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TREND ALERT: the labor shortage

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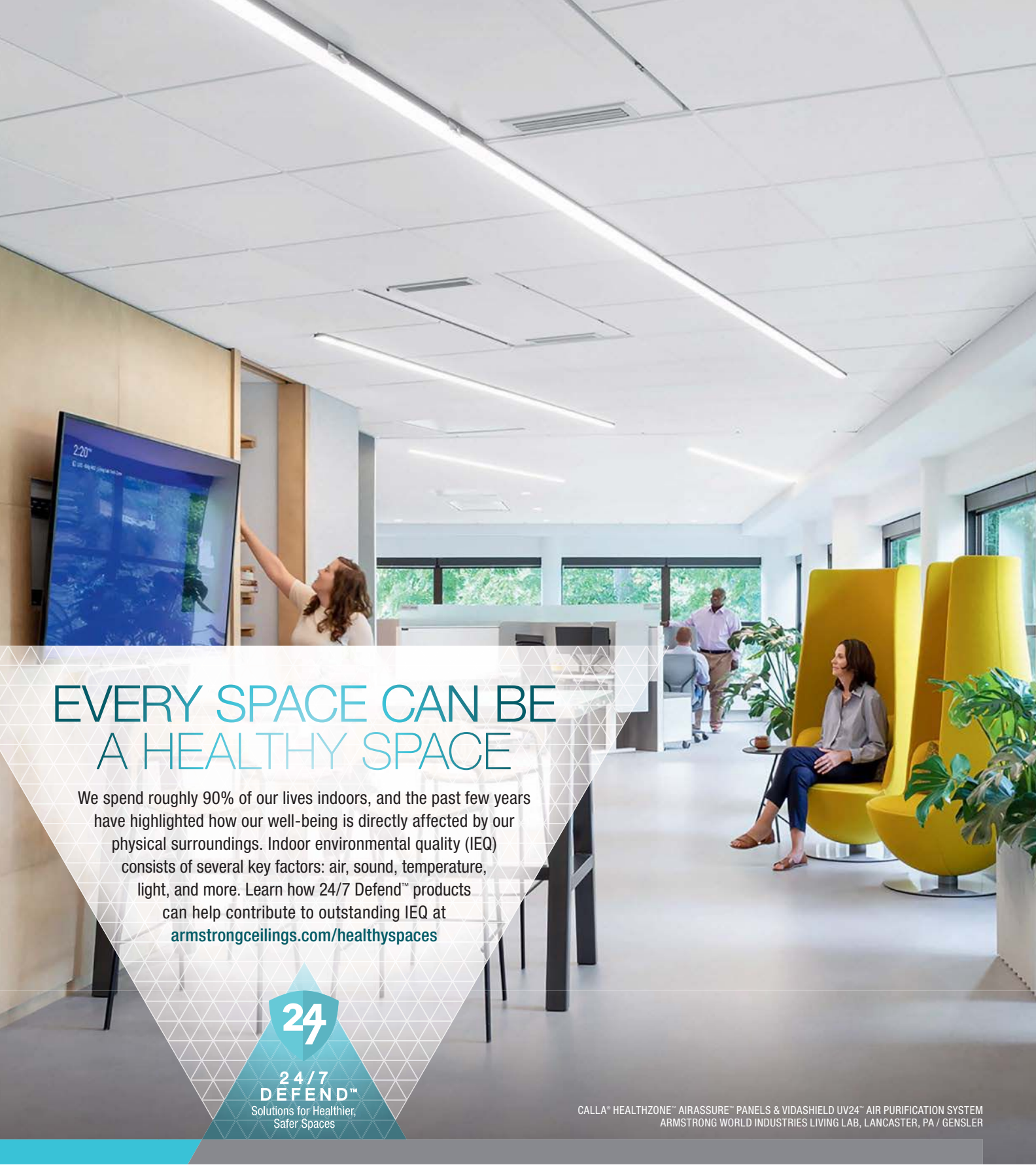

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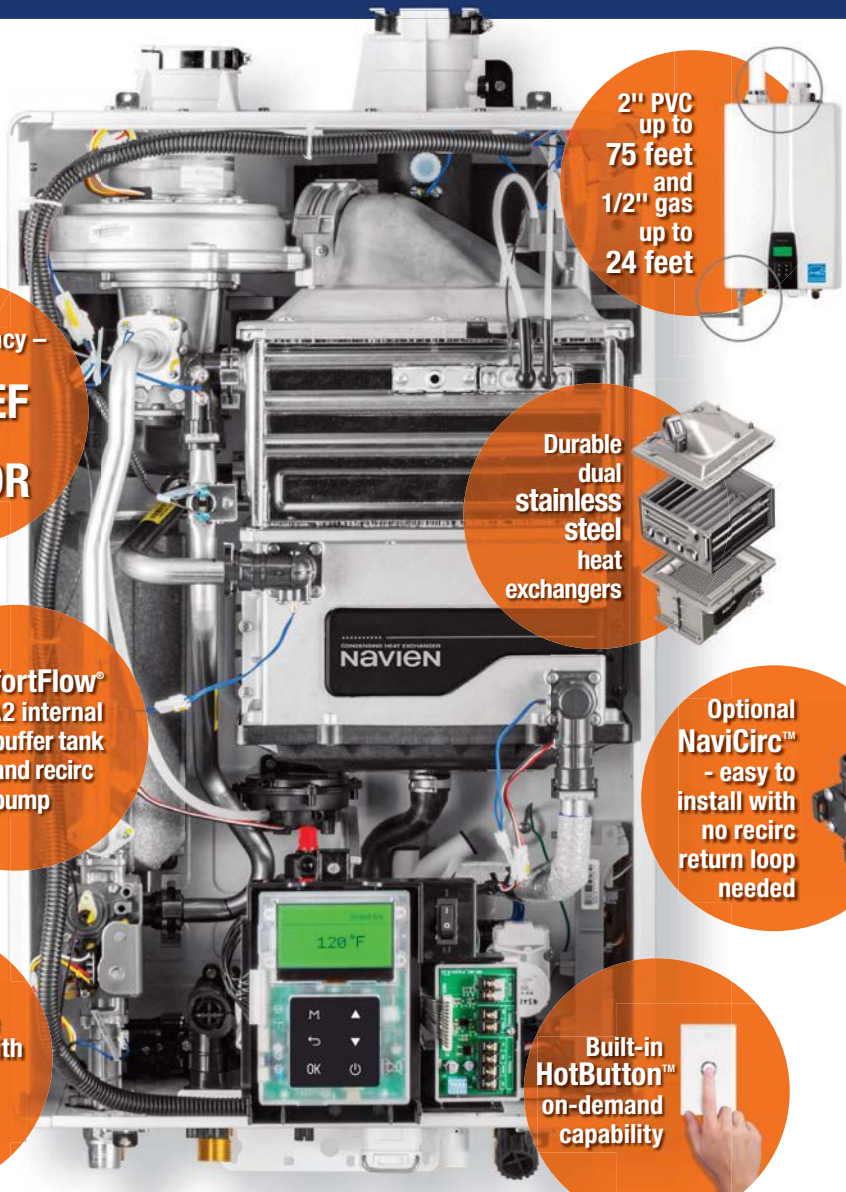

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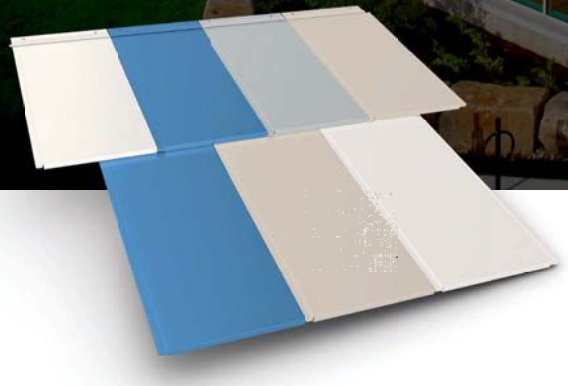

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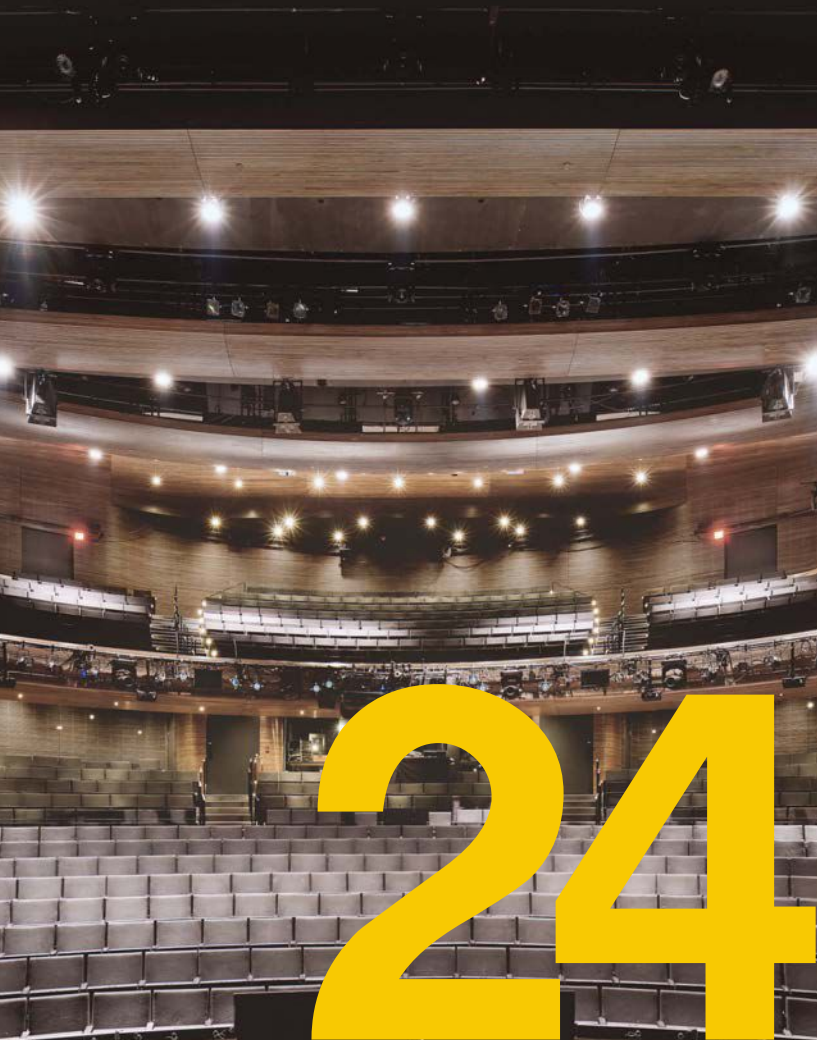

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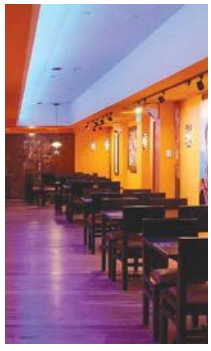

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pointofview

HELLOOOOO, WE ARE HIRING. ANYONE OUT THERE???

I may have mentioned in a previous column that my husband Bart is co-owner of a bar/restaurant in our lake town. Since Bart and I married, I have helped with marketing the business. The summer months are especially busy because our small lake town fills with visitors, and seasonal residents return to enjoy their lake homes. Therefore, we are always in a hiring frenzy in the spring to ensure the new staff is trained before the busy summer. Because the service industry tends to attract folks who are looking for extra income or are just starting out in life, the bar's staff is constantly changing.

My husband and his partners have always paid well over minimum wage even for staff members who receive tips. Employees who do well receive multiple raises during the year because when someone is good, the owners and manager want to keep him or her. However, it has always been difficult to hire new staff and, unfortunately, 2022 takes the prize for most difficult hiring year yet.

We live in a town of approximately 1,100 people—not to mention, because it's a lake town, there are three bars and three dedicated restaurants in town, so we're all competing in the same small hiring pool. Over the years, we've tried newspaper and radio advertising; flyers in our town, surrounding towns and in our bar/restaurant; gift certificates to patrons and staff who recommend someone who is hired; and social media marketing. Our latest social media blitz features testimonials from former staff members about what a great place our establishment is to work. They all have their own opinions about what they enjoyed—from the obvious tips, to making new friends when they were new in town, to flexibility with scheduling, to the ribbing from regular customers and more. Despite using all of these avenues this year, as of this writing, we received only two applications when we need to hire a minimum of six people.

In this issue of ***retrofit***, not only are we covering hospitality and entertainment projects—whose owners and managers hopefully are having better luck than my husband keeping their businesses fully staffed—but we also tackle the labor shortage that is seriously affecting the construction industry. Jim Schneider, our "Trend Alert" columnist, did a stellar job outlining the complicated causes that have led to where the industry finds itself, as well as some solutions, with assistance from key industry experts.

For example, Kermit Baker, chief economist with the American Institute of Architects, identifies three main issues—demographics, recruitment and marketing—affecting the construction labor shortage. Demographics itself encompasses two more problems: a shortage of immigrant workers due to increasingly strict border policies and a dramatic lack of women in construction.

Baker's thoughts are supported by insight from Ken Simonson, chief economist with the Associated General Contractors of America; Jason P. Lien, P.E., executive vice president of EnCon United, producers of precast/prestressed concrete systems; Jennifer Ford-Smith, chair of the EPDM Roofing Association and head of marketing and product management for Johns Manville; and Andy Holub, vice president, pre-construction and special services director for Clune Construction, a national general contractor. Read Schneider's story on page 74.

As for the staffing shortage at my husband's business, he and I plan to take some shifts ourselves, in the hopes that Bart and his partners won't have to make the difficult choice of closing. However, I'm a much better editor than server, so I plan to stick with my day job!

Christi Koch

CHRISTINA KOCH
Associate Publisher/Editorial Director
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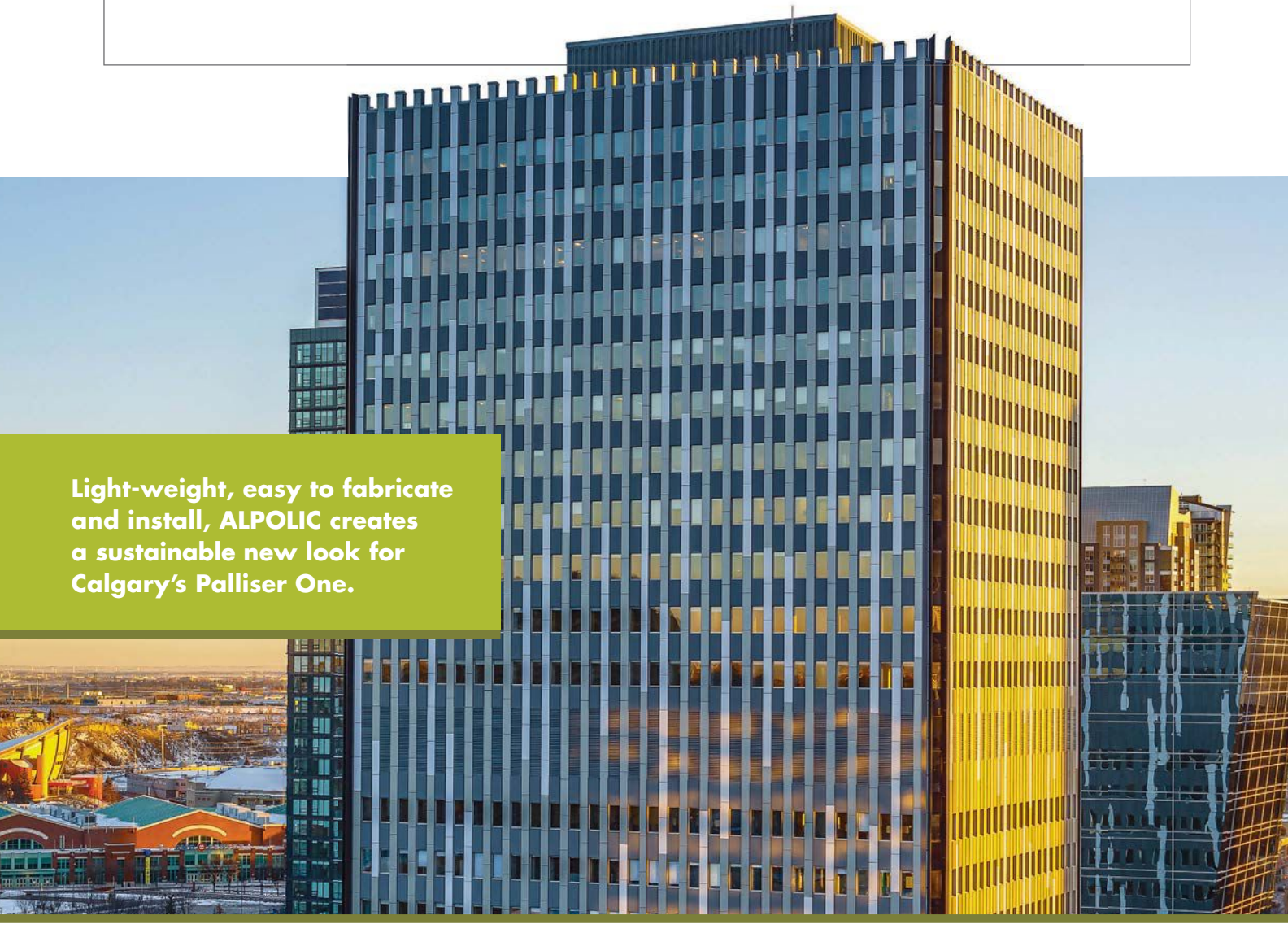

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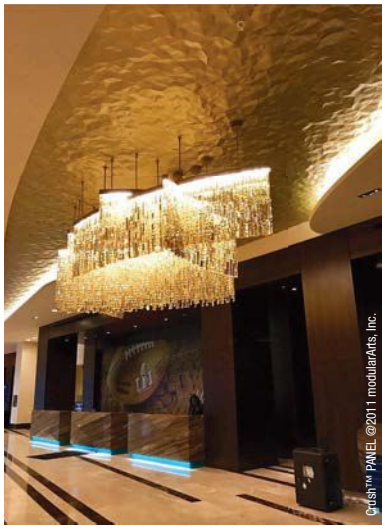
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CONTRIBUTING WRITERS

When it comes to bringing clients' visions to life, the art of visual storytelling is key, explains **Griz Dwight**, AIA, LEED AP, principal and owner of GrizForm Design Architects, in "Business", page 18. Via a project example—Estadio Charleston, a Spanish tapas restaurant in South Carolina that was designed to complement its sister location in Washington, D.C.—Dwight demonstrates how his team determines the framework for the design, developing public and private storylines guided by the client's desires.

KJ Fields, a Portland, Ore.-based ***retrofit*** contributor, describes in our "Cover Story", page 24, how Trahan Architects creatively addressed decades-old disparities while maintaining functional and state-of-the-art technical aspects of the Coca-Cola Stage at the Alliance Theatre in Atlanta. By using a combination of artistry and technology, the design team created a visually striking and tactile experience for all patrons.

Michael Smalley is the director of preconstruction at IWR North America, which has specialized in building enclosures since 1895. In "Component", page 48, Smalley outlines eight steps taken early in the process of a building enclosure retrofit that will prevent delays and avoid mistakes. In addition, a project example from his portfolio— City Foundry STL—demonstrates the benefits of following the steps.

Built in 1909, the Battery Maritime Building was once the crown jewel of lower Manhattan's working waterfront. **Meredith Morton**, who writes about construction and design from her home office in Chicago, unravels the dedicated effort to preserve this storied landmark and transform it into Casa Cipriani, a boutique hotel, private member club and event space. Read the story in "Historic", page 54.

Ben Shock, P.E., is a structural engineer at HGA in Milwaukee with extensive experience in the renovation of historic buildings, and **Lyssa Olker**, AIA, LEED AP BD+C, WELL AP, NCARB, is a design architect with HGA, specializing in arts, community and non-profit work. The pair writes about Central Standard Crafthouse & Kitchen, which is housed in a reimagined 1874, 3-story commercial building that is helping to establish the micro-distillery in a city with a long history of legendary brewhouses. Read about the project in "Transformation", page 62.

As director of design at The Johnson Studio at Cooper Carry, **Ray Chung** and his team had the task of transforming a 1970s-era telecommunications call center—a 26,700-square-foot space—into a vibrant food hall that anchors the recently completed AT&T Discovery District in Dallas. Delivered last spring, The Exchange is a new-age destination for casual diners and foodies alike. Learn more in "Transformation", page 68.

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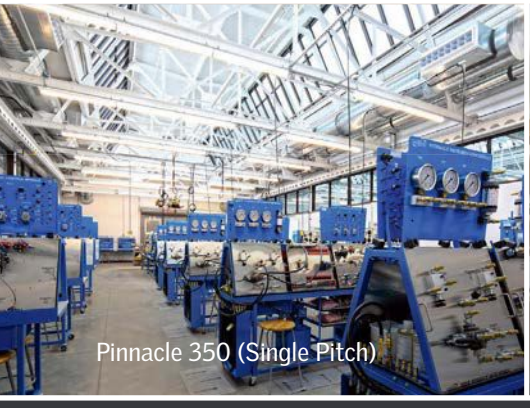

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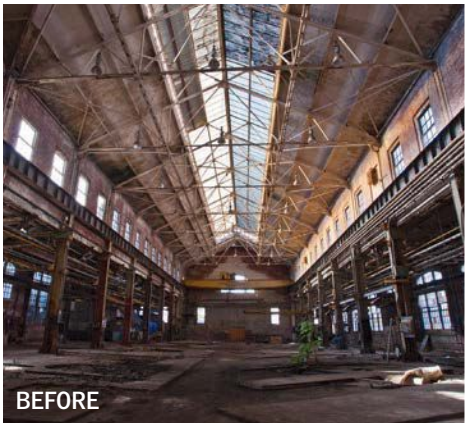

VELUX's Pinnacle Structural Ridge System was chosen for its large-span capability, variable-pitch hinge design and fast on-site assembly and installation.

CHALLENGE

Building 18, formerly a metal foundry in Philadelphia's abandoned navy yards, needed extensive renovations to be converted into work spaces for Urban Outfitters' Anthropologie brand.

Attaching the massive metal skylight structure to the curbing and integrating with the roof posed a special engineering challenge. Another challenge was providing a design that met the National Park Service's stringent standards for historic renovation.

SOLUTION

"The stunning [Pinnacle Structural Ridge] skylight was the predominant feature, which raised the design to a whole other level," said David Ziel, Urban Outfitters' chief development officer.

The National Park Service uses this building project as a prototype for exemplary historical restoration.

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Project Type
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Year of Construction
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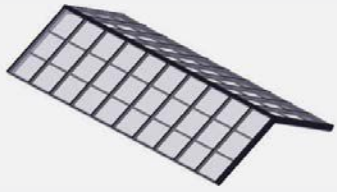


Pinnacle 350 - Structural Ridges

VISUAL

There Is an Artform to Effectively Translating Design from Words to Walls

WRITTEN BY | GRIZ DWIGHT, AIA, LEED AP

PHOTOS: KRISTOPHER ILICH unless otherwise noted

STORYTELLING

Although discussing the theme and coordinating project materials for a new restaurant is important, the time and effort put into planning an eatery means nothing if the interior designer does not effectively translate the client's vision. Not only does an unclear concept confuse guests, but it hinders the restaurant's ability to craft specialized menus and events dedicated to a singular theme. Lack of clarity can deeply impact the experience for customers and employees alike, further emphasizing interior design and branding's crucial roles throughout the process. The end goal is to properly, and effectively, tell a story through strategic design elements.

When one thinks of the word "story," the mind immediately goes to books or some form of written content. However, at GrizForm Design Architects, a Washington D.C.-based hospitality design and architecture firm, bringing clients' visions to life through the art of visual storytelling is key. The firm's overall approach is collaborative. GrizForm Design Architects comes together as an office and determines the framework for the design, developing public and private storylines guided by the client's desires. The team's belief is that spaces work best when layered, always leaving a new storyline to be discovered—or better yet, created.

Creating a Flow

Drawing from a region's energy is one of the many ways GrizForm Design Architects turns its brainstorming sessions into a finished, well-composed interior. The team's attention to detail, incorporation of unique materials and subtle historical

Estadio Charleston in South Carolina is a second location for this Spanish tapas restaurant; the flagship location stands in Washington D.C. GrizForm Design Architects was challenged to ensure the new space would not simply be a replica of the original.

references add those little nuances that drive an entire design concept home.

One project that really stretched the team's design wings was Estadio, a modern take on the traditional Spanish tapas restaurant brought to the Charleston, S.C., area. The concept's second location—the flagship restaurant stands in Washington D.C.—came with two challenges: One, GrizForm Design Architects was given a pre-built space and had to work around the intricacies of the existing floor plan; two, the team had to evolve and transport the Spanish theme more than 500 miles down the coast, ensuring the new space would not simply be a replica of the original restaurant.

In GrizForm Design Architects' experience, most floor plans are not utilized to their full potential and are commonly overlooked during the development stages. Creating "microclimates" within a shared space is beneficial to a restaurant's internal flow, along with increasing the possible depth of the design. Fluidity also is key; guests need the option to move freely without feeling crowded. Whether it's tailoring spaces for small groups or larger parties, each zone provides an air of comfort. Pre-segmented spaces also ease internal coordination for hosts.

