ENERGY EFFICIENCY FEATURES

- Large windows and open floor plan in main living area provide natural daylight
- LED light bulbs reduce energy consumption
- East-west orientation optimizes natural lighting and passive heating
- Energy recovery ventilator reduces energy requirements for interior heating and cooling
- Air-tight building envelope prevents air leakage and moisture infiltration
- Superinsulation in walls, ceilings, and floor slab with R-value for walls (R-40), foundation floor slab (R-50), and roof assembly (R-60)
- Metal roof reflects sun and reduces heat gain
- High-performance windows and doors minimize air leakage and improve overall performance
- Mini-split heat pump and electric baseboard heating provide supplemental heating and cooling as needed
- ENERGY STAR® appliances reduce energy consumption

RENEWABLE ENERGY FEATURES

- Solar panels on roof provide electricity for the home
- Solar car-port charges electric vehicles

WATER EFFICIENCY

- Native, drought-resistant landscaping reduces watering and maintenance needs
- Permeable paving used for all exterior pavement allows movement of water and air into soil

- Rainwater collection system used to water landscape
- Low-flow water fixtures and dual-flush toilets conserve water

SUSTAINABLE CONSTRUCTION AND MATERIALS

- Recycled and rapidly renewable materials used
- Innovative prefabricated wood block wall system (HIB-System) stands up to southwestern Kansas’ high winds, provides plenty of room for insulation, and saves money and time by easily locking together without the need for heavy lifting devices
- Job site recycling program incorporated for construction waste
- Regionally sourced labor and materials used
- Compact house size uses less land space, reducing site impact and carbon footprint

INDOOR AIR QUALITY AND ENVIRONMENT

- Operable windows and ceiling fans provide natural ventilation and promote air circulation
- Non-toxic products used, including low-, or no-VOC finishes and green cleaning products

EXPECTED HOME ENERGY RATING: 10-15

- Through the use of Passive House Standards energy consumption is expected to be reduced by up to 90% compared to a newly constructed home. The remaining 10% of energy needs will be covered by solar panels. With the application of these features, it’s anticipated the home will use less energy than it produces.