

## CASE STUDY

# COMPLEX GEOMETRY

WALTON ARTS CENTER | FAYETTEVILLE, ARKANSAS

# 9Wood Designed Two Ceilings that Appear Monolithic, But Are Made of Open-Cell Cubes

The Walton Arts Center in Fayetteville, Arkansas, features two ceilings from 9Wood—a 5,598 sq. ft. diamond ceiling in the lobby, and a 1,008 sq. ft. cube ceiling in the museum’s Garden Room. Bora Architects, Portland, Oregon, specified the design.

The lobby and balcony ceiling with triangular design elements is monolithic. It’s made with panels featuring just three unique 2’ 9” by 2’ 9” open-cell cubes—622 open-cell cubes with crosspieces—and 251 main runners, 599 cross tees and 2 curved trim pieces—a total of 1,474 separate components.

## CHALLENGES MET

The ceiling contractor, TCM Enterprises of Fayetteville, faced three challenges and surpassed them all.

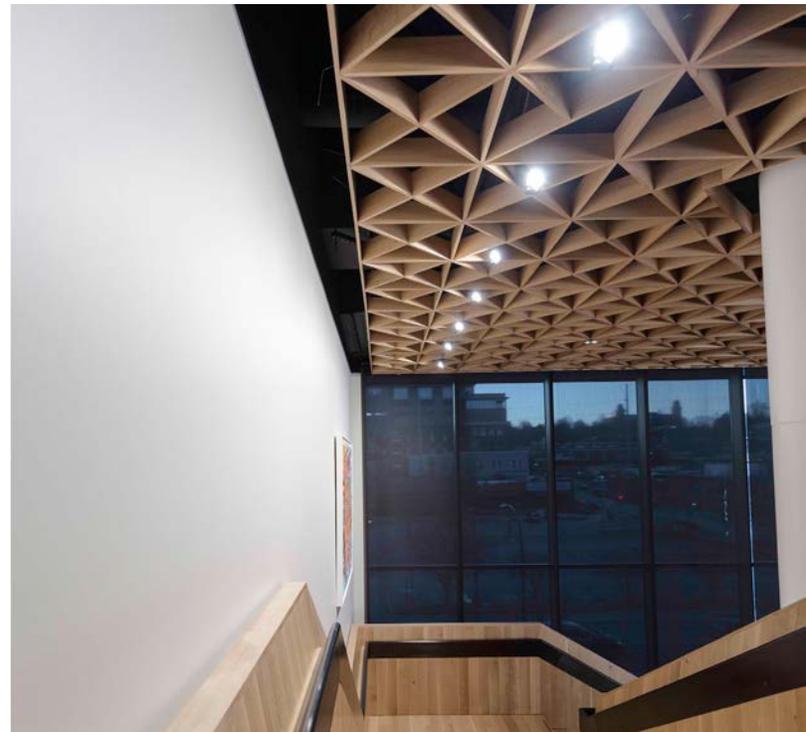
**1. Ceiling height.** The ceiling’s ornate joinery was challenging to install at a 36-foot height. The contractor used an electric actuated boom and two scissor lifts. But, piles of material staged on the lobby floor limited movement.

“We shared the area with everyone doing their work,” said Bob Brush, project manager at TCM Enterprises. “It was rather cramped.”

**2. Precision work.** To install the lobby’s



9Wood’s diamond monolithic cube ceiling fit intricately around corners and integrated perfectly with speakers and light fixtures.



One ceiling features three unique cube designs. One has full crosspieces. Another has a full crosspiece, a partial crosspiece, and an open triangular area.



The manufacturer designed three standard panels to create a monolithic ceiling. "We were able to meet the GC's schedule," said Bob Brush of TCM Enterprises.

diamond monolithic cube wood ceiling, TCM Enterprises assembled hundreds of open-cell cubes, more than 2,000 lineal feet of main runners, and about 1,800 lineal feet of cross tees. It was important to install the cubes in their correct locations, so that speakers, flood lights, light sculptures, and future display banners would all hang properly.

"We had to build a lot of UNISTRUT® to bridge around the mechanical systems and get attachment points," Brush said. "It was like building a trapeze to hold up the ceiling."

**3. Disruptions.** The ceiling contractor estimated his crews needed four weeks to complete both ceiling installations. But once work began, a large motorcycle rally took over town. The rally blocked access to the main business district and halted work on the art center.

"Just as we were getting familiar with the components, pieces, and parts, we had the rally," Brush said. "The town shut down completely."

Work resumed after the week-long festival, and TCM Enterprises was able to makeup some lost time. "We had to re-learn our learning curve," Brush said.

