

january-february 2024 // retrofitmagazine.com

retrofit

2023 retrofit
TOP 25
PRODUCTS

* Healthy Foundation:

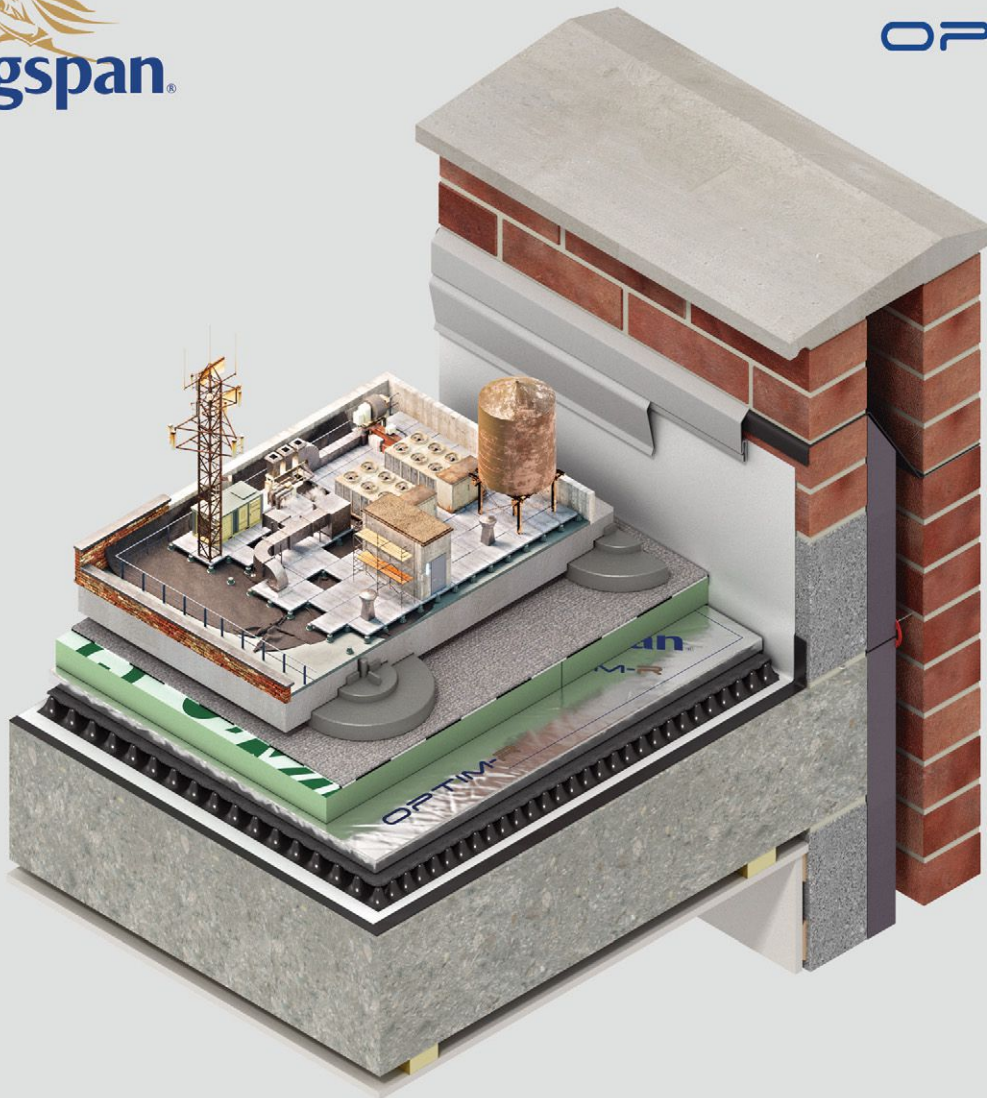
Dormant Urban Properties Are
Reimagined as a Workplace,
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in Mind + More Office Projects

* TREND ALERT:
the promise
of AI

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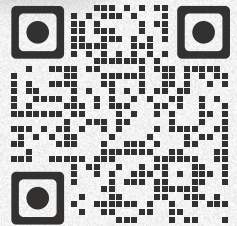
Photo by Steve Morgan

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That's why we recommend pull-testing on retrofits involving seismic or structural wall repairs. PROSOCO provides pull-tests in order to customize anchoring solutions specific to each unique wall, including the veneer, backup material, wall conditions and other variables. That's what we did on Benson Polytechnic High School in Portland, Ore., a \$400 million restoration using our customized pull-test rigs, anchors and masonry cleaners.



SEE HOW THEY DID IT

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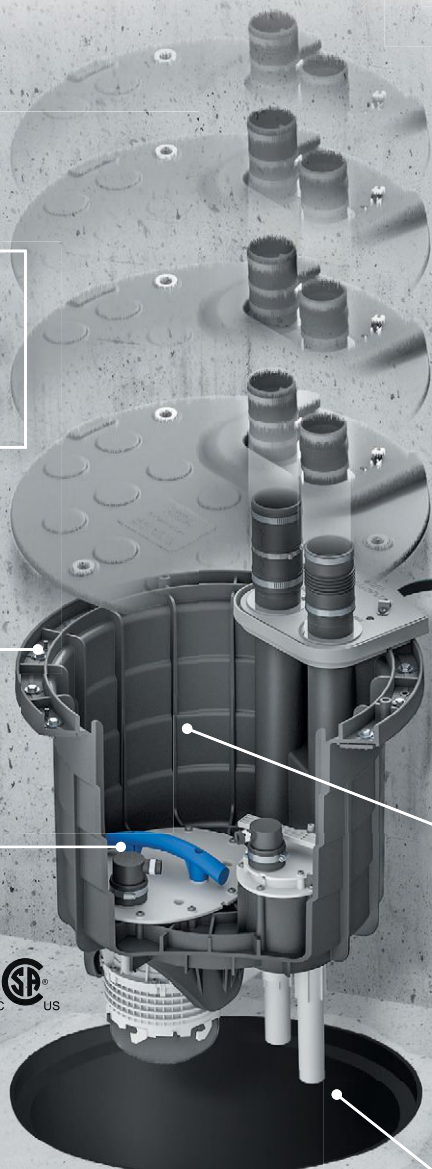
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