



# Healthy Communities

The Walnut Farm Diamond Effect | Williamsburg, VA | HealthyCommunitiesVA.com



"This is our fourth home built from the ground up and by far the best quality." Homeowners



## PROJECT DATA

- **Layout:** 3 bdrm, 2.5 bath, 1 fl, 2,025 ft<sup>2</sup>
- **Climate:** IECC 4A, mixed-humid
- **Completed:** April 2022
- **Category:** Production

### MODELED PERFORMANCE DATA

- **HERS Index:** without PV 45; with PV 4
- **Annual Energy Costs:** without PV \$1,400; with PV \$400
- **Annual Energy Cost Savings:** (vs typical new homes) without PV \$1,750; with PV \$2,750
- **Annual Energy Savings:** without PV 10,150 kWh; with PV 19,060 kWh
- **Savings in the First 30 Years:** without PV \$70,450; with PV \$112,100

## CONTACT

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## KEY FEATURES

- **Walls:** 2x6, 24" o.c., panelized, R-24 total: flash & batt 1" OC spray foam+R-19 fiberglass or sprayed-in cellulose. R-3.5 coated OSB; fiber cement siding.
- **Roof:** Truss gable roof: plywood, synthetic underlayment, architectural shingles. Ridge vent.
- **Attic:** Vented, 14" R-49 blown-in cellulose; 14" raised heel. Attic access is gasketed.
- **Foundation:** Unvented crawlspace: poured concrete and CMU walls, R-10 EPS on interior, termite inspection strip. 8-mil poly vapor barrier. Rim joist has R-19.5 open-cell spray foam.
- **Windows:** Double-pane, argon-filled, low-e2, vinyl, single-hung. U=0.28, SHGC=0.22.
- **Air Sealing:** 1.4 to 2.2 ACH 50. Open-cell foam in rim bands, over top plates, over garage, in cantilevers; as flash & batt in some wall cavities. Sill gaskets; sealed crawlspace.
- **Ventilation:** ERV at air handler, MERV 8 filter. Bath fans have timers, condensation sensors.
- **HVAC:** Central air-source heat pump, 10 HSPF, 19.25 SEER. Air cleaner. Passive solar design.
- **Hot Water:** Heat pump water heater, 50-gal, 3.57 EF. 50 gallon heat pump water heater.
- **Lighting:** 100% LED, motion sensors, Wi-Fi lighting controls daylighting.
- **Appliances:** ENERGY STAR dishwasher, clothes washer, clothes dryer, refrigerator.
- **Solar:** 6.12-kW solar PV, 18 panels. Optional battery storage.
- **Water Conservation:** EPA WaterSense-certified low-flow showerheads, faucets, toilets. Push-button recirculation pump. Drip irrigation, drought-resistant landscaping, and swales.
- **Energy Management System:** Controls for HVAC and lighting.
- **Other:** EV charger and battery backup or bidirectional EV battery control terminal.

