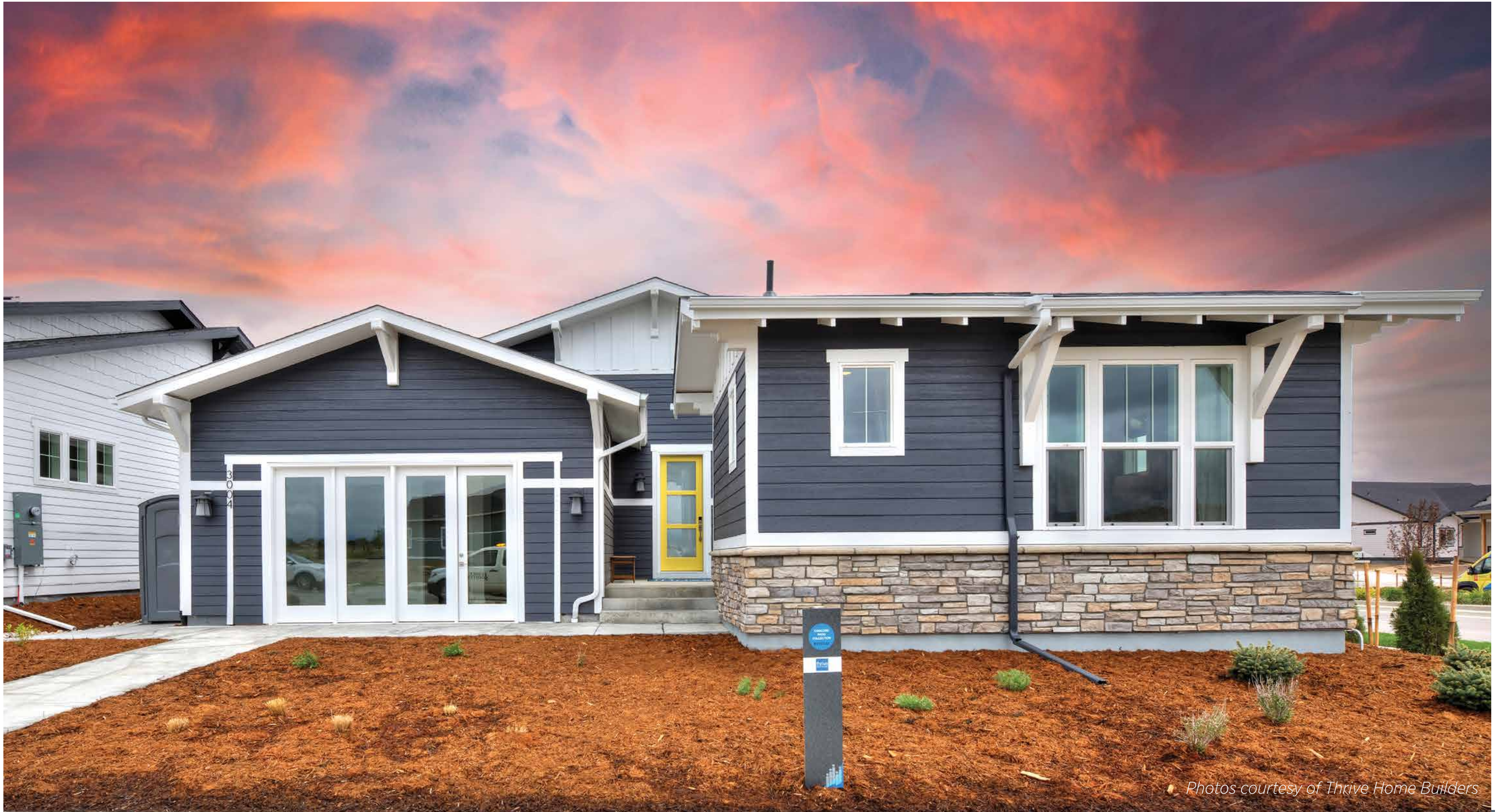




Thrive Home Builders

Carbon-Neutral Retreat | Fort Collins, CO | ThriveHomeBuilders.com



Photos courtesy of Thrive Home Builders

"I now have a home that not only is beautiful but is also built for a better quality of life." Homeowner



PROJECT DATA

- **Layout:** 3 bdrm, 4 bath, 1 fl + bsmt, 3,611 ft²
- **Climate:** IECC 5B, cold
- **Completed:** March 2023
- **Category:** Production

MODELED PERFORMANCE DATA

- **HERS Index:** without PV 53; with PV 23
- **Annual Energy Costs:** without PV \$2,450; with PV \$1,050
- **Annual Energy Cost Savings:** (vs typical new homes) without PV \$3,650 with PV \$5,000
- **Annual Energy Savings:** without PV 16,793 kWh, 29.2 Therms; with PV 7,150 kWh, 29.2 Therms
- **Savings in the First 30 Years:** without PV \$151,900; with PV \$209,250

CONTACT

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KEY FEATURES

- **Walls:** 2x6, 24" o.c., R-23 total: advanced framed, R-23 blown fiberglass, 7/16" OSB, draining house wrap, engineered wood siding.
- **Roof:** Gabled truss roof, 7/16" sheathing, 10-mil synthetic roof underlayment, 30-year asphalt shingles. Metal drip edge on all edges; 14" raised heel roof trusses.
- **Attic:** Vented attic, 16" R-50 blown fiberglass. Vaulted ceilings, R-38 batt fiberglass.
- **Foundation:** Insulated basement, R-18 total: R-15 fiberglass batt in 2x4 framed walls in finished basement + R-19 perforated drape over concrete walls in unfinished basement. Slab poured over 4" of 3/4" rock and 6-mil vapor barrier. Active radon system with fan.
- **Windows:** Double-pane, U=0.25, SHGC=0.19, low-e, argon filled, vinyl framed.
- **Air Sealing:** 1.91 ACH50, Drywall sealed to top plates with sealant gasket. Spray foam over top plates and rim joists; detailed sealing of all tubs, showers, and chases.
- **Ventilation:** Controlled central fan with fresh air intake and timed exhaust (balanced). Air intake damper controlled by external air pollutant and humidity sensors.
- **HVAC:** Central air source heat pump, 11.2 HSPF and 18.2 SEER; transfer air grilles to minimize return length and leakage; central returns on each floor.
- **Hot Water:** Heat pump water heater, 65-gallon, 3.55 UEF. Recirc., WaterSense fixtures.
- **Lighting and Appliances:** LED lighting. All-electric ENERGY STAR appliances.
- **Solar:** 6.2 kWh PV, 10 kWh battery with 3 modes: self consumption, time of use, backup.
- **Energy Management System:** Smart controls for exhaust. Leak detection on plumbing. App that records owners manuals, warranties, serial numbers, etc.
- **Other:** Universal design features for aging in place. Extensive staff and trades education.

