When Urbane Homes was founded in 2007, the downturn in the housing market was just beginning and the owners Abe Gilbert and Zane Underwood realized they would have to make their homes very affordable to survive. They worked with the National Association of Home Builders Research Center, a Building America research partner, to streamline their building practices and decided to make their homes more efficient as well. Their goal was to “pick all the low-hanging fruit for green and energy-efficient design and put it in a standard package that made sense and was affordable,” according to Gilbert. Their first home cost $36 per square foot (not including the lot) compared to a typical Louisville construction cost of $55 to $85 per ft². Their homes also achieve HERS scores of 57 to 62, and according to the owners, with no paid advertising they have sold every house they built in three weeks or less.

Urbane’s standard package includes some off-the-shelf but less common features like rigid foam instead of OSB sheathing, advanced framing, and ducts routed through open-web floor trusses in conditioned space. They reduced construction costs by using a frost-protected shallow foundation, which allows the footing or foundation depth to be reduced from 48 inches to 12 to 16 inches, reducing the amount of concrete needed by two-thirds. The underside of the entire slab is insulated with 1 inch (R-5) extruded polystyrene (XPS) foam; the exterior foundation is protected by 2 inches (R-10) of recycled expanded polystyrene (EPS) foam; and the interior slab edge is insulated with 1¼ inch (R-5) of EPS foam.

High-efficiency windows and lighting and ENERGY STAR dishwashers, refrigerators, clothes washers, and ceiling fans increase the efficiency. A passive radon-protection system is installed. Deep overhangs reduce summer solar heat gain and keep snow off porches and sidewalks.

(Photograph top left) The walls use advanced framing with 2x6 studs at 24 inches on center and XPS rigid foam sheathing on exterior walls instead of OSB. The XPS rigid foam sheathing is taped at the seams and covered with house wrap to provide a drainage plane, air barrier, and thermal barrier.
Lessons Learned

• Urbane Homes uses XPS rigid foam instead of oriented strand board (OSB) for sheathing to improve the moisture resistance of the exterior walls.

• Ducts are installed within the conditioned space in open-web floor trusses between the floors.

• A shallow foundation protected by rigid foam cuts excavation and concrete costs.

• To ensure adherence to quality standards, Urbane Homes holds pre construction meetings with trades and the site superintendent, provides training sessions for its subcontractors, and developed a manual for its framers (who do most of its air sealing); the manual is updated whenever improvements are made to its processes.

“We set out to prove that we could build a really good house for an affordable price, and we built that first house for $36 per square foot (not counting the lot).”

Abe Gilbert, co-owner, Urbane Homes