Gothic Revival

A vintage Cincinnati concert hall is redone for the 21st century

By: David Barbour

The cultural life of Cincinnati, Ohio got a boost last fall when the Cincinnati Music Hall—home of the city's symphony as well as its opera and ballet companies, as well as the Cincinnati Pops, and the May Festival, a two-week choral music event—reopened following a renovation that preserved its architectural charms while bringing it into the 21st century. An august Victorian pile designed by hometown architect Samuel Hannaford, the building opened in 1878, and quickly became a signature part of the city's skyline. In 1975, it was listed on the National Register of Historic Places.

According to the music hall's official history, "Originally serving the city as its first convention center, the three buildings which make up the familiar Elm Street façade were early destinations for nationally-acclaimed industrial exhibitions, which firmly established the multi-use character of this unique venue. Continuing through the 1970s, programming included everything from sporting events (boxing, wrestling, tennis, ice skating, basketball), traditional exhibits (art, home, military, horticultural, automobile, and trade shows), and everything in between (circuses, big band dances, conventions, and political events, including Republican and Democratic national conventions and campaign appearances by several presidents)."

But, as time went by, the building came to seem increasingly problematic as a home for its cultural institutions. Michael Cooper, writing in the *New York Times*, detailed its weaknesses, many of which will resonate with arts patrons in other cities: "A concert hall that was simply too cavernous: hard to sell out and leaving audiences feeling distant from the music. Lobbies that have grown shabby over time. A fortress-like presence, somewhat isolated from the city just outside its doors."

A top design team was assembled to address these issues and others: Martinez + Johnson, architects, working with Perfido Weiskopf Wagstaff + Goettel Architects; Schuler Shook, theatre consultants; Akustiks acoustical consultants, and Messer, the construction firm. The renovation, which cost $143 million, came in on time and on budget, and is being hailed as a model project of its kind.

The building's exterior was freshened with newly reopened windows to let in daylight, accent lighting to give it a sleeker profile at night, and interior illumination of the rose window. The painted bricks on the eastern façade, lost when the building was sandblasted in 1969, have been restored, revealing patterns depicting piano keys, diamonds, four-leaf clovers, basket weaves, and checkerboards. An ADA-friendly entrance was added.

The Grand Foyer was uncluttered, thanks to the removal of a glass separating the north and south halls as well as a gift shop that protruded into the space. The drop ceiling in Corbett Tower, an event space, was removed, revealing the original ceiling with its stenciled pattern. New finishes, food and beverage service, a catering area, and reopened windows were all part of the room's renovation.

In addition, nearly 30,000 sq. ft. of additional space was found without changing the Music Hall's footprint. A second-floor rehearsal event space was reclaimed from the two-story-tall paint/scene shop; the new space features a sprung floor for dancers as well as a lobby and dressing rooms. A repurposed carriageway space on the first floor has been made into another flexible event space. Interestingly, the building contains a ballroom complete with an organ, built in 1927 for a local movie palace; it has gained additional access via elevators, along with a new catering facility and updated restrooms. Other improvements including vastly increased restroom capacity; new high-density storage for what is the largest orchestra library in the

All photos: Whitney Cox

world; and updated dressing rooms for performers and locker rooms for musicians.

However, the most significant alterations were made to Springer Auditorium, making it more usable for the symphony, opera, and ballet, all of whom had specific needs to be addressed. According to Michael Burgoyne, a partner at Schuler Shook, "The biggest driver was the symphony's desire to improve acoustics, for the audience and the performers. Paul Scarbrough and Chris Blair, at Akustiks, felt that the overall volume of the room needed to be reduced. This led to bringing in the sidewalls and realignment of the main floor and first balcony. The other big move was to bring the symphony into the room; now, almost the entire ensemble is placed in front of the plaster line. This was done by extending the stage apron." This was not a small operation: the orchestra has been extended 13' with the aid of Serapid motorized stage lifts, supplied by J.R. Clancy.

