

## Bacon-Brenes Home

Portland, Oregon

### PROJECT NAME

Bacon-Brenes Home

### LOCATION

4057 NE 14th Avenue, Portland, OR

### BUILDING TYPE

New construction, 2002

### USE

Single family, detached

### DESIGNER/ARCHITECT

Andre DeBar

### BUILDER

Dave Heslam, Coho Construction

### RATING

- None

### AWARDS

- 2003 National Green Custom Project award

### DESIGN FEATURES

- Rastra blocks
- Solar and radiant heating
- Recycled & salvaged materials en masse
- Passive solar design
- Roof overhangs for shading in summer



This home was built on a previously developed site in the Sabin neighborhood. It is within walking distance of the lively NE Alberta Street area, known for its variety of art, music and food. Located in a dense area with great walkability, this allows for a car free life style and provides convenient public transportation and bicycle lanes.

The owners focused their building strategies around what was environmentally sustainable, using as many salvaged and recycled materials as possible and implementing strategies for rainwater harvest. The result is a home designed with passive solar and built with Rastra Blocks and an extensive water harvest system.



## BUILDING DETAILS

Floor Area Heated: 1,550 sq. ft.

Floor Area Cooled: 1,550 sq. ft.

Number of Stories: 2

New or Remodeled: New

## INTERIOR ENVIRONMENT

Overview: The use of an energy recovery ventilation system helps to maintain a high indoor air quality. The 22 foot long south-facing wall allows ample lighting for the main living area. The kitchen has concrete flooring which heats by the sun, and hand plaster walls for a warm feeling. The second story has bamboo flooring.

Strategies: Interior materials were selected from the Rebuilding Center and include salvaged framing lumber, doors from a Pendleton boarding house, a staircase from Springfield high school, marble and lumber from deconstructed buildings, light fixtures from an old church and recycled sinks. Use of low VOC paints and finishes were used throughout the interior.

## ENERGY

Overview: The well-insulated building uses an efficient forced air heat pump along with the benefits of its passive solar design for heating. The living area and kitchen make use of a radiant floor heating system during the sun-starved periods. A wastewater heat recovery system captures heat from upstairs.

## SITE

Overview and Land Use: The site is an urban site, located in an existing close-in neighborhood, adjacent to public transportation and bike lanes.

Site Strategies: The main focus is to make use of Portland's rainy climate by using a 3,400 gallon underground water harvesting system.

## WATER

Strategies

- Rainwater harvest system for potable water
- Water collection in oversized barrels for gardening
- Two 1,700 gallon underground tanks
- Native landscape plantings

## WASTE

- Used furnishings and salvaged materials
- Wastewater heat recovery system captures heat
- Recycled lumber
- Portland Recycling & Composting

## PUBLICATIONS

- portlandonline.com
- www.salon.com/2004/07/07/green\_big\_houses/
- Daily Journal of Commerce