

Charis Homes

ZERO
ENERGY READY HOME

2019 WINNER

Housing
Innovation
Awards

The Sanctuary | North Canton, OH | CharisHomes.com













PROJECT DATA

- **Layout:** 3 bdrm, 3 bath, 1 fl + bsmt, 4,294 ft²
- Climate: IECC 5A, cold
- Completed: November 2018
- Category: custom for buyer

MODELED PERFORMANCE DATA

- HERS Index: without PV 44
- Annual Energy Costs: without PV \$1,850
- Annual Energy Cost Savings: (vs typical new homes) without PV \$1,900
- Annual Energy Savings: without PV 15,700 kWh, 100 CCF
- Savings in the First 30 Years: \$90,700

CONTACT

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KEY FEATURES

- Walls: ICF, 11" R-22 total: 2.5" EPS, 6" steel-reinforced concrete, 2.5" EPS, ½" drywall.
- **Roof:** Hip roof; engineered 24" o.c., $\frac{7}{16}$ " OSB sheathing, synthetic felt, rain-and-ice guard in valleys and eaves, 4" ridge vent, 30-year shingles, 1.5" aluminum drip edge, 1-ft overhangs.
- Attic: Vented attic; 16" R-50 blown cellulose, 3" R-20 closed-cell spray foam on top plates; R-20 blown cellulose in garage attic.
- **Foundation:** Insulated basement, R-20 total: 11" ICFs, waterproof membrane, concrete footers with integral interior and exterior drainage system.
- Windows: Triple-pane, argon-filled, vinyl double-hung frames, U=0.17, SHGC=0.21.
- Air Sealing: 1.41 ACH 50
- Ventilation: ERV, MERV 11 filter.
- HVAC: Combined heat and hot water with .95 EF gas tankless boiler, hydrocoil and small-diameter high-velocity ducts, radiant floor heat in basement; 16.3 SEER heat pump AC.
- Hot Water: Combi boiler, 0.95 EF; central manifold with PEX; smart recirc. pump.
- Lighting: 100% LED, motion sensors, transom windows, daylighting.
- Appliances: ENERGY STAR refrigerator, dishwasher, microwave drawer.
- Solar: Solar ready.
- Water Conservation: EPA WaterSense fixtures.
- Energy Management System: Wi-Fi-enabled smart thermostat.
- Other: Electric vehicle charging; zero clearance shower and thresholds; no-VOC paints, low-VOC sealants and glues; formaldehyde-free hardwood, plywood, adhesives.





