

Energy Value Housing Award®

*A look at design features from the nation's
elite energy-efficient home builders*

2010 Winners



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NAHB Research Center

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Chandler Design-Build

Energy Features

- Foundation:** R-23 ICF basement with 2" EPS underslab insulation
- Wall Construction:** 2x6 and 2x4 double wall system with 2 1/2" airspace
- Wall Insulation:** R-46 spray fiberglass insulation
- Rim Joist Insulation:** Open cell spray foam insulation
- Roof Construction:** Trusses at 24" o.c.
- Ceiling Insulation:** Unvented attic with R-30 open cell spray foam at roofline
- Windows:** Low-e, gas-filled; U-0.30, SHGC 0.30
- HVAC:** Solar preheat and 95 AFUE gas furnace auxiliary with radiant floor distribution; 15 SEER air conditioner; Timer-controlled exhaust ventilation
- Ducts:** All in conditioned space
- Water Heating:** 96 s.f. solar thermal collector with 0.95 EF tankless gas auxiliary
- Lighting:** Mostly CFL's
- Appliances:** ENERGY STAR refrigerator, dishwasher, and clothes washer
- On-Site Energy Generation:** None
- Duct Leakage Test:** 74 cfm total at 25 Pa; 0 cfm to exterior
- Blower Door Test:** 847 cfm at 50 Pa; 1.9 ACH50
- HERS Index:** 48
- Energy/Green Building Programs:** Energy Star, GHBT HBA-DOC Green, NAHB Green, USAGBC LEED-H, DOE Builders Challenge qualified house



Although Chandler Design-Build is a small custom builder, the company has tremendous influence on other builders in the region. As an active participant in the local green building community, the company conducts seminars for local real estate professionals and other builders and provides extensive training for its subcontractors. Its techniques have become so well known that their HVAC and solar thermal contractors get requests for a "Chandler-style" system. To maintain control over HVAC design, the company uses an independent engineer to design HVAC systems rather than relying on the HVAC contractor. As the EVHA judges put it, "[Chandler Design-Build] nicely integrates systems and builds to a higher standard."

Moderate Climate, Custom Category

Company Overview

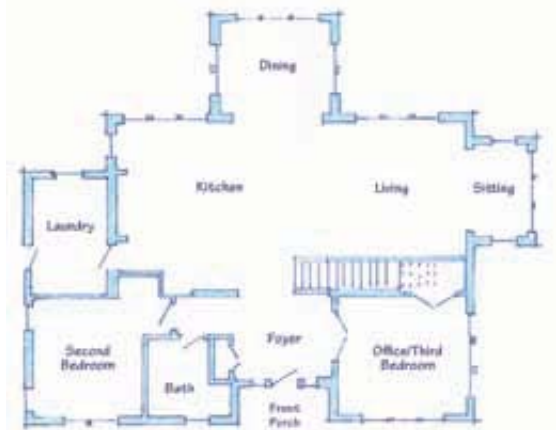
Years in business: 21
 Average homes built per year: 3
 Member: Home Builders Association of Durham, Orange & Chatham Counties

House Overview

Size: 2,498 s.f.
 Location: Mebane, North Carolina
 Construction cost: \$158 per s.f.
 Completion date: June 2009

Chandler Design-Build would like to thank the following:

Jon and Vicky Bryant, owners & smart house wiring - interior design team
 Beth Williams, designer, Chandler Design-Build
 Chris Kerscher & Mat MacDonald - project leaders
 Jamie Hagar, Southern Energy Management
 Dan Gretsich and Roy Schmidt
 Bobby Penland, Zoned Bypass Builders First Source
 GreenBuildingAdvisor.com



Tankless water heater

