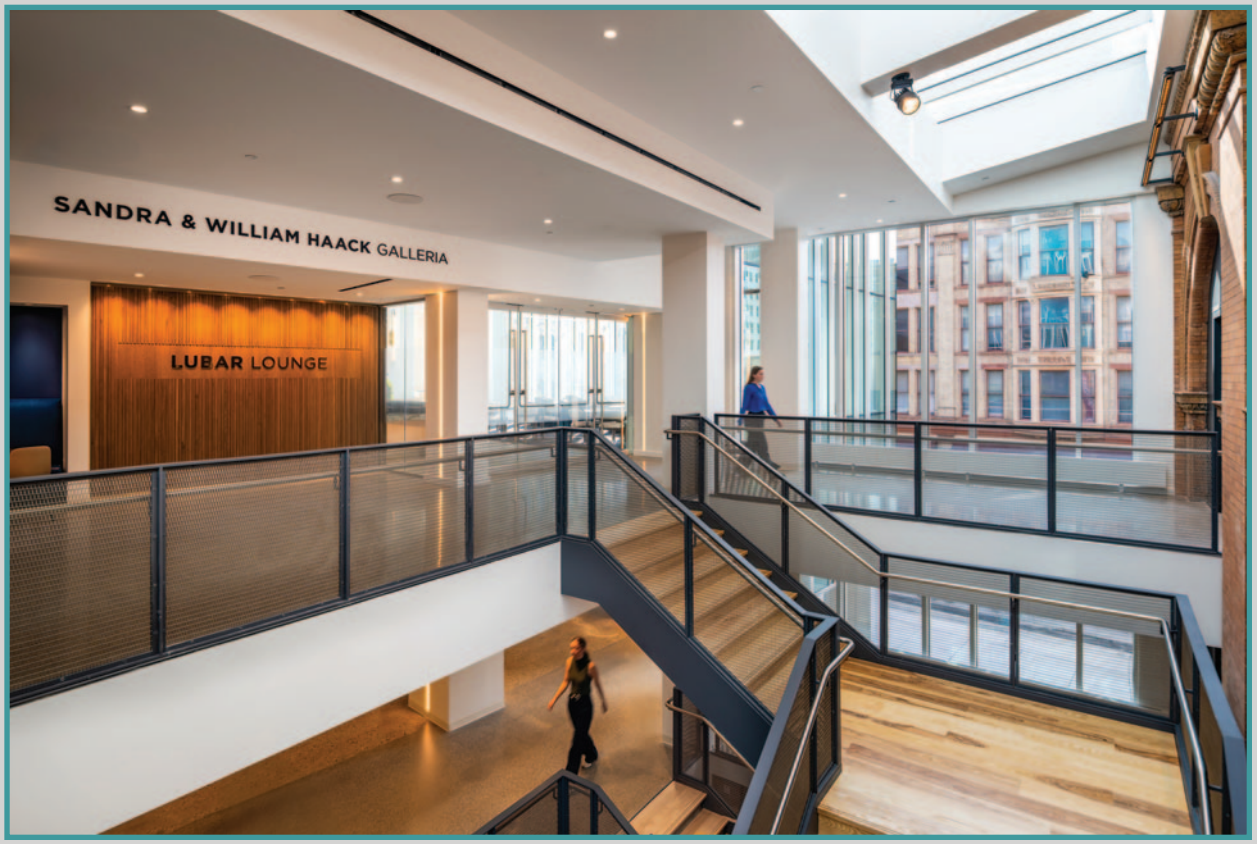
Recharging the Power Plant

A renovated Milwaukee Rep generates theatrical electricity

By: David Barbour

At a time when many regional theatres are struggling with dwindling audiences and scarce financial support, Milwaukee Rep is charting an entirely different path, completing a renovation budgeted at $80.1 million. Having enjoyed one of its all-time box office successes, *Come from Away*, it is moving ahead with a robust slate of productions; the 2026-27 season sees a few well-known musical titles (*Footloose*, *The World Goes 'Round*) with a bracing list of new works, only one of which (*John Proctor is the Villain*) has yet been seen in New York. The company is clearly positioning itself as a home for new writing, thanks to a $1-million fund supporting such efforts.