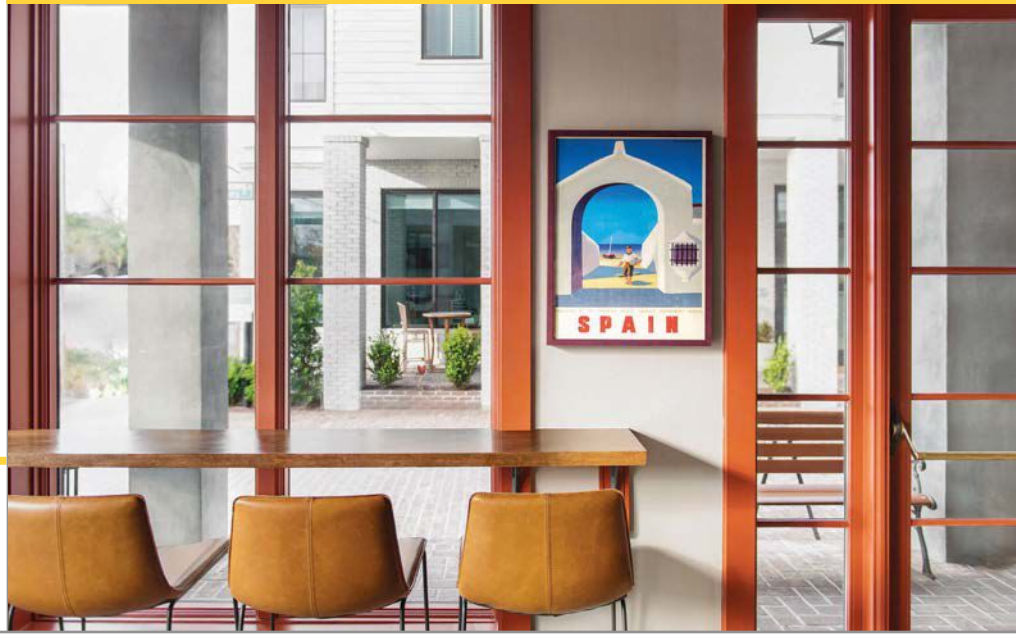
Estadio: Two Locations, One Story

When plans for the first Estadio location unfolded, the project focused on balancing Spain's inherent strength with its historic grace. The design integrates time-honored Spanish materials and textures while incorporating modern lines and elements. Like the chorizo, manchego and pistachio-crusted quince pintxos, the D.C. restaurant's design is a balance between tradition and innovation. Murals of early 20th century bullfights offset elegant pictures of flamenco dancers while vintage Spanish soccer plays on monitors above the bar. Here, the soccer player is a representation of the bull.

Still inspired by Spanish culture, the overall concept for Estadio Charleston is rustic and masculine, yet playful and energetic. Combined, the two restaurants create a lively restaurant and bar franchise that offers a modern take on traditional Spanish cooking, complemented by a dynamic wine and beverage program. While the initial location embraces the matador story and celebrates the protagonist of that narrative, the new concept is reframed, becoming all about the bull. Highlighting the animal made way for an original storyline, playfully juxtaposed against the sister restaurant's concept.

To seamlessly tell this story, Estadio guests are welcomed into the intimate

(continues on page 22)



At Estadio Charleston, a color palette of bold reds evokes the matador's uniform and Talavera-like wall tiles complement the space's intricate metal design and warm wood tones.

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eatery's bar area, featuring a large communal table and decorative iron base, brightly lit by glowing traditional-style pendants. Reclaimed wood tabletops paired with leather chairs provide a distressed texture to the space while the bar's large clavos add artisan detailing. Above, wrought iron is bent to look like lace. Vintage Spanish posters fill the more open spaces through colorful adornment.

The design team chose a color palette of bold reds, evoking the matador's uniform, and Talavera-like wall tiles to complement the space's intricate metal design and warm wood tones. Burnt, dark wood used next to the bar is modeled after the gates to the bullring with intricate trim and complementing hardware mimicking the handles and hinges.

As patrons make their way through the 39-seat dining area, the emblematic Estadio decorative metal screen encloses the kitchen bulkhead, adding an industrial flair to the restaurant's red walls that stand behind. Diners are also given a front-row seat to the action in the kitchen—much like those with a front-row seat to a bullfight—with the extension of the travertine bar, where guests can grab a seat at one of the counter's custom steel and wood bar stools.

The chosen elements provide a feminine perspective in a traditionally masculine space. In the Charleston location, one of the goals was to portray how the modern man can be soft and bright while maintaining the strength and composure of the bull—a rugged, strong being. For example, the wall mural portrays Pamplona's famous "Running of the Bulls" sequence, showcasing a bull running through the streets and forcing the men in its path to concede. Depicted in black and white, the delivery is muted, increasing the art's overall impact and enriching the traditional "man versus beast" dialogue. Even the bull incorporated into the tiled bar backsplash is tempered. The tile pattern retains a masculine, angular look, softened with pink, red and blue hues.

Enjoying the Experience

To GrizForm Design Architects, the final design plays a big role in the excitement elicited when walking into a restaurant for the first time. That built-in mystery enhances the overall experience and creates great buzz around the establishment. Customers like a little bit of a guessing game or elongated exploration. They don't want to walk in and immediately say, "Oh! I get it." Time is needed to fully absorb and grasp the clues peppered throughout a space and to develop appreciation for those descriptive nuances and surprises. The strategic design decisions work two-fold—promoting a light, fun mood while evoking a subconscious loyalty that keeps repeat customers flowing through the door all year long.

While the Washington, D.C., location (shown on this page) embraces the matador story and celebrates the protagonist of that narrative, the new concept in Charleston, S.C., is reframed, becoming all about the bull. Highlighting the animal made way for an original storyline, playfully juxtaposed against the sister restaurant's concept.

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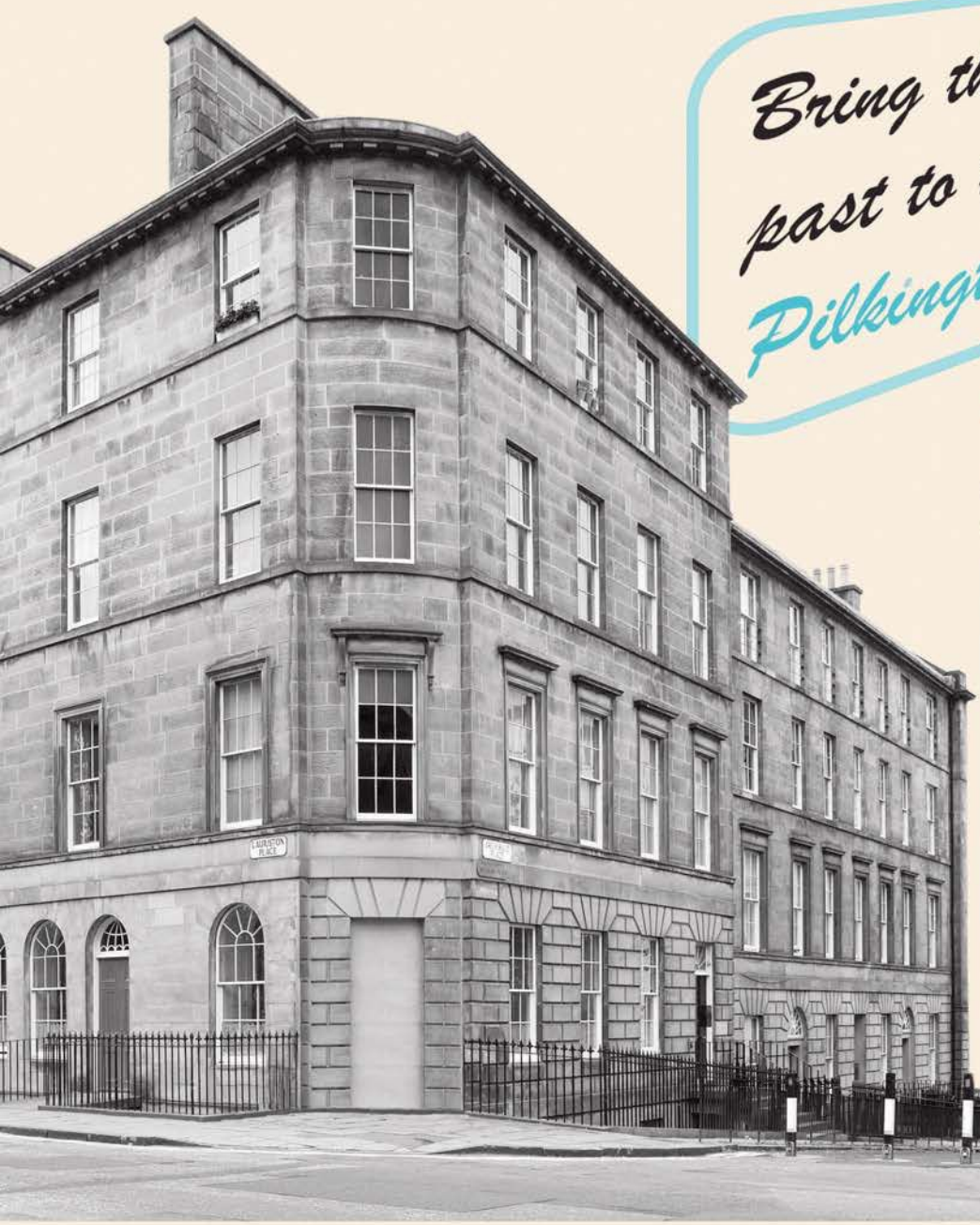

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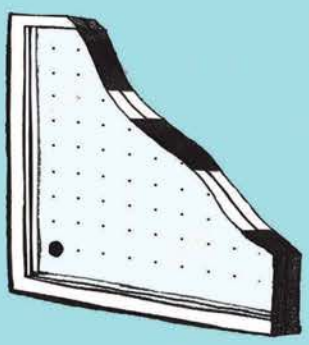
Archibald Place (left) was able to maintain its existing building appearance while upgrading its monolithic glass to modern IGU performance.



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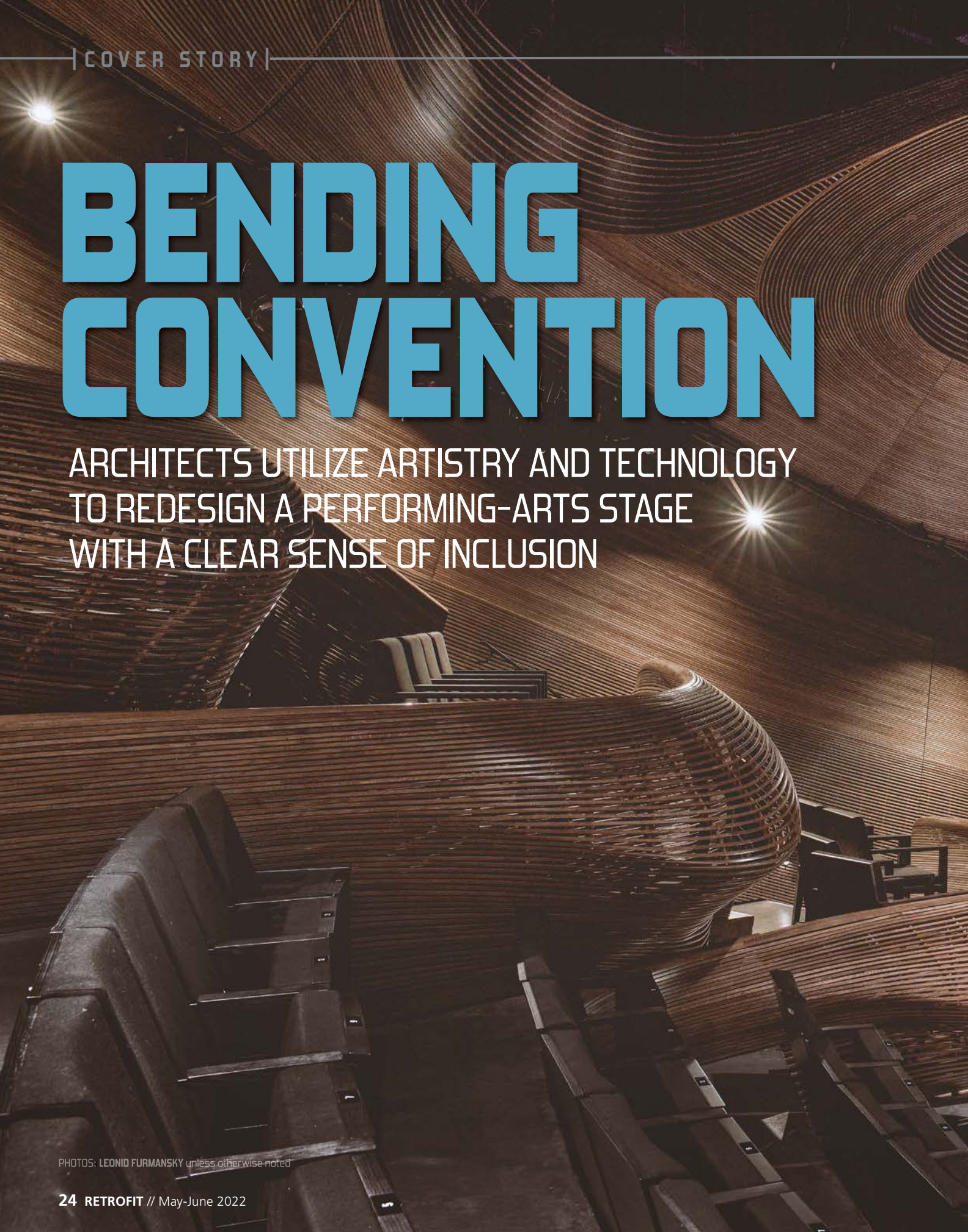
BENDING CONVENTION

ARCHITECTS UTILIZE ARTISTRY AND TECHNOLOGY TO REDESIGN A PERFORMING-ARTS STAGE WITH A CLEAR SENSE OF INCLUSION



PHOTOS: **LEONID FURMANSKY** unless otherwise noted

WRITTEN BY | **KJ FIELDS**

Invention, risk and experimentation are characteristics of the performing arts, and performing-arts spaces are places of truth-seeking and truth-telling, according to Robbie Eleazer, AIA, design director at Trahan Architects. "You can challenge authority and convention in a way you can't do elsewhere," he asserts. "At the same time, they are places of optimism."

During the renovation of the Coca-Cola Stage at the Alliance Theatre in Atlanta, Trahan Architects aspired to creatively address decades-old disparities yet maintain the theater's functional and state-of-the-art technical aspects. Perseverance paid off and—mirroring the arts—invention, risk and experimentation played prominently in the project's realization.

SHARED JOURNEY

Years ago, African Americans were forced to sit in the balconies of performance spaces and access their seats through separate entrances. A member of the Alliance Theatre's board of directors described her grandmother's recollection of the relegating experience. For many in the South, the concept of the balcony is still intertwined with segregation. Although the renovation project began in 2015 before more recent racial-equality activism surged nationwide, designers were moved by the account. Viewing the balcony's isolation through the board member's family lens had an early impact on the design.

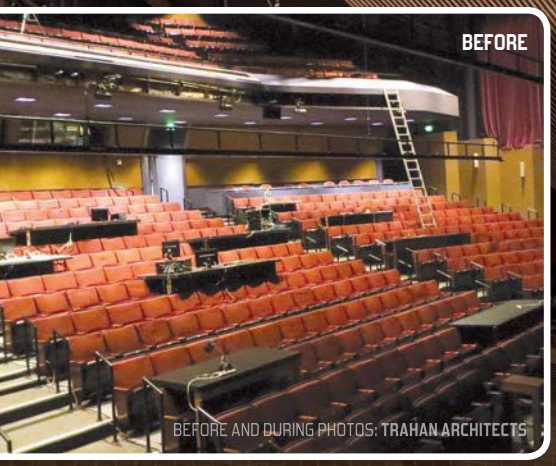
"We had an intuitive epiphany on the project that the architect has a responsibility to create environments that foster equity," Eleazer recalls. "Early in the design process, we attempted to do away with the balcony entirely. We tried 50 different options. But we weren't able to solve the room for acoustics and seating capacity."

Another design inspiration came in the form of a wooden bowl by the multigenerational, Atlanta-based artisans at Moulthrope Studios. Because a circle has no start or end, designers recognized translating the rectangular space into a circular geometry would allow people to mix together.

"Being inside a box is different than being inside a bowl," Eleazer says. "A bowl is more democratic, and the Moulthrope hand-turned bowl emanated warmth, power and significance. We started experimenting with how to make the balcony and orchestra circular and fuse their lines together."

VIEW A VIDEO

Now, patrons can enter any door to the theater and access every seat. Two staircases for perimeter box seating step down within the room into the orchestra, and the cross aisle in



BEFORE AND DURING PHOTOS: **TRAHAN ARCHITECTS**

“BEING INSIDE A BOX IS DIFFERENT THAN BEING INSIDE A BOWL. A BOWL IS MORE DEMOCRATIC, AND THE MOULTHROPE HAND-TURNED BOWL EMANATED WARMTH, POWER AND SIGNIFICANCE.” *—Robbie Eleazer, AIA, design director, Trahan Architects*

the middle of the orchestra graciously blends into the staircases. While it's rare to add staircases into a theater renovation because it reduces seating capacity, the theater's board saw the benefit.

The notion of equality also included creating ample access for people with disabilities. Early concept pre-designs showed elevators, but designers added an interior ramp instead to eliminate the experience of separation. The ramp now cascades along the room's edge, giving audience members a shared journey to all seating levels. The lower orchestra, orchestra and balcony levels all have prime seats reserved to accommodate patrons with disabilities.

Patrons feel a clear sense of inclusion because the balcony seems to wrap around the audience. The design also moved the audience 10 feet closer to the stage, and performers feel more like they're part of the space.

ARTISTRY AND INNOVATION

Trahan Architects had designed the room's layout with cascading staircases and ramp, but the team remained unsure of the best material choice for the project. Although a wooden bowl influenced the design's geometry, sculpting heavy pieces of wood to achieve the complex shapes would produce a lot of waste. Initially, team members had a shape made from cast stone and then another of cast plaster. They built formwork and searched for more malleable, fluid materials.

"We were exploring but nothing seemed right," Eleazer recalls. "At Trahan Architects, we seek to find a role for handcraft in an industry that often relies on manufactured processes and materials. One night, Trey [the firm's founder Victor F. "Trey" Trahan, FAIA] sent me an email of Matthias Pliessnig's work. He connected the dots between Matthias' artistic techniques with wood and a way to make the geometry work."

Pliessnig is a New York-based design artist who creates unique lattice furniture and art forms from steam-bent wood strips. If the concept could transfer to the theater's new design, it would be pliable and resource-efficient; the strips are built on loose networks of bent jigs without the need for molds.

Eleazer and Trahan approached Pliessnig with the idea. "Matthias immediately saw how the room was an immersive experience and was interested in collaborating on the project," Eleazer says. "Visualizing the room formed from wood strips got back to the origin of the wooden bowl and solved all the complex geometries."

To determine project feasibility, Pliessnig made 13 physical full-scale mockups of selected architectural features. He cut stock and steam bent the wooden strips in various sizes. The ideal medium was 1/2-inch by 1/2-inch strands of rift sawn oak derived from fallen trees.

Trahan's research uncovered historic Southern homes and creole cottages with spiral staircase handrails crafted from pie-wedge-shaped sections of wood. Eleazer developed a detail of the handrails in a computer model. He then asked Pliessnig to explore the idea of making the handrails and the sections where the front lattice rises up over to the backside lattice out of steam-bent wedges of oak.

Another challenge came in the form of the balcony's front. Making the balcony out of open slats would create transparency so people could see each other. But they discovered that to meet acoustic needs, the team would have had to add insulation, which would destroy the appearance of the wooden forms. Pliessnig invented a unique curved balcony where the undulations that curve forward are solid strips of wood but where the undulations cup back, the slats are open. The innovative pattern fixed the acoustic issue.

"We had many intensive moments trying to solve all these problems," Eleazer remembers. "We were working together to combine acoustics, art and architecture. Matthias is a true co-designer of aspects of the room. He infused the project with incredible intelligence and artistry."

PROCESS OF DISCOVERY

Millwork fabrication for the project, however, required a new addition to the team. Trahan Architects brought in CW Keller Associates, and its crew used a world-class process of digital imaging to map out every strip of wood into a computer. CW Keller members happened to be doing an internship on augmented reality at the time and they experimented with the process through 3D laser projection so each piece could be made by the millworkers.

The process was accurate, cost-effective

Retrofit Team »

ARCHITECT // Trahan Architects, trahanarchitects.com
- Victor F. "Trey" Trahan, FAIA
- Leigh Breslau
- Scott Melançon, AIA
- Brad McWhirter, AIA
- Robbie Eleazer, AIA
- James Babin, AIA
- Conway Pedron, AIA
- Ayesha Husain
- Sarah Hussaini
- Wenyun Qian, AIA
- Andrew Fu

STEAM-BENT WOOD DESIGNER // Matthias Pliessnig, www.matthias-studio.com

ARCHITECTURAL MILLWORK FABRICATOR // CW Keller Associates, www.cwkeller.com

STRUCTURAL ENGINEER // Uzun+Case, uzuncase.com

CONSULTANT // Theatre Projects Consultants, theatreprojects.com

ACOUSTIC CONSULTANT // Talaske, talaske.com

LIGHTING DESIGNER // FMS, www.fmsp.com

Materials »

THEATER SEATING // Series Seating, seriesseating.com

ACOUSTIC PANELS // Novawall, novawall.com, with Facing Fabric from Maharam, www.maharam.com

THEATER CURTAINS // Rose Brand, bit.ly/3KUHBzH

LIFE-SAFETY DEVICES // Concealite, bit.ly/3IgNohb

EXIT SIGNS // LELU by Architectural Safety Components, www.architecturalsafety.com/lelu

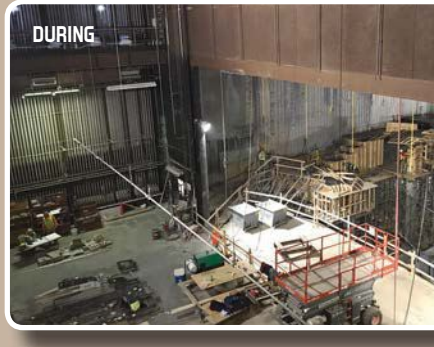
CEILING PANELS // Celebration Snap-in Metal Panels by USG, bit.ly/364kaF9

LIGHTING // Aculux, aculux.acuitybrands.com

CERAMIC TILE // Florida Tile Inc., www.floridatile.com

WOOD DOORS // SingCore, singcore.com

DOOR HARDWARE // TK Collection by 12th Avenue Iron, bit.ly/3IbsiAB



and produced no waste because the team basically "drew lines in the air" rather than forming models that would ultimately need to be discarded. The final project includes more than 100,000 linear feet of millwork.

"We didn't know how we would achieve the end result, and we learned as the process evolved. It was a perfect reflection of the work we did with Matthias," Eleazer says. "In construction, it can be harder to innovate because of the legal and financing realities. As a result, a fabricator had never applied this cutting-edge technology to the real-world application of construction in this way."

The renovation of the Coca-Cola Stage delivers a space that is inclusive, visually striking and a rich, tactile experience for patrons. Eleazer appreciates that creating something unique from scratch is much more difficult, but he encourages his profession to find new ways of inventing architecture.

"Have strength in your conviction because the idea that's driving you and driving the project is a very powerful thing," he affirms. "The idea is not invalidated if you don't know how to do it. Keep the idea, keep asking questions and you'll figure it out."

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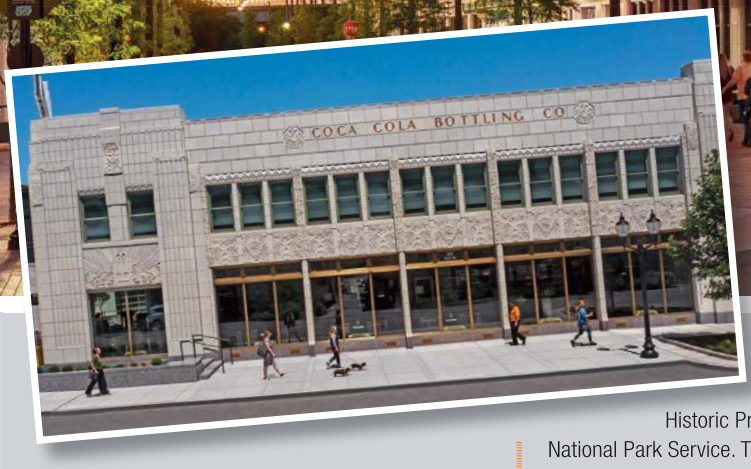
BOTTLEWORKS HOTEL | Indianapolis



PHOTOS: SUSAN FLECK PHOTOGRAPHY, COURTESY WEATHER SHIELD

RETROFIT TEAM

ARCHITECT: RATIO Architects, ratiodesign.com
DEVELOPER: Hendricks Commercial Properties, www.hendricksgroup.net
OWNER/OPERATOR: Geronimo Hospitality Group, www.geronimohospitalitygroup.com
WINDOW DISTRIBUTOR: G-2 Architectural Products, g2arc.com
WINDOW INSTALLER: National Glass & Hardware LLC, www.natgh.com

MATERIALS

Julie Zent, historic window specialist for RATIO Architects, took on the intricate task of matching the 150-plus original wood windows that had once complemented the Coca-Cola Bottling Plant's decorative exterior. Throughout the nearly two-year process, she worked with Dan Kovas of G-2 Architectural Products to orchestrate window design details, specifications, updates and product delivery.

All historical replications were sourced through Weather Shield whose team of architectural window specialists combined artistry and technical expertise to match original specifications while adding modern features.

To qualify for historic rehabilitation tax credits and receive local historic district approval, Zent coordinated with the Indianapolis Historic Preservation Commission, Indiana State Historic Preservation Office and National Park Service. The sign-off process called for close communication and cooperation because approvals at all three levels were essential.