Blair says, "Several attempts had been made at correcting the auditorium's sound over the last 20 or 30 years. But the room was too large, and the orchestra was sitting half behind the proscenium and half in front; they were playing in two different rooms. We pulled the orchestra 13' into the room. The Cincinnati Pops uses the full stage and needs more seating, so it is seated behind the proscenium. For the opera, we expanded the pit a bit."

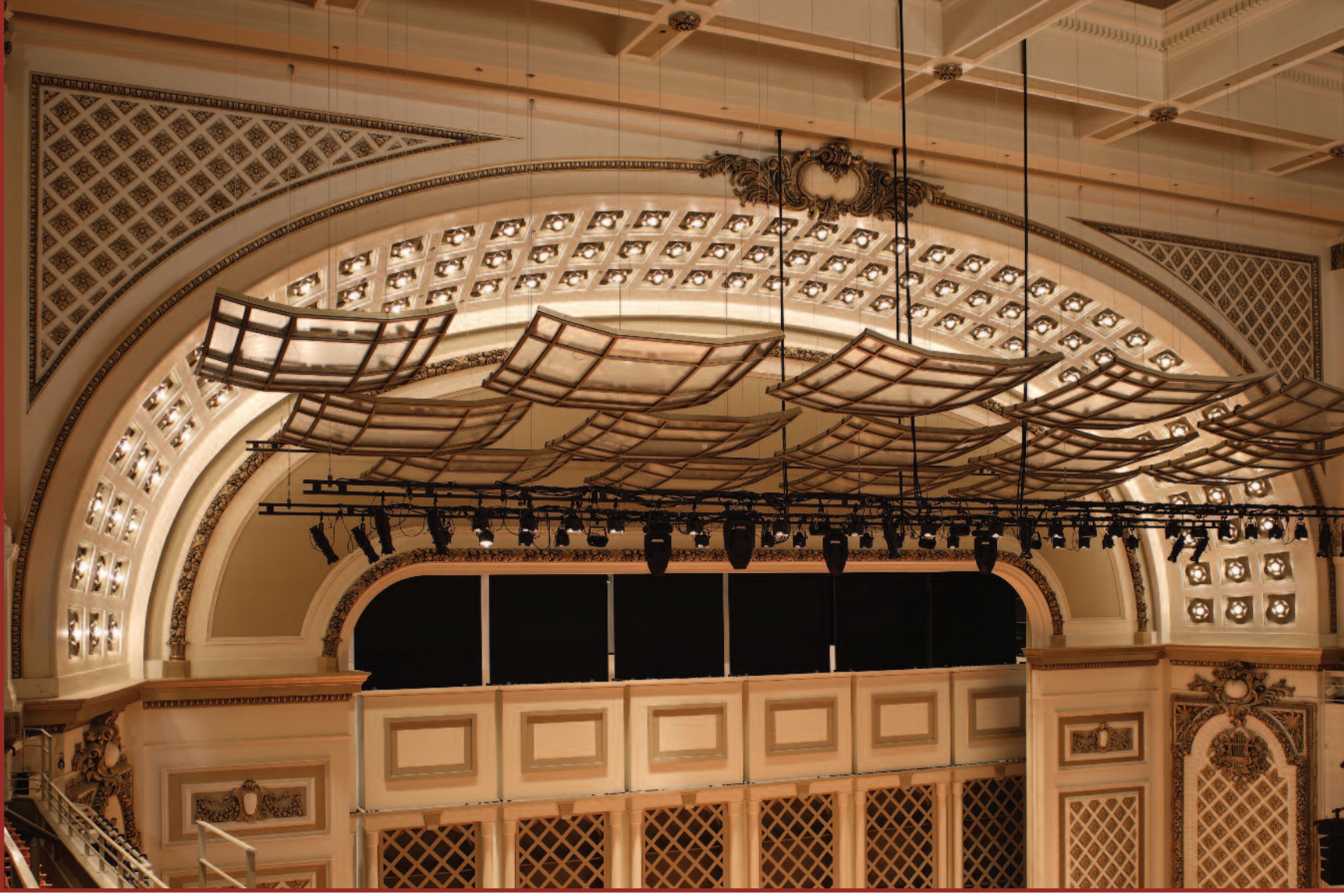
However, extending the stage for the symphony meant, Burgoyne says, "The sightlines from the balcony and gallery were compromised." Also, he notes, the sightlines in the orchestra were less than ideal. "The floor was heavily sloped and the farther back you got, the more you were behind a sea of heads. To solve this, we re-sloped the floor and re-tiered the back of the room. The re-sloping of the balcony and gallery [the second balcony] was even more significant; the tiers became much steeper. Also, on the balcony level, we had to reconfigure the audience circulation based on where the seating ended. Bringing in the walls gave us space for vestibules between the lobby and the hall, allowing for enclosed control rooms for the first time. At the orchestra level, we also gave them space for a patron lounge that opens into the lobby."