It's the latest chapter in the story of a troupe founded in 1954 as Drama Incorporated, presenting star-package editions of past Broadway hits. (The premiere production, the drawing room comedy *Sabrina Fair*, featured Jeffrey Lynn, a second-tier leading man at Warner Brothers.) A name



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Opposite: Stacey says, "The initial study reported that the existing architecture was 'massive and impeding.' We wanted a more welcoming and engaging entry. That's what prompted the glass entryway." Above: For the first time, all three performance venues are accessible from a central lobby.

change, in 1963, to Milwaukee Repertory Theater, reflected the switch to a repertory acting company performing a broader range of works. Milwaukee Rep maintained a couple of venues until 1987, when it moved into the former Oneida Street Station, a downtown power plant built in 1898. It housed a trio of venues: the mainstage Quadracci Powerhouse, the Steimke Studio, and the Stackner Cabaret. (Unlike many companies, Milwaukee Rep has a long tradition of supporting cabaret-style performances.)

Since then, Milwaukee Rep has helped to make downtown a nighttime destination, in concert with its close neighbor, the Pabst Theater, a grand, 19th-century roadhouse that hosts comedy and music acts. (The Rep stages its annual production of *A Christmas Carol* there.) By 2010 or so, however, it seemed clear that the Oneida Street Station building needed a refresh. A study was completed, but plans were put off to allow fundraising. Eventually, a team consisting of the architecture firm EUA, theatre consultancy Fisher Dachs Associates, acoustician firm Shen Milsom & Wilke, and AV systems design consultant Threshold Acoustics contributed to the renovated building, now known as The Associated Bank Theater Center. It was an ambitious project filled with complications, not least of which was a flood last August, which damaged the theatre's scenic and properties storage facility.

Among the highlights of the renovation are a new entrance, featuring a glass façade that lets in sunlight and exposes the life of the Rep to the outside world. It leads to the triple-level Sandra & William Haack Lobby, which features several places for gatherings and events. The Ellen & Joe Checota Powerhouse Theater was reworked, gaining improved sightlines and a flexible stage, plus new lighting, sound, and projection systems; a new fly loft with scenic automation; and livestreaming capabilities. The black-box Herro-Franke Studio Theater now benefits from the addition of modular platforms and new seating. The Stackner Cabaret, which, alone among the others, was renovated in 2018, has also acquired new amenities.

Reimagining the building

Chad Bauman, the theatre's executive director, says, "In audience satisfaction surveys, we would hear common themes regarding dissatisfaction with sightlines, audio clarity, comfort of seats, lack of accessibility, and amenities. Locally, other arts organizations had made significant investments in their facilities, and we share the same community. Audiences were looking for a more improved experience than we could provide in our 1980s facility. It was at a competitive disadvantage." Bob Campbell, a principal at Fisher Dachs, says, "One early question [in the study] was, should they move out of downtown Milwaukee? Fortunately, they made the right decision." Staying downtown meant a show of support for the Rep's extensive education program, which, consequently, needed space of its own.

Tom Stacey, a principal at EUA, says one of the biggest

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issues was rationalizing the theatre’s layout. “The initial study reported that the existing architecture was ‘massive and impeding.’ We wanted a more welcoming and engaging entry. That’s what prompted the glass entryway.” This bold stroke was not easily achieved. The entry is located, he adds, “between two historic buildings: The Pabst Theater to the east and the Rep itself, in the former powerhouse. We had to receive approval from state and local historic preservation authorities.”

The interior posed many more challenges. “It was best described as a rabbit warren,” Stacey says. “You had to leave one theatre into the common space for the complex of buildings called the Milwaukee Center—a 1980s project that joined the Pabst Theater, the Milwaukee Rep, and a new office tower—to get to the next venue. Just moving around was a challenge. Accessibility was not great.” Also, he notes, “The donor lounge was very inward-looking, not visible from the exterior.”

Now, for the first time, all three performance venues are accessible from a central lobby, with a grand staircase, providing access, increased circulation, and greater social interaction before, during, and after events. Stacey says the project is a good example of the “compress-and-release” approach, a concept popularized by Frank Lloyd Wright to create an emotional impact by transitioning from a small, low, or narrow space into something larger, brighter, and more open. It was achieved through “careful coordination and hard work on everyone’s part—not just the construction management team but also the builders, the guys who have to place ductwork in tight spaces and figure out how to get plumbing through seemingly impossible areas.”

