



Mantell-Hecathorn Builders

Tahoe Inspired Home | Durango, CO | M-HBuilders.com



Photos courtesy of Mantell-Hecathorn Builders

"We have been committed to the DOE ZERH program for years as custom home builders, and are pleased and proud to have built our own home to these high standards." *Home builder*



PROJECT DATA

- **Layout:** 3 bdrm, 2.5 bath, 2 fls, 3,259 ft²
- **Climate:** IECC 5B, cold
- **Completed:** December 2019
- **Category:** Custom for Buyer >3,000 ft²

MODELED PERFORMANCE DATA

- **HERS Index:** without PV 44; with PV 14
- **Annual Energy Costs:** without PV \$2,000; with PV \$600
- **Annual Energy Cost Savings:** (vs typical new homes) without PV \$1,050; with PV \$2,450
- **Annual Energy Savings:** without PV 2,600 kWh, 15 Therms; with PV 13,200 kWh, 15 Therms
- **Savings in the First 30 Years:** without PV \$48,300; with PV \$112,700

CONTACT

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KEY FEATURES

- **Walls:** Double wall, R-44 total: 2x4 stud 24" o.c., 1/2" gap, 2x6 stud 24" o.c., 7.5" blown fiberglass, 2" closed-cell spray foam, 1/2" coated OSB sheathing, 1" EPS foam under stucco, 3/8" rainscreen behind stone and wood siding.
- **Roof:** Shed truss roof, 3/4" roof sheathing, standing seam metal roof, 24" raised heel.
- **Attic:** Vented: 23" R-60 fiberglass. Vaulted, R-70: 8" CC spray foam + R-19 batt.
- **Foundation:** Unvented crawlspace: 8" poured-in-place concrete, 2" EPS on interior and on exterior, liquid-applied crystalline waterproofing.
- **Windows:** Triple-pane, low-e2, aluminum-clad wood casement frames, U=0.19, SHGC=0.50. Automated interior motorized blinds.
- **Air Sealing:** 1.25 ACH 50. Foam sealed all top plate, wall, and floor penetrations.
- **Ventilation:** HRV, ducted to each room, switch-activated boost mode, 12 MERV filter.
- **HVAC:** Radiant floor heat from a 95 AFUE boiler. 16 SEER AC.
- **Hot Water:** Combi uses HVAC boiler to heat 50-gal tank, 0.88 EF. PEX, recirc pump.
- **Lighting:** 100% LED. Lighting controls. Automated window blinds. Daylighting.
- **Appliances:** ENERGY STAR dishwasher, clothes washer, and refrigerator.
- **Solar:** 7.3 kW; 24 305-W rooftop panels, central inverter.
- **Water Conservation:** EPA WaterSense fixtures and toilets. Drought-resistant landscaping.
- **Energy Management System:** Smart thermostats. Cell to lighting, windows, AV, HVAC.
- **Other:** Electric vehicle charging. Accessibility features. Reclaimed redwood. No/low-VOC/ formaldehyde cabinets, sheathing, floor finishes, mastics, paints, caulks, carpet.

