



CASE STUDY

Liberty United Methodist Church

Location: Liberty, Missouri | New Construction

Written for Green Build & Design Magazine by Lisa White



Dake Wells Architecture and Ludowici on Historic Church Design

When Liberty United Methodist Church purchased 30 acres for its second location, it chose Dake Wells Architecture to create a special building to house its contemporary worship services

“The new church was positioned as a growth opportunity where services geared toward young families could be held,” says Andrew Wells, design director at Dake Wells Architecture. “At first this was thought to be a relocation, but it was decided a second location was needed that would include a large worship space, fellowship hall, children’s classroom and multipurpose area.”

THE CHALLENGE

One of the biggest challenges was adhering to a tight budget in constructing the 18,000-square-foot religious building. Another issue was incorporating a durable material that conformed with the design theme, which leaned into the church’s historic identity.

The team found its answer in Ludowici’s NeXclad 16 Matte White and Ash Grey Mist terra-cotta tiles, manufactured in New Lexington, Ohio, and coordinated by their independent representative George Davis Associates.

“The designer on this project had a vision that the building’s shape and color should resemble a dove ascending to the heavens,” says Rob A. Wehr, Ludowici’s CEO. “In order to assist with this vision, we needed to develop terra-cotta wall cladding tiles in white and light gray colors to resemble the colors of a dove’s feathers.”

THE SOLUTION

Ludowici was able to develop and utilize white and light gray ceramic glazes that were applied to their terra-cotta wall cladding tiles. These glazes are fired onto the clay body at extremely high temperatures, around 2,100 degrees, causing the glaze to become vitrified as part of the clay body.

“After coming up with ceramic glazes in white and light gray colors, we had to determine how to apply them to the flat, interlocking terra-cotta tiles,” Wehr says. “Some of the tiles have a solid coat of matte white ceramic glaze, while others have a base coat of the matte white ceramic glaze with a second misted coating of light gray ceramic glaze on top of it.”

This misting of the light gray glaze allows some of the matte white glaze base to show through while giving the white a subtle hint of light gray. The final

ARCHITECT:

Dake Wells Architecture
www.dake-wells.com

CONTRACTOR:

Pearce Construction

ENGINEER(S):

J&M Engineering
Smith-Goth Engineers
AGC Engineers

PRODUCT(S):

NeXclad 16”

COLOR(S):

Matte White
Ashe Grey Mist

SIZE:

18,000 square feet



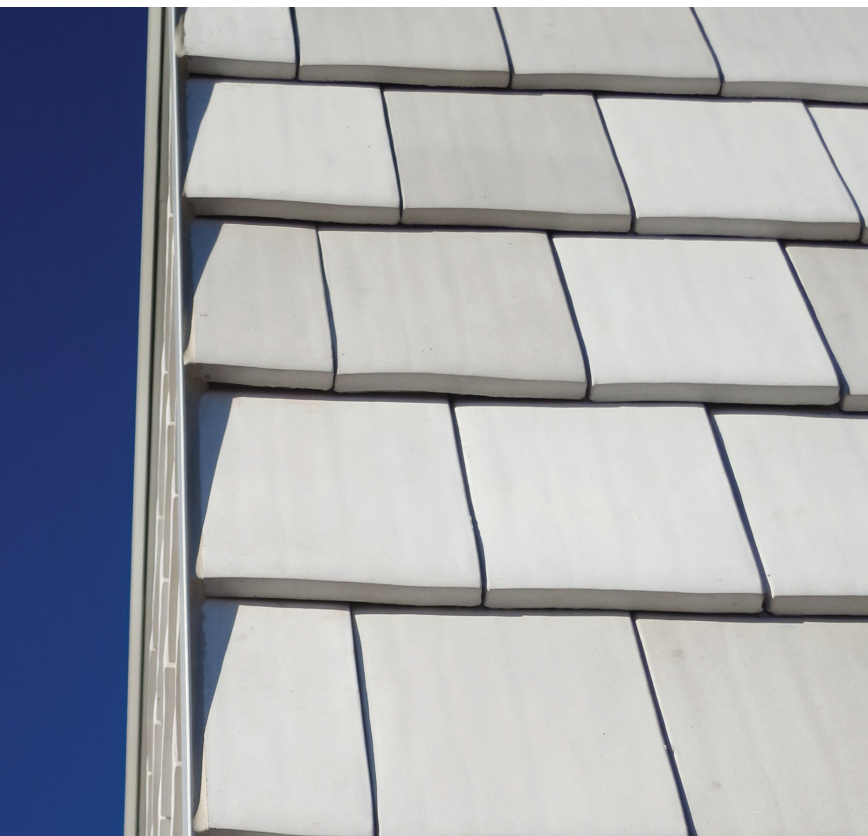




effect is a striking blend of varying shades of white and light gray.

Ludowici's small module classic interlocking tile made with clay sourced locally to their New Lexington, Ohio factory was used for this project. The tile has a flat surface with clean, crisp edges. An interlocking weather channel on the left hand side allows it to nest with the adjacent tiles and properly drain any moisture that gets into the vertical reveals. As a result these tiles have a very high breaking strength, very low water absorption rates, and will remain color permanent due to the ceramic glazes for well over 100 years.

The tiles are fired, like a brick, at 2,100 degrees Fahrenheit for 24 hours. This process vitrifies the clay body and gives it similar properties to glass. The low water absorption rate and high breaking strength are a result of its pure clay body and the firing process. All these things combined result in a cladding material that will last for more than a century.



DESIGN FLEXIBILITY

Ludowici's NeXclad is a versatile solution that offers installation options, depending on the project. In this case the team chose the direct-to-sheathing option to meet the church's budget.

"We knew at the time the tiles were typically used for roofs and not wall surfaces, so we wanted to explore how the material could be utilized as wall cladding," Wells says. "We worked with Ludowici's own staff architect, who was incredibly helpful."

With this design the zone above features the white and gray NeXclad terra cotta tiles, while the yellow and orange brick below symbolizes fire. "Once we proposed this symbolism to the church committee, tying it into their history and religious symbolism, everyone got on board," Wells says. "We talked about installation

strategies since we weren't the first to use terra-cotta as wall cladding material, but it wasn't common at that time."

IN THE DETAILS

Just as Liberty United Methodist Church has a long history, Ludowici's classic tiles have been around a long time, too—having been made from a 100-year-old material. "We liked the natural appearance that had richness and character but also that the tiles were super durable," Wells says. "We liked the terra-cotta even more than metal because we could direct apply it to substrate, which kept costs down." The church's sustainable design also includes exterior insulation for added energy efficiency. In addition, indirect lighting was brought in using glass with different coatings.

"There are no direct outside views but instead zones of daylight that wash surfaces in a mysterious way," Wells says. "Glass is tuned to their orientation and utilizes different coatings."

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– **ANDREW WELLS**, FAIA, LEED AP, SCUP, *Principal Architect, Dake Wells Architecture*

