



Craftsman Cottage

Solon, IA

Location: Solon, IA

Design: DPO Construction

Type of Construction: New

Construction Cost: \$405,000

Square Footage: 3,000

Cost per Square Foot: \$135

Project Website: www.dpoconstruction.com

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Project Description: This home achieves significant energy savings through efficient green building design and construction. From October 2005 to April 2006, the cost to heat the entire home was \$181. In 2005-2006 this home's heating costs were 83 cents per day, and it produced 36,000 fewer pounds of carbon dioxide because of the energy upgrades. Data show this home is performing even better than projected. The house has earned a 5-star plus energy rating from Energy Star.

Sustainable Features:

- Within walking/bicycling distance of town and a golf course
- No landscape plants requiring water and no irrigation
- Yard is sloped to keep water away from the house and flowing into a wetland
- Geothermal HVAC with energy recovery ventilation system recovers heat, maintains interior humidity levels, provides fresh air, prevents soil gas entry and keeps 36,000 pounds of CO₂ out of the atmosphere
- Two sun tubes and Low E Argon windows provide



abundant natural light

- Artificial lighting is designed to be diffused in order to save energy
- Light fixtures use fluorescent and compact fluorescent bulbs and all appliances are Energy Star
- Sprayed urethane foam insulation made from soybeans and brought in from a nearby manufacturer
- R-23 structural insulated panels eliminate scrap and waste and use almost no lumber
- Sprayed urethane foam under the entire basement floor insulates and seals out soil gasses
- Durable fiber-cement siding with a water drainage layer underneath keeps water from penetrating to sheathing
- Natural stone siding and oak interior materials from local sources
- Dupont flashing at windows and doors keeps walls and interior dry
- Washed rock under entire floor keeps water and soil gasses from entering the basement
- Durable oak and ceramic tile flooring as well as green-label carpet
- All paints are low-VOC or VOC-free