The interior change is central to both patron comfort and supporting the theatre’s identity, Campbell notes. “When you walked into the building, you entered a big atrium, and then into the theatre. There was no representation of the Rep on the street. The architects did a fantastic job of tying the historical character of the Powerhouse Theater to the lobby and tying the lobby spaces to the theatre. The stairs are set up against the Powerhouse building; you can walk up there and put your hands on the original brick. Then they added the balcony-level lobby, which is where they

In its new iteration, the Checota Powerhouse Theater can function as a proscenium house or a thrust stage.

put in the Lubar Lounge donors' room, a beautiful glass room where you can look at the [Milwaukee River]."

Indeed, the entire interior layout has been rationalized, he notes, "Before, you had to buy your ticket on one level, go down through the rotunda, then escalate to the cabaret theatre. The original entrance to the studio theatre was again from the rotunda; you came in from the north side, like you were coming from a shopping mall. The key was

to tie all three theatre spaces and the education space into this beautiful lobby."

Many cosmetic changes were made. "Everything was touched," Stacey says. "We polished existing concrete to create a terrazzo-style floor. Historic brick was stripped of paint and restored to the satisfaction of the historic reviewers. Windows were replaced with historically accurate window systems." Such tasks were not simple in a historically listed building, he notes. "Windows had to be matched. Brick had to be preserved or brought back to its historic quality, including glazed brick on the interior of this old power plant. We had to stitch the old brick back into its structural wall system." It was a process of "careful, selective demolition, then putting things back. It took the builders so long just to figure out what we were dealing with and how to respond to it."

Also, Stacey notes, "For a building built in 1890, with a subsequent addition in 1900, there was very little documentation. We really had no documentation on the foundation system. Exploration and testing were significant challenges because they affected the schedule." He adds, "Even when we had drawings of the 1984 addition, things weren't exactly as drawn. That isn't completely unusual; you never seem to have all the documents from a project. Even in 1984, things happened in the field, and adjustments were made. You might not get accurate shop drawings or field-verified conditions. It took a lot of effort just to come out of the ground. Fortunately, we were working with a structural engineer who deals with old buildings all the time."

Meanwhile, the building's acoustic isolation needed an upgrade, Stacey says. "The exterior walls of the old power plant are 1.5' thick, 2' in some places, so that wasn't the challenge, although the windows that overlook Wells Street are part of the theatre wall, so those had to be improved. There were upgrades to the theatres, of course. But the rehearsal spaces were not acoustically isolated from each other. It was difficult to have rehearsals in adjacent halls."

Thomas Rafferty, of Shen Milsom & Wilke, notes, "We did a walk-through of the space, talking with the client about the issues they were having. The biggest challenge was determining which goals could be achieved given the budget and existing space constraints. The overall shape and volume of a performing arts space are key to its acoustical quality and response; such aspects are usually difficult and/or costly to modify after the fact."

The biggest challenge, Rafferty notes, was, "They were getting unwanted sound bleed between spaces. In these areas, we modified the partition construction, using drywall or CMU partition types with sufficient mass and good amounts of acoustic insulation to achieve improved acoustic separation."

Also, Stacey notes, "The HVAC was woefully inadequate; it was designed for 1980s building codes, but we have progressed, and the needs were massive. It was replaced along with the electrical and plumbing systems. When the funds for these became available, the Rep staff, which had been on-site during reconstruction, relocated to

an adjacent office tower, which was leased for a brief period." Rafferty adds, "We worked with the mechanical engineers, Ring & DuChateau, to make sure that the new HVAC systems had appropriate elements to control noise and vibration control and maintain quiet space conditions."

Checota Powerhouse Theater

Mark Clements, the theatre's artistic director, notes that a top priority was making the theatre's main stage more flexible. "We have been interested in creating a future life for the work on our stages, but our previous main stage was not compatible with most theatres worldwide, so it wasn't an option. Now, we can create work that not only thrills our local audiences, but that can also tour, expanding our potential audience infinitely. We can also, for the first time, explore enhanced, pre-Broadway productions with collaborators we have been wanting to work with and who have reached out to us."