### **Project**

Walton Arts Center,  
Fayetteville, Arkansas

### **Design Architect**

Bora Architects,  
Portland, Oregon

### **Architect of Record**

Polk Stanley Wilcox Architects  
Fayetteville, Arkansas

### **Ceiling Contractor**

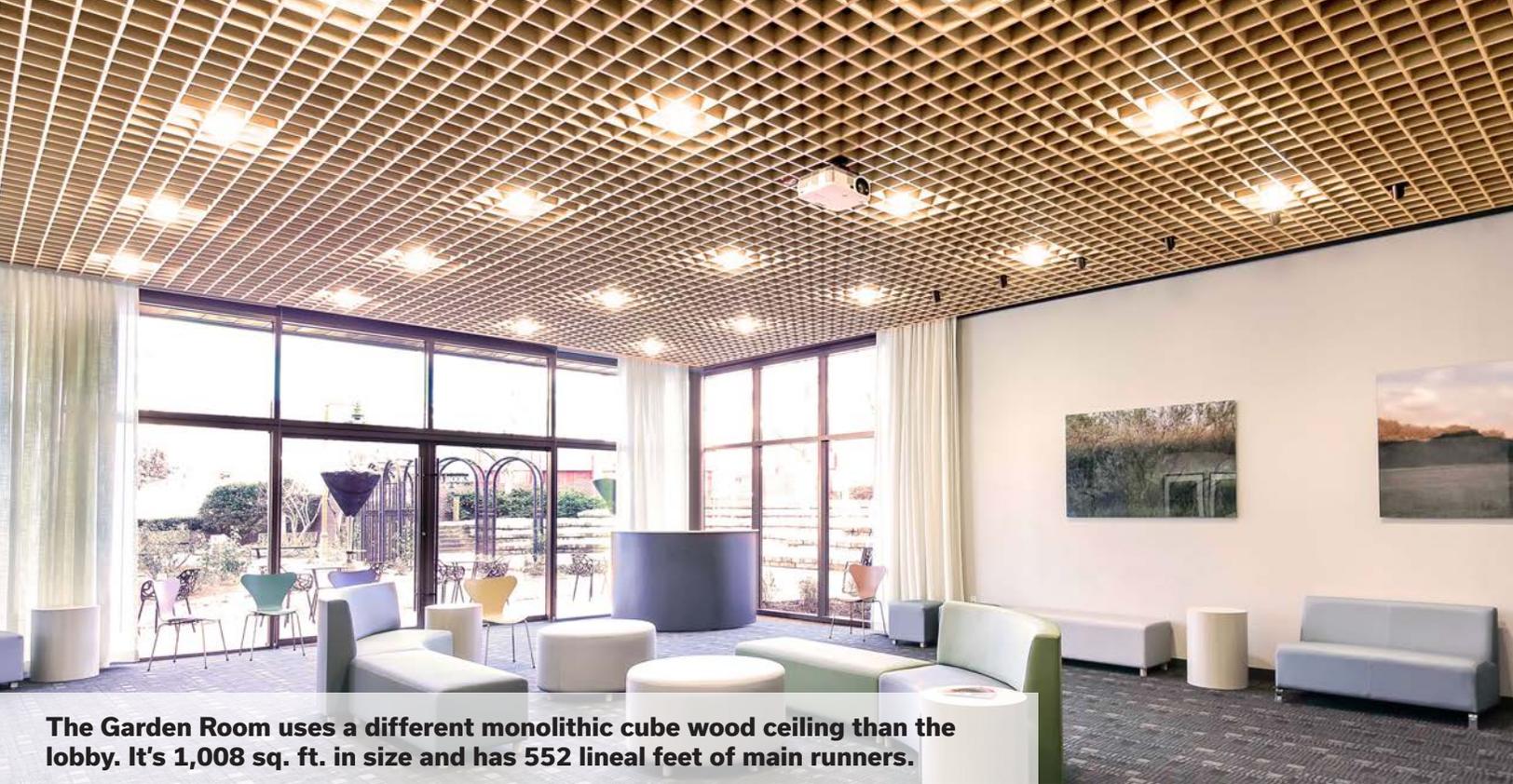
TCM Enterprises,  
Fayetteville, Arkansas

### **Ceiling System**

5,598 sq.ft. and 1,008 sq.ft. open-cell cubes ceilings from 9Wood



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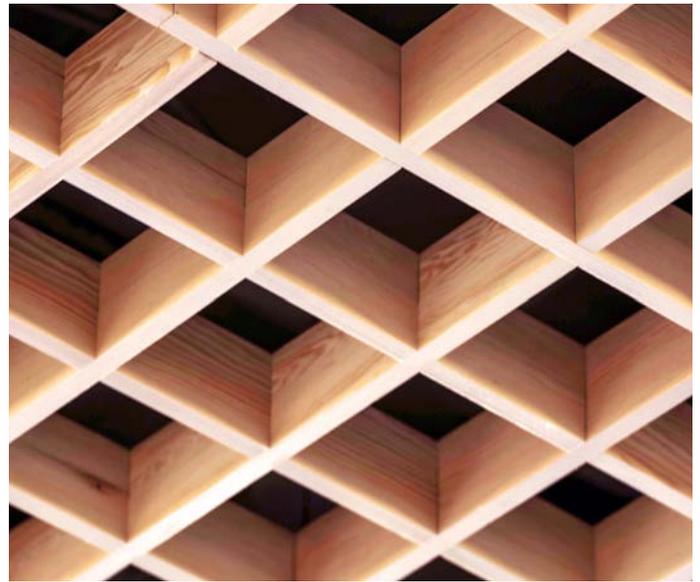


**The Garden Room uses a different monolithic cube wood ceiling than the lobby. It's 1,008 sq. ft. in size and has 552 lineal feet of main runners.**

## JUST THREE STANDARD PANELS

The solution to a high level of productivity was the ceilings' designs. 9Wood had engineered the ceiling systems to be assembled efficiently on site.

In the case of the lobby ceiling, the larger of the two ceilings, 9Wood found a way to fabricate just three standard panel types to create a monolithic ceiling with complex geometry.



The Garden Room ceiling features 2' by 2' cubes and 8' main runners all made from solid Western Hemlock.



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