



Simple Integrity

Chestnut Crossing | Cooperstown, NY | SimpleIntegrityllc.com



Photos courtesy of Simple Integrity

“[We] took an abandoned lot... and turned it into healthy, efficient housing for 13 apartments, in the heart of a small walkable village.”
Simple Integrity Builders



PROJECT DATA

- **Layout:** 1 bath, 1 fl, 1,051 ft² (whole building 16,436 ft²)
- **Climate:** IECC 6A, cold
- **Completed:** January 2023
- **Category:** Multifamily

MODELED PERFORMANCE DATA

- **HERS Index:** without PV 28; with PV 0
- **Annual Energy Costs:** without PV \$700; with PV \$-1
- **Annual Energy Cost Savings:** (vs typical new homes) without PV \$700; with PV \$1,000
- **Annual Energy Savings:** without PV 8,950 kWh; with PV 12,300 kWh
- **Savings in the First 30 Years:** without PV \$30,050; with PV \$41,300

CONTACT

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KEY FEATURES

- **Walls:** 2X6 16" oc, adv. framed. Total: R-42, dense-packed cellulose, 7/16" coated OSB with seams taped, 4" of rigid mineral wool on exterior, 2x4 horizontal purlins with 1.5" mineral wool batts between 2x4 furring, house wrap, 3/4" rain screen and siding.
- **Roof:** Gabled truss roof: interior to exterior: 5/8 drywall, 3.5" service cavity, 7/16" coated OSB nailed to bottom of trusses, 5/8" coated OSB decking, asphalt shingles.
- **Attic:** Vented attic, 18" R-65 blown cellulose.
- **Foundation:** Slab on grade; On exterior of stem wall: high-psi 6" EPS foam installed to 2 feet down with a 3" frost skirt extending 4 feet out.
- **Windows:** Triple-pane windows, U=0.14, SHGC=0.54, argon-fill, uPVC-framed.
- **Air Sealing:** 0.17 ACH50. All mechanicals run below taped coated OSB ceiling air barrier. Windows and doors installed in coated OSB bucks that are sealed to the main wall air sealing layer with strong tapes.
- **Ventilation:** Two HRVs and two ERVs shared among 13 units, supply fresh air to bedrooms and living spaces and draw stale air from bathrooms, kitchens, and laundry spaces.
- **HVAC:** Ductless minisplit air source heat pumps 13.5 HSPF, SEER 33; 15 indoor heads, 15 outdoor compressors (1 unit per apartment plus 2 in common areas), not VRF.
- **Hot Water:** Heat pump water heater, 80-gallon, 4.0 UEF. 8 HPWH shared by 13 apts.
- **Lighting and Appliances:** LED lighting, ENERGY STAR appliances.
- **Solar:** 25 kW PV, no battery.
- **Other:** Study comparing HRVs vs ERVs. Apartments built on reclaimed urban infill lot. Eight EV chargers shared by 13 units.



Energy Efficiency & Renewable Energy



For more information on the **DOE Zero Energy Ready Home** program, go to <http://energy.gov/eere/buildings/zero-energy-ready-home> or scan the QR code.



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