In the reconfiguration of the room, the seat count was reduced from 3,500 to 2,550. "The capacity for the symphony is closer to 2,300," Burgoyne says, "because the seat count includes the first, second, and third lifts, all of which are used as stage extensions for the symphony's performances. The opera and ballet gain seats, since the pit is in use when they perform." He adds, "We eliminated the center aisle on the orchestra floor. It was a big culture shift to take that away—there was a lot of discussion about it, and we went back and forth on it in respect to the subscribers—but we did it to maintain the seat count. Altogether, we went from five aisles to two. It did turn the patrons upside down a little bit. But the flip side is that it now feels so much more intimate. Everyone likes how the character of the orchestra floor has changed." The new seating was supplied by Ducharme.

In terms of acoustical treatments for the room, Blair says the lower walls feature "three layers of 1" cement board with a finish coating on top to preserve low frequencies." He adds, "As the slopes of the floors were changed, we installed a plenum for the air supply to come from underneath." The air system, he notes, is also designed to be extremely quiet.

As you might imagine, the business of reconfiguring a landmark building's interior involves highly delicate surgery. "Moving the walls was tricky," says Burgoyne. "We had to be sensitive to the architecture of the room. Some elements we couldn't or wouldn't wish to change, such as the proscenium arch and flanking walls. Also, the fascias on the balcony and gallery are significant and weren't changed, nor were the coffered ceilings and chandeliers." The connections between the re-sloped balcony and gallery and the circulation galleries weren't easy to maintain. "We tried to maintain the perimeter door elevations as best we could, and it was a puzzle," Burgoyne says. "The angles and curvature and wall construction were very specific in terms of the acoustics. Some of the walls have multiple layers of cement board to give them the right mass and reflective qualities." Blair adds, "The balcony structure was stripped back to the trusses. Between changing the rake of the seats and moving the orchestra forward, the goal was to keep within a certain characteristic sound that the symphony has enjoyed for generations, while improving its impact." He adds, laughing, "Brain sur-

Despite the reconfiguring of the interior, the coffered ceiling, with its gorgeous paintings and chandeliers, was left untouched.



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gery is simple compared to this. We worked with computer modeling to a certain extent, but most of it involved using historical models at full scale, rooms that we were experienced with. We were confident that narrowing the room and reducing the seat count would work. The modeling was pretty much a check on the design."

The auditorium's rigging system was also reworked in part. "The original number and configuration of line sets didn't change," Burgoyne says. "We also reused some of the fire curtain and updated the release and operating system, but the panel had been replaced in the '80s and was still fine. A large motorized first bridge position was heavily used by the opera, but it sometimes got in the way and not where they wanted it in plan. We eliminated it and filled in new counterweight line sets; five sets were gained. We also gave them a portable bridge, so when they want it they can hang it a little bit upstage or downstage or strike it."

