



Red Tree Builders

Wandering Oaks | Asheville, NC | RedTreeBuilders.com



“We create homes that are energy-efficient, sustainable, and provide superior indoor comfort and air quality.” *Red Tree Builders*



PROJECT DATA

KEY FEATURES

- **Layout:** 3 bdrm, 2.5 bath, 1 fl + bsmt, 2,832 ft²
- **Climate:** IECC 4A, mixed-humid
- **Completed:** November 2022
- **Category:** Custom for Buyer

MODELED PERFORMANCE DATA

- **HERS Index:** without PV 47; with PV -11
- **Annual Energy Costs:** without PV \$1,400; with PV \$150
- **Annual Energy Cost Savings:** (vs typical new homes) without PV \$2,200; with PV \$3,400
- **Annual Energy Savings:** without PV 13,450 kWh; with PV 14,600 kWh
- **Savings in the First 30 Years:** without PV \$91,250; with PV \$ 142,150

CONTACT

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- **Walls:** 2x6, 24 inches o.c., advanced framed, R-19 total: 7/16" coated OSB sheathing, R-19 unfaced fiberglass batt; plastic mesh screen; white ash siding and stone veneer.
- **Roof:** Truss and rafter gabled roof, open-cell spray foam under 3/4" OSB roof sheathing, synthetic underlayment, architectural asphalt shingles and standing-seam metal roof.
- **Attic:** Unvented, vaulted ceilings, 8" R-30 open-cell spray foam on underside of roof deck, 12" raised-heel trusses.
- **Foundation:** Insulated basement: 2" rigid foam under slab. Pre-cast concrete-EPS-steel wall panels + 5" open-cell spray foam for R-30 total. Dimpled drain board. Stucco and stone veneer.
- **Windows:** Double-pane, U=0.28, SHGC=0.18, low-e, argon-fill. Vinyl-framed. Roof overhangs.
- **Air Sealing:** 1.78 ACH 50; liquid flashing at transition between pre-cast foundation walls and framing, at all exterior plumbing, electrical, and HVAC penetrations, and for window and door flashing. Tape at all sheathing seams. Caulked base plates.
- **Ventilation:** ERV integrated with HVAC. Timers and motion sensors on all bath fans and exhaust fans in garage and laundry room.
- **HVAC:** Ground source heat pump, 3-ton, 2-stage ground-source heat pump. 22 SEER. Central air handler.
- **Hot Water:** Heat pump water heater, 80-gallon, 3.88 EF. Compact plumbing design.
- **Lighting and Appliances:** LED lighting, ENERGY STAR appliances.
- **Solar:** 11.22 kWh PV, no battery.
- **Other:** Ground-source heat pumps use 80% less energy annually to heat homes.