For a project of this magnitude, the design team needed to create models in advance before production. Although most of the bottling-plant windows had been discarded in favor of low-cost replacements, a few of the originals remained in garages onsite. Dave Kroll, director of preservation for RATIO Architects, notes, "Although deteriorated, they were able to get accurate dimensions from those windows, which allowed us to eventually duplicate the design."

"The exciting part of obtaining the artifact samples was that the Weather Shield crew initially created a plastic 3D printer replica of the wood components, so the architects could make modifications before we moved into the shop-drawing phase," Kovas explains. "This added precision to the operation and ultimately accelerated the timeline for approval."

Once the detailed side-by-side shop drawings of the original unit and the proposed replication were finalized, the Weather Shield team was able to create a full-sized mockup in its workshop.

The resulting design included three customized Weather Shield components—brick mould, sash lug and bottom sill. In addition, the team matched the original exterior Coca-Cola paint color and provided several historically accurate stains and colors for the various interior spaces, including a designer stain to match the paneled office spaces.

"The window replication process is complex. Fortunately, our local and state people worked well together to reach consensus. Discussion on changes often included up to nine people weighing the pros and cons and working toward resolution," Zent explains.

One of those early discussions occurred at the mockup installation site, where a group of developers, architects and historical advisors gathered to view the product and compare the details to one of the original units. The side-by-side contrast created a then-and-now visual that displayed the craftsmanship that went into the beautiful replication. Onlookers were able to see the window as it looked nearly 100 years ago—with modern weatherproofing added to the design.

"Weather Shield pulled their team together so quickly to get the job done," Kovas notes. "They were the first to produce a mockup, which allowed time for the various contributors to provide feedback. Some minor tweaks were requested, but the core design was approved the first time around, which is seldom the case."

Although the original windows were double-hung, the design team required the sashes to be fixed in place for climate-control purposes, whereas the garage windows were designed to be fully functional double-hung units. All specified product directives were completed at the manufacturing plant before shipping.

PHOTOS: **THE ADDISON GROUP, COURTESY GERONIMO HOSPITALITY GROUP** unless otherwise noted

PHOTO: **WEATHER SHIELD**

Zent notes: "Weather Shield provided 14 different sizes in four separate configurations. Due to the complexity of the terra-cotta restoration, openings varied in size throughout, resulting in subtle modifications to multiple units."

Sean Edwards of National Glass & Hardware LLC worked with the window team from the early days of the mockup. His crew carefully removed the old units while working in tandem with terra-cotta artisans repairing any of the delicate crumbling components.

"The installation was implemented in phases as different portions of the façade neared completion," Edwards recalls. "We installed the windows in various sizes, and all were extremely maneuverable. Weather Shield did a great job creating the right look to match the originals."

HISTORIC-REPLICA WINDOW MANUFACTURER: Weather Shield, www.weathershield.com

THE RETROFIT

The 1930s-era Art Deco Indianapolis Coca-Cola Bottling Plant employed thousands of workers throughout some of the nation's most turbulent decades. In the 1960s, when plant owners moved their expanding bottling operations to Speedway, Ind., they left behind one the city's most beloved landmarks. After years of steady deterioration, Hendricks Commercial Properties saved the architectural gem and initiated a grand restoration project for the long-neglected Bottleworks District.

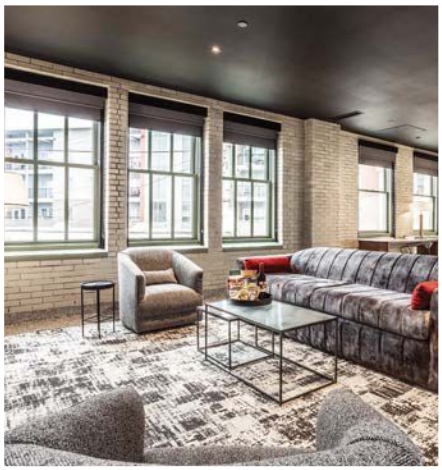
RATIO Architects transformed the fading North Mass Avenue property into a 139-room boutique hotel and garage food hall while resurrecting its past splendor. This anchor project launched Phase 1 of the much anticipated $300 million overhaul.

"We get into buildings that have been around for a long time for good reason—they are well-built and have served a significant and worthwhile purpose in society," explains Dave Kroll, director of preservation for RATIO Architects. "We retain as many of the features and materials as possible and replicate what cannot be saved."

The original Coca-Cola Bottling Plant and garages comprised the oldest and most lavish structures in the Bottleworks complex, and great care was taken to preserve the historical integrity of the design. One of the site's most treasured features, the exquisite terra-cotta façade, had steadily deteriorated because of weathering and neglect. A team of specialty masons took painstaking efforts to repair and restore the exterior to its original grandeur—blending skill, patience and artisan wizardry.

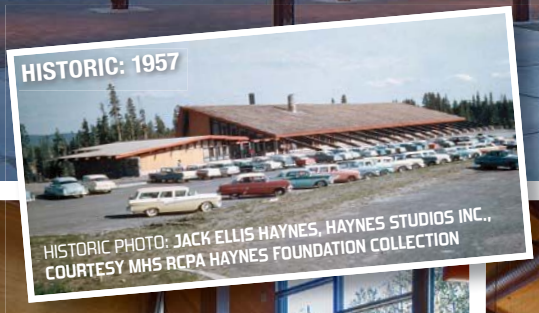
In addition to the ornate exterior restoration, the RATIO Architects team designed the stunning Art Deco interior spaces, including an impeccably refurbished lobby filled with colorful polished tile and shining brass fixtures.

The hotel welcomed its first guests Dec. 15, 2020. The Garage Food Halls unveiled 14 restaurants and shops on Jan. 5, 2021.

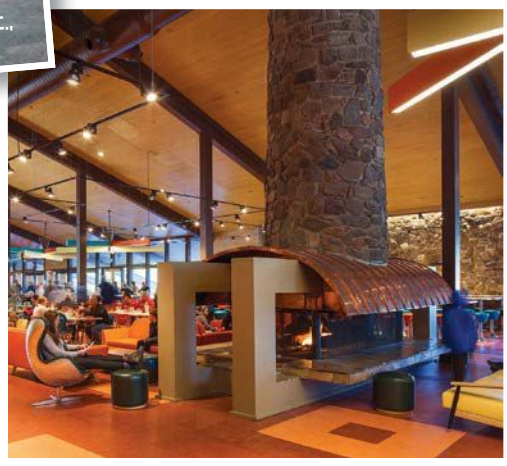


CANYON LODGE | Yellowstone National Park

PHOTOS: REX CONNELL



HISTORIC PHOTO: JACK ELLIS HAYNES, HAYNES STUDIOS INC., COURTESY MHS RCPA HAYNES FOUNDATION COLLECTION



RETROFIT TEAM

ARCHITECT, ELECTRICAL ENGINEER, GRAPHIC DESIGN, HISTORIC PRESERVATIONIST AND MECHANICAL ENGINEER: Cushing Terrell, cushingterrell.com
OWNER: National Park Service, www.nps.gov

MATERIALS

The following is a sampling of materials used in the project:
CARPET: Durkan Hospitality, www.mohawkgroup.com/segments/hospitality
WALLCOVERING: Koroseal, koroseal.com
CUSTOM WALLCOVERING: TRI-KES, www.memosamples.com
WINDOWS: Oldcastle BuildingEnvelope, obe.com
SCULPTED WALL PANEL: Innovative Accents, www.innovative-accents.com
ACCENT WALL TILE (FOOD LINE): Modwalls, www.modwalls.com
PAINT: Sherwin-Williams, www.sherwin-williams.com
LARGE STAR PENDANTS: Original to the Building and Painted to Match the Historic Colors
LINOLEUM: Forbo, www.forbo.com
ACRYLIC PANELS (BAR AND RESTAURANT): 3form, www.3-form.com
FURNITURE: HF Collection, hf-collection.com
CUSTOM MID-CENTURY-MODERN-PATTERNED LAMINATE TABLETOPS: Wilsonart, www.wilsonart.com

THE RETROFIT

Balancing a rich history, delicate environment and modern needs, Cushing Terrell renovated the Canyon Lodge at Yellowstone National Park to restore the structure's original vibrancy and character. Cushing Terrell executed a holistic renovation of the lodge, removing cluttered layers and restoring the building's original openness.

Opaque walls between retail spaces were made semi-transparent to provide separation without intruding on the airiness of the 27-foot-tall space. The eating areas were redesigned and distributed throughout the building for fluency and definition. The design team worked directly with food and beverage management to ensure their specifications were met.

Cushing Terrell's architectural, electrical, and mechanical designers worked together to ensure the building was properly and sustainably heated, ventilated and illuminated. In addition, exterior signage and interior wayfinding were thoughtfully designed and integrated to emulate the retro spirit of the building and to bolster function and lifespan. This building is a contributing feature of the Canyon Village Historic District, which is eligible for listing in the National Register of Historic Places.

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ATLANTIC CITY BOARDWALK

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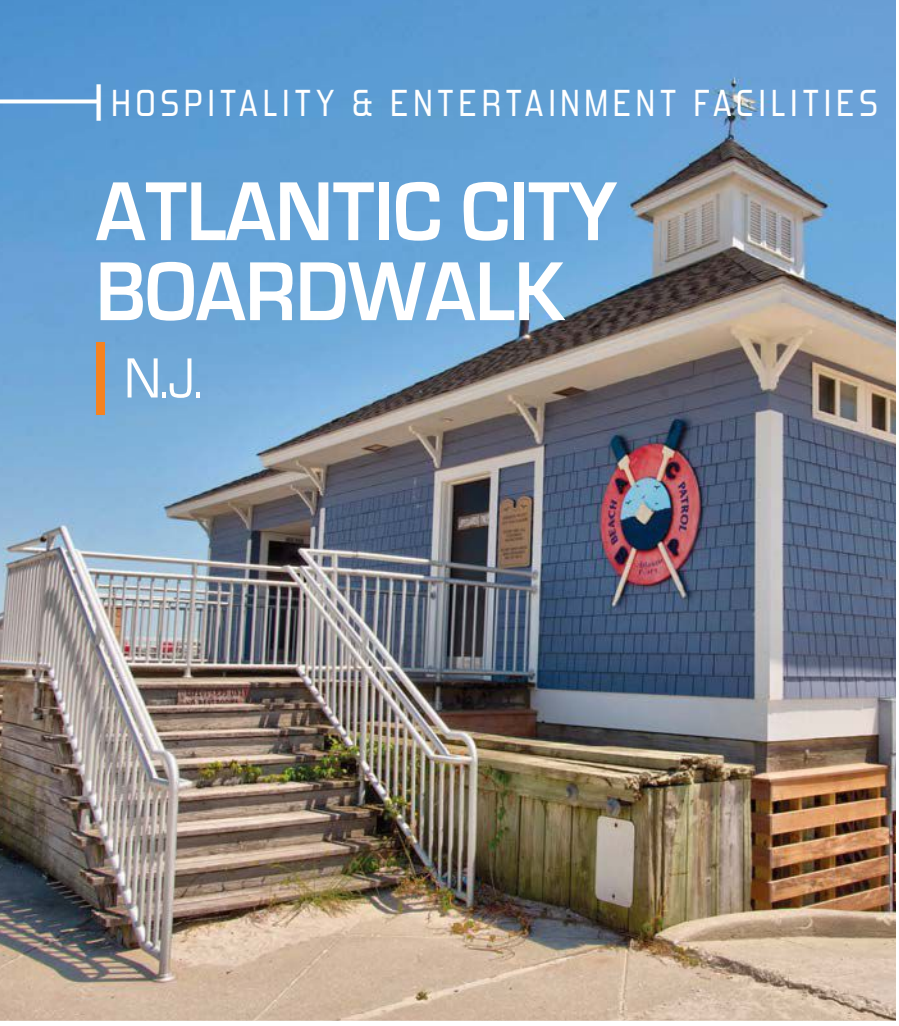

PHOTOS: BRADLEY CORP.

RETROFIT TEAM

ARCHITECT: SOSH Architects, www.sosharch.com

MATERIALS

Amidst beautiful beaches along the Atlantic Ocean, the world-famous Atlantic City Boardwalk is a beacon of year-round tourism, recreation and public events. The world's first and longest boardwalk provides access to a number of hotels, resorts, shops, casinos and more.

Following years of complaints from locals and tourists about the poor restroom conditions, the seven high-use bathrooms located along 4 1/2 miles of the boardwalk underwent a major transformation to make them cleaner, more modern and family friendly. Atlantic City's Casino Reinvestment Development Authority (CRDA) oversaw the multi-million-dollar renovation of the 8,150 square feet of restrooms—some measuring more than 2,000 square feet—which were completely gutted and refurbished.

Some of the overriding goals for the project, according to Austin Gerber, senior associate and architect/project manager with SOSH Architects, were to "make them convenient and durable enough for public use, easy to clean and maintain, touchless—a feature that is especially timely in the age of COVID-19—and consistent looking throughout all the bathrooms."

In addition to replacing fixtures; toilets; urinals; and installing new heating, plumbing and ventilation systems, the project team specified Bradley's all-in-one WashBar with touch-free soap, water and hand dryer in one single chrome-plated component. The handwashing systems are featured in seven comfort stations along the boardwalk, including men's and women's restrooms, for a total of 14 bathrooms.

"I've specified Bradley's products for years and had been curious about the all-in-one concept of the WashBar," says Arley Sochocky, Interior Design Studio manager with SOSH Architects. "After I experienced the unit in person, I knew the WashBar would be perfect for this application. Not only is it highly durable and easy to use, it's completely touch-free, modern, streamlined and super functional."

The WashBar's integration of soap, water and dryer into one fixture eliminates deck and washroom clutter, Gerber says. "There was no need to map out separate spaces, hookups and wiring for individual soap dispensers, faucets and hand-dryer components," he says. "Installation was also easy and straightforward."

Seamless, OmniDeck made of Terreon solid surface was specified along with the WashBar.

"The tonality of these integral handwashing systems complement the bathrooms' tile floors and walls, which have neutral hues with warm accents. All of these aesthetics tie back to the boardwalk while keeping the materials and color palette of the restroom facilities consistent across all restrooms," Sochocky notes.

"As a tourist destination, we realize the importance of having clean restrooms and providing a higher standard for visitors and their families," says CRDA Executive Director Matt Doherty. "These improvements, including the WashBar's performance, greatly increase the Atlantic City tourism experience."

WASHBAR MANUFACTURER: Bradley Corp., www.bradleycorp.com

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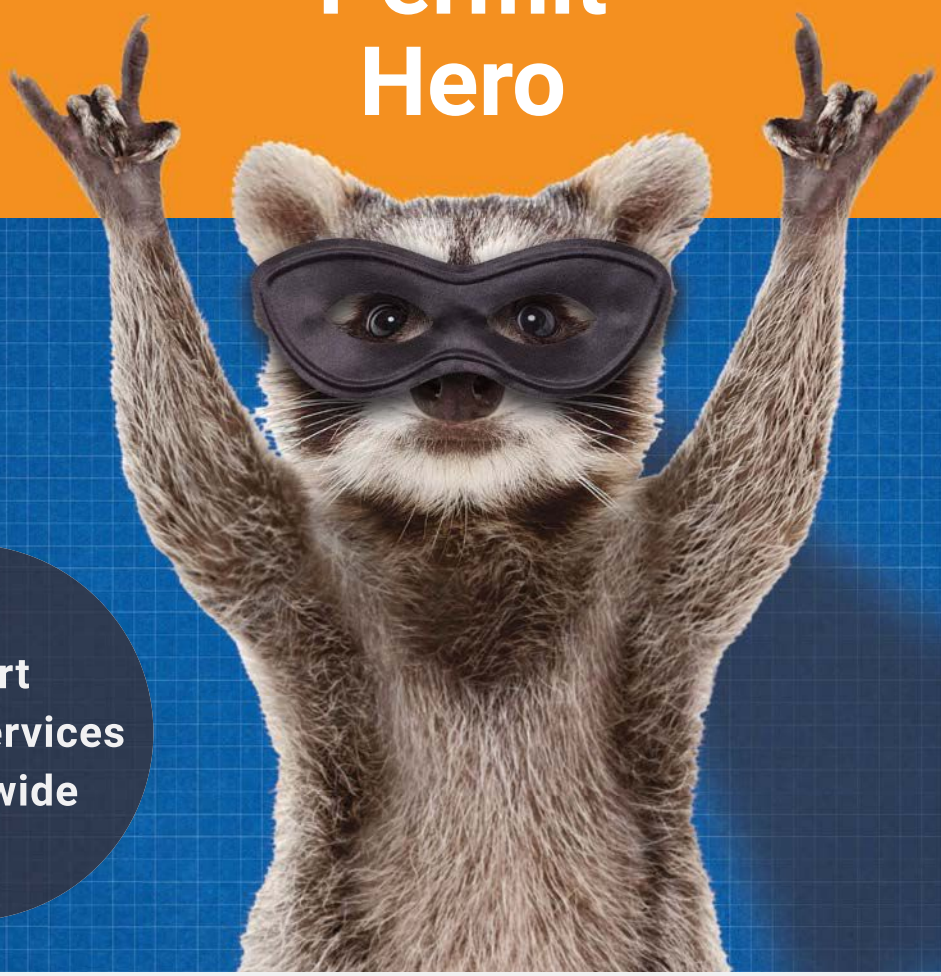

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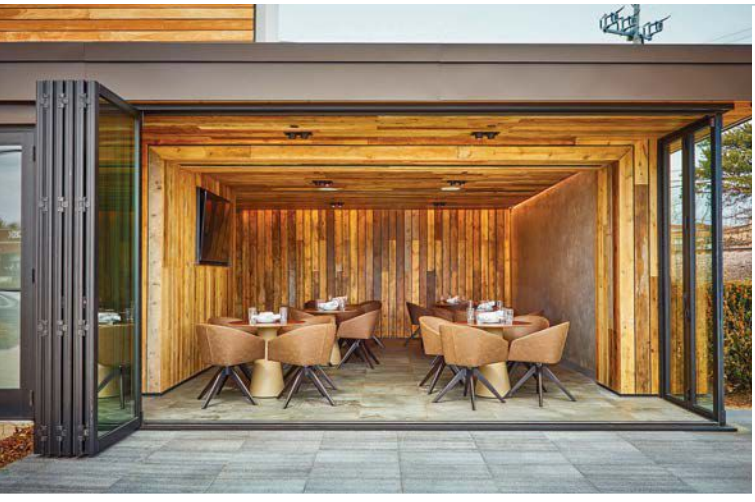

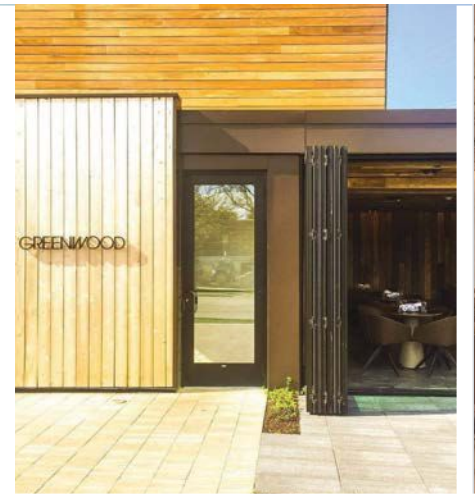

GREENWOOD AMERICAN KITCHEN & BAR | Highwood, Ill.

RETROFIT TEAM

ARCHITECT AND INTERIOR DESIGNER: DMAC Architecture, www.dmacarch.com
- Dwayne MacEwen, principal
- Aaron Beyers, project architect

STRUCTURAL ENGINEER: Rockey Structures LLC, rockeystructures.com
ENGINEER: WT Group, www.wtgroup.com
CONTRACTOR: 41 North Contractors, www.41northcontractors.com
FOLDING DOOR DISTRIBUTOR: Bricks Inc., www.bricksinc.net

MATERIALS

The visually intriguing structure that is now Greenwood American Kitchen & Bar began decades ago as a 5,300-square-foot auto repair shop on the corner of a busy intersection in this suburb of Chicago. Surrounded by plenty of pavement for parking, the original brick-façade building had been altered in a manner that diminished structural integrity, and the light-industrial structure attached to it looked like little more than a tear-down.

DMAC Architecture saw something else: A chance to honor the building's history and create a modern aesthetic through a combination of adaptive reuse and new construction.

DMAC chose to keep the existing structure intact, exposing an interior concrete block wall layered with paint and other imperfections for an urban feel. Original garage door openings were outfitted with modern glass doors that allow movement and views. The floor plan was segmented to allow multiple seating configurations and efficient service while maintaining visual unity throughout.

Warm wood furnishings, fabrics, and wooden walls backed with black insulation boards offset the concrete surfaces and soften the appearance and acoustics of the space.

The east dining lounge, one of two additions to the original structure, opens onto the terrace using LaCantina's zero post corner system and two LaCantina folding door systems that erase the boundary between indoors and outdoors.

"At the east dining room, there is an open corner that is cantilevered with no structural post. It was a unique condition where we wanted to enhance the physical and visual relationships between the indoor dining space and outdoor terrace. LaCantina folding doors worked seamlessly to accomplish our design vision," says Dwayne MacEwen, DMAC Architecture principal and creative director.

Another set of LaCantina folding doors connects covered patio dining with a second interior bar area.

"We chose LaCantina for the slim and modern frame profile to help maximize the glass opening. The door systems maximized opportunities to have a very open and fluid indoor-outdoor restaurant experience," MacEwen adds.

DMAC's respect for the past, eye for possibilities and careful attention to detail all contributed to the Greenwood project being named Best Renovation in the Best of LaCantina 2019 competition.

FOLDING DOORS AND ZERO POST CORNER SYSTEM MANUFACTURER: LaCantina, www.lacantinadoors.com

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COELETTE RESTAURANT | Jackson, Wyo.

PHOTO: KRAFTY PHOTOS

PHOTO: COURTESY DUBBE MOULDER ARCHITECTS
BEFORE

PHOTOS: LINDLEY RUST PHOTOGRAPHY unless otherwise noted

RETROFIT TEAM

ARCHITECT: Dubbe Moulder Architects, www.dubbe-moulder.com
OWNER: Old Growth LLC, jholefisher@yahoo.com
GENERAL CONTRACTOR: Wilkinson Montesano Builders, www.wilkinson-montesano.com
CIVIL/STRUCTURAL ENGINEER: Nelson Engineering, www.nelsonengineering.net
MEP ENGINEER: Energy 1 LLC, www.energy-1.net
INTERIOR DESIGNER: GYDE Architects, www.gydearchitects.com
ROOFING CONTRACTOR: Salt River Roofing, (307) 885-3084

MATERIALS

The following is a sampling of materials used in the project:
WINDOWS: Jeld-Wen, www.jeld-wen.com
LOG-JAM SYNTHETIC CHINKING: Sashco, www.sashco.com/log-home/wood-seal-chinking
ROOFING: Tapersawn Western Red Cedar Shingles

THE RETROFIT

The Coe Cabin is one of the last remaining structures from Jackson's earliest years. Built in 1915, the structure was the home of Ed and Emily Coe. It was converted into a restaurant in 1976; locals knew the building as the Sweetwater Restaurant, which operated for more than 40 years.

When Sweetwater closed in 2017, the cabin, along with two other historic structures, were listed for sale. They were purchased by John and Shelley Holland, local preservationists willing to restore the log structures rather than razing them. Their goal was to rehabilitate the cabin to become a vibrant, functioning place of business while ensuring its continued presence in the dwindling historic fabric of downtown Jackson. However, this goal didn't come without challenges. According to an article in *Jackson Hole News & Guide*: "To buy the building another century, crews had to carefully and meticulously disassemble the walls and put everything back together. Rotting logs in the foundation needed to be replaced. Building codes and regulations require a delicate 'Goldilocks' balance to fix what's needed without triggering upgrades to meet current codes, which [John] Holland said could destroy the building's original character."

Kurt Dubbe, principal at Dubbe Moulder Architects and a historic preservation specialist, was brought on to retain the historic character of the original cabin and design an addition to be used as a bar, complete with a rooftop dining deck overlooking Snow King Mountain. "We didn't want to freeze Sweetwater in time," Dubbe told *Jackson Hole News & Guide*. "Its success and its future will depend heavily on human occupancy and human enjoyment."

The 18-month renovation entailed disassembling the entire building, carefully labeling each log so that the structure could be reassembled once the foundation and floor were replaced.

Today, the cabin has reopened as Coelette Restaurant. Even with the new addition and components, the building recalls Jackson's history. For example, the log walls likely were constructed from old-growth pines that grew on the Snow King Mountain hillside when the first settlers arrived.

Dubbe Moulder Architects was delighted to be part of the team that brought the cabin new life so it will continue to be a restaurant where diners from all over the world can appreciate its history and ambiance.

3 MARGARITAS
Denver

PHOTOS: AMERICAN LIGHTING

RETROFIT TEAM

ARCHITECT: re:architecture, www.re-architecture.com
LIGHTING DESIGNER: AE Design Inc., www.aedesign-inc.com

MATERIALS

re:architecture created a contemporary Mexican restaurant experience within a former theater lobby while respecting the historic character of the Art Deco space. The interior concept was brought to life through Mexican artwork, custom light fixtures and furniture sourced from the owner's home state of Jalisco in Mexico.

The vision was to create three unique environments within the 6,000-square-foot restaurant: the bar area, the galleria that displays artwork and the indoor patio that connects to the outdoor patio. Each area required a custom lighting scheme that would tastefully highlight the interior architectural elements.

For example, the galleria now is a brilliantly colored dining room with a James Turrell-inspired color-changing ceiling cove. The cove uses concealed, slowly colored LED lighting to celebrate the tradition of color commonly used in Mexican architecture. "We wanted to unify the space, make it feel more expansive by making use of the higher ceiling, and enhance the dining experience with a subtle kinetic lighting effect," explains Addie Smith, a senior certified lighting designer at AE Design Inc.

