traditional, high-end residences designed and built "green" in Washington, D.C; and will be one of only four registered single-family LEED® for Homes projects in the district.

STRATEGIES:

A "green" home employs construction quality and also pays special attention to indoor air quality, use of renewable resources and the conservation of water and energy.

The design team uses traditional interior and exterior details executed with modern materials that are sustainable, and durable. These materials include: Hardieplank® cementitious siding and Ecostar® synthetic slate roofing for greater lifespan and reduced maintenance. The recycled materials used are reclaimed brick, reclaimed hardwood flooring, reusing existing interior doors and wood paneling. Other sustainable strategies utilized in the project include:

- All possible materials removed from the existing house are being recycled.
- FSC Certified wood for the built-in cabinetry.
- The majority of the existing interior plaster walls are left intact.
- All exterior walls above grade are a combination of soy-based spray foam insulation and a layer of rigid insulation.
- All windows and exterior doors are new double-paned, argon-filled, low-E glass.
- Recycled fly-ash was used in the concrete for the new foundations.
- All hot water pipes and ductwork will be insulated.
- Permeable Pavers will be used for the new driveway to reduce storm water runoff.
- Wiring for a future photovoltaic system
- The use of Zero-VOC paints
- Rainwater Storage System to augment garden waterings

DESIGN AND LAYOUT:

The historically-sensitive addition resembles a home that has been added onto over time with filled-in porches and varying roof pitches. The existing central foyer leads to the original entertaining rooms and also connects to the new addition. The second floor layout was substantially retained and added to. The basement includes recreational rooms, a guest room suite, and the mechanical room, which houses the sophisticated components of the sustainable energy management systems. For example: the internal components of the geothermal system and hot water re-circulator.

"The home is designed as a synthesis of refined traditional aesthetics together with sustainable practices, high indoor air quality, low energy use, and responsible resource-management."

Ankie Barnes, Principal, AIA, LEED® AP



Architect:
Barnes Vanze Architects, Inc.
Builder:
Nash Construction
Landscape Design:
LandArt Design, Inc.
LEED for Homes Provider:
Southface Energy Institute

ABOUT BARNES VANZE ARCHITECTS

We are a collaborative architectural firm designing one-of-a-kind homes and institutional buildings for discerning clients. We are sensitive to client needs, context and sustainability.



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GREEN HOME RENOVATION

Sustainable Characteristics:

ENERGY STAR RATINGS

Appliances
Light Fixtures
Exhaust Fans
Ceiling Fans
Windows
Exterior Doors
Mechanical Equipment

TOXIN-FREE BUILDING MATERIALS

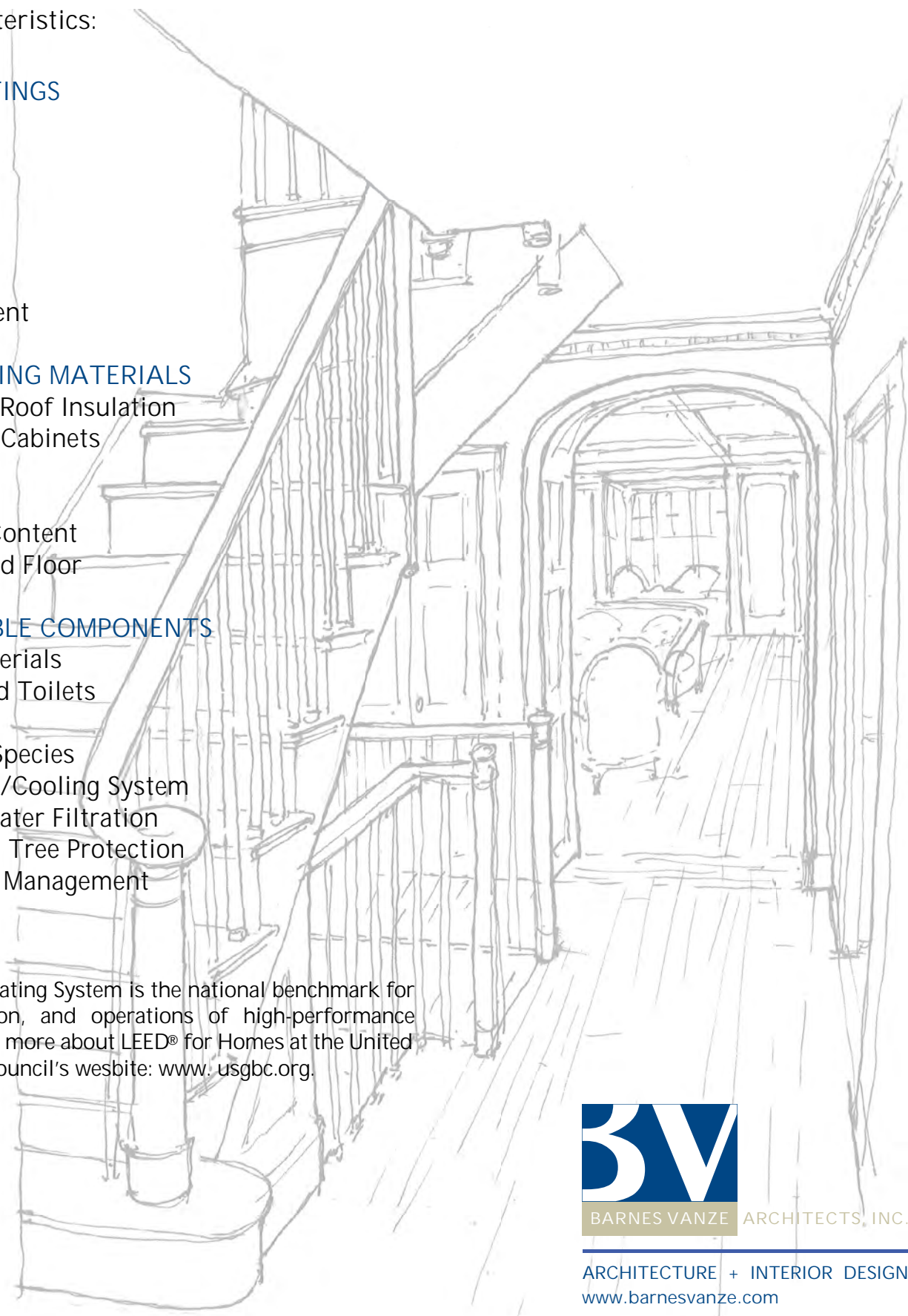
Soy-Based Wall and Roof Insulation
FSC-Certified Wood Cabinets
Zero-VOC Paint
Green-Label Carpet
Tile with Recycled Content
Reclaimed Hardwood Floor

OTHER SUSTAINABLE COMPONENTS

Locally Sourced Materials
Efficient Faucets and Toilets
Efficient Irrigation
Non-Invasive Plant Species
Geothermal Heating/Cooling System
Extensive Air and Water Filtration
Erosion Control and Tree Protection
Construction Waste Management

ABOUT LEED®

LEED® Green Building Rating System is the national benchmark for the design, construction, and operations of high-performance "green" buildings. Learn more about LEED® for Homes at the United States Green Building Council's website: www.usgbc.org.



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