

KINGDOM HALL

In 2014, the Jehovah's Witnesses building fund completed a pilot project in Yazoo City, Mississippi, to evaluate BuildBlock ICFs as an alternative to standard wood-frame construction for Kingdom Halls. The project focused on comparing energy performance, durability, and construction efficiency against a similar wood-frame Kingdom Hall located approximately 40 miles away. The completed building demonstrated lower HVAC demand, reduced utility costs, and strong storm resistance while remaining cost-competitive with conventional construction methods.

About

Location: Yazoo City, MS

Project Type: Religious Institution

Size: 6,000 SF.

ICF Wall Square Footage: 3,000 SF.

Total Cost: \$500,000

Architectural Feature: ICF used for 100% of exterior walls and storm water control boxes



Efficiency by Design

- **HVAC Reduction:** The wood-frame version of this design typically requires 13 tons of HVAC capacity. By using ICFs to form the exterior walls and provide superior insulation, temperature control, and stability, the HVAC capacity was reduced by 5 tons.
- **Utility Savings:** ICFs help save money on monthly operational costs by providing double sided EPS insulation to each wall, achieving an insulation performance of over R-55. Over a six-month period, the ICF building achieved a 33% reduction in monthly utility costs compared to the traditional wood-frame counterpart.
- **Thermal Stability:** The building envelope combines ICF exterior walls with open-cell Icynene spray foam insulation to reduce air leakage and improve thermal consistency. According to project organizers, the indoor environment remains stable enough that the HVAC system is often used primarily for air circulation rather than active heating or cooling.

Efficiency By Design

From the start, this project was designed to maximize efficiency in construction, performance, and safety. The project incorporated several deliberate decisions, including LEED certification goals, reuse of an existing lot, and regional sourcing of ICF materials from a plant located less than 300 miles away. One of the project's primary metrics for measuring success was to compare its operational performance against an identical wood-frame Kingdom Hall located just 40 miles away.



Proven Resilience

The project is located in an area prone to severe storms and tornadoes, making disaster resistance a top priority. At the core of an ICF wall is solid reinforced concrete—capable of withstanding high winds and subsequent impact damage. Building a structure's exterior walls with ICFs creates a strong and durable building shell, providing shelter and safety for the occupants. Shortly after completion, the building's durability was put to the test when a tornado passed directly overhead. While the high winds triggered building alarms, the ICF structure suffered zero damage. More recently, another tornado formed less than a mile away, causing extensive damage to the surrounding business district while the Kingdom Hall remained unharmed.



Ease of Use, Perfect for Volunteer Labor

One of the most unique aspects of this project was the use of 100% volunteer labor, a standard practice for Jehovah's Witness construction. With most of the construction work occurring only on the weekends, efficient planning and coordination was crucial to ensure the correct material and labor were present when needed. Tim Middleton, a BuildBlock Master Distributor and congregation member, led the effort, using the project as an educational platform to train volunteers on ICF installation.

"This project was built in the same manner as all Jehovah's Witness Kingdom Halls. The labor for the construction is completely donated with the exception of the spray foam installation," said Tim.

The light weight of EPS foam, material adaptability, and installer-friendly design of BuildBlock ICFs make them a perfect system for first timers and volunteers to use.



Project Success

The success of the Yazoo City project has significant implications for future construction. By demonstrating superior life safety, 33% energy savings, and lower maintenance needs, the project demonstrated measurable reductions in energy use and strong storm performance, making it a useful reference point for future Kingdom Hall construction projects using ICF systems.

