

CASE STUDY

BUILT ON CURVES

*BIGHORN CLUBHOUSE
PALM DESERT, CALIF.*



DIVISION 9 ENGINEERED-TO-ORDER WOOD CEILINGS

Champagne-stained solid western hemlock planks form the curvy ceilings at BIGHORN's Clubhouse. The undulating ceilings continue into the interior.



BIGHORN's Clubhouse features linear wood ceilings, leaf-shaped ceiling clouds and matching wall panels

About 1,000 feet above the valley floor, the Clubhouse at BIGHORN, Palm Desert, Calif., is "built on curves," says BIGHORN President Carl Cardinalli. "There are very few right angles to be found throughout the entire building," he says.

The clubhouse features linear wood ceilings, special ceilings shaped like leaves and matching wood wall panels.

Upper Linear Ceilings. The upper ceilings run inside and outside the building. They comprise about 12,000 square feet of 3-1/4-inch linear planks, ranging from 8 to 12 feet in length, made of a custom-stained solid western hemlock.

"What's tricky is that the ceiling undulates," says Todd Paiva, president of Advanced Acoustic Contractors Inc., San Diego, Calif. "It's a wave."

To build them correctly, the ceiling contractor used a Building Information Model to determine the radius of the wave, which was reflected in the suspension grid. "It was feat in itself to get this curved framing correct," Paiva says.

Leaf-Shaped Ceilings. Eight, leaf-shaped walnut veneered ceilings, totaling 3,628 square feet, appear throughout the structure. The largest is 952 square feet in size. The smallest is only 71 square feet. All were designed by 9Wood to meet





PROJECT

The Clubhouse at BIGHORN,
Palm Desert, Calif.

ARCHITECT

Swaback Partners,
Scottsdale, Ariz.

CEILING CONTRACTOR

Advanced Acoustic Contractors Inc.,
San Diego, Calif.

CEILING SYSTEM

9Wood custom engineered linear wood
ceilings and matching wall panels,
Springfield, Ore.

The eight "leaf" ceilings (three shown here) sit on multiple planes and total 3,628 square feet. BIGHORN Magazine calls them "a suspended work of art within this grand setting."

the architect's design intent. BIGHORN Magazine calls them "a suspended work of art within this grand setting."

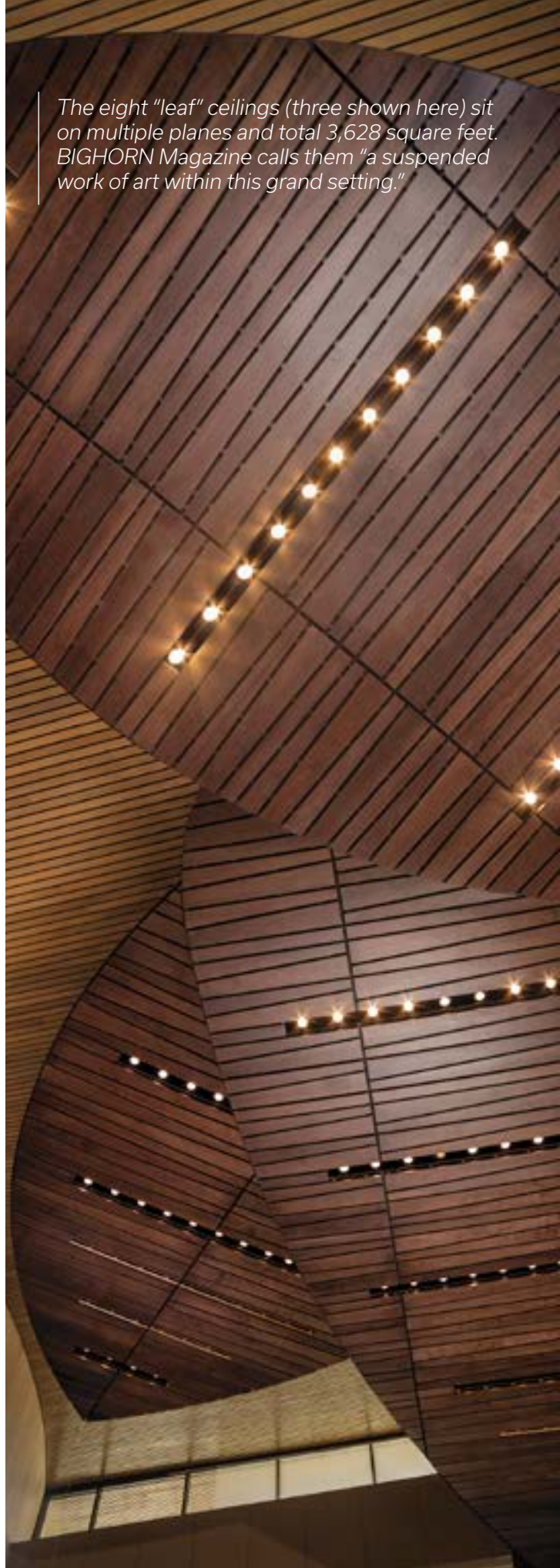
"We figured out a way to build them, cover their supports and make it appear that they were floating," says Paiva. His crews used tube steel to frame the "leaves" and attach them to the deck and cold-formed steel cross pieces with plywood to give them rigidity.

Special Sequencing. The wood slats for the "leaves" and the 2,600 square feet of matching wood wall panels are each trapezoidal in shape and were pre-cut in the factory. Since they assemble like a jigsaw puzzle in a precise way, 9Wood laid out each "leaf" in the factory to ensure a proper fit before shipping them to the job site.

"The 'leaves' are stacked, so they had to be shipped and installed in order," says Brad Leonard, a project manager at 9Wood. "There was lots of sequencing logistics involved in this project."

The contractor cut openings in the "leaves" for air diffusers, light fixtures, speakers and sprinkler heads.

“ WE FIGURED OUT A WAY TO BUILD THEM ... AND MAKE IT APPEAR THAT THEY WERE FLOATING. ”



The 12-member crew worked 10-hour days, seven days a week, for three months to meet the clubhouse grand opening date. "We had trucks with material coming from the 9Wood factory every two weeks," Paiva says.

The result are ceilings that contribute to "a breathtaking use of light and space," BIGHORN Magazine says.



Linear ceilings undulate over sculptures and follow a rear curved wall. The Clubhouse design is "this beautiful symphony flowing through the space," says architect John Sather of Swaback Partners.

One ceiling cloud showcases a chandelier of glass and fiber optics. Matching walnut veneer flat panels of various shapes and sizes clad the staircase.



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