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Showcase Architects.

Sustainable homes

Eco-Estate @ Briggs Chaney

- a development of eight small homes designed with energy-efficient principles and the latest green products
- "The objective of this project is to build within the natural habitat, minimally impact the environment through use of sustainable design [and] green construction techniques, and to raise awareness of 'getting off the grid,'"

- Phase I of Eco-Estate is a model home that is being used as a testing ground for some of the systems and products under consideration for use in the next eight houses.
- At 10,000 square feet, the size of the home runs counter to the direction green advocates say the country should be headed, but the architect wanted to use the home as a demonstration project to show the possibilities of energy-efficient building. The next eight homes will be much smaller. Besides, we are using strategies that show "you can go green and not feel guilty."

- We preserved every tree on the property.
- We also saved and relocated an existing 1940s Cape Cod to the rear of the 1.1-acre site, where the structure will be used as a guest house. Though it would have been cheaper to raze the home and send it to a landfill, we wanted to set an example

- The five-bedroom, five-bath main house is an architectural hybrid of traditional and modern design. It has a pitched roof, but the large glass openings, indoor/outdoor connections, and clean lines are clear modernist tropes.
- Interiors are highlighted by high ceilings—25 feet in some areas and 9 feet in the basement—and multi-purpose rooms. Some rooms feature energy-saving occupancy sensors.

- The structure was sited for passive solar orientation and to capitalize on cross ventilation. “The house is designed to bring in lots of light, which saves energy, and to be flexible so each room can be used for something else,”

- On first glance, the house is typical, including products that many builders are already using, such as Energy Star appliances, high-efficiency windows, and multi-zone heating and cooling system. But behind the walls, one finds a number of nonstandard technologies that we hope will gain attraction, such as a green roof. Here's an overview of the strategies and systems SHOWCASE is relying upon to save energy, resources, and the environment in this home:

Geothermal heating and cooling.

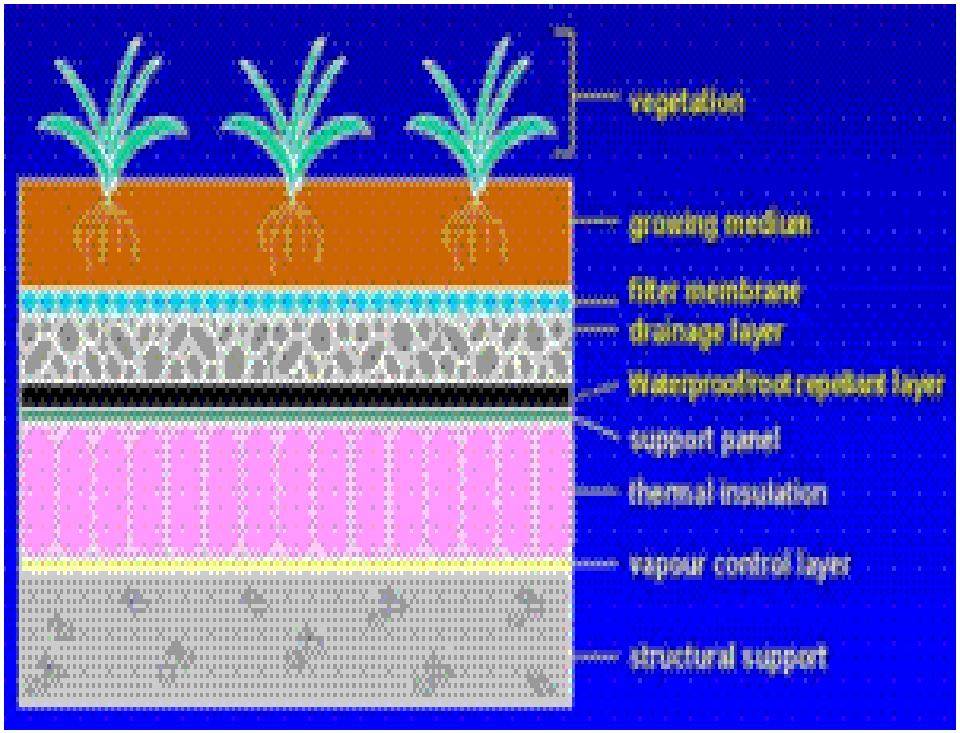
- This cutting-edge system uses the earth's constant temperature for space heating and cooling and for hot water production.
- The Eco-Estate model home has five 250-foot horizontal wells that transfer heat stored in the earth into the house during the winter and transfer it out of the building and back into the ground during the summer.
- Though expensive for a single house, a geothermal system is ideal for a cluster of homes

Structural insulated panels (SIPs).

- Made from 6 or 8 inches of foam sandwiched between oriented strand boards or plywood, the panels are up to 66% more energy efficient than stick framing and can be installed a lot faster. The model home's exterior walls are made from 6-inch-thick SIPs

Green roof:

- a green (or sod) roof consists of multiple layers of waterproofing, root repellant, drainage, filter cloth, lightweight growing medium, and drought-tolerant plants.
- The green roof helps, providing stormwater retention. It also offers other benefits to a building; the soil adds another layer of insulation, which muffles sound and reduces heating and cooling costs

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