J.R. Clancy refurbished an 85-counterweight line set system, provided a new motorized traction drive hoist for the fire curtain system and two SceneControl pendants, sourced additional equipment, and collaborated on rigging installation with local installer Beck Studios. Clancy and its sibling company, Wenger, provided nearly a dozen customized drum hoists, and three custom seating wagons.

A particularly significant change involved the acoustic canopy. "The previous canopy, a pair of big, heavy, opaque white assemblies, was replaced with 15 aluminum frames and frosted acrylic, which is much lighter-looking," Burgoyne says. Blair, who designed them, says, "Organizing the various sized translucent panels within the metal framing; each canopy element becomes a segment of a sphere, reflecting sound more or less equally in all directions back to the orchestra. We couldn't find a manufacturer to give us clear panels of the desired size, so this segmented approach was required. In addition, the symphony selected the degree of translucency with an eye that they might in some cases be illuminated from above with colored lighting." Burgoyne adds, "Part of the replacement was about portability. The previous ceiling panels consisted of these massive pieces that would be struck in the summer for the opera season. We wanted something a little more manageable; the 15 new panels

aren't so massive are much more portable and can be tracked on carts as individual pieces. Each has four lift lines, however, so we have a sea of rigging lines to support all the individual panels. Clancy did heroic work figuring out how to place and manage the winches and then getting the lift lines where we needed them." J.R. Clancy worked with subcontractor C.K. Wegner on the fabrication of the panels; Wegner provided custom carts to store the panels, which are suspended from Clancy custom line shaft hoists.

Other new amenities for the opera, include new curtains and scrims, supplied by Beck Studios, and stage traps, Also, dressing rooms were updated and a backstage crossover that was 4' above stage level was lowered; the latter involved lowering a number of crew offices as well. The loading dock was expanded from one bay to two. "This a 100% improvement, which had a trickle-down effect for the scenery and paint shops, which were also raised and brought to floor level," Burgoyne says.

Lighting and AV systems

The auditorium's house lighting, including the array of exposed lamps in the ceiling coffers and marquee lamps wrapping around the balcony's edge, was replaced with GDS ArcLamp dimmable LED units. GDS is distributed in the US by ETC. Speaking about the product, Burgoyne says, "It marries the energy-saving aspects of LEDs with ultra-smooth dimming. The theatre can still go to absolute zero without any steps in dimming." He adds that a case had to be made to the client for its use. "The opera, in particular, was worried about changing exposed filament lamps to LED and what it would mean for the warmth of the room. We did mockups to show what was possible with the dimming. I think they are now quite content with

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the system." ArcLamps provided another benefit: "The incandescent lamps in front of the balcony and the gallery wouldn't have met new codes if they had left them in," says Matt Klasmeier, lead field service technician at Vincent Lighting Systems, the systems integrator for the project. "The ArcLamp system could utilize the existing wiring and still meet code. This allowed the venue to keep those historic elements, while saving time and money."

Additional steps were taken to preserve the lighting aesthetic that had framed the proscenium arch for years. The LEDs matched the color, but individual emitters were causing hotspots. To achieve the right dispersion effect with reflected light, ETC custom-painted each fixture with a gold crown to replicate the look of the original silver-bowl incandescent bulbs. Shawn Fernandez, project manager at ETC, says, "Given the historical nature of the building we wanted to make sure we did this right." Burgoyne adds, "The first sample bulbs were true silver bowls, created by coating the inside with an almost chrome finish. They were complicated and expensive to fabricate, and the finish was so reflective that we were getting reflections of the LED emitters. Ultimately, we went with more of a low-tech solution, spraying the outside of the envelope; this approach blocked a direct view of the source without creating any reflections."

The performance lighting rig, Burgoyne says, includes ETC Series 2 Profiles and D60 wash units, and other units from AC Lighting, Martin by Harman, Philips Vari-Lite, and others, plus four Lycian and two Robert Juliat followspots. The existing ETC Eos Ti console was retained, and an ETC Ion was added, for backup.