The TLX RGB+TW Tape Light from PRIZM by American Lighting is located along the bottom edge at one side of an existing pop-up ceiling cove. Smith worked with Rick Epstein, founder and principal of re:architecture, to add a plastered curve to the inner corner of the cove to help carry the light around the inner surface for an infinity effect.

"We utilized the tape light based on its RGB and 2700K-6000K color options, output, local availability and affordability, along with its easy customization and long-term performance," Smith says. "The color options enable us to set the appropriate light levels to create the exact effect for the experience we wanted to deliver."

TAPE LIGHT MANUFACTURER: PRIZM by American Lighting, prizmlighting.com

3 Margaritas
Denver, CO

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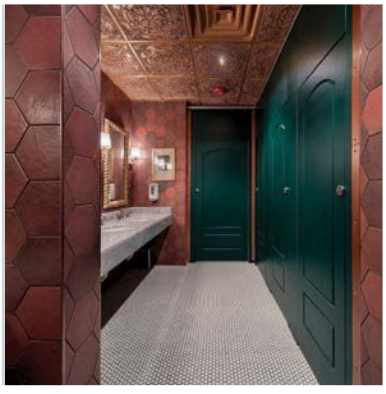

RETROFIT TEAM

ARCHITECT: JL Studio Designs, www.jlstudiodesigns.com
RESTROOM PARTITION DISTRIBUTOR: Waldo Brothers Inc., www.waldobros.com

MATERIALS

A wide assortment of New Orleans' colors within this restaurant extends all the way into the second floor's two restrooms. Described as "traditional New Orleans meets modern flair," the "Mardi Gras-inspired women's and men's restrooms feature Scranton Product's Aria Partitions.

"Used to produce six stalls and two urinal screens, the Aria Partitions were the perfect complement for this project," says Mary Kay Cowen, president of Waldo Brothers Inc. "They replaced the previous facility's dated metal partitions with these beautiful emerald green stalls and their raised paneling, which fit seamlessly into the restaurant's look and feel."

Made of durable HDPE for commercial and institutional environments, Aria Partitions were developed by Scranton Products to add an enhanced level of comfort and privacy, as well as elegance, warmth and charm, to virtually any enclosed or private room. The partitions reduce sightlines with a continuous edge-mounted hinge and greatly improve aesthetics with a design that does not use face-mounted hinges like traditional bathroom partition systems. Aria Partitions also are resistant to impact, graffiti, corrosion, mildew, bacteria and moisture.

"The grand reopening could not have gone better," explains Jacquelyn Lindsey, owner and lead designer at JL Studio Designs. "Everyone from Tujague's loyal customers to its first-time guests loved the experience. Needless to say, the food was spectacular and everyone was mesmerized with every aspect of the restaurant's new design. The wow factor was everywhere. Some guests even took selfies in the restrooms with the Aria Partitions as a backdrop. Now that's a design compliment."

RESTROOM PARTITIONS MANUFACTURER: Scranton Products, www.scrantonproducts.com

THE RETROFIT

Tujague's, an iconic French Quarter fixture of the New Orleans cultural landscape, has been serving culinary delights to customers for more than 160 years. To stay viable, the owners of the beloved establishment made the difficult decision to relocate the restaurant four blocks upriver. The nation's third-oldest restaurant now occupies an existing building with three floors and balconies overlooking the steamboats cruising along the Mississippi River.

"A favorite of both locals and tourists since it first opened in 1856, Tujague's presented us with the formidable task of recreating the restaurant's long, colorful history and vibe in a new location," says Jacquelyn Lindsey, owner and lead designer at JL Studio Designs. "This included restoring the restaurant's Cajun ambiance in a new setting that not only comfortably embraced regulars, but also attracted younger customers desiring a five-star Creole dining experience."

JL Studio Designs recreated Tujague's renowned antique standup bar and filled the building's entire 3-story interior with the former site's vintage photos, memorabilia, artwork, chandeliers, newspaper clippings and miniature liquor bottle collection. The team also designed the green walls to look heavily aged with a custom faux finish while adding an assortment of gold, ornate mirrors and sconces to provide an extra layer of ambiance and visual flair.

Lindsey explains the meticulous specification of the restaurant's historic color palette: "We created a very vibrant New Orleans look and feel with a wide assortment of bright and bouncy colors that represent the city's festive culture. Each tier has its own personality. While the first floor's white and walnut-stained wall paneling is more traditional, the third is filled with lots of gold and metallics. The brass footrail from the old location was even brought over to provide the same antique feel to the new bar. And then, there's the second floor, which was designed with a sparkling array of purples, greens and gold accents to mimic the excitement of Mardi Gras."

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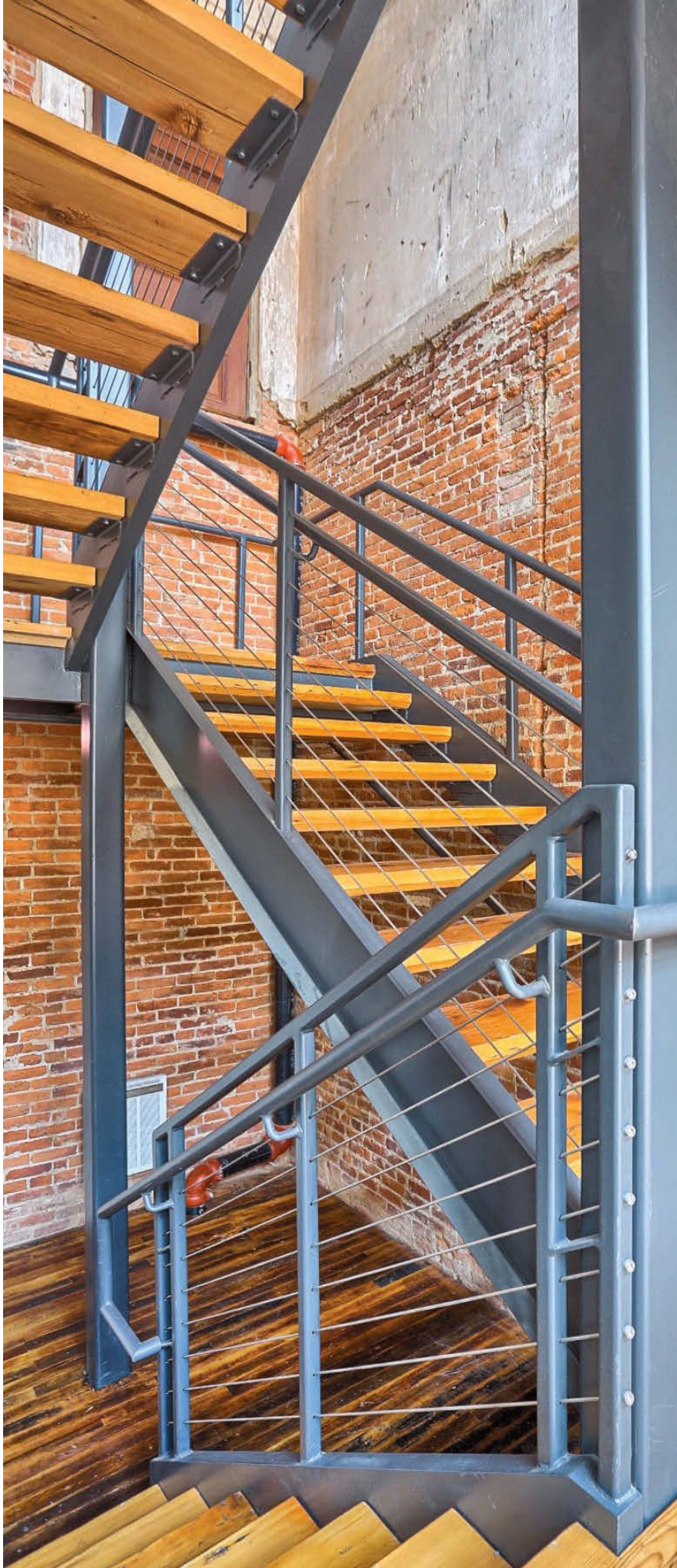

THE LAURENCE FROST AMPHITHEATER

Stanford, Calif.

PHOTO: MARCO ZECCHIN

PHOTO: CAW ARCHITECTS

BEFORE

PHOTO: MARCO ZECCHIN

PHOTOS: JOHN MARGARETTEN unless otherwise noted

RETROFIT TEAM

ARCHITECT: CAW Architects, cawarchitects.com
STRUCTURAL ENGINEER: Rutherford & Chekene, www.ruthchek.com
LANDSCAPE ARCHITECT: Studio-MLA, studio-mla.com
CIVIL ENGINEER: Sandis, www.sandis.net
THEATRICAL CONSULTANT: Fisher Dachs Associates, fda-online.com
ACOUSTICAL CONSULTANT: Kirkegaard, www.kirkegaard.com
AUDIO CONSULTANT: Sonitus, www.sonitusconsulting.com

THE RETROFIT

The Laurence Frost Amphitheater is one of Stanford University's most legendary spaces. The historic tree-lined grass bowl was built in 1937 to host university functions and events. It evolved into a venue that hosts popular musical acts, classical concerts and addresses by dignitaries, such as Mikhail Gorbachev. In its heyday, it was a regular venue for the Grateful Dead and featured numerous well-known musical guests, such as Duke Ellington, Louis Armstrong, Creedence Clearwater Revival and Joan Baez. However, in the past few decades, the amphitheater fell into disuse because of the difficulty in producing events within its bowl, which lacked accessibility and production infrastructure.

The goal of the recent redesign was to create greater accessibility for larger acts to perform, as well as the ability to house student shows and various university events. CAW Architects' design mission and vision was to create a more modern experience while sustaining the beauty and serenity of the historic site. This modernization was achieved with the creation of curved tunnels for wayfinding and crowd management and a new signature curved wall that serves as a shield to the stage building beyond. A wide variety of stone and wood elements were added throughout the design to enhance the natural beauty of the tree-lined bowl.

Functionality and access were additional key aspects of the redesign. CAW Architects created new entrances to the amphitheater by designing a unique and strategically placed system of tunnels through the tree-covered slopes. Other additions included new guest amenities, an updated service and stage entrance, a stage building with a canopy cover to protect the performers, and upgraded lighting and sound infrastructure.

After almost two years of limited programming because of pandemic restrictions, Stanford Live expanded its concert series at the amphitheater, which is designed to hold up to 8,000 guests, for the 2021-22 season.

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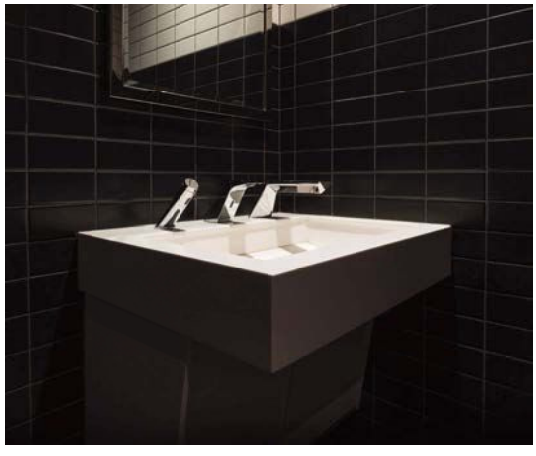

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[1]Based on testing performed by LMS Technologies, April 2020.

VIDA AND THE VAULT | Knoxville, Tenn.

PHOTOS: PETER MONTANTI

RETROFIT TEAM

ARCHITECT: Johnson Architecture, www.jainc.com
INTERIOR DESIGNER: SK Ballard Contract Interiors, skballardcontractinteriors.com
GENERAL CONTRACTOR: Jenkins & Stiles LLC, www.jenkinsstiles.com
OWNERS: Jim and Lori Klonaris

MATERIALS

The following is a sampling of materials used in the project:
MARBLE: Tennessee Marble Co., www.tnmarble.com

THE RETROFIT

Completed in 1913 as the headquarters of Holston National Bank, the 14-story Holston Building was Knoxville's tallest building at the time. In the 2000s, the upper floors were converted to high-end condominiums while the commercial floors waited for more than a decade for a concept that would honor its past but offer luxuries of the present.

Johnson Architecture worked with SK Ballard Contract Interiors and Jenkins & Stiles LLC to implement the vision of owners Jim and Lori Klonaris for restaurant Vida in the former bank lobby and a basement cocktail bar, The Vault, located in the bank's former vault.

"The Holston Building has been a downtown Knoxville landmark for 108 years," says Daryl Johnson, founder and president of Johnson Architecture. "The bank spaces are so unique and steeped in history, our team designed with preservation in mind. The result nods to history by showcasing special historical elements with all modern comforts. All partners came together to create this special vision."

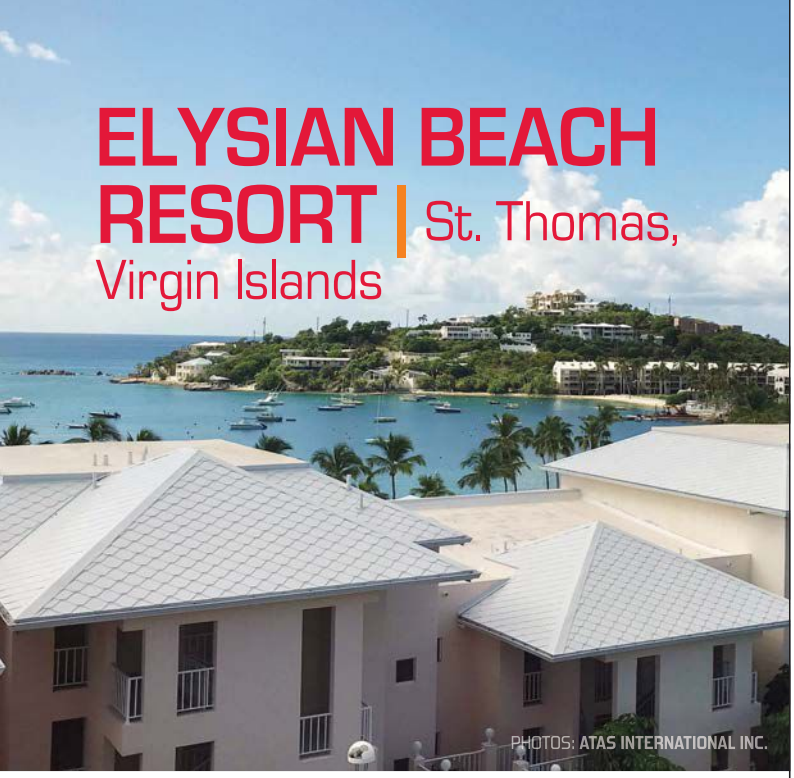
Vida, is a pan-Latin restaurant on the ground floor of the Holston Building. The marble staircase that descends to cocktail bar, The Vault, was preserved and the original vendor, Tennessee Marble Co., matched and installed new marble to repair areas that had been chipped and broken over time.

The entrance to The Vault boasts an original metal bank-safe door featuring exposed combination gears. Efforts were made to salvage as much of the original relics and hardware as possible, such as Art Deco metal railings.

"The Holston is a symbol of Knoxville's dynamic history, evolving in step with the times," Johnson notes. "It has a promising future thanks to careful, loving restoration and preservation that has been addressed with every iteration."

Vida and The Vault earned a 2021 East Tennessee Preservation Award for their transformations.

ELYSIAN BEACH RESORT | St. Thomas, Virgin Islands



PHOTOS: ATAS INTERNATIONAL INC.

RETROFIT TEAM

ROOFING CONTRACTOR: Rooftops Silicone Distributors Inc., (340) 778-8550

MATERIALS

The beautiful Elysian Beach Resort is located next to the St. Thomas Yacht Club on the eastern end of the island. In 2017, Hurricanes Irma and Maria created catastrophic damage on St. Thomas, including the destruction of the resort's roofs, causing it to close. The existing composite tile roofing material on the Elysian Beach Resort's buildings was replaced with .032 aluminum Ascot White CastleTop shingles, manufactured by ATAS International Inc. CastleTop shingles have an embossed texture and an expanded polystyrene backboard that supports the shingle during installation and aids in sound dampening. The shingles' tab interlock design resists wind uplift.

CastleTop aluminum shingles were recommended by Rooftops Silicone Distributors to the timeshare owners association. The contractor had them installed on his own home and could personally attest to their performance in high-wind areas. The energy-efficient Ascot White 70 percent PVDF paint finish has a high solar reflectance index rating of 83, which will result in more of the sun's heat being reflected away, rather than being absorbed into the buildings. This will help reduce cooling costs for the timeshare owners. In addition, pre-painted 70 percent PVDF aluminum metal panels are resistant to the corrosive effects of a marine environment, as tested in accordance with ASTM B117-85 (salt fog tolerance).

Rooftops Silicone Distributors' crew installed a total of 62,400 square feet of the diamond-shaped shingles. "It is hard to tell in the photos just how high off the ground these roofs were on the front side," says Rodger Bressi, the contracting firm's managing director. "We needed 120-foot manlifts to reach the areas."

The retrofit project was completed in 2020.

ALUMINUM SHINGLES MANUFACTURER: ATAS International Inc., www.atas.com

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BUILDING ENCLOSURE RETROFITS

Eight Steps Taken Early in the Process Will Prevent Future Delays, Mistakes

WRITTEN BY | **MICHAEL SMALLEY**

With fewer green fields available and property value increasing, retrofitting buildings has become a growing trend over the years. Citing McGraw Hill data, the U.S. Green Building Council found that 61 percent of all construction projects in recent years have been retrofits (bit.ly/3JOKnGr).

Real-estate investors are trying to find ways to make available existing space work for their needs while converting these older buildings into something more sustainable. Nearly 75 percent of leading investors plan to invest in net-zero initiatives in the next three years (bit.ly/3iMm7ZE), meaning parts of these existing buildings must be improved. In addition, at the end of 2021, the average U.S. commercial building was more than 50 years old (www.commbuildings.com/ResearchComm.html), resulting in many of these buildings requiring a retrofit because of aged and degraded façades and systems.

To retrofit a building enclosure, there are certain best practices that can be used to prepare for the process. The objective is to gather as much relevant information as possible. From a carbon and building-structure standpoint, the entire team needs to know what they are getting into before a project begins.

Consider the following eight best practices before beginning your next building enclosure retrofit:

1 Team Meetings

It is crucial to get all relevant stakeholders in the room together early. Depending on the project, the architect of record or the owners representative can be responsible for assembling and managing the team for the due diligence and operational execution of the project.

Engage with architects, façade consultants, the owner or an owner representative, along with any other key stakeholders. This will help build a consistent understanding of the retrofit's objectives. Because most projects are not cookie-cutter builds, there may be sacrifices on the project, and everyone needs to be onboard with these changes.

For example, the team must ensure new products being attached to the existing envelope will function properly with the building as a whole. Because structural codes need to be met, it must be

The Eight Steps Are Executed on City Foundry STL

IWR North America, a specialty contractor providing turnkey building enclosure and metal design services, has followed these eight best practices on a number of building enclosure retrofit projects. One such project was City Foundry STL, a unique dining hall experience; the complex also features office space, retail options, three major entertainment venues and an esports gaming center.

The 180,000-square-foot, 15-acre complex opened in St. Louis in 1929 as Century Electric Foundry, where various electric motors and automotive parts were produced for 40 years. After standing vacant for 10 years with signs of neglect, it was added to the National Register of Historic Places. The facility was purchased in 2015 and converted into its new use, opening in 2020. The redevelopment project preserved the character and building infrastructure of the historic building.

For example, as part of its interior design, the remains of two concrete kilns were transformed into a unique seating option within the dining hall. Guests can look to the sky and be amazed by hoppers, catwalks, rolling cranes, 2-ton hoists and foundry salvage that have been transformed into art.

For IWR North America, one of the project's challenges, as with many retrofit projects, is understanding what existing structural supports would be kept and determining if they were in adequate condition for the project. Much of the steel and other substructure supports for the new façade and claddings were partially or completely covered and could not be physically inspected until selective demolition was complete and the substructure was exposed. Fortunately, it was discovered early in the project that much of the substructure was inadequate and needed to be replaced or reinforced before installing the new claddings and façade. Having discovered this, the general contractor adjusted the phasing and sequencing to allow the selective demolition and physical verification of any concealed substructure to be inspected and mitigated as early as possible to prevent delays.

Today, City Foundry STL attracts people to the area not only for what's inside the building but also for its pedestrian-only streetway, which can be used for art fairs, concerts, farmers markets, street performers and events. In addition, the project preserves the significance of this industrial building in St. Louis' history.

understood who owns the structural engineering of the building. There is usually an engineer of record, but this can be determined in this early collaboration process.

2 Drawings

When it comes to preparing to retrofit a building enclosure, reconnaissance is key. For example, are there existing drawings of the structure? Will the team have access to these drawings? Or must the drawings be recreated based on what is seen?

If drawings need to be recreated, a datapoint scan likely will be needed to create a model. A physicality survey of the building is also necessary to see what parts of the current building remain adequate for its future use.

3 Energy Codes

Through the reconnaissance phase, it should be determined how new energy codes need to be applied and whether they need to be applied to a new addition only or the entire building. Many times, code-related items are not black and white, and the code may not address a specific scenario. Communicating project goals and objectives in a collaborative effort with building code officials is a great way to ensure compliance and also get a variance to achieve specific project objectives.

For example, if a building owner wants to replace an elevation of windows on a 50-year-old building, if not properly coordinated, it could result in the entire building being required to meet current-day building codes. This could mean replacing all windows, adding insulation inside existing walls, increasing the R-value in the roof through additional insulation and membrane, or even replacing the roof.

4 Picking and Choosing

During the planning process, decisions must be made about what will stay and what will be removed from the structure. Determining this will help develop an expectation of the finished product. These

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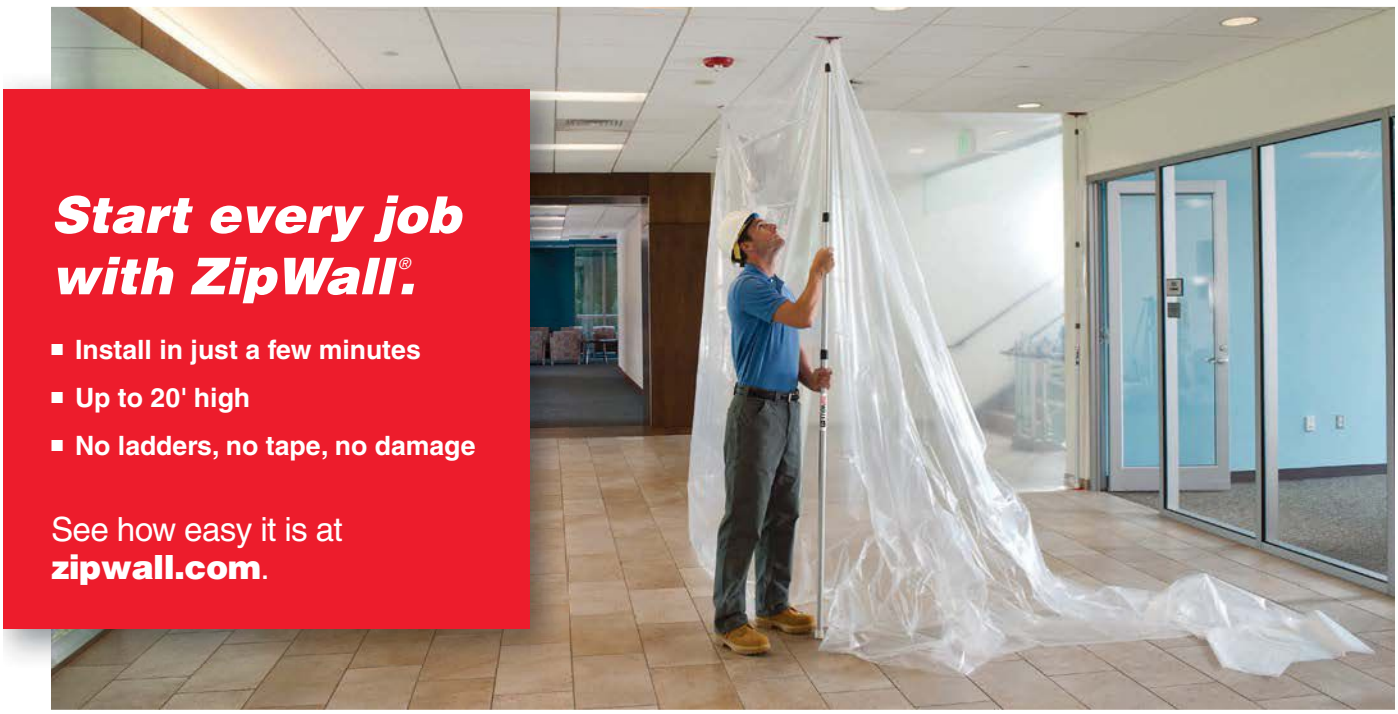

expectations will clarify responsibility for certain aspects of the project. When the renovation is transitioning from brick to a curtainwall, for example, who will be responsible for the transition and pull test? Who has the warranty for the materials and work? These questions must be answered before the project begins. Part of this collaboration includes determining whether the existing structure has been evaluated for any issues. Has the steel rusted? Is it usable? Does it need to be supported? Who is responsible for that?

5 Compatibility between New and Old

Compatibility studies should be completed early and often in the project, including as the envelope materials and systems are selected and specified. This will help the team learn how all pieces will interact and if the materials will be compatible with the rest of the building.

Material compatibility is not limited to what's on the surface. In many cases, existing brick has been painted, sealant joints have been re-sealed multiple times using different sealants and leaks have been fixed with unknown materials. In this scenario, the proper amount of time should be taken to understand what new materials will be interfacing with what existing materials, and appropriate tests should be performed to ensure compatibility and warranty.

