CASE STUDY

DIVINE DESIGN

TEMPLE BETH AM
LOS ANGELES, CALIF.

CONSTRUCTION EXCELLENCE
FOUNDER'S AWARD
CISCA
Ceilings & Interior Systems Construction Association
March 2020

9 WOOD

DIVISION 9 ENGINEERED-TO-ORDER WOOD CEILINGS

The sanctuary and foyer renovation of Temple Beth Am, Los Angeles, Calif., features a circular wood grille ceiling that spirals upwards 25 ft. The architect says the circular design is "meant to hug and hold the congregation." 9Wood provided 3,305 SF of wood cross-piece grille ceilings.

“Design-Build was perfectly suited for this project. It allowed us to work … hand-in-hand with the fabricator.”

The layered, concentric spaces of Temple Beth Am, Los Angeles, Calif., feature wood walls and a 3,305 SF, suspended, solid western hemlock ceiling. The design of this helical, cross-piece grille ceiling is intended to evoke a desert tent, like that of Abraham of the Bible, says the Steven Rajninger, AIA principal, Herman Coliver Locus Architecture, San Francisco, Calif.

“The ceiling at Beth Am, with its billowing and faceted effect, suggests a soft, light and airy textile, while using a warm, yet hard and more permanent natural material like wood,” Rajninger says. “An open ceiling also provided for ideal room acoustics.”

Design-Build Delivery. The ceiling is 50 feet in diameter. Its highest point is 34 feet above the floor. The lowest point is 9 feet up, giving the ceiling a total 25-foot rise.

“Normally, this kind of geometry is impossible for wood elements,” says 9Wood project manager Brad Leonard. “We worked with the architect to refine the design to one that could be produced.”

The project followed the design-build delivery method. This enabled 9Wood to offer its engineering expertise directly to the architect and to the wood ceiling subcontractor, Coustic-Glo, Simi Valley, Calif.

“Design-Build was perfectly suited for this project. It allowed us to work through design and detailing hand-in-hand with the fabricator,” Rajninger says. “It also enabled us to work through multiple design iterations to keep the cost of fabrication and installation right on budget.”

“The ceiling at Beth Am, with its billowing and faceted effect, suggests a soft, light and airy textile,” says architect Steven Rajninger. The cross-piece grille ceiling is solid western hemlock with a custom stain.

PROJECT

Temple Beth Am
Los Angeles, Calif.

ARCHITECT

Herman Coliver Locus Architecture
San Francisco, Calif.

CEILING AND WALL CONTRACTOR

JHN Inc., dba Coustic-Glo
Simi Valley, Calif.

SYSTEMS

Custom engineered wood ceilings from 9Wood
Springfield, Ore.

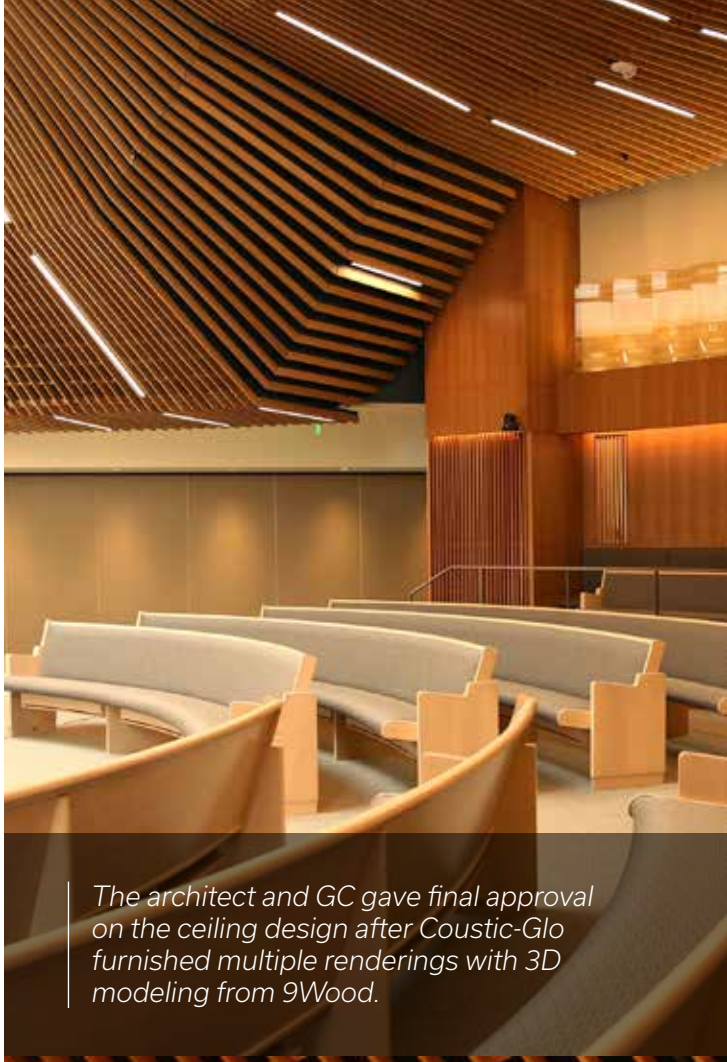
3D Modeling. 9wood provided detailed 3D CAD models that helped the architect and Coustic-Glo make important decisions.

For example, instead of having multiple slopes and center points, the final design modeled by the manufacturer had two mirrored transition sections and one central point from which the panel layouts worked their way around the helical structure.

Modeling also helped the architect achieve a unique design feature: The progressively narrowing spaces between the wood slats as they curve upward. Slats at the outer walls are spaced 1 feet apart, but the inner slats at the apex have only 2 inches of separation.

The city inspector questioned the compression posts specified for the design given the long drop from the deck. The solution was to run back-to-back, 18-gauge, cold-formed steel studs, with 4-inch flanges, from deck to grid.

> "THE WOOD CEILING HAS THE EFFECT OF A WARM EMBRACE UPON WORSHIPPERS



The architect and GC gave final approval on the ceiling design after Coustic-Glo furnished multiple renderings with 3D modeling from 9Wood.

The design, featuring a variety of wood ceiling panel types, was cost-effective and more affordable than other systems considered.

Installation. The grid was installed in just two and half weeks. Most wires are 20 feet in length. The longest seismic wire was 30 feet long.

Requiring a total of three weeks to install, the wood grilles "went in at a good rate," says Johnny Reyes, vice president and senior project manager at Coustic-Glo. He adds: "We started in the center where the ceiling had the steepest slopes."

The installation crew used only three scissor lifts and scaffold. "We had to coordinate with other finish subcontractors around the opening of the ceiling," Reyes says. "Another acoustical subcontractor attached a stretch fabric around that opening below the skylight."

Five installers worked on the wood ceiling beginning in March 2019 for three months. But most of that time was to allow other trades to work.

The wood ceiling has the effect of a warm embrace upon worshippers, the Temple Beth Am web site says.

The spacing between wood grille slats gets narrower — from a 1′ separation between slats and finishing at 2″ between them — as the ceiling curves upward.

The synagogue's helical wood ceiling is 50′ in diameter. Its highest point is 34′ above the floor. The lowest point is 9′.

"Normally, this kind of geometry is impossible for wood elements," says Brad Leonard, 9Wood project manager.

DIVISION 9 ENGINEERED-TO-ORDER WOOD CEILINGS

999 South A Street
Springfield, OR 97477
Tel: 888-767-9990
sales@9wood.com

9wood.com

Photography by Reyna Zack