Stage management now has the benefit of a GDS CueSystem. Previously, a basic, home-built cue light system was used, consisting of four colored lights that, when activated, were illuminated in all locations; crews at stage left might have to ignore a light for stage right, sowing confusion. With the GDS system, the stage manager can trigger commands on individual cue light channels or control multiple channels at once. Cue lights are also now installed in more locations. In addition, stage management can make use of CueSystem's on-board programming capabilities, meaning complex productions can be cued with a single Go button, just like a lighting console. "We were concerned it would be a difficult adjustment, since the new system was so different than the one they were used to," Burgoyne says. "But when they saw the new opportunities it provided, they quickly got onboard."

In terms of power, the circuit count was doubled, a choice driven both by constant and dimmed power needs. The electrical overhaul added new lighting positions at the balcony rail and ceiling as well as wiring that met modern code. The addition of dimmed circuits provided permanent power to "temporary" positions that had been in use for years. And the 15 new Echo Relay Panels from ETC supply 120V and 208V constant power to new lighting positions. The relays, combined with ArcLamps, helped preserve the auditorium's decorative lighting along the faces of the balcony and gallery.

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Akustiks also did the AV system design for the building. Sam Brandt, who designed these with his Akustiks colleagues Anthony Nittoli and Jordan Lytle, notes that the PA system is used mostly for announcements and spoken-word presentations. The simple system that was specified consists of, from d&b audiotechnik, left and right arrays of Y8s, a center array of V12s, and a V-SUB, and, for fill, 5S boxes; the company's 10D and 30D amplifiers are also used. Also specified was an array of mics from Shure, AKG, DPA, Sennheiser, Countryman, and beyerdynamic.

However, Brandt says, "Pre-renovation, the venue didn't have an extensive cabling system. It's a classic symphony room and, in the old days, you didn't need a lot, but, as people have become more interested in broadcasting, webcasting, and recording, and productions have become more complex, more and different types of cabling are needed. We specified a large AV plant, with analog audio, Category 6a, coax, speaker, multimode and single-mode fiber optic cable. We also established multiple equipment rooms that are linked by an Ethernet network and traditional dry lines. And we designed paging and auxiliary systems in the lobby and backstage that are run off a [QSC] Q-SYS platform. We can also send program, via Q-SYS or analog cable, to the two rehearsal rooms and three event rooms."

In addition, Brandt says, "The music hall didn't have AV equipment rooms or a control room; there was just a perch in the balcony. We created a new amplifier room and control room plus multiple data closets around the building, shared between the AV and IT systems. [Akustiks also designed the latter.] Each of those outlying areas [like the rehearsal rooms] has its own equipment room. The AV net is discrete and redundant; it does not run on the building's system." He adds that installing all the necessary cabling can be challenging in a vintage building with walls that are "upwards of 12" – 16" of brick. It was a challenge to cut

Left: The Taft Suite is a new space that can be used for receptions, meetings, or other small events. Below: The Grand Foyer was uncluttered, thanks to the removal of a glass separating the north and south halls, as well as a gift shop that protruded into the space.

and drill into that, and we were on a quick time line. Luckily, the contractors were very good." A Clear-Com party-line system was chosen for production communications; the backstage paging system is handled by Q-SYS. Brandt says, "The dressing rooms didn't have backstage video, so that was added. We also added coaxial cable for remote intercoms and wireless microphone antennae. The two rehearsal rooms are fitted out with Fulcrum Acoustic GX1295 loudspeakers and self-contained audio from the Q-SYS network." The AV system was installed by ICB AV and ESI Electrical.

The response to the renovated space has been very positive. Louise Langrée music director of the Cincinnati Symphony, described the renovated room to the *New York Times* as "very honest," adding, "The sound was less clear before. It was mostly working on balance, dynamics. Now it's about colors." The *Times* also quoted Walter E. Langsam, one of the orchestra's longtime patrons as saying, '"It used to be so long and narrow and cold. It embraces you now in a way it never did."