MARGARIDO HOUSE

City of Oakland Green Building Case Study

Project Summary

This single-family home, overlooking the Bay Bridge and San Francisco, is designed to merge comfortably into its steeply sloped site while providing a tranquil setting for a young couple and their two children. The home incorporates a photovoltaic panel system that generates all electricity necessary for the home and solar thermal panels which provide pre-heated domestic hot water and radiant heat. Other features include an underground cistern and an interior air quality management system.

Residential
New Construction

5950 Margarido Dr.
Oakland CA

GreenPoint Rated-New Home Pilot Program & LEED Platinum Certified

Recognition per City Council Resolution 81825

Green Building Features

Site Design & Community

- Bunkered into hillside for Geothermal cooling and heating, the house utilizes thermal mass of concrete , tile floors, and walls.
- Floor-to-ceiling South & West facing glass and extensive sun shading overhangs.

Water Conservation

- 600 sq. ft. intensive planted green roof and deck.
- Low water/drought tolerant landscaping and plants.
- Underground cistern to capture rain and groundwater for reuse in landscaping.

Resource Conservation

- Blown in soy-based foam insulation was used in the walls.
- Minimum 25% fly ash content was used in all concrete poured for the foundation, walkways and retaining walls.
- Engineered framing materials such as recycled steel, OSB, LVL and Timberstrand wood products.
- Windows locally sourced and counters made of recycled glass and concrete were chosen.

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Indoor Air Quality

- Zero VOC paints and finishes.
- Carefully placed operable windows take advantage of winds off bay and allow cross ventilation to cool house.
- Automated air exchange system that exhausts stale air and brings in fresh air; whole house fan.

Energy Efficiency

- 55% more energy efficient than California's tough Title 24 energy standard
- Solar powered electrical system.
- Comprehensive construction recycling and waste management plan allowed 80% of waste from site to be recycled.
- House conserves energy by eliminating the need for air conditioning and replacing traditional temperature control devices with more natural passive solar heating and cooling systems.
- Solar power collectors and solar thermal panels on roof provide electricity, hot water, and heat.
- Solar thermal/hot water system that preheats water for in floor radiant heat system and domestic hot water use.
- Light dimmers, high-efficiency appliances, and low-energy LED lighting.

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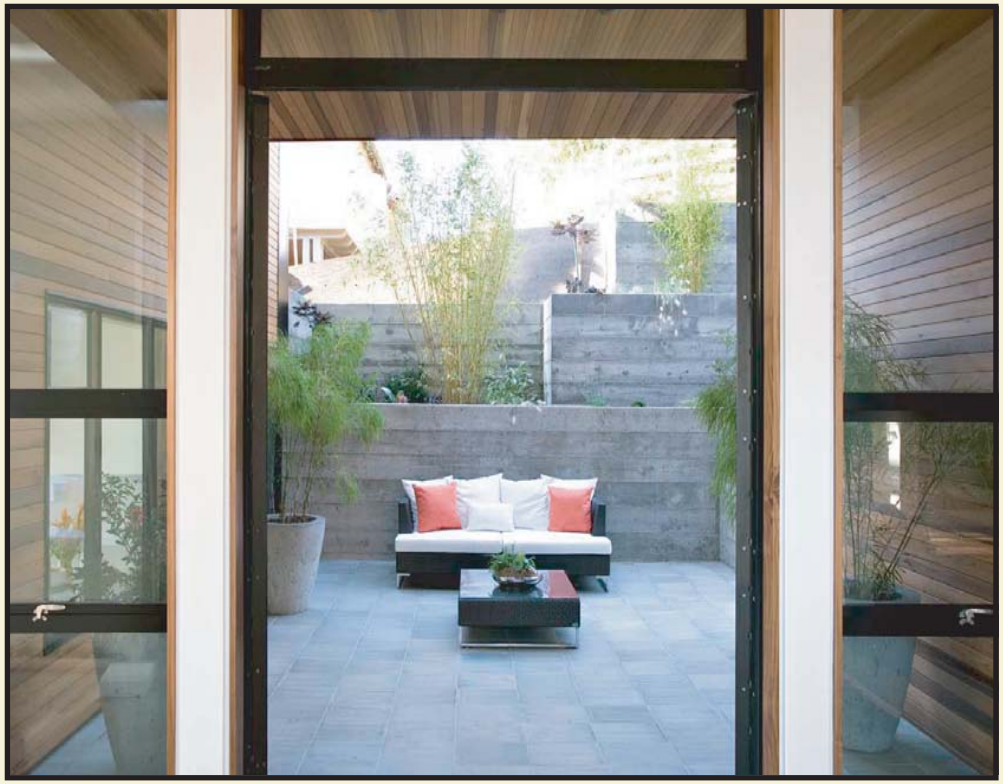
>
> Michael McDonald
> President of Margarido Group



Project Team

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Architecture: Plumbob, LLC
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CITY OF OAKLAND

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