In its new iteration, the theatre can function as a proscenium house or a thrust stage, Campbell says. "We widened the proscenium a few feet on each side and narrowed the seating layout. We completely gutted the main-level seating bowl and designed it with a seating plan that better serves both types of performance. Then we put in a platforming system that allows them to add a thrust stage or remove it and add a stepped seating system. There are two vomitory entrances; we installed temporary platforms so they can be used with seats. These seats can be removed if they're using the thrust [which precludes the voms], so that actors can enter from the audience. We replaced the original seating bowl, and the balcony was trimmed back, and the balcony-level seats were pitched so the sightlines work better for proscenium-style productions." The new seating was supplied by Series Seating, Campbell says. "We went with a steeper back but an overall more comfortable seat."

Also, Campbell says, "We took the complete existing catwalk system out and replaced it with a new one that works well for both thrust and proscenium configurations. We also accommodated two followspot positions, one for each configuration. The theatre had no fly space, only a rectangular steel grid that required every show to be hung from lifts and ladders. We took out the dressing rooms above the stage, creating additional fly space—not a full

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fly tower—and added a motorized rigging system. This gives them the ability to do more co-productions with other regional theatres. It shortens the time between shows."

Stage rigging, supplied by Heartland Scenic, includes 14 onstage ETC Vortek NXT variable-speed 1,750 lb-capacity hoists and one downstage Vortek NXT single-speed, 1,750lb-capacity hoist, plus an ETC Foundation control system, consisting of a main console plus hand-held touchscreen controls. Sightline Commercial Systems supplied SC90 platforming and custom-built stage thrust seating and vomitory platforms.

The original theatre, Campbell notes, "was dark, with no sense of place. We worked closely with the EUA team and Chad and Mark about bringing some kind of enclosure to it. Josh [Dachs, of FDA] came up with the idea of using the Vivian Beaumont Theater [which has a modified thrust] as a model. We added wood vertical side walls to give the room a sense of intimacy. It is now more focused on the stage and allows more side catwalk positions for box-boom lighting positions. We also exposed the interior brick walls of the original powerhouse building, bringing its historic nature into the theatre's space. I'm thrilled with the way the architects carried these motifs. the building's history of wrought iron, steel, and wood, into the lobby."

In addition to the existing inventory, the overall lighting package for the project, provided by Clearwing Industries, includes 13 ETC/High End System Halcyon Titanium Ultra-Brights, 18 Chroma-Q Color Force II Plus 72 strips, 54 ETC Source Four Series 2 Lustrs, two Lycian Superstar 1000 LED followspots, 24 ETC ColorSource Spot Vs; 20 ColorSource PAR V Zooms, 15 High End SolaPix 7 fixtures, one High End Lonestar Ultra-Bright, and two High End Ministars.

The ETC control system, provided by MainStage Theatrical Supply, includes four Sensor3 dimmer racks with ThruPower dimmer modules for production, one Sensor IQ relay panel with 208V circuits for production, Sensor IQ and Foundry panels for houselights and work lights, a new emergency lighting system, two new equipment racks, distributed Ethernet throughout the venue, 36 DMX nodes, and a Paradigm control system for house lighting. Controllers include ETC Pucks, one Eos programming wing, one ION XE 20, and one Apex lighting console provided by Studio Gear.

Rafferty says, "We noted that their seating had, through normal wear and tear, lost some of its acoustical properties. Because it takes up a large surface in a space, seating has a pretty significant influence on the overall acoustics. We worked with Fisher Dachs to select new seating that would help tame the space a bit more." He also notes that sound absorption on the perimeter walls makes a difference, along with "reflective elements to help project sound out to the audience."

Herro-Franke Studio Theater

The Herro-Franke Studio Theater underwent fewer, if nevertheless significant, changes. "There was no division between the theatre and the adjacent lobby, only a curtain," Campbell says. "We worked with EUA to put in a folding partition wall and a complete interior renovation of the lobby. Now they have a real lobby with a bar, concessions, soft seating, and access to the restrooms. You can talk out there without disturbing the performance. The great feature about the folding partition is that if they want to open the space for a non-theatrical event, they can still do that."

"The primary acoustical issue in the studio was the sound bleed between the adjacent function space and the theatre," Rafferty says. "We worked with the architects to incorporate an operable partition with decent acoustical properties to improve the separation. They were generally happy with the acoustics in the room, with well-controlled sound reflections." Similarly, in the Stackner Cabaret, "Because the sound there is louder, they have some issues with buildup. The main strategy was to incorporate more absorptive enhancements to the ceiling to alleviate this. We also worked to isolate the cabaret from the bank atrium."

