

TOBIN CENTER FOR THE PERFORMING ARTS SAN ANTONIO, TEXAS



PROJECT PROFILE



DIVA® FULL-STAGE ACOUSTICAL SHELL, MUSICIAN CHAIRS, CELLO CHAIRS, FLEX® CONDUCTOR'S STAND

“Customization makes each Diva shell special and there’s peace of mind from working with Wenger for so many years. We trust the Diva shell – it’s an established product with a strong warranty.”

*– Adam T. Huggard,
Senior Associate, Fisher Dachs Associates*



CHALLENGE

Create full-stage acoustical shell that delivers superior acoustical performance and beautiful design aesthetics.

WENGER SOLUTION

Working with architect and project team to develop digital-printing solution on wood veneer, partnering with interior millwork supplier. Engineering and building shell components to meet design criteria and production timeline. Coordinating project details and accommodating specification changes.

BENEFITS

- Provides acoustical excellence to performers and audience alike
- Offers assurance of strong warranty and readily available parts
- Complements facility interior with unique, custom aesthetic treatment
- Reduces labor costs and speeds changeovers with user-friendly operation

HIGHLIGHTS

"Excellent auditorium acoustics were essential for the Tobin Center's various resident companies," says Vicki Dickerson, Owner's Representative with The Projects Group. "The right acoustical shell plays a huge role in this."

The Tobin Center for the Performing Arts in San Antonio incorporates portions of the city's historic Municipal Auditorium while dovetailing a new 1,768-seat auditorium and stage house into the existing footprint. Other elements include a 250-seat studio theatre and an outdoor performance plaza connected to the city's famous River Walk.

"We wanted a semi-standard shell we knew and trusted – Wenger's Diva model – with enough customization to make it look special," says Adam Huggard, Senior Associate with Fisher Dachs Associates theatre consultants. "Most custom, purpose-built shells are a little fussy but the Diva is not."

Huggard believes the Diva system offers technical advantages including user-friendly operation, along with readily available parts and strong warranty. "We're not re-inventing the wheel," he states.

Although Wenger has manufactured hundreds of acoustical shells for performing arts facilities worldwide, this was the first shell incorporating a digitally printed overlay pattern along with the traditional woodworking craftsmanship and fabrication.

ENCOURAGING INTERPRETATIONS. The printed overlay was inspired by the arabesque ornamentation of the original auditorium's Spanish Colonial Revival architecture, but the resulting design also evokes other images: Clouds...Ocean waves...Wind currents...

"Any of these multiple interpretations – or others – are encouraged," said Miles Mazzie, Associate with Sussman/Prejza graphic design studio. "Some visitors will attend numerous concerts and see the shell many times." The shell's graphics were intended to feel comfortable in the space, according to Mazzie, and in scale with the overall architecture. The graphics also appear in other interior design elements, such as on the auditorium balcony fronts where they are enhanced with color-changing LED illumination.

Mazzie says today's digital technology can seamlessly integrate such images into architecture on almost any material, including wood, metal, glass and vinyl. Printing on the wood veneer was performed at Image Mill, where John van Rensburg states the challenge was creating an image that didn't look too overt, yet appeared very intentional from a distance.

FOCUSING ON DETAILS. "Printing with translucent ink allowed the veneer's wood grain to show through the dot pattern," notes van Rensburg. He adds that the Anegre wood's natural coloring creates interesting variations depending on the viewer's perspective, while transforming the ink's nut-brown color into more of a plum hue.

To ensure visual consistency, Wenger obtained the shell veneer on ¼" (0.6 cm) plywood from Fetzer Architectural Woodwork, fabricator of the Tobin Center's interior millwork. Wenger incorporated this veneer into the Diva's honeycomb-core composite panels, attaching all the necessary framework and hardware. For the three ceiling rows and ten 38' (11.6 m) tall wall towers, more than 7,400 ft³ (685 m³) of veneer was required. This tropical



African hardwood is noted for its natural luster and straight-to-interlocking grain pattern.

"The project team reviewed numerous veneer samples to ensure proper matching," explains Brent Gilbert, Engineering Manager with Linbeck/Zachry Joint Venture, the construction management firm. He praises Wenger's attention to detail throughout the project in execution, coordination and communication. Akustiks was the acoustical consulting firm.

As prime architect, LMN Architects took part in the design development of the shell. Rich Johnson, AIA, who coordinated architectural design intent during the construction phase, joined other project team members in a visit to Wenger's Minnesota facility to view the shell mock-up and participate in a tour of Wenger's factory.

"Wenger offers an impressive array of technology, capabilities and equipment," recalls Dickerson, an opinion echoed by Johnson.

"Everyone was very knowledgeable and accommodating," notes Johnson of this visit. "And the quality of the mock-up was excellent." He claims Wenger met all the design criteria and worked to integrate architectural details where possible.

In the project's final stages, Wenger made engineering modifications to the approved tower specifications, meeting to the owner's request for a standard manual wheeled mover rather than an air caster system.

The shell will be reconfigured often; the Tobin Center is booked solid for its first six months. When stored, the towers nest backstage; if necessary they can all fit in a footprint measuring only 16ft 7in by 9ft 3in (5m by 2.8m).

ACHIEVING HARMONY. During the design process, Huggard asked Wenger if they had ever done a printed shell. "They said, 'No, but let's figure it out together.'" He adds, "It's really nice that Wenger will spend the time with you up front – even if they're not guaranteed the project – to work through issues and understand what's possible."

Huggard believes the shell blends two looks – organic, natural wood and high-tech printing – to create a dualistic visual effect analogous to painted scenery onstage. "With a scenic painting, every brush stroke is visible; up close it is hard to make out the pattern," he explains. "But from the audience's vantage point, everything makes sense and looks perfect."

The audience sees the shell image formed by the collective printed dots as a backdrop for the musicians, a gestalt greater than the sum of its parts. Meanwhile, musicians onstage do not perceive the overall pattern, but only bask in the warmth of the stained wood veneer suggesting the richness of a finely crafted musical instrument.

"Although the shell's visual element does not directly influence the musician's craft, there are psychoacoustic benefits," states Huggard. "A comfortable, natural-wood surrounding helps relax the musicians, enabling them to play their best."

In a way, the shell's dualistic visual effect also mirrors its twofold acoustical impact. Onstage, performers benefit from enhanced early reflections and improved communication. In the auditorium, audience members hear a blended, focused and fuller sound.

PRODUCT LIST

Diva® Full-Stage Acoustical Shell, Musician Chairs, Cello Chairs, Flex® Conductor's Stand and Chair Move & Store Carts.



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