Compatibility of systems also is important. A point-supported curtainwall system will interact with its structural support differently than the 1960s traditional masonry wall that the architect wants to remain within the façade, for example. Studying the compatibility of the differential movement of these components will ensure that the systems will perform independently, and together, as intended.

6 Sequencing

The sequencing of installations is also a key part of retrofitting different enclosures and façades. It is important to develop a phasing and logistics plan and manage that plan as the project scope and design progress.

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If a building is occupied, renovations must be completed in phases. As with most renovations and retrofits, existing materials and systems will be completely or selectively removed. If there are limits to how much scope can be removed and installed before moving to another phase, this will increase the cost of the project and bidders should be made aware of this information. That is why all parties involved in planning the project should take the time to coordinate early.

7 Material Lead Times

As with any project, developing an accurate schedule is crucial; this begins with knowing the lead time of materials. With the inherent phasing and sequencing of renovations and retrofits, managing materials to fit within project needs is even more important. Take the time to understand what the lead times are for products used on the project. Are there any products or systems coming from overseas and what is the lead time associated? If a part breaks, how long will it take to receive a replacement?

Asking these questions early in the process ensures the team responsible for executing the work has the right information from which to plan.

One of the ways to manage current supply-chain challenges is early procurement. Bringing the right entities on board early can assist with early procurement. For example, if the lead time for roof insulation is 10 months and a traditional design-bid-build delivery does not allow that amount of time, it would be worth considering bringing a roofing contractor onboard in the design development phase and ordering the insulation as early as possible.

8 Preservation

Finally, knowing the history of the community where the project is taking place is essential to a retrofit project. Stakeholders must understand historic preservation requirements. When it comes to preserving the history of a building, renovations will always require more consideration than new builds.

Many times, projects can be required to receive approvals from historic review boards. Building-code requirements and historic-preservation requirements may not align with each other. In addition, there can be different requirements for preserving versus replacing, and it's important to understand how those requirements will impact the project. Consulting early and often with historic review boards and building-code officials can save a lot of work and anxiety.

Retrofitting a building enclosure can be challenging. Preparation, communication and planning can lead to a high-quality project compatible with the original structure. Taking these steps during the early stages of the project will create fewer problems and lead to success.

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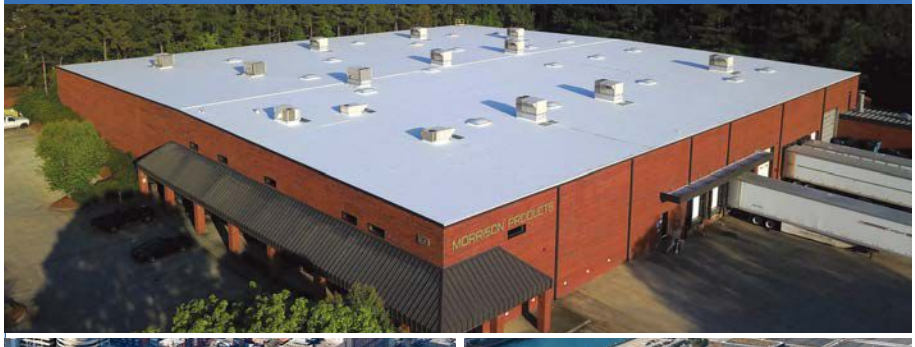

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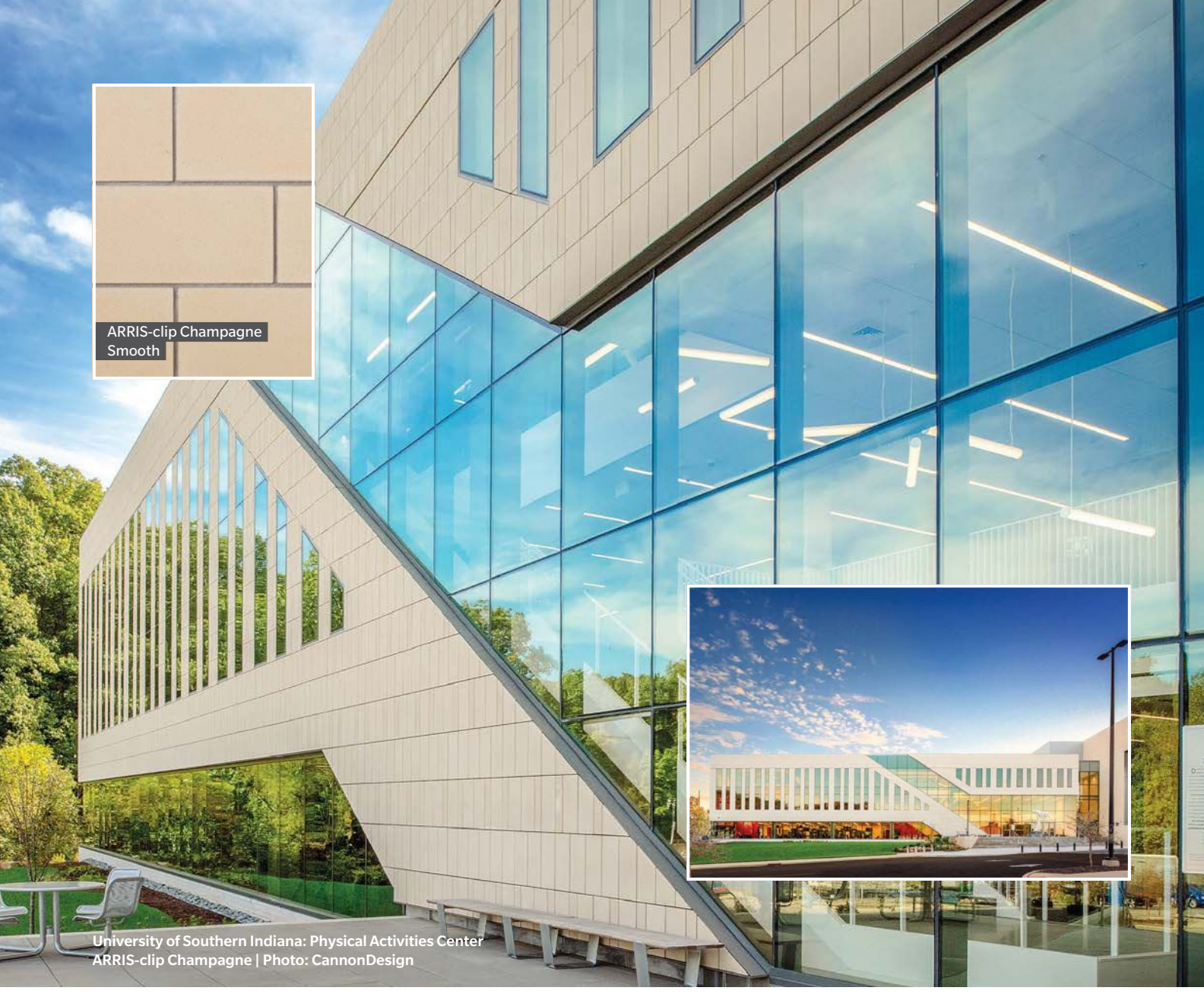

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CROWN JEWEL

Adaptive Reuse of Manhattan's Battery Maritime Building Renews the Structure's Rightful Prominence in the Harbor and City

WRITTEN BY | **MEREDITH MORTON**

VIEW A VIDEO

Built in 1909, the Battery Maritime Building, or BMB, was once the crown jewel of lower Manhattan's working waterfront. Over time, the ferry building served a variety of uses and experienced several changes of hands before standing vacant and nearly crumbling into the East River. The effort to save this magnificent structure spanned 18-plus years and involved real-estate developers Midtown Equities and Centaur Properties, along with hospitality giant Cipriani. Following a major restoration from inside out, the team opened Casa Cipriani, a boutique hotel, private member club and event space, with great fanfare in December 2021.

PHOTOS: **DAVID SUNDBERG, ESTO** unless otherwise noted

Multi-disciplinary design, landscape architecture and urban planning firm Marvel was lead architect on this adaptive-reuse and redevelopment project. Interiors were completed by the Office of Thierry Despont Ltd.; Higgins Quasebarth & Partners LLC consulted on historic preservation; and construction was undertaken by Veracity Partners LLC and MJM Associates Construction LLC.

Work on the project began in 2007, when the New York Economic Development Corp. (EDC) sought to redevelop the property as part of its restoration and transformation of New York's historic waterfront. What followed was a dedicated effort to preserve a storied architectural landmark through creative adaptive reuse, collaborative public/private partnerships, and dogged persistence.

A Piece of New York's Historic Fabric

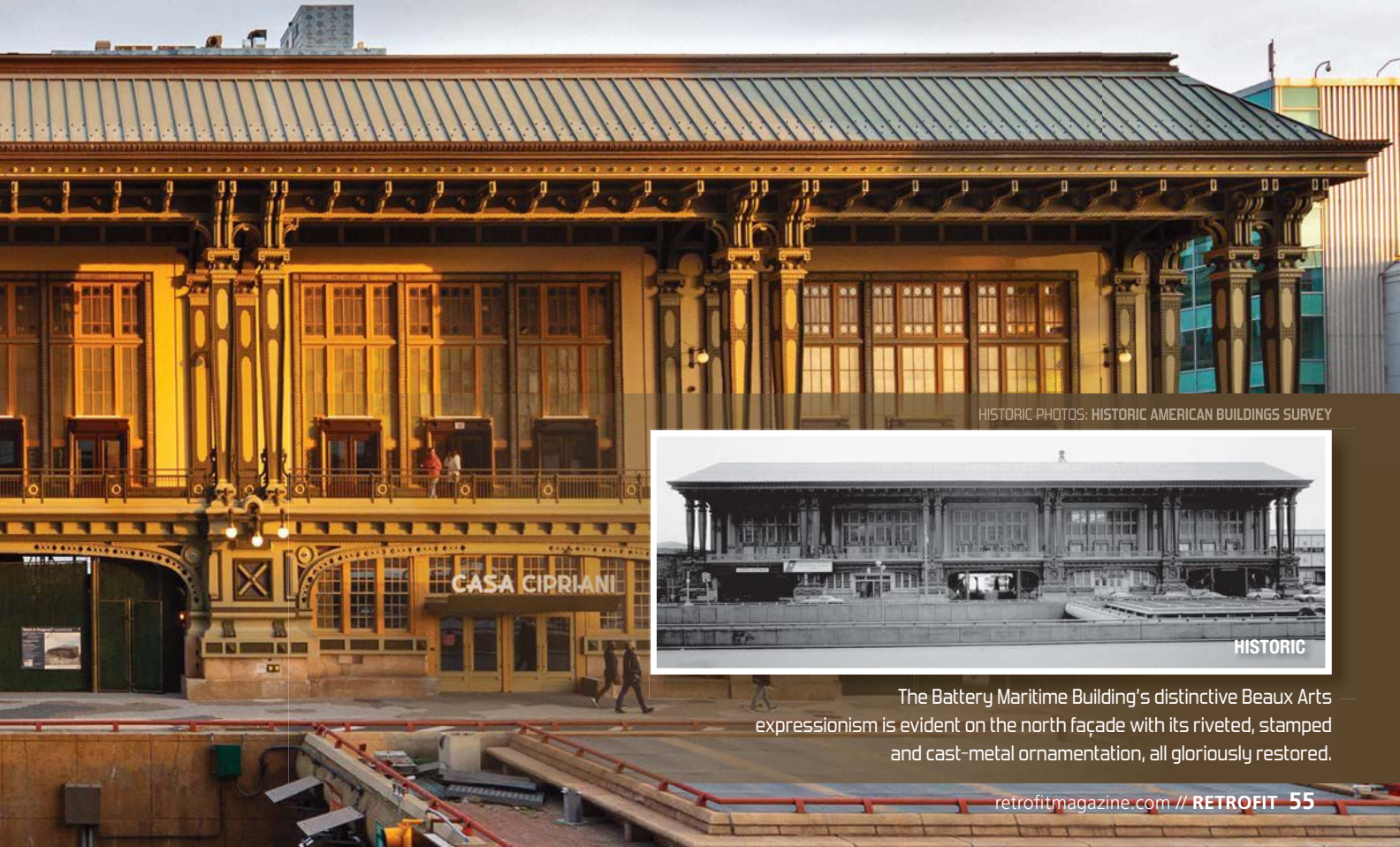
The Battery Maritime Building's commanding position at the tip of lower Manhattan, and its use as a boat landing for commerce and transportation, tells the story of New York City, an archipelago of islands with approximately 520 miles of coastline—more than Los Angeles, San Francisco, Miami and Boston combined. In the early 20th century, ships of all sizes and uses teemed the city's waterways, and economic activity focused along the shores. Ferries offered an ideal mode of transportation to Manhattan and provided an essential connection for areas not yet served by mass transit. In 1904, New York maintained and operated some 147 ferryboats in its waters.

Noted architects Walker & Morris were tasked with creating the Municipal Ferry Terminal, as BMB was known then, after the city's establishment of the Municipal Ferry system in 1905; the facility was constructed by the Department of Docks and Ferries. Characterized for its majestic Beaux Arts Structural Expressionist style, popular in New York's Gilded Age, BMB shares a lineage with other remarkable civic landmarks built in the same period: the Williamsburg, Manhattan and Queensboro Bridges; New York's subway system; and the original Pennsylvania Station.

The visionary architects sought to design a space that reflected the ambitions and power of the growing city. BMB highlights include structural rivets and trusses used decoratively, possibly influenced by the Eiffel Tower and buildings made for the French Exposition, as well as ornate and bold embellishments of scrolls, rosettes, inset panels and brackets, along with nautical-inspired detailing. The goal was to create a grand and welcoming arrival experience, elevating the daily commute of

A Cornerstone of Waterfront Revitalization

The Battery Maritime Building is a cornerstone of New York City's broad-based goals of transforming lower Manhattan into a vibrant, mixed-use community and revitalizing the waterfront for the 21st century. The Marvel design was approved by New York City Community Board 1, the New York City Landmarks Preservation Commission and New York City Planning Commission. Historic tax credits for the project were secured through the State Historic Preservation Office and the National Park Service.



HISTORIC PHOTOS: **HISTORIC AMERICAN BUILDINGS SURVEY**

The Battery Maritime Building's distinctive Beaux Arts expressionism is evident on the north façade with its riveted, stamped and cast-metal ornamentation, all gloriously restored.

Retrofit Team

ARCHITECT OF RECORD // Marvel, www.marveldesigns.com
- Jonathan J. Marvel, FAIA, ASLA Affiliate, founding principal
- Tim Fryatt, AIA, director, project lead
- Jen Olson, AIA, director
- Anne Bannon, AIA, project architect
- Andrew Brown, AIA, project architect
- Makenzie Leukart
- Eugene Murphy
- Claudia Castillo de la Cruz
- Miguel Gutierrez
- Thomas Garland

DESIGNER // The Office of Thierry W
Despont Ltd., www.despont.com

STRUCTURAL ENGINEER // Silman, www.silman.com

MEP/FP/FA ENGINEER // EP Engineering, www.epengineering.com

CIVIL AND ENVIRONMENTAL ENGINEER // Langan, www.langan.com

HISTORIC PRESERVATION // Higgins Quasebarth & Partners LLC, www.hqpreservation.com

MARINE ENGINEER // Halcrow HPA Engineers P.C., now Jacobs, www.jacobs.com

ENVELOPE CONSULTANT // Frank Seta & Associates LLC, www.frankseta.net

CONSTRUCTION MANAGER // Veracity Partners LLC, www.veracitypartners.net

GENERAL CONTRACTOR // MJM Associates Construction LLC, mjmcontracting.com

LIGHTING DESIGNER // Schwinghammer Lighting LLC, www.schwinghammerlighting.com

thousands of ferry riders as they entered the city, transitioning from the water to the busy streets. Original plans called for a sweeping seven-slip facility, but the scheme was never realized: Slips 1 and 2 were folded into the now lost Whitehall Ferry terminal; slips 5, 6 and 7 became BMB while connecting slips 4 and 5 remained unbuilt.

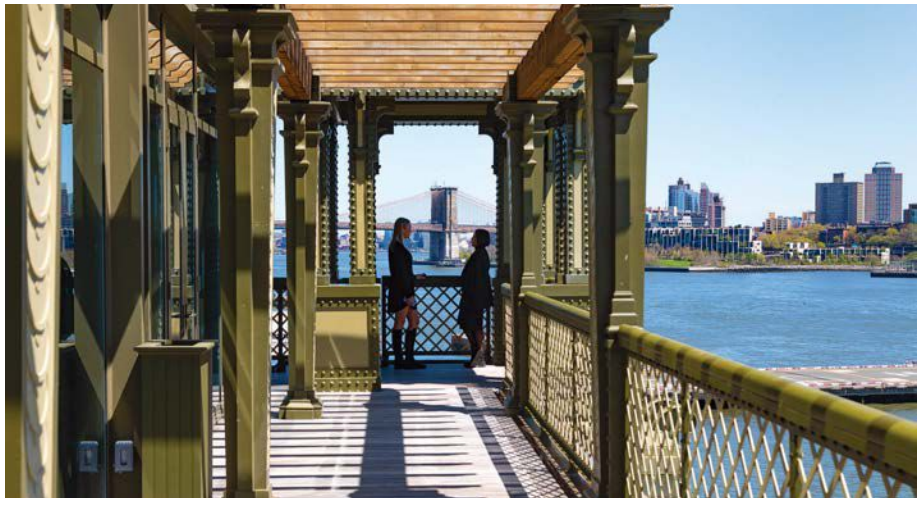
Beginning in the 1950s, with the rise of the automobile, ferry service throughout lower Manhattan and other parts of the city declined. BMB, no longer a primary source of transport, fell into disrepair. Originally, the facility was operated and maintained by the Department of Docks and Ferries and then transitioned to the Department of Marine and Aviation before falling under the oversight of the Department of Transportation. Uses for the space ran the gamut—as a men's shelter and then for storage and administration before ultimately being vacated.

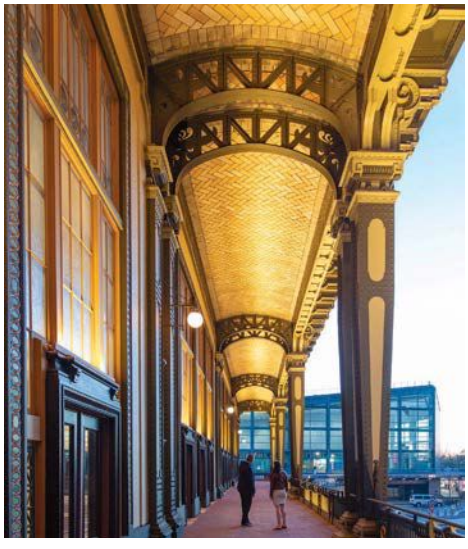
Marvel to the Rescue

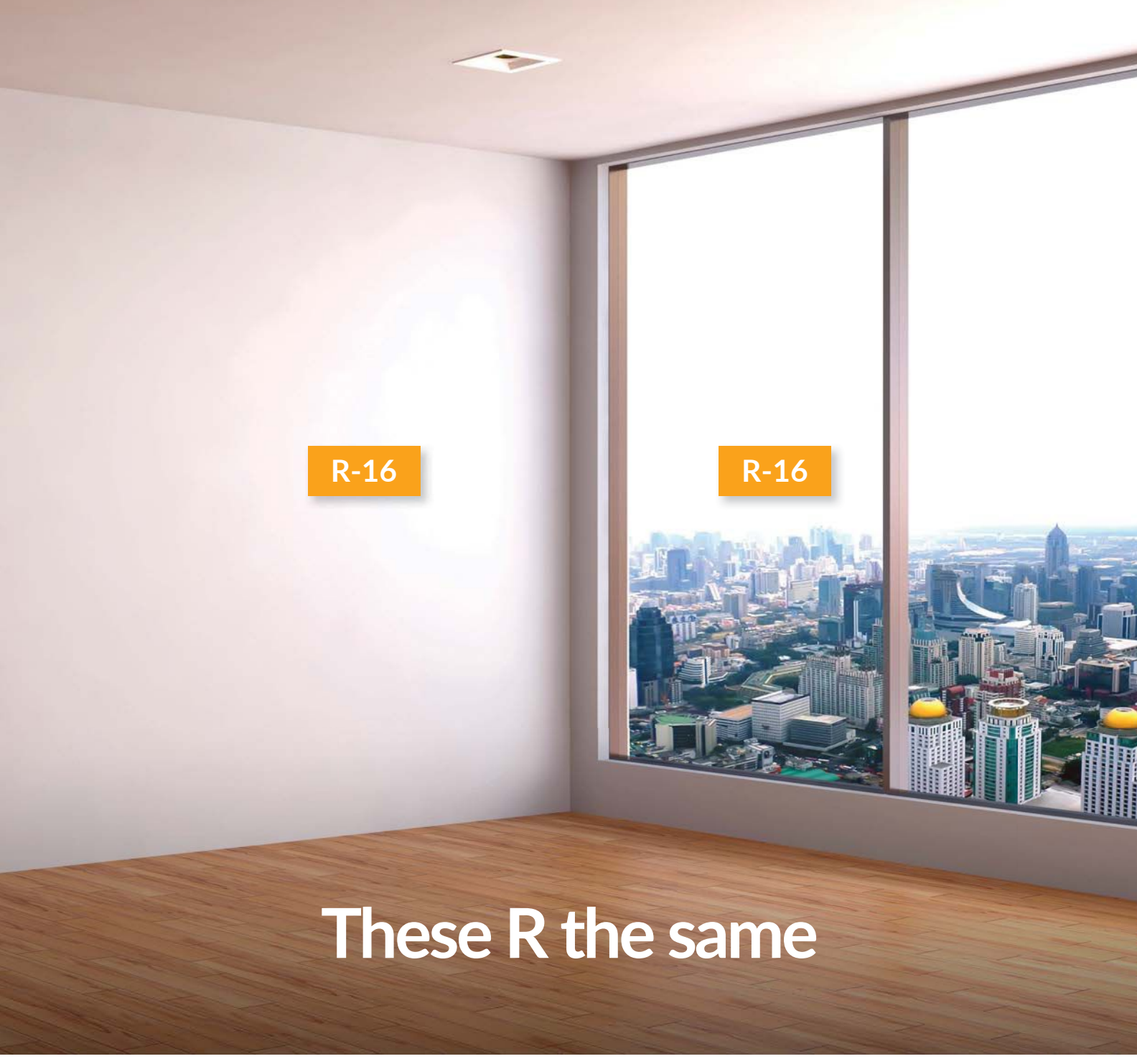
Despite deterioration, poorly executed additions and deferred maintenance, in 1966, the building was designated a City Individual Landmark by the New York City Landmarks Preservation Commission (LPC). The following is a remark from LPC's designation report, "Viewed from a ferry boat approaching the tip of Manhattan, the monumental arched openings of the Municipal Ferry Terminal at the mouth of the East River appear like three tunnels opening into the canyons of the city." Then, in 1976, it was listed on the National Register of Historic Places.

Interest in lower Manhattan's waterfront surged in the 1990s. Efforts to expand and revitalize the area increased, not as a place for industry—as in the past—but, rather, for residential and recreational uses. In 2000, EDC recognized the urgency of the

(continues on page 58)







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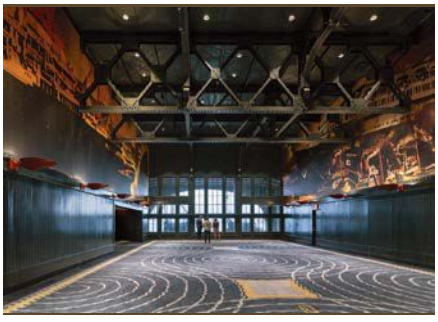

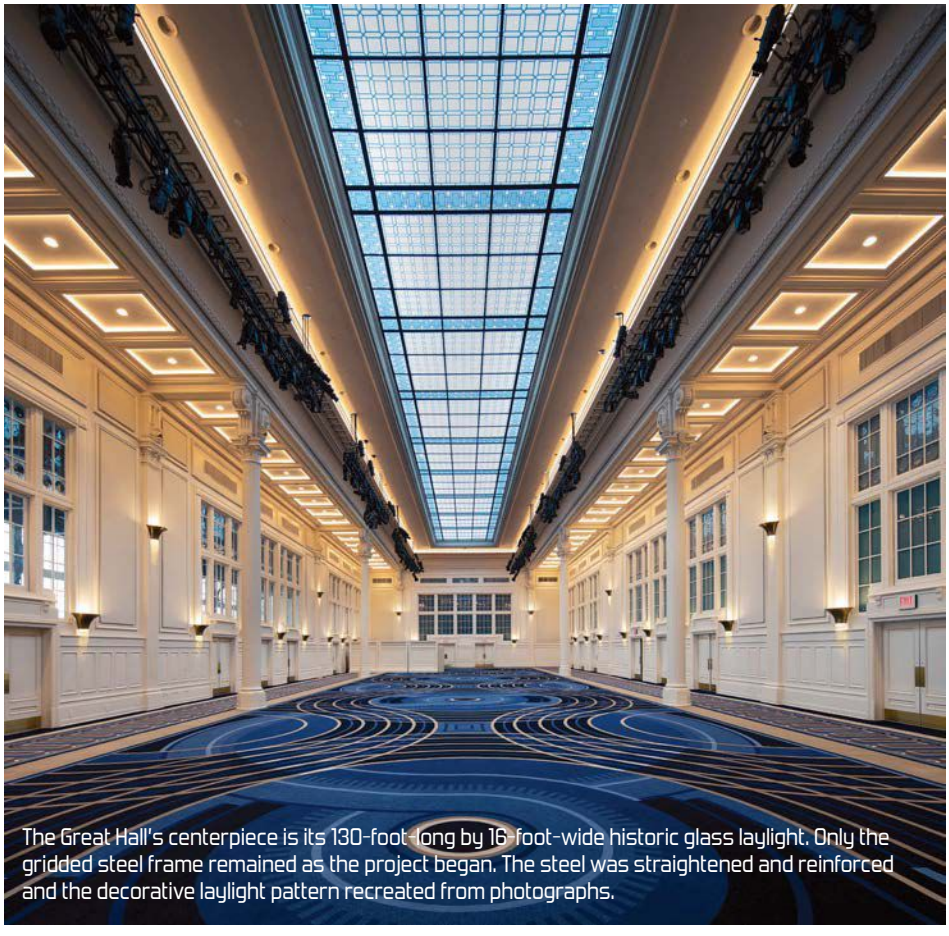

The Great Hall's centerpiece is its 130-foot-long by 16-foot-wide historic glass laylight. Only the gridded steel frame remained as the project began. The steel was straightened and reinforced and the decorative laylight pattern recreated from photographs.

building's disrepair and engaged Jan Hird Pokorny to restore the exterior envelope and roof. However, the non-historic fabric remained untouched, and the interiors were gutted entirely. In 2007, Marvel helped secure an RFP by EDC seeking a private developer to complete the exterior and restore the interior for new uses. Marvel began work on reactivating the building in 2008 for a new type of economic engine. The firm's design garnered agency approvals, meeting strict historic and environmental requirements with building and construction commencing. However, during the process, the project changed developers several times and stalled for many years.