Campbell notes another major change in the Herro-Franke: "We installed a new modular seating platform system; the previous system was difficult to assemble and took a very long time to change configurations. Sightline Commercial Solutions supplied their SC90 platforming system, including custom platforms and railings for up to six different seating layouts. We also replaced the old, worn seating with 234 Ducharme Versatile Prestige portable chairs."

The lighting system in the Herro-Franke Studio features ETC Sensor3 dimmer racks with new ThruPower dimmer modules for production, one Sensor IQ relay panel for houselights and worklights, a new emergency lighting system, one new equipment rack, distributed Ethernet throughout the venue, 18 DMX nodes, and a Paradigm control system for house lighting.

The flood

Campbell says that an early key client decision involved "moving the scene and paint shops to a new production facility a few miles away from downtown." This made room for an education space, dressing rooms, and other support spaces. A major setback occurred, however, when the new building was flooded during a storm, causing $7 million in damage. According to *American Theatre* magazine, "This '1,000-year flood event' caused the nearby Menominee River to rise from less than 2' to over 14' in just six hours, from 4am to 10am. Local meteorological data indicated this was driven by more than 14" of rain falling in less than 12 hours, crushing all-time rainfall records."

"Everything under 4' was destroyed," Campbell says. "During the construction period, they had moved all their

props, scenery, and lighting and sound equipment to the warehouse. Their first show of the season, *Come from Away* was set to begin construction the day after the flood. Due to the tight timing, they had to get an outside scene shop [Cal Scenic] to build it." Jared Clarkin, the Rep's director of production, says that *A Christmas Carol*, which originally took seven months to build in-house, was contracted out to Calgary-based F&D Scene Changes, which got the job done in seven weeks. He adds that the theatre purchased winches and a Revolver turntable motor from Creative Conners, gear used in several shows this season.

The flood affected the theatre's plans for AV gear, too. As Tim Perez, of Threshold Acoustics, notes, "They had a lot of AV equipment that they removed from the existing facility and planned to reintegrate." Then the flood came, and he says, "Ultimately, they wound up with much more new gear than they had originally anticipated. It caused a big scramble. Many industry partners showed up to donate or loan resources to get their first show going. They leveraged their community connections and got things off the ground in time." Among the AV purchases were two 17K Panasonic projectors and one 20K model; two were used in the Rep's production of *McNeal*, a play in which artificial intelligence and digital technology play central roles.

AV upgrades

The big to-do item on the AV front, says Tim Perez, of Threshold Acoustics, which consulted on the gear package, was "to improve utility control. They had basically no AV network at the time and wanted to bring their performance video systems up, plus recording and streaming." He adds, "We worked closely with the integrator through the construction process to make sure we were responding to the needs of the client as they evolved. It was a very active and involved client group. For at least a couple of years, we sat down weekly with the theatre's executive leadership and design team to navigate the ongoing construction, but also to understand their needs and design goals, which continued to evolve." His colleague, Joe Disbrow, "spent a lot of time working directly with a handful of the audio and production staff. With things like late-breaking reorganizations of the office suites, we continued to respond almost to the date of their soft opening."

"By the end of the process," Disbrow says, "they opted in many cases to use existing equipment and rely on rental. But we supplied audio/video transport, lots of XLR, speaker, SDI, intercom, and fiber around the theatre and back to the main patch bay, adding new lines that gave them extended ability to route signal around the room based on the production needs."

Indeed, notes Perez, "They have extensive front-of-house/back-of-house video production distribution infrastructure. We also incorporated an NDI video system to facilitate distribution throughout the building for sharing content between venues. Some rehearsal and education spaces are occasionally employed for production-related

In the Herro-Franke Studio Theater. Campbell says, "Sightline Commercial Solutions supplied their SC90 platforming system, including custom platforms and railings for up to six different seating layouts. We also replaced the old, worn seating with 234 Ducharme Versatile Prestige portable chairs."

needs. I don't think any spaces in the building are isolated from the broader AV system. It really is a facility-wide platform for audio, video monitoring, and intercom."

