



Music on Route 66

The Harry M. Cornell Arts and Entertainment Complex is Joplin's new cultural touchstone

By: David Barbour



Joplin, Missouri, known for its bars, restaurants, outdoor activities, and a museum featuring an exhibit on Bonnie and Clyde, got a brand-new amenity last fall with the opening of the Harry M. Cornell Arts and Entertainment Complex. A combination performance space and art gallery located along the famed Route 66, it is administered by two organizations:

Connect2Culture, a community arts agency and performing arts presenter, and the George A. Spiva Center for the Arts, which presents exhibitions and offers classes in the visual arts. (The Cornell Complex also hosts ProMusica, a classical music-presenting organization.) Named for an executive at Leggett & Platt, a local manufacturer of components for the bedding and furniture industries, the Cornell Complex is a true community center, reflecting the Joplin cultural scene while introducing patrons to artists from around the world.

At 37,000 sq. ft., the building is massive, yet bright; at night, it glows from within, serving as a kind of beacon of the arts. More than 15 years in development, the Cornell Complex is well-placed to make an impact on the community. Speaking to the local television station KSN 16, Emily Frankoski, executive director, Connect2Culture, said, “We found that the arts are a \$5,400,000 industry in Joplin. Employing, you know, over 190 different people in our community and giving back through various means and so, the arts really mean business in Joplin.”

It is also an unusual project in that all aspects—architectural design in addition to theatre and acoustic consultation—were handled by the global design firm DLR Group. It is especially known for restoring vintage theatres, including the Capitol Theatre in Flint, Michigan; the Tampa Theatre in Tampa, Florida; and the collection of venues that make up Cleveland’s Playhouse Square.

Tom Gallagher, the project architect, says that, from the start, the clients “wanted a flexible arts center that took advantage of synergies between the visual and performing



Above: At 37,000 sq. ft., the building is massive, yet bright; at night, it glows from within, serving as a kind of beacon of the arts. The building’s design “was inspired by the cubist forms of lead and zinc as mined from the ground in Joplin,” Gallagher says. Right: The Beshore Performance Hall, a 450-seat end-stage venue, hosts a broad range of music, comedy, dance, and theatre.

All photos: Kevin Reeves

arts.” Noting the building’s cubic structure, he says, “Given the budget, we needed to minimize the building envelope area, so we developed it as a square, with the theatre in the center. This helps to isolate the theatre from ambient noise caused by traffic while also allowing the theatre to open onto an amphitheatre.”

The building’s design “was inspired by the cubist forms of lead and zinc as mined from the ground in Joplin,” Gallagher adds. “We used a cost-effective metal panel system with three different finishes to evoke the different reflectance of lead and zinc. The dramatic ‘carving out’ of the volumes evokes the eroding of loose materials around the mined lead and zinc to strengthen the presence of the building and program areas. A strong use of solid-void relationship in the massing and glazing enhances this evocation of the dramatic look of lead and zinc in its natural state.”

Ample outdoor space has been included; in addition to the amphitheatre, known as the Leggett & Platt Green, the building features a roof terrace and several balconies. “We proposed them as part of the design relative to the solid void relationships but also to create highly useful outdoor spaces at each level,” Gallagher notes. “The balconies on the building’s south side, flanking the opening to the stage, evoke the sidewall boxes of a traditional theatre, making the amphitheatre feel more like a ‘theatre room’.” Design flourishes such as these point to the building’s organic nature; conceived to make economical use of space, every inch is devoted to its overall mission.

Beshore Performance Hall

The Beshore Performance Hall, a 450-seat end-stage venue, hosts a broad range of music, comedy, dance, and theatre; this month sees JOMO Jammin’, a festival of jazz, rock, bluegrass, soul, and other American music styles.

“What they were really after was flexibility,” says Patrick Barrett, the project’s theatre consultant. “They host many types of performances, and they want to serve the community, including theatre groups, dance schools, and university music departments. Beyond that, they had a vision of using the space for banquets, trade shows, and small art markets. Because we were also putting in a gallery, we needed to make an efficient use of the space.”

Thus, the theatre is convertible to a flat-floor configuration, continuous with the stage, allowing it to host various special events. The stage also opens at the back, connecting to the 1,500-seat outdoor Leggett & Platt Green. The front and back-of-house spaces are designed to support indoor, outdoor, and simultaneous indoor/outdoor events.

“It is, nominally, a proscenium house,” Barrett says. “The seating is built on a series of manual screw-jack platforms. The rear section is retractable, with a cross aisle in the middle.” The retractable seating was supplied by Audience Systems, with the Uplift platforms supplied by Sightline Commercial Solutions, and additional seating provided by Wenger. The front audience section, which sits on 30 platforms, “can go from a setup that steps down to audience seating to a flat-floor arrangement and anywhere in between. The first two rows of platforms can make a shallow orchestra pit or a runway configuration.”

Barrett adds that the theatre has a balcony with side galleries and, higher up, a control booth for lighting and sound. Onstage rigging includes nine counterweight line sets with nine additional dead hung, supplied and installed by Texas Scenic.

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Above, left and right: The stage opens at the back, connecting to the 1,500-seat outdoor Leggett & Platt Green. The front and back-of-house spaces are designed to support indoor, outdoor, and simultaneous indoor/outdoor events.



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position just above the balcony, in addition to over-stage positions.” The lighting package—fixtures and console supplied by Headline Productions with infrastructure by Texas Scenic— includes High End Systems SolaFrame and SolaPix automated lights plus CHAUVET Professional Ovation ellipsoidal units. Control is provided by a High End Road Hog console with a network that includes ETC Sensor Relay Modules.

Other amenities include a star dressing room for one or two performers and two group dressing rooms, each accommodating four; a green room; and lounge, dining, and kitchen spaces in addition to storage rooms, laundry, and a technical director’s office.

Acoustics

Expanding on Gallagher’s earlier comment on the placement of the theatre, acoustician Jonathan Hopkins says, “The building is sited on Route 66, the busiest street in town. We didn’t do a full box-in-box construction”—a classic isolation tactic—“but we sited it so that is back from the main street where it is quieter.”

The room is defined by its adjustable acoustics, which accommodate the varied lineup of performance types. “We had a limited footprint, so we extended the room’s volume above the reflector, which gives us the ability to reach a higher reverb time while keeping a sense of intimacy,” Hopkins says. The room’s reverb time ranges between 1

and 1.3 seconds. “It doesn’t accommodate a full symphony orchestra, but it’s good for spoken-word presentations, theatre, and most kinds of music.”

Texas Scenic also provided an adjustable acoustic system. “The sidewall louvers have a mix of absorptive and reflective materials,” Hopkins says. “The angles help to redirect the sound into the seating area.” The acoustic materials blend in well with the auditorium’s cherry wood walls. “The fixed absorption is microperforated, which has a wood veneer that matches the other panels. Absorption is also handled by strips of acoustic felt, made from recycled denim, on the sidewalls. The denim, which is also used in the lobby’s ceiling, is cool; we have sustainability goals, and this was one way to reach them.”

Designing effective acoustics for all possible room configurations was a challenge, Hopkins notes. “When the seating goes away, so does part of the absorption,” he says. “That’s when curtains get deployed to get the right room environment. Also, the HVAC system is designed for low velocity and less background noise. The air is supplied from above, with returns on the sidewalls.”

Hopkins notes that budget limits led to creative solutions. “The door to the exterior was a major coordination item. A traditional acoustic door of that size can cost \$700,000. We explored different options and eventually worked with a manufacturer of airplane hangar doors; they tweaked their typical door, upgrading the seals and mask-



This page and opposite: Other amenities include meeting and hospitality spaces with catering capabilities as well as offices, service facilities, and storage areas for member arts organizations. Additionally, there are four art galleries.

ing to make it more performance-ready. There's a canopy on the exterior and a forestage reflector overhead," adding to the theatrical atmosphere.

AV Systems

Continuing the theme of flexibility, Andrew Nagel, who specified the theatre's AV systems, says the main PA rig consists of L-Acoustics A Series line array elements in a left-center-right arrangement. "Like any consultants, we play the field when choosing gear, but this was the right product for this room," he says. "L-Acoustics was at the top of the list here because the client needed a system that is rider-friendly. Joplin is located some distance from any rental houses," and, since swapping out gear would be effortful, better to go with products that are universally known.

"One challenge was product availability," Nagel notes, adding that decisions were finalized at the height of the supply chain crisis. "The choice of L-Acoustics [which is based in France] was beneficial," he adds. "They had product and established protocols for getting it into the country quickly." But when a Yamaha console proved impossible to get, Nagel instead went with a DiGiCo Quantum225, again chosen for its rider-friendly characteristics. The retractable seating systems facilitated the placement of a mix position in the center of the room, he adds. "For music-critical productions, they can plug in the console anywhere on the floor." (Similarly, the infrastructure exists to plug in the lighting console during the production process.)

Also rider-friendly is the wireless system, which features four channels of Shure's ULX-D antenna distribution, with auxiliary outputs that allow performers to plug in any wireless gear. "They have other ULX-D in the building, for the

lobby and main art gallery," Nagel adds. "Each has a Dante chip; the entire building has a Dante backbone although, overall, it runs on Q-SYS, because of the background music and paging system. Everything is linked; whatever is happening in the auditorium can be piped in throughout the entire building if they want."

For video, he says, the clients "wanted to set up cameras, so we installed extra panels with connectivity; they can set up flypacks in the rack room. A PTZ camera on the Visionary Solutions AV-over-IP system can send video around the building. In the auditorium, video is delivered by a Barco F80 4K12 projector; there is no media server.

"In the lobby," Nagel continues, "is a feature wall, consisting of three 75" Samsung screens, in portrait, that can show what is happening in the theatre. Also, there are a few displays in the box office and several Samsung OM Series outdoor LCD displays in the main entry area."

The Leggett & Platt Green has infrastructure for later development, including a built-in mix position and a cable pass system extending from the outdoor stage to the sidewalk on the edge of the park. "We anticipate them setting up a projector and showing movies on the back of the building," Nagel says. Communications are handled by a Clear-Com party-line system. The AV integrator was Joplin-based Total Electronics Contracting.

"The biggest challenge was the supply chain," Nagel says, saying it plagued the project into the late design and construction period. "That's why the system was built with a flexible enough backbone so that some of the pieces built into it could be adjusted." He adds, "It sounds really nice in the theatre; some of that is due to what Jonathan did with the acoustics. If you make it good for spoken-word presentations, it will be great for reinforcement."



The lobby includes this artfully designed donor wall.

Galleries and offices

Other amenities include meeting and hospitality spaces with catering capabilities as well as offices, service facilities, and storage areas for member arts organizations. Additionally, there are four art galleries, and the rooftop terrace hosts intimate performances and gatherings.

“The biggest challenge was getting the program right-sized to match the needs and budget,” Barrett says. “There were very delicate compromises over that. It’s not a unique thing. Fortunately, the clients were very proactive, involved, and dedicated. When you have that, things go pretty well.” 📶