Finally, in 2018, with developers Midtown Equities and Centaur Properties, as well as operator Cipriani, onboard, Marvel restarted work. Relying on proven expertise in preservation and adaptive reuse, the firm assembled a team of architects and established a site office. Working onsite enabled the team to understand the existing structure's history and quirks and facilitated an expedited construction schedule.

"From day one, the team fell in love with the BMB and was committed to realizing its potential," says Tim Fryatt, AIA, Marvel director and lead project architect. "It seemed unfathomable that an ornate metal structure situated over water could survive more than a century of waves, winds and underuse. Revered as the maritime equivalent of Grand Central Station, the BMB's design as a grand civic ferry terminal demanded a complex approach for preservation and retrofit to adapt to new and modern uses, as well as facilitation of a viable economic engine to ensure its long-term protection. Marvel was honored to reanimate this exquisite and storied landmark, helping to transition New York's historic waterfront into a resilient and sustainable ribbon for recreation and hospitality."

Through a careful process and sustaining effort to this civic asset, Marvel crafted an elegantly modern and historically sensitive redevelopment. Working closely with the owner/developers and owner/operators, the team orchestrated efforts to reimagine and safeguard BMB's historic lineage.

A central challenge was adapting the building to myriad new uses. The ground floor continues to provide ferry access to Governors Island via slips 6 and 7, and SeaStreak Ferry serves Atlantic Highlands, N.J., in slip 5. The ground floor also contains a porte cochere-covered driveway and two gracious new lobbies with a ceremonial stair. The grand civic second-floor spaces are fully restored as an events venue, which centers around the dramatic 9,000-square-foot Great Hall. The second-floor mezzanine features a fitness center characterized by its industrial beams and rivets. The third and fourth floors were completely redesigned and built to accommodate a 47-room boutique hotel and spa. Finally, a modern glass addition on the fifth floor houses a jazz club, expansive lounge, two restaurants and outdoor terrace with sweeping views of New York Harbor.

Creative Solutions

Renewing the deteriorating 1909 Ferry building for modern use presented many

conflicts. Challenges included navigating unique historic existing conditions, carefully threading new infrastructure through the historic building, finding inventive strategies to meet modern code and safety standards, and satisfying complex new program and operational requirements. Marvel referred throughout to the Secretary of the Interior's Standards for the Treatment of Historic Properties with methods varying for different elements spanning preservation, rehabilitation, restoration and reconstruction.

The application of strategies varied in scale from holistic design approaches to creative technical detailing. For example, special fire-protection studies and a robust new sprinkler system allowed the city to approve the design without concealing the historic structural steel work with modern fireproofing. Other examples include the needling of new elevator and stair cores between working ferry slips to provide a safe means of access and egress, the creation of double walls and slabs to help satisfy thermal and acoustic isolation demands, and creative utility pathways avoiding alteration of the historic envelope and permitting the potential for reversibility.

The Great Hall contains many specific examples of creative solutions in historic preservation by Marvel. The room was in severe disrepair with limited fragments of historic fabric and very few original drawings. The Marvel team used surviving millwork and plaster fragments as templates for new profiles, stitching the room back together. The centerpiece of the Great Hall is its 130-foot-long by 16-foot-wide historic glass laylight, which was completely lost to time with only the gridded steel frame remaining. The steel was straightened and reinforced and the decorative laylight pattern recreated from photographs. A series of new glass prototype pieces was manufactured and tested in place to ensure quality, historic accuracy and modern code compliance. The reconstructed enormous laylight is true

Materials

METAL PANELS AND GLASS CURTAINWALL // Thomas Manufacturing, www.tmiwindows.com

EIFS // Sto Corp., www.stocorp.com

MOISTURE BARRIER // Carlisle Coatings & Waterproofing, carlisleccw.com

ELASTOMERIC ROOFING // Soprema, soprema.us

WOOD-FRAME WINDOWS AND WOOD DOORS // ArchMills Doors & Hardware, archmills.com

GLAZING // Guardian Glass, guardianglass.com

SKYLIGHTS, HISTORIC LAYLIGHT // Galaxy Glass & Stone, www.galaxycustom.com

REVOLVING DOORS // ASSA ABLOY Entrance Systems, assaabloyentrance.us

LOCKSETS // Omnia Industries, omniaindustries.com

DOOR CLOSERS // LCN by Allegion, us.allegion.com

EXIT DEVICES // Von Duprin by Allegion, us.allegion.com

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ACOUSTICAL AND SUSPENSION GRID CEILINGS // Armstrong Ceiling & Wall Solutions, armstrongceilings.com

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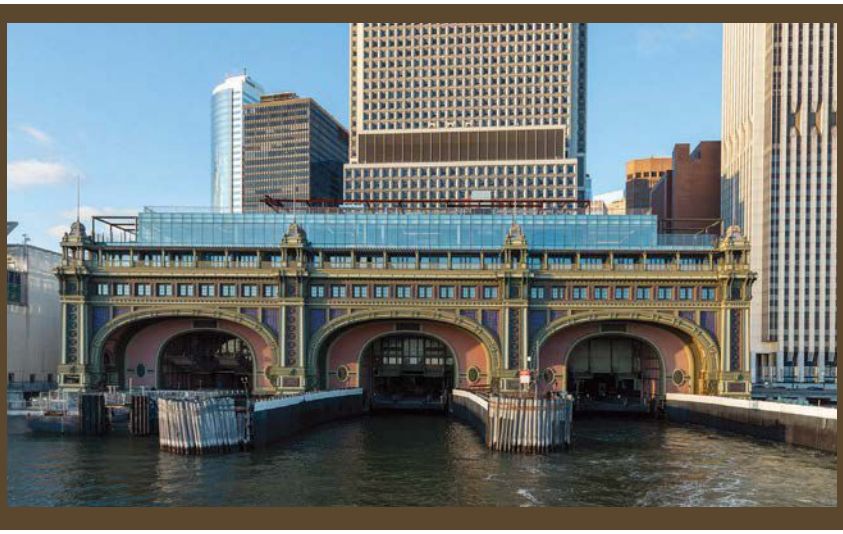

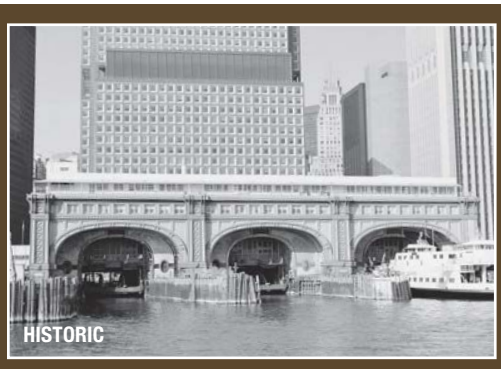

Viewed from the water, the Battery Maritime Building's new rooftop addition is set behind recreated cupolas, spires and pergolas, reflecting the skyline profile lost over time and contrasting against lower Manhattan's towers that have grown behind the building.

to the building's original feature, which allows diffused natural light to filter down into the ferry waiting hall.

A central example of Marvel's holistic approach to historic preservation and adaptive reuse is the thoughtful addition of one story on top of the existing structure. The original south façade included cupolas, spires and pergolas, which created a striking skyline profile from the water while providing shaded space to enjoy prime vistas and sea air. In time, the cupolas and pergolas were lost, and skyscrapers grew behind it, obscuring and diminishing BMB's presence. Marvel's vision was not only to restore and celebrate the building's historic features, but also to re-establish BMB's relationship to the harbor and city, renewing the structure's rightful prominence. The cupolas and pergolas were reconstructed and then silhouetted against the modern glass curtainwall of a fifth-floor addition, which reflects the sky. This simple bold gesture recreates the lost historic skyline and establishes a strong horizontal form aligning with the harbor and contrasting against the predominantly vertical modern skyline. The design enhances the presence of BMB and proudly announces a revitalized waterfront.

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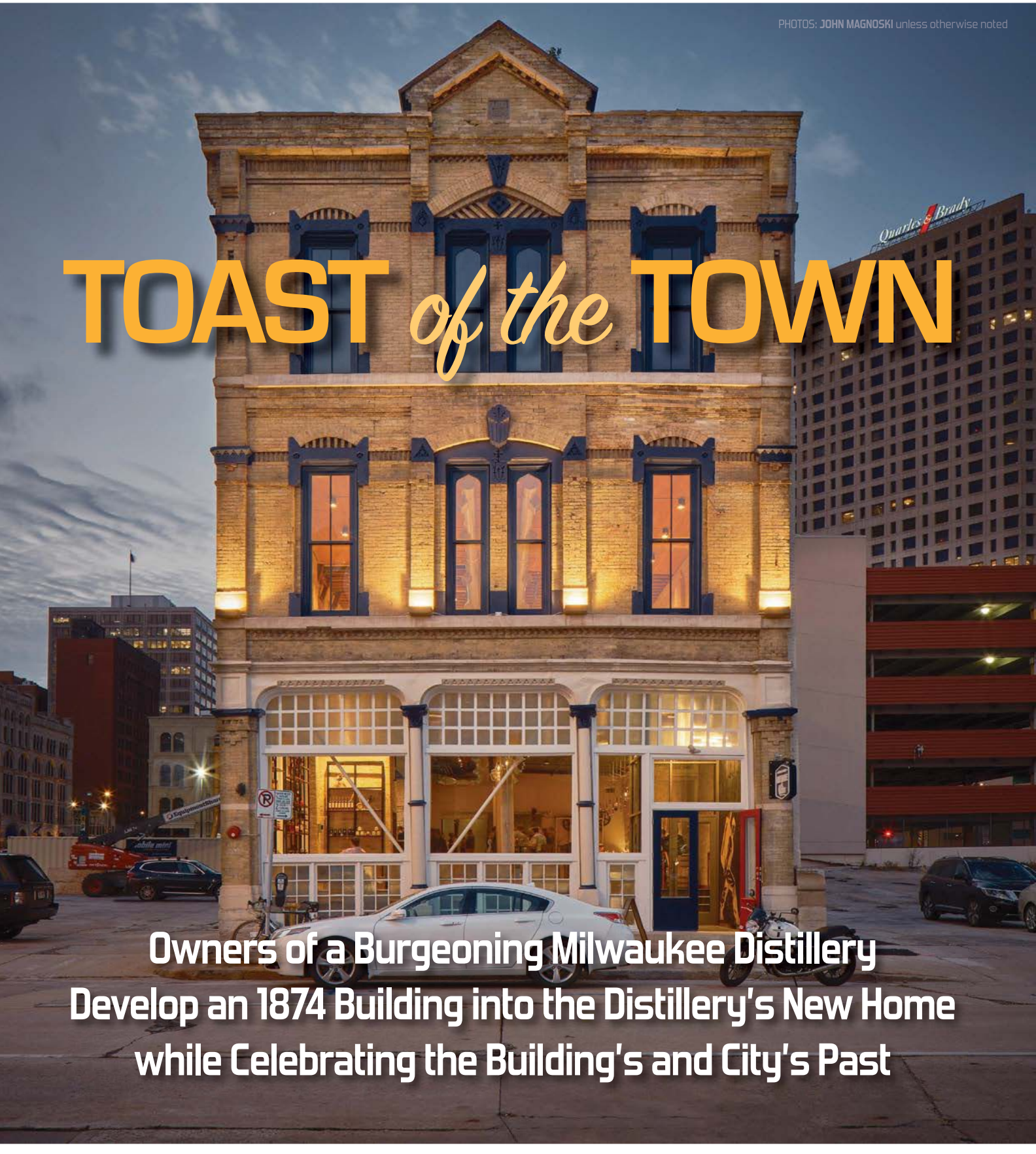


PHOTOS: **JOHN MAGNOSKI** unless otherwise noted

TOAST *of the* TOWN

Owners of a Burgeoning Milwaukee Distillery Develop an 1874 Building into the Distillery's New Home while Celebrating the Building's and City's Past

WRITTEN BY | BEN SHOCK, P.E., AND LYSSA OLKER, AIA, LEED AP BD+C, WELL AP, NCARB

Since moving into a renovated historic building in downtown Milwaukee in the summer of 2021, Central Standard Crafthouse & Kitchen has quickly established itself as a destination micro-distillery in a city with a long history of legendary brewhouses.

Specializing in small-batch craft brandy, bourbon, vodka, gin, whiskey and rye, parent company Central Standard Craft Distillery steadily has increased its business operations and local reputation since opening in 2014. The business soon outgrew its small tasting room in a converted industrial space on the city's west side, and the owners wanted to expand their offerings. They eventually identified a historic 16,000-square-foot, 3-story commercial building to develop into a restaurant, bar and events space with a rooftop patio.

BEFORE PHOTOS: HGA

Yet the building, which sat vacant for many years, needed extensive repairs requiring coordinated architectural and engineering strategies by multidisciplinary design firm HGA. In fact, the story of Central Standard Crafthouse & Kitchen is as much a structural engineering story as it is an architectural renovation story. Someone stepping in for a convivial drink may wonder why the floors slope or the walls and columns lean to the west. The reasons are part of the building's intriguing history and relate to the marshy conditions in this area of Milwaukee at the time the building was constructed.

Someone stepping in for a convivial drink may wonder why the floors slope or the walls and columns lean to the west. The reasons are part of the building's intriguing history and relate to the marshy conditions in this area of Milwaukee at the time the building was constructed.

A 122-year-old tree removed from the historic Pabst Mansion property—a nod to Milwaukee's brewery heritage—was split in half to create the 20-foot-long tasting table.

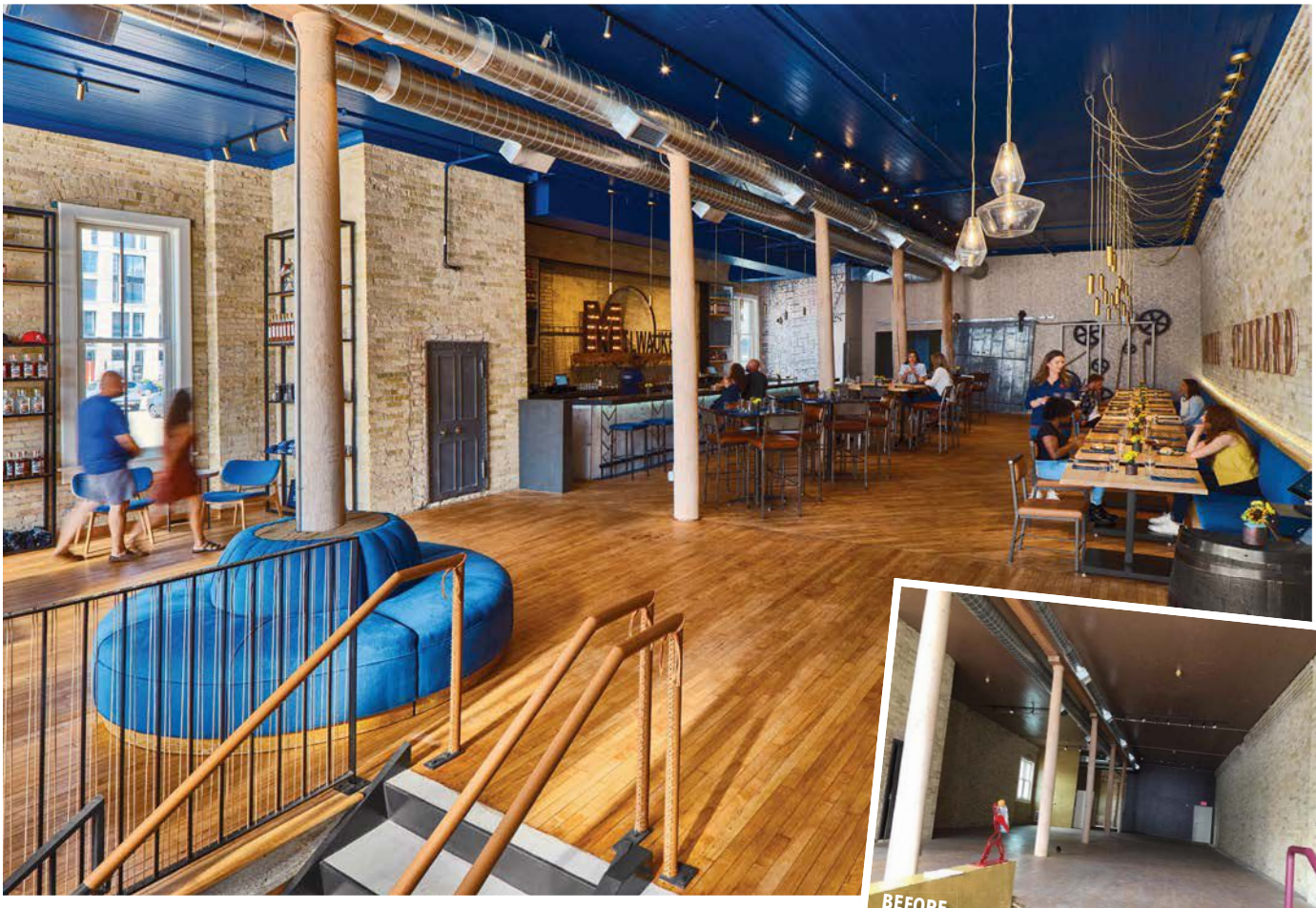
The building's history as the original home to the Wisconsin Leather Company is reflected in the short entry stair, which features handrails wrapped in leather and a railing strung with leather cording. Behind the bar, a backdrop includes colored leather cording in a motif that references the Milwaukee flag.

west. The reasons are part of the building's intriguing history dating to 1874 and relate to the marshy conditions in this area of Milwaukee at the time.

Structural Intervention

To ensure the building could safely accommodate the new program, HGA first conducted a structural engineering study to understand the history of its construction and identify critical deficiencies. A test pit was even excavated beneath the basement slab revealing saturated organic soil, which is not ideal for building support, along with the original timber grillage foundation system. The timbers themselves were found to be in good condition, but the overall system was unable to support the heavy brick walls in these soil conditions. Thus, the combination of poor soil and inadequate foundation design contributed to the uneven settlement and westward lean of the walls and columns.

The lateral bracing system also required



upgrades; the original design did not meet the current building code and was further weakened by subsequent renovations through the years. Extensive structural intervention was necessary to address these safety concerns, but the real challenge was to perform the repairs in a way that was sensitive to the historic structure with minimal visual impact to the finished spaces.

HGA developed a plan to strengthen the foundations using concrete grade beams and micropiles (steel-reinforced grout columns) with all work being concealed beneath the basement slab. The westward lean of walls and columns—up to 12 inches at the roof—was preserved; trying to straighten the building would likely do more harm than good. The leaning walls do cause increased demand on the lateral system, which typically resists only wind pressure on the exterior walls. Upgrades to the lateral system included plywood floor diaphragms, a concrete-block elevator shaft and shear-wall, and steel X-bracing at the street façade.

Designing the structural upgrades to be inconspicuous often meant additional effort from the construction team, Gardner Builders. As an example, plywood sheathing for the new diaphragms had to be sandwiched between the existing timber subfloor and the historic wood plank floors, which meant carefully removing the existing planks and reinstalling them over the plywood.

HGA'S PRIMARY DESIGN INTENT WAS TO CELEBRATE THE BUILDING'S EXISTING ARCHITECTURAL CHARACTER, FEATURING EXPOSED CREAM CITY BRICK AND WOOD STRUCTURE AND FLOORING.

Restoring Architectural Character

This surgical approach to the structural repairs allowed the architecture to shine. HGA's primary design intent was to celebrate the building's existing architectural character, featuring exposed cream city brick and wood structure and flooring.

The design solution kept the building's original street-level entrance leading to an open floor plan. The main level features a primary dining area with a large bar on one side and a lounge near the front. A converted basement level houses a 100-gallon pot still and adjacent tasting room called The Founder's Room. The second level features The Mix, an event space for reserved gatherings. The third level is shell space for a future tenant. A rooftop deck completes the program.

Carefully curated brand elements are integrated throughout the three occupied floors. The branding, in fact, reflects the history of the building as the original home to the Wisconsin Leather Company. The short entry stair that leads from the street to the main level features handrails wrapped in leather and a railing strung with leather cording. Behind the bar, a backdrop includes colored leather cording in a motif that references the Milwaukee flag.

The architectural branding also reflects the building's new life as home to a distilling company with references to tools of the trade. As with the inside of bourbon aging barrels, the company's logo in the vestibule was routered into a charred wood wall. Brass—such as on the distillery's pot still—is used in the swagged brass pendant lights to create an intimate dining area within the main level. Brass also is used at the main bar, which features a tile face with a custom brass inlay. Even bottle stoppers appear in the form of cork wallpaper featuring a geometric brass pattern.

Finally, elements from the existing building, including elevator gears and a circular couch, have been refurbished and repurposed. Across from the bar, siding salvaged from a historic red barn, which clad the walls of the original Central Standard tasting room, was remade into signage and hung above banquette seating. This signage, along with the historic cream city brick wall, are up-lit by lights recessed into the top of the banquette.

The merchandise area at the front of the main level features custom steel shelving to display a range of products. Adjacent to the merchandise area, a lounge provides a variety of seating, including custom coffee tables with legs made from joist hangers salvaged from the building.

Originally, the building's stairway to the lower level created a barrier to the front wall. Relocating this stair allowed lounge seating to be set against the expansive glass wall at the street façade. The new stair leads patrons to the basement and its pot still focal point, then flowing into The Founder's Room with a 20-foot-long tasting table, which seats 20 people. Surrounded by branded barrels and heavy stone foundation walls, the tasting table is a work of art. A 122-year-old tree removed from the historic Pabst Mansion property—a nod to Milwaukee's brewery heritage—was split in half to create the table. The top of the 3,000-pound ash tree is flanked by glass panels to display the rich texture of the bark.

On the second level, The Mix event spaces include a catering kitchen, bridal suite and a second bar, which is constructed of steel slats and black granite salvaged from the original tasting room. A new elevator and stairway lead to the wooden rooftop deck. Surrounded by red railings and salvaged barnwood planters, the deck offers patrons a relaxing outdoor gathering spot and extraordinary views of downtown Milwaukee, the Historic Third Ward and Lake Michigan.

RETROFIT TEAM

ARCHITECT, ENGINEER, STRUCTURAL ENGINEER, INTERIOR DESIGNER // HGA, hga.com

GENERAL CONTRACTOR // Gardner Builders, gardner-builders.com

OWNER // Central Standard Craft Distillery, thecentralstandard.com

MATERIALS

METAL PANELS // Delta Concealed Fastener Panels from Firestone Building Products Co., bit.ly/37BC16R

ALUMINUM FRAMING SYSTEM // Tubelite, tubeliteinc.com

WALL TILE // Daltile, www.daltile.com

TILE ACCESSORIES // Schluter Systems, www.schluter.com

WALK-OFF CARPET // J+J Flooring, www.jjflooringgroup.com

WALLCOVERING // Innovations USA, www.innovationsusa.com

Art in the Details

Custom-crafted pieces throughout required collaboration between HGA, craftspeople and the contractor. In some cases, these were unique applications of standard building products. For the bar front, brass strips, typically used for flooring transitions, were laid out in a chevron pattern reminiscent of the grains used in distilling. In other cases, materials more common to the world of arts and crafts were leveraged. At the bar back, leather cording in yellow and two shades of blue were strung back and forth between a custom-fabricated steel armature. Here, the pattern follows the Milwaukee flag, as noted earlier, but subtler to allow visibility to the cream city brick beyond.

The success of the architectural and structural engineering retrofit of Central Standard Crafthouse & Kitchen resulted from a careful blend of modern technology and historical sensitivity. The effort has transformed a neglected commercial building into a vibrant new urban space.

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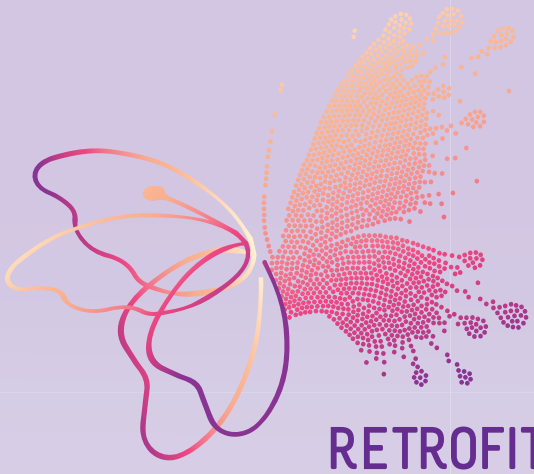

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CALLING ALL *Foodies*

The telephone exchange boards may be gone but The Exchange food hall continues to thrive as a venue that inspires communication and collaboration. Once home to a 1970s-era telecommunications call center, a 26,700-square-foot space has been transformed into a vibrant food hall that anchors the recently completed AT&T Discovery District in Dallas.

WRITTEN BY | **RAY CHUNG**

Designed by Cooper Carry, in partnership with Gensler as the architect for the exterior build and The Johnson Studio at Cooper Carry overseeing the interiors, the reimagination of the space was part of the larger redevelopment of AT&T's 2.5 million-square-foot headquarters into a mixed-use, entertainment-filled, food-driven experience for AT&T employees and the downtown Dallas community.

From Call Center to Food Hall

Delivered last spring, The Exchange is a 16-stall food hall spanning two levels owned by AT&T and managed by Hospitality Alliance. The Johnson Studio transformed the dated call center into a new-age destination for casual diners and foodies alike. As part of the adaptive-reuse project, the Gensler team reskinned the outer building with a sleek glass material and introduced two outdoor patios that span both levels of the food hall. Inside the food hall, a reimagined design unfolds, pulling from the area's surroundings and the unique offerings of the namesake corporation.

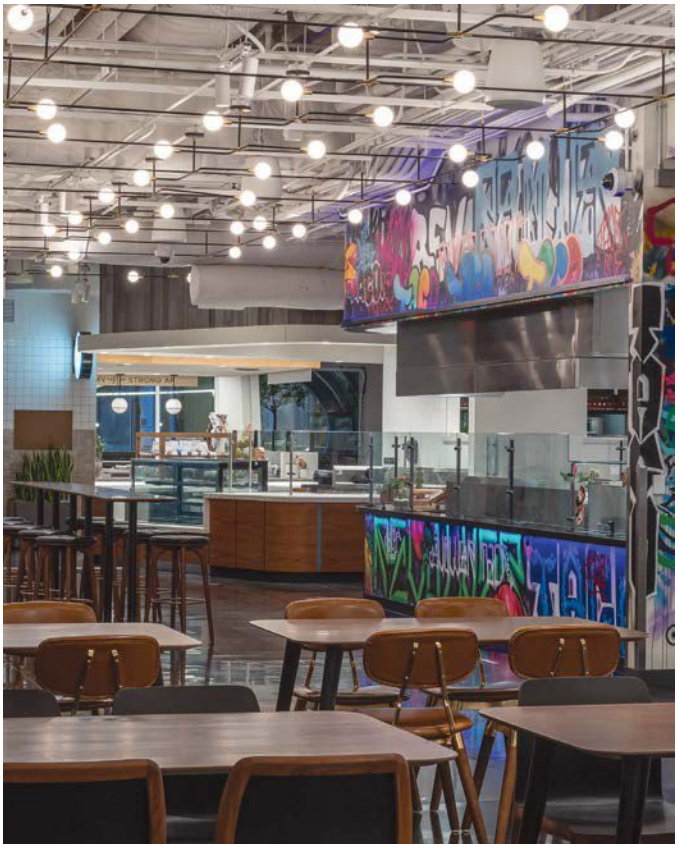
Opening more than a decade after the initial food-hall frenzy, The Exchange offers a look into the future of the dining model, where chef-driven menus, an enhanced focus on hospitality, and elevated dining and bar design become standard. This higher-end, hospitality-infused approach to the dining experience could be referred to as a "culinary collective," a term that describes an environment where diverse culinary concepts come together to provide guests with an exceptional dining experience.

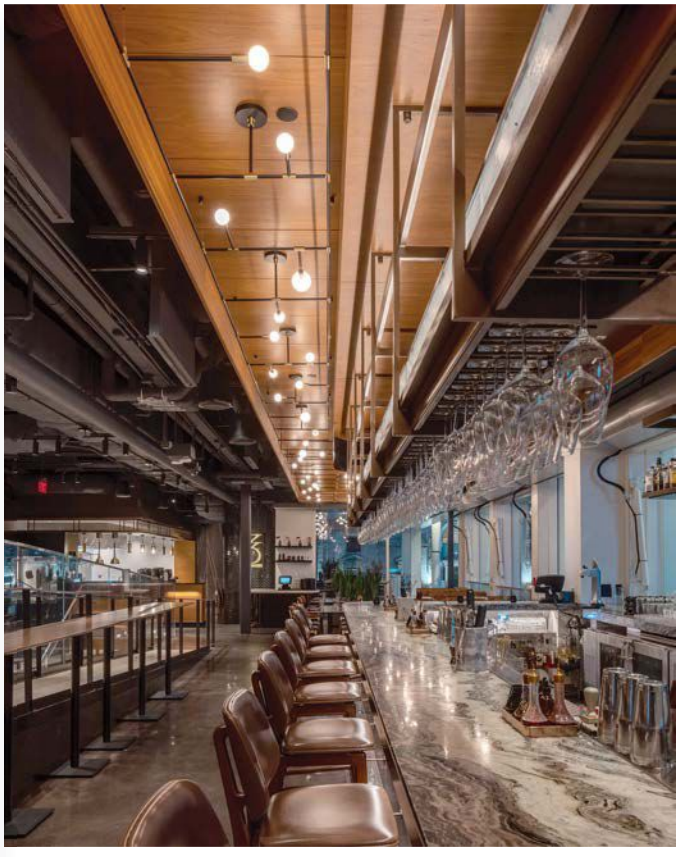
In designing Dallas' first true culinary collective, Cooper Carry sought to integrate flexibility, efficiency and variety through different atmospheres and moods across the two levels, seamless indoor and outdoor spaces, and customizable vendor spaces to provide AT&T employees and local residents with a distinct neighborhood destination.

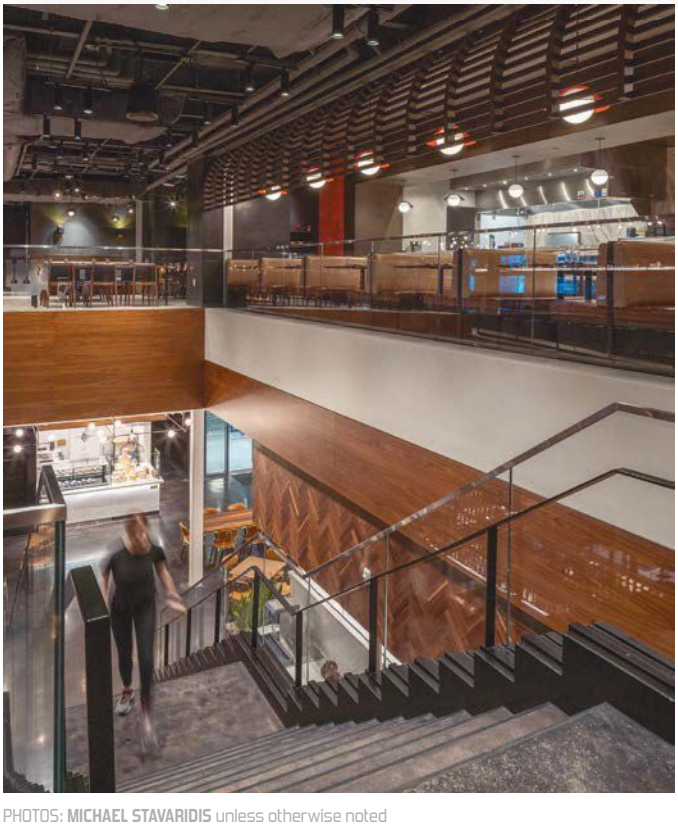
Designing Spaces within Spaces

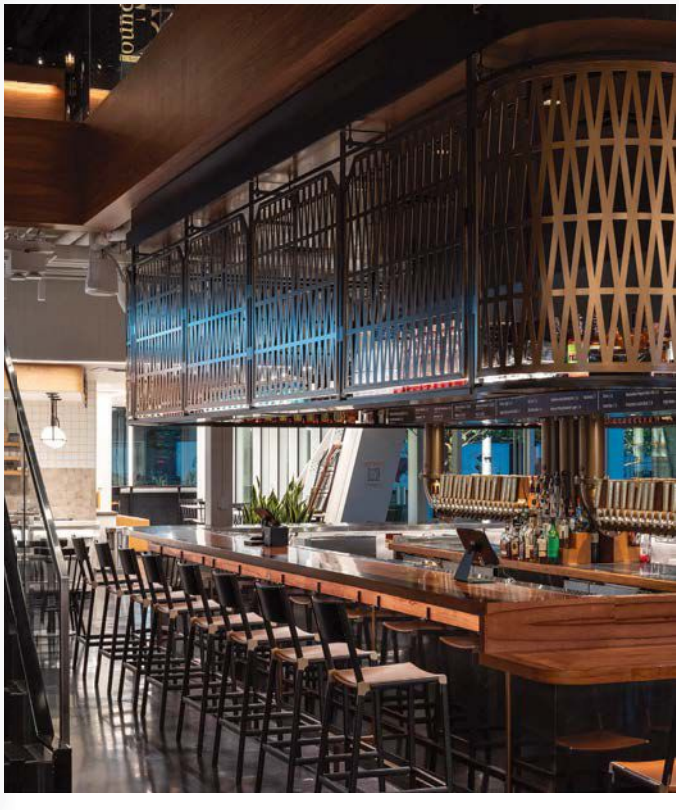
With interiors designed by The Johnson Studio at Cooper Carry, The Exchange takes on a residential, human-scale approach across the

A '70S-ERA TELECOMMUNICATIONS CENTER FOSTERS CONNECTION IN DOWNTOWN DALLAS AS A DINING DESTINATION









PHOTOS: **MICHAEL STAVARIDIS** unless otherwise noted

THE EXCHANGE ENCOMPASSES 700 SEATS, TWO BARS, 20 INDIVIDUAL VENDORS, A DEDICATED TO-GO AND PICK-UP AREA, AND A PRIVATE DINING ROOM THAT ALSO FUNCTIONS AS AN EVENT SPACE.

two-level space. Throughout the food hall's large area—encompassing 700 seats, two bars, 20 individual vendors, a dedicated to-go and pick-up area, and a private dining room that also functions as an event space—the design team was intentional about creating zones and neighborhoods within the collective to help break down the scale and provide guests with a sense of orientation.

The first level of The Exchange functions as a collaborative space, where the hustle and bustle is most compatible. Vendor operators are stationed on this level, sporting colorful exteriors that invite guests to explore new cuisines. A well-stocked craft-beer bar offers seating where office workers can grab a coffee during the day or locals can linger over cocktails with friends. Ample table and seating arrangements fill the vast square footage, allowing for lively brainstorming sessions or off-site meetings.

Drawing from the building's former use as a telecommunications data center, the design team incorporated an exchange board-inspired custom lighting fixture that runs across the ceiling of the first level, as well as makes an appearance on the second floor. To connect both floors, The Johnson Studio strategically placed a walnut-clad staircase adjacent to the craft-beer bar on the first floor to lead visitors to the more muted activity located on the second level.

Retrofit Team

ARCHITECTS // Cooper Carry, www.coopercarry.com, in partnership with Gensler (exterior build and branding), www.gensler.com, and The Johnson Studio at Cooper Carry (interiors), johnsonstudio.com

GENERAL CONTRACTOR // The Beck Group, www.beckgroup.com

FOOD SERVICE CONSULTANT // Davella Studios, www.davellastudios.com

MEP ENGINEER // DFW Consulting Group Inc., dfwcgi.com

STRUCTURAL ENGINEER // JQ, www.jqeng.com

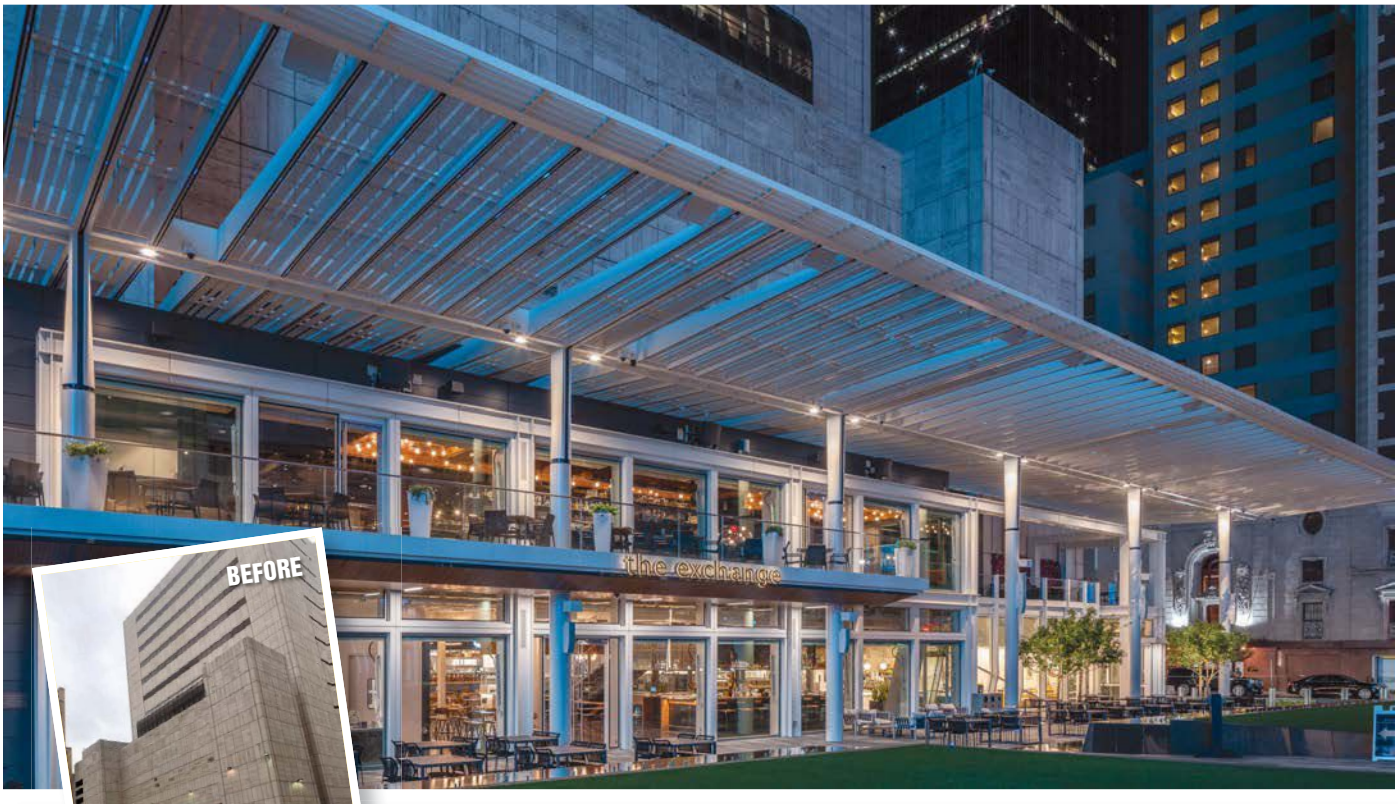
ORNAMENTAL METAL INSTALLER // QMF Steel Inc., qmfsteel.com

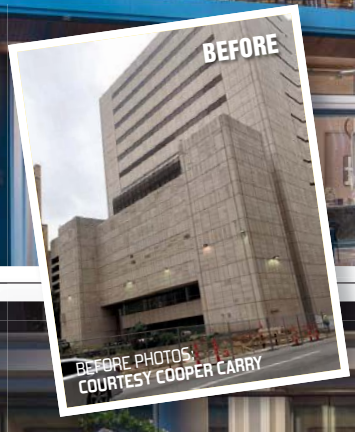
WOODWORK // Facility Construction Services Inc., fcsdallas.com

Upon accessing the second floor, visitors will find a lounge-style design that appeals to daytime workers looking for a quieter place to get work done, as well as those looking for a more upscale, high-end environment for nights out. Within the area's various nooks and crannies, clusters of soft seating create private environments that contrast with the more dynamic and bustling activity of the ground floor. This warm and spacious environment is accented by walnut tones and bronze metals that create a polished, upscale aesthetic. Expansive windows offer views to the surrounding district and flood the second floor with sunlight by day, before the space transitions to a moodier atmosphere by night.

Situated above an existing auditorium, the design of the food hall required several unique solutions to accommodate for both uses, including plumbing, electricity and a sound barrier. By raising a defined area of flooring by 20 inches, The Johnson Studio created a unique opportunity for an elevated dining platform. Named "The Yard," this indoor, porch-like area is reminiscent of a backyard atmosphere with a sound-absorbing trellis and allows for an intriguing

BY RAISING A DEFINED AREA OF FLOORING BY 20 INCHES, THE JOHNSON STUDIO CREATED A UNIQUE OPPORTUNITY FOR AN ELEVATED DINING PLATFORM. NAMED "THE YARD," THIS INDOOR, PORCH-LIKE AREA OFFERS AN INTRIGUING SIGHTLINE OVER THE ACTION HAPPENING IN VENDOR STALLS.





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sightline over the action happening in vendor stalls.

Unique in Flavor and Design

A primary focus for the design team was creating a sense of commonality throughout the vendor spaces, which are all established, local Dallas concepts, while giving stalls the flexibility to showcase their own personal brands. The design approach was to create the feeling of one unified place, in addition to creating a fun balance and mix-and-match character formed by a variety of cuisines in close proximity to each other.

Rather than turn over the interior fit-out of the vendor spaces to outside designers, The Johnson Studio held visioning charrettes with each entrepreneur to better understand the desired look and feel of his or her stall. The Johnson Studio worked in-tandem with vendors to create a unique, yet cohesive look on the exterior of each stall, aligning with the vision and aesthetic of the individual owners. Each stall is designed to reflect the distinct brand identities and culinary offerings of each vendor while remaining adaptable enough to accommodate the next tenant to occupy the space in the future.

The Exchange's roster of offerings includes Mexican, Southern, Mediterranean, desserts, breakfast foods, noodles, burgers and pizza, plus a revolving concept for a guest chef. The façade design for each stall reflects the distinct offerings and personality of each concept while incorporating consistent materials and colors throughout the collective.

Bridging the Indoor and Outdoor

The design of the culinary collective prioritizes a seamless transition between indoor and outdoor spaces, allowing foodies to seek solace in the high-design interior environment while leveraging the open-air terraces and ground-level operable glass garage doors to enjoy some fresh air during the workday.

Gensler, which led the exterior architecture of The Exchange, reoriented the existing building to complement the Discovery District's Central Plaza and public greenspace. On the ground floor, garage doors open directly onto the greenspace, facilitating the free flow of people in and

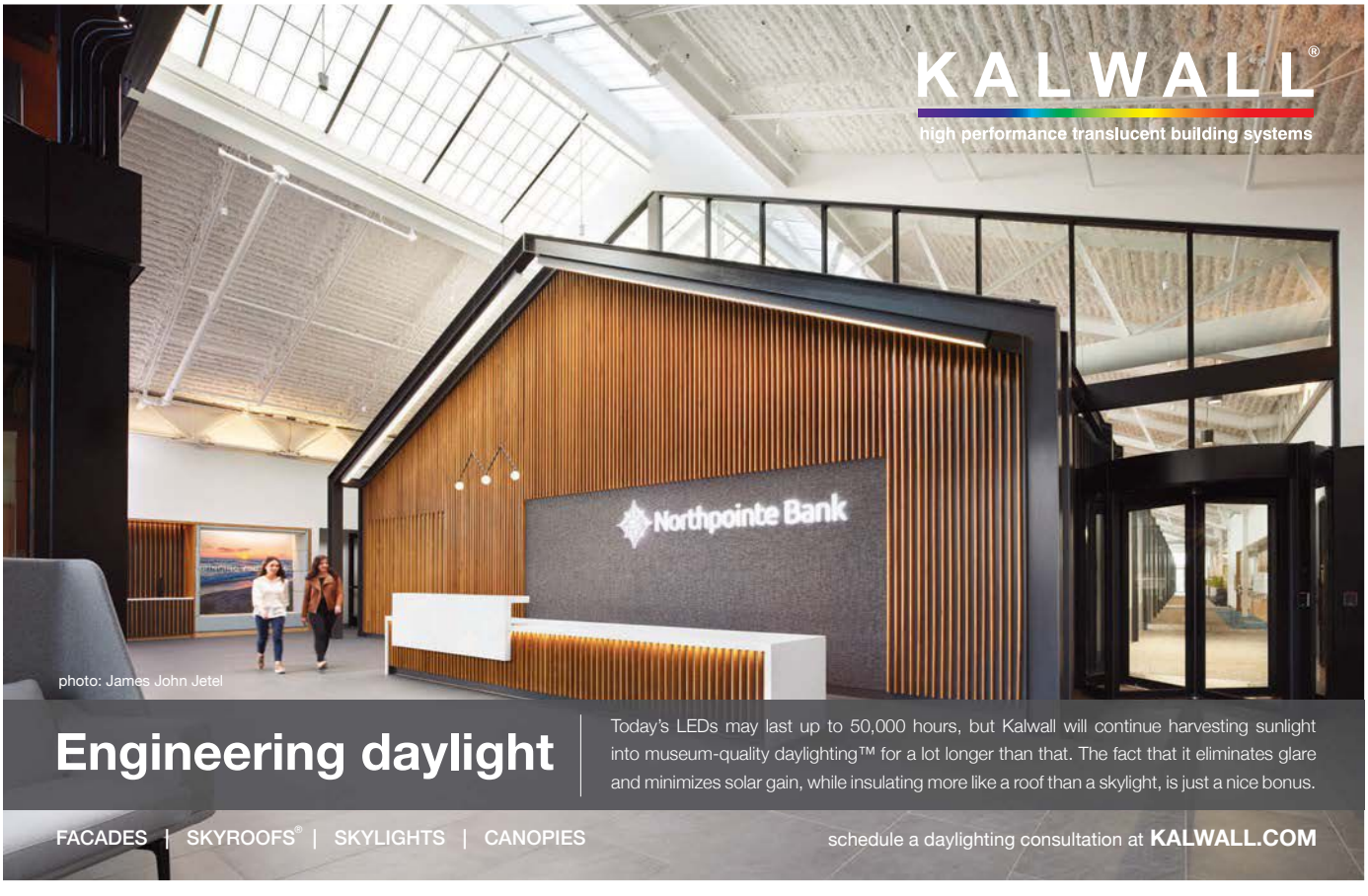
out of the food hall. The design team implemented six entryways throughout the building for ease of entry and exit, and outdoor lockers for hot and cold foods offer guests and delivery drivers a quick takeout experience.

For foodies wanting to stay a bit longer and immerse themselves in the space, the outdoor terraces on the first and second floors overlook the Central Plaza and offer open-air seating and expansive views of the district.

Aligning with AT&T's vision to reconstruct its headquarters to best serve its employees and the local Dallas community, The Johnson Studio designed The Exchange to foster the same exchange of ideas, collaboration and expression the building was originally designed to provide. Although the literal exchange boards that facilitated communication between person to person are no longer present, AT&T's legacy remains evident in the way visitors are able to connect on a deeper level in a space designed just for that purpose.

Materials

ARCHITECTURAL BRICK // S. Anselmo, www.santanselmo.com/en
PORCELAIN TILE // Nemo Tile + Stone, www.nemotile.com
DECORATIVE GLASS // Bendheim, bendheim.com
AIR CURTAIN // Berner International, berner.com
HYDRAULIC OVERHEAD DOORS // Power Lift Doors, powerliftdoors.com
METAL CEILING TILE // Armstrong Ceiling & Wall Solutions, www.armstrongceilings.com
SPECIALTY PAINT/PLASTER // ClayLime, www.claylime.com/en
QUARTZ // Hanstone, hyundailncusa.com/hanstone-quartz, and Corian, www.corian.com
SOLID SURFACE // Corian, www.corian.com
VINYL WALLCOVERING // Glamora, www.glamora.it/en
ACOUSTICAL WOOD VENEER CEILINGS // Navy Island, navyisland.com
CUSTOM LIGHTING // Lamberts & Fils, lambertetfils.com
WOOD FLOORING // Havwoods, www.havwoods.com
PAINT // Sherwin-Williams, www.sherwin-williams.com
ORNAMENTAL METAL // Tableaux, tableaux.com, and Chemetal, www.chemetal.com
SEALED CONCRETE // Prosoco, prosoco.com
BEVERAGE DISPENSERS // Chill Rite, www.chillrite32.com



HELP WANTED

Strong Conditions in the Construction Economy Are Hampered by Labor Shortages

The road back from the disruption caused by COVID-19 continues to be a rocky one, filled with twists and turns. Even as mask mandates and other pandemic policies begin to ease, concern still lingers about future variants and other unforeseen challenges.

WRITTEN BY | JIM SCHNEIDER

Considering all hits the economy has weathered in the past two years, the overall conditions for commercial construction have proven to be quite resilient. After taking a downward turn in 2020, the construction economy has bounced back reasonably well. Demand for projects remains strong, and financing continues to be favorable, even with rising inflation and potential interest rate hikes.

This is all well and good, but that doesn't mean there aren't significant challenges. In the end, buildings are designed and built by people, and right now finding those people has become a real struggle. A lack of labor is causing difficulties and delays for firms in all parts of the process. Contractors, manufacturers and architects alike face many challenges filling positions.

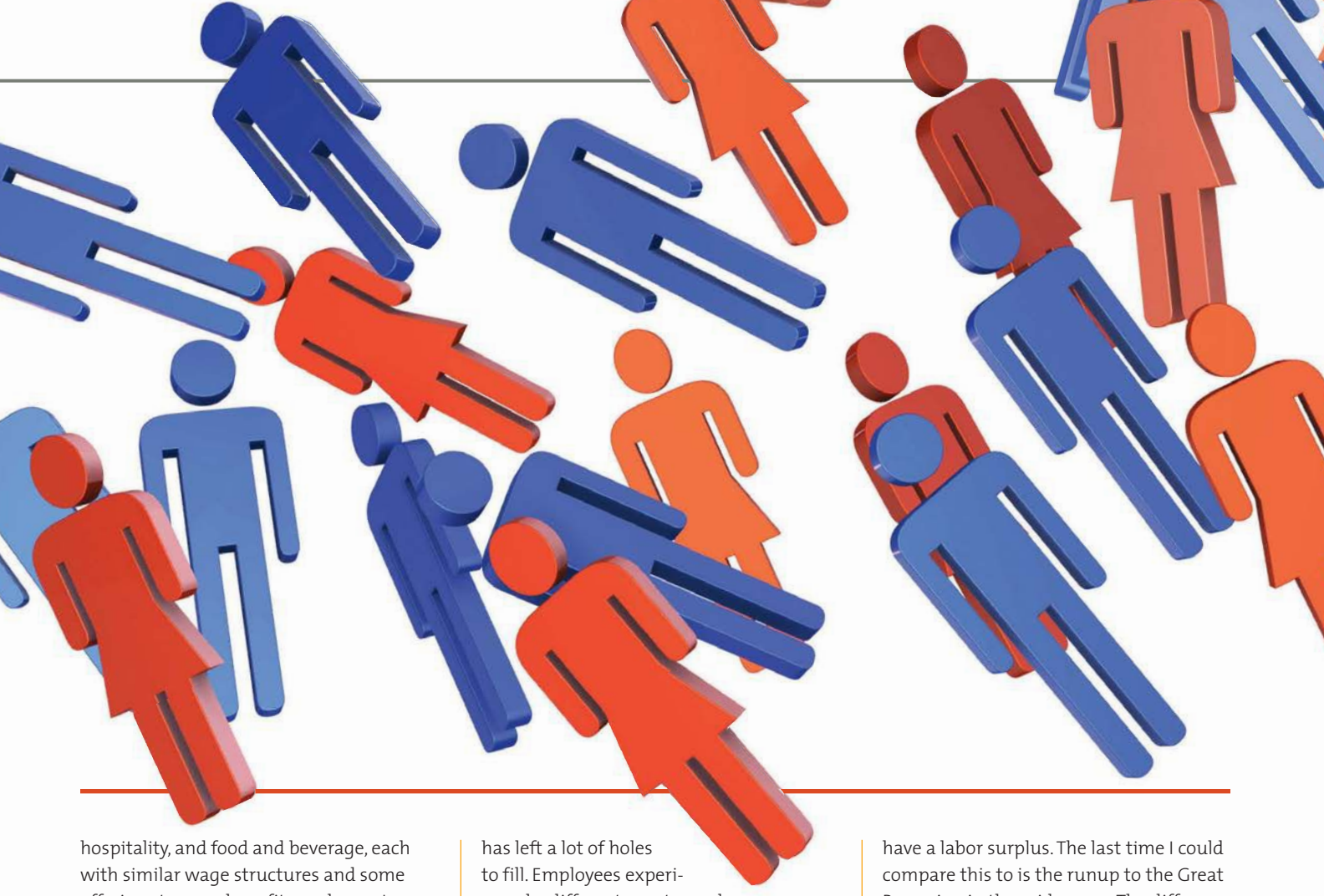
"Both residential and nonresidential construction firms have been adding employees for the past six months, but they are having a hard time finding qualified and willing workers," explains Ken Simonson, chief economist with the Associated General Contractors of America. "At the end of January, there were 384,000 unfilled positions in construction. That's an all-time high for January and far above the number hired during the entire month. It suggests that contractors would have hired more than twice as many workers as they were able to find."

"There is a severe labor shortage throughout the economy, and construction is one of those industries that has been hit hard in terms of having a deficit of workers," says Kermit Baker, chief economist with the American Institute of Architects. "It looks like it is only going to get worse because the nonresidential construction market has actually been fairly weak over the past few years because of the pandemic and is slated to see a pretty healthy recovery in 2022. As it recovers, I think that will underscore the fact that there is a very serious problem trying to find sufficient construction workers."

Competitive Conditions

With a low unemployment rate in the broader economy and labor shortages in just about every industry, construction finds itself having to compete even harder to find quality candidates to fill positions in the office, field and factory.

"The construction labor market is extremely tight and competitive," says Jason P. Lien, P.E., executive vice president of EnCon United, producers of precast/prestressed concrete systems. "Our plant labor candidates have an abundance of opportunities in general construction,



hospitality, and food and beverage, each with similar wage structures and some offering stronger benefits packages. In previous times of high economic growth, we were constrained by available plant capacity, but today we are constrained by labor in the plant, both experienced and inexperienced."

"Contractors are losing labor because they can't acquire material to get the work done, and if they lose a crew member to a competitor, they will struggle to fill that position," says Jennifer Ford-Smith, chair of the EPDM Roofing Association and head of marketing and product management for Johns Manville. "Labor is a true constraint and will continue into the future if we can't find ways to improve recruitment into the industry."

"We know that labor shortages were an issue for the trades, even before COVID. But right now, our greatest challenge is hiring in our offices," says Andy Holub, vice president, pre-construction and special services director for Clune Construction, a national general contractor. "I can say with certainty that the pandemic had a heavy hand in this. The Great Resignation has left a lot of holes to fill. Employees experienced a different way to work over the last couple of years. Some have decided to leave the workforce, many learned they need a better work-life balance. In turn, employees are rethinking how and where they want to work, what they want and what they are worth."

"Construction has had a challenge filling positions for a long time, but the competition for workers may be even more intense than before," Simonson says. "Now, historically low-paying industries, such as fast food, warehousing and local delivery, have dramatically increased starting pay and added signing and retention bonuses, along with other benefits. Many more sectors now offer flexible hours and the chance to work remotely or on a hybrid basis. These perks aren't possible for onsite construction jobs, which means contractors will have to raise wages even more or find other inducements."

"Construction is notoriously a boom/bust industry, so every time we have another cycle we have a labor shortage," Baker adds. "Every time we have a down cycle we have a labor surplus. The last time I could compare this to is the runup to the Great Recession in the mid 2000s. The difference was that the market was incredibly strong back then so the labor shortage made sense. When you have a labor shortage in a recessionary period, that is worrisome."

Root Causes

There appear to be several root causes to the current shortage the industry is experiencing. Some may have accelerated during COVID, but for the most part these troubles were lurking for many years.

"This has been a long-term trend and was a concern within the industry well before COVID," Ford-Smith notes. "Immigration laws need to be revisited and career paths need to be established so young people not interested in college can seek success in the construction industry."

"The pool for plant labor, people willing do hard work and manual labor is just getting smaller and smaller," Lien says, echoing concerns with immigration policy. "There are the politics of the southern border, and in general there are less people willing to do the kind of work we need."

NO ONE REALLY SEES A SCENARIO WHERE THE LABOR ISSUE TRULY GOES AWAY IN THE SHORT TERM, BUT THERE IS HOPE FOR THE FUTURE.

Baker identifies what he sees as three main issues to the construction labor shortage: demographics, recruitment and marketing. Demographics itself encompasses two big problems to the construction workforce: a shortage of immigrant workers due to increasingly strict border policies and a dramatic lack of women in construction.

"The construction industry has traditionally relied heavily on an immigrant workforce and is second only to agriculture as an industry that relies on foreign-born workers," Baker explains. "What's been going on politically the last several years is not conducive to attracting immigrants to the country to staff up construction sites. Second is that women constitute half the workforce, but the share of women in skilled-labor trades is in the low single digits. That number hasn't moved much in decades. Young people also seem not to be attracted to construction, so the labor force has gotten older. We need to attract women and young men."

Impacts

As with the shortage of materials, the lack of qualified labor is creating issues on many projects, driving up costs and causing schedule delays.

"In the 2022 AGC of America/Sage Hiring and Business Outlook Survey, 84 percent of the more than 1,000 respondents reported that costs had been higher than they anticipated last year and 72 percent of projects had taken longer than anticipated," Simonson says. "Contractors have already raised wages sharply and are paying a lot more for overtime to make up for the workers they haven't been able to hire, and they'll have to spend still more."

Firms of all kinds are forced to do more with less and put additional resources toward recruiting and retention, which takes bandwidth away from construction and manufacturing.

"Constant inflow and outflow of individuals means higher costs for training, supervision, tools and equipment," Lien says. "Labor shortages make it harder to maintain a level of quality in the goods we produce. Companies in our industry evaluate overhead recovery in terms of hours in the plant, square foot, cubic yards or similar metrics. If we cast less product due to a shortage of labor, we are not recovering all the overhead required and potentially eroding margin to recover that gap."

"Supply-chain disruptions have dovetailed with labor issues to significantly slow down project activity," Baker says. "The two are double-dipping in their impact on the profession. Sometimes it's that you have to get the plumbers in before the electricians can start and if the plumbers are facing a labor shortage or having trouble getting the products they need to install, it slows down the whole project."

Solutions

The lack of labor can feel like an overwhelming issue in the moment, but there are things the industry can do to improve the situation.

"Strong recruiting practices and an emphasis on continuing education and professional development are important," Holub says. "We have invested a lot of time and effort in our people and culture. We partner with high schools to create interest in construction at a young age, and our talent acquisition team is heavily focused on college recruiting and internship programs."

"I do think work visas are an appropriate method to bring large groups into a region," Lien says.

Although firms in the construction industry can theoretically utilize the H2-B temporary visa program for non-agricultural workers, the requirements are currently very stringent and the visas are short-term. Lien envisions something with greater stability to attract good workers. "These could be company-based sponsorships, thus creating some level of loyalty between the company and employee. In the future, more automation may help in that it will require smaller staffing levels to perform the same level of work," he says.

"The big wild card is technology. There is a lot of potential improvement with technology," Baker adds. "The productivity numbers for construction workers are traditionally quite low. With a labor shortage, it would encourage productivity-enhancing technology investment. That tends not to happen very quickly."

No one really sees a scenario where the labor issue truly goes away in the short term, but there is hope for the future. It will require movement from within the industry to make stronger appeals to wider groups of workers.

"Demand for construction remains strong and, in fact, some categories will pick up money flows from the Infrastructure Investment and Jobs Act into specific projects over the next several years," Simonson predicts. "The optimistic view is that the assurance of years of funding for infrastructure will attract more workers who want a secure, high-paying job with great career advancement opportunities and the chance to do work one can show off to friends and family."

"Most young workers have a pretty negative image of a career in construction, but it doesn't have to be that way," Baker notes. "The construction industry tends to be better paying than entry-level jobs in many other industries. If you're a young, entrepreneurial worker and want to start your own busines, your chances are greater in this industry than almost any other. The industry hasn't done a good job of promoting the advantages of a career in construction. There are lots of workers who like to problem-solve, who may prefer working outside—not being behind a computer screen—and doing something different every day. The industry needs to play that up more."

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na.fabricair.com/en/ceiling-diffusers

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www.vanguardsmokefire.com

PALMWOOD CAN BE USED AS AN EXTERIOR CLADDING PRODUCT

Smith & Fong Co. has introduced PalmShell, a palmwood cladding product for commercial and custom residential projects. Derived from the same Indian black palm resource as the company's Durapalm interior products, PalmShell provides a new look for modern exterior wall applications, particularly rainscreen systems. The new cladding range is made from solid palmwood with an easy-to-install groove/lap system. Given its inherent weather-resistant quality, PalmShell can be installed and finished using standard exterior-grade clear finishes or natural products, such as linseed oil for a raw natural look. Black palm is similar in density and hardness to ipe and is harvested from agricultural and residential environments. Like other exotic woods, palm weathers over time, taking on a rich deep patina. PalmShell groove/lap cladding is milled in 96-inch lengths with a 3 1/4-inch width and 3/4-inch thickness.

www.durapalm.com

METAL ROOFING AND SIDING FINISHES ARE MATTE

Steelscape has made available Natural Matte, a range of ultra-matte exterior finishes for metal roofing, including standing-seam roof panels, and siding, such as flush architectural wall profiles. Inspired by organic matte surfaces, this range of six refined colors delivers a balanced, non-reflective light interaction for ultimate design flexibility. Natural Matte uses microscopic light-disruptive paint technology to eliminate unwanted shine and glare without sacrificing color depth or finish durability. Based on proven paint technology, Natural Matte offers a delicate satin texture, a 40-year finish warranty and a 30-year warranty against color fade.

www.steelscape.com/natural-matte

➔ MITIGATE THE NEED FOR A BLACK DROP ABOVE A PROJECTION SCREEN

Da-Lite has released SightLine, its aircraft-grade cable drop screen feature. The single roller design suspension system, available with Da-Lite's Tensioned Advantage and Advantage screens, replaces the need for black drop above the projection screen and preserves a room's architectural integrity. SightLine's low-profile design honors a space's existing aesthetic. Three or four cables reveal the space in between the ceiling and top of the screen, and the Tensioned Advantage and Advantage screens can be mounted flush to the ceiling, concealing them from view. Da-Lite's Tensioned Advantage (up to 177 inches, diagonal 16:9 and up to 182 inches, diagonal 16:10) and Advantage with SightLine (up to 184 inches, diagonal 16:9 and up to 189 inches, diagonal 16:10) are now available for shipping.

www.legrandav.com/products/da-lite

↑ TUBULAR DAYLIGHTING DEVICE MEETS WILDLAND URBAN INTERFACE REQUIREMENTS

Solatube International Inc. has launched its Solatube Rooftop Fire Glazing accessory that meets strict ANSI Z97.1 safety glazing requirements to deliver a flame-resistant tubular skylight. Made with a fully tempered top layer and two layers of glass laminated with a layer of PVB, the Solatube Rooftop Fire Glazing accessory prevents the skylight glass from dropping to the floor and igniting a fire inside a building. When used in conjunction with the flame-resistant Solatube Dome Edge Protection Band, the Solatube Rooftop Fire Glazing accessory meets the prescriptive building-code requirements for areas located in high fire and Wildland Urban Interface zones. The Solatube Rooftop Fire Glazing is available in residential 160 DS and 290 DS models and commercial SolaMaster Series 300 DS, 330 DS and 750 DS models.

solatube.com

➔ SIMPLIFY INVOICING WITH WORKFLOW BUILT FOR DESIGN PROFESSIONALS

Monograph, an operations platform designed to help architects and other design professionals oversee projects, timesheets and forecasts in one interface, has unveiled Invoices, a new invoicing workflow built for design professionals. As users prepare an invoice, they're able to see all timesheet data, milestone progress and billing history—no need to go searching in spreadsheets, conversation and email. Once the project progress is billed for, all billing information is output in a simple, accurate invoice that customers can understand. This invoicing workflow also includes the recently released Project Financials offering, which allows firms to get a side-by-side look at project and financial progress. Whether way ahead on billing, way behind, or somewhere in between, firms have the ability to see all outstanding invoices, logged time and project budgets in seconds.

monograph.com/features/invoicing

➘ LUMINAIRE IS DESIGNED FOR NATATORIUMS

Drawing on experience in the tunnel lighting market, Kenall's new Ingress Protection-rated (IP66) EnviroPro IN9 series luminaires are a long-lasting lighting solution for caustic environments, including those containing chlorine and salt, such as natatoriums. The stainless-steel luminaire features a sleek design with three housing options. Field adjustability and multiple optical distribution options help minimize glare while directing the light exactly where it's needed. Kenall offers warranties on the EnviroPro IN9 luminaire series; depending on the material selected, housings are guaranteed for up to 15 years. The luminaires also comply with the Buy American Act, so there are no expensive delays waiting for lighting to arrive from an overseas supplier.

kenall.com

Sync110

ERVs ARE DESIGNED FOR MULTIFAMILY BUILDINGS

Greenheck's new high-performance residential energy recovery ventilators (ERVs) provide balanced ventilation that improves energy efficiency and ensures multifamily projects meet code and exceed indoor air quality expectations. Four models— ASSURE120, SYNC110, SYNC180 and SYNC270—are available with a variety of options and accessories and all offer Home Ventilating Institute-certified airflow. ASSURE120 and SYNC110 offer a 50-130 cfm operational range in a compact low-profile design that simplifies installations with limited mechanical space, such as bulkheads and drop ceilings. SYNC180 and SYNC270, which are 75-200 cfm, are cold-weather certified ERVs. When paired with PrecisionSYNC control, the ERVs allow for measurement of the maximum airflow capacity of the installation and precisely adjust airflow to meet design and code requirements. All models include a Total Recovery Core that transfers heat and moisture between two crossflow airstreams without allowing cross contamination.

www.greenheck.com/residential-ventilation/multi-family

CUSTOMIZE MIRRORED GLASS FOR INTERIOR AND EXTERIOR APPLICATIONS

Pulp Studio has made available "Refracted Reflections" among its custom glass products. Playful textures and mirrors refract light for lively and dramatic effects that are suited for a feature wall in a hotel lobby, back bar, elevator cab interior, and other interior or exterior applications. Made of low-iron textured glass and reflective interlayers, "Refracted Reflections" has six textures in 24 colorways that can be color-coated, ceramic-decorated, laminated, printed with custom graphics or mirrored. Choose from dozens of the company's Pintura or Colorlites stock colors or use your own graphics.

www.pulpstudio.com

CYLINDER LIGHT FEATURES INTERCHANGEABLE OPTICS, BEZELS AND LENSES

Spectrum Lighting has released the CR2, a small-diameter cylinder executed within fine manufacturing tolerances to ensure the fit and finish of all components, resulting in a sleek appearance. All pendant and cord-mounted luminaires feature hardware-free canopies to achieve an ultra-clean look at the ceiling line. The CR2 also is offered in a wall mount, which is ADA-compliant when used with an integral driver. The product is available with a wide array of beam patterns and lumen outputs allowing for use in 8- to 20-foot ceiling heights. Optical systems range from extra-narrow spot (12 degrees) to extra-wide flood (60 degrees), along with a wall-wash optic; all are field interchangeable. CCTs range from 2200K through 4000K, at two-step MacAdam Ellipse, and CRIs up to 90. Lumen packages from 500-2000 are available. Bezels in a variety of anodized finishes and decorative knurling options come with an interior low-dazzle anti-glare matte black finish.

www.speclight.com

COMPOSITE CLADDING LOOKS LIKE WOOD

Fiberon Wildwood composite cladding is designed for commercial cladding applications. The cladding product, which features an open-joint profile, is available in two nature-inspired color collections that feature realistic embossing patterns. It is available in a variety of board lengths and widths for more design solutions. Longer lengths result in fewer seams, creating a cleaner aesthetic. Mix and match board lengths and colors to create a unique, custom look for each project. The product is priced competitively to wood and costs less than most rainforest wood cladding or engineered cladding products. The durable composite core ensures resistance to rotting, cracking, insects and decay. The PermaTech cap layer protects against fading and staining. Additionally, it includes 94 percent pre- and post-consumer recycled content, is free of toxic chemicals and is manufactured using sustainable processes.

cladding.fiberondecking.com/product/wildwood-cladding

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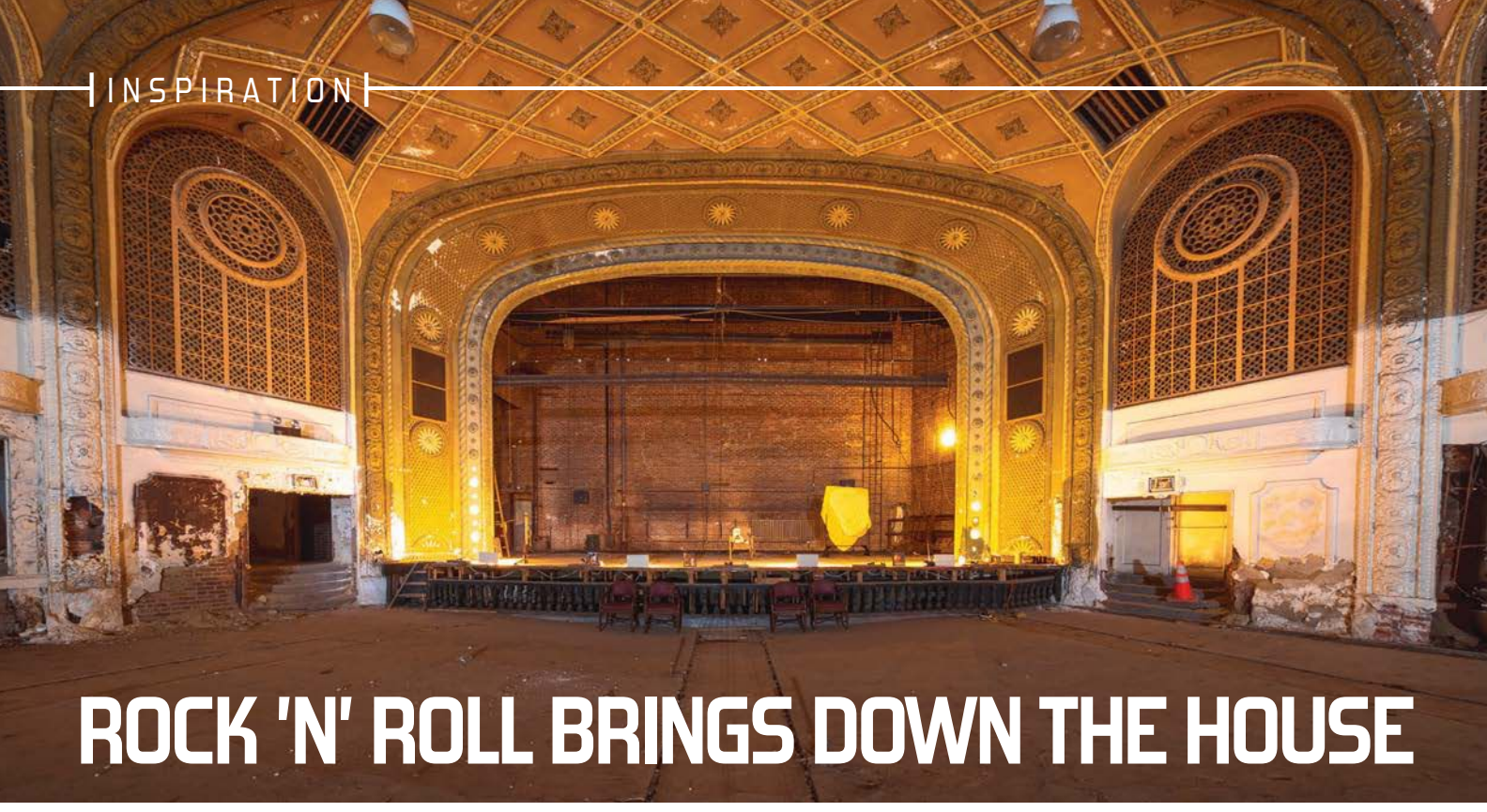
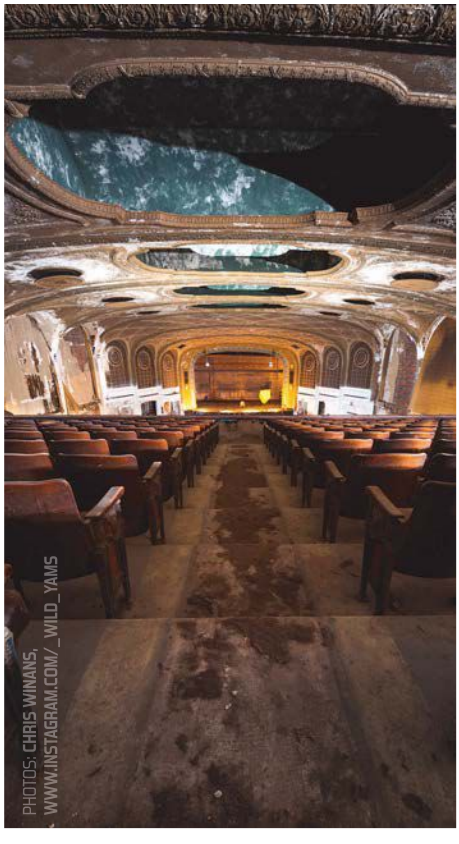


ROCK 'N' ROLL BRINGS DOWN THE HOUSE



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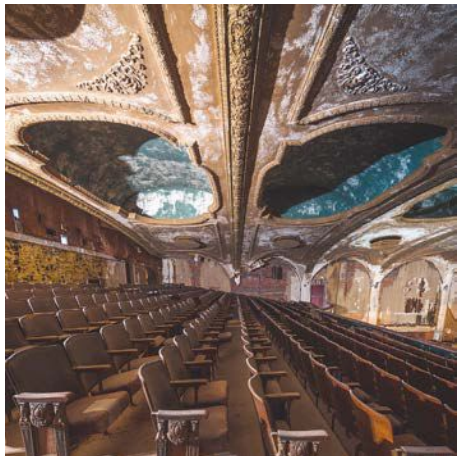

CONTENT: ABANDONEDONLINE.NET AND CLEVELAND.COM

Opened in 1927, the 2-story Spanish gothic Variety Theatre in Cleveland was designed by local architect Nicola Petti. The theater featured cut-glass chandeliers, marble, brass and tapestries. Fireproof materials composed the ornamental work. A tornado damaged the theater in 1953. It was sold twice before becoming a second-run movie house in 1976. Heavy-metal rock bands, including Metallica, favored the space for performances until the fall of 1985 when parts of the plaster ceiling fell on attendees during a Motörhead show. The Variety Theatre consequently closed for good.

In 2020, Cuyahoga County Council approved a plan to convert a $2.5 million loan into a grant for restoration of the theater. Friends of the Historic Variety Theatre is the recipient of the funds. Plans reportedly call for the rehabilitation of the theater and the inclusion of a restaurant and event venue.

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