The latter aspect was especially crucial, he adds: "They had long occupied this space with disparate theatres and very little interconnectivity, which hampered some of their goals. They now have wireless intercom connections throughout the building. Bringing all their venues onto a common platform allows flexibility in using the entire facility." Communications are handled by a Clear-Com Arcadia central station system, with additional analog party lines included, and an Eclipse digital matrix system.

For audio reinforcement in the Checota Powerhouse, Disbrow says, "We designed a system based on d&b audiotechnik T-Series loudspeakers, along with the company's 5D amplifiers. We supplied left and right main arrays, along with a center array that can be deployed for musicals. There's also a full surround package." Audio is controlled via a Yamaha DM7 console.

The Herro-Franke Studio "mostly got an infrastructure upgrade," Disbrow says. This includes "a large amount of patchable infrastructure distributed around the room," facilitating different configurations. With this setup, "They can put self-powered speakers in various patch points tied to a local rack room. There are also a couple of mix positions, one in the booth and another in the balcony."

For hard-of-hearing patrons, a Listen Technology wireless loop system was also installed. It runs on RF, Disbrow says: "Commonly, your usher hands it out, and there's no signal; you have to trust that it's working. We made sure there is an RF transmitter at all those locations, for checking the device before handing it over to the patron."

On the video side, Threshold supplied somewhere between 40 and 50 displays throughout the venues. "They range from 98" to 43", including some 75" models in portrait format," Disbrow says. "They can feed content over the NDI system, then switch over to show feeds" for latecomers. Perez adds, "They have an active marketing team that generates digital signage content, and it was important for them to have flexibility and open channels for content feeds customized to their location in the buildings."

The rehearsal rooms feature simple audio and video setups, cued from, say, a stage manager's laptop. "They have four speakers in each room that they can tap into," Disbrow says. "The donors' lounge has one large display and a projector and screen on a motorized system."

Ancillary spaces

Ancillary spaces include the Lubar Lounge, an event space for up to 100, a gift shop, coat check, concessions, and refreshed restrooms. A major addition is the 2,700-sq.-ft. Herzfeld Foundation Education & Engagement Center, featuring classrooms, rehearsal rooms, and performance spaces, plus an outdoor patio. Among other things, the company is launching a theatre school offering classes, workshops, seminars, and camps.

The Herzfeld Center, Campbell says, is "set up like a studio theatre, with a theatrical pipe grid and a lighting system. They also have two classrooms. Now they can properly rehearse mainstage shows and support the educational programming. Education is properly sited in the building." It features two ETC Echo relay panels for production and houselights, a Foundry panel also used for houselights, a new emergency lighting system, one new equipment rack, distributed Ethernet throughout the venue, six DMX nodes, and an ETC Echo control system. Rigging includes a 4'-by-4' pipe grid and curtain track and drapery system for educational programs.

Stacey is especially proud of the Lubar Lounge. "Folks can see in, and people in the lounge can see out to the historic building that the Powerhouse Theater is in," he says. "It's completely transformative." In addition, EUA designed "the experiential graphics and donor recognition signage. Our team did a remarkably great job; because there are so many donors, you almost run out of places to put names. You can overpopulate with donor recognition, too, and I think the team did a really nice job balancing that. Without the donors, this project isn't happening."

Summing up

Throughout, Perez notes, "A key element of the design and construction teams' approach involved being responsible, responsive stewards of the funds they had available, making sure that whatever we left them with was something that they would be able to maximize their use of, treating the theatre like the community asset that it is."

Clarkin notes with amazement how his team navigated a season that included the renovation, the flood, 12 new productions, and, in mid-season, a return to the new scene shop. He praises his full-time crew of 40 and the IATSE Local 18 stagehands who job in for individual productions.

The process unfolded largely during the COVID years, which made everything extra challenging. "We launched the initial capital campaign in 2020," Bauman says, "five weeks before we completely shut down due to the pandemic. Then it was about survival for a year. When we relaunched the campaign, the cost was significantly higher due to labor shortages, supply chain disruptions, and tariffs. Our campaign went from $66 million in 2020 to $78 million in 2022. The campaign was by far the largest we have ever taken on, with the previous largest campaign completed being $10 million in 2016. It was a bold decision on behalf of our board of trustees to embark on such a large undertaking immediately after we had reopened from the pandemic and at a moment in time when there were significant concerns about the viability of the performing arts." Thanks to skilled fundraising and committed community support, the Milwaukee Rep is well-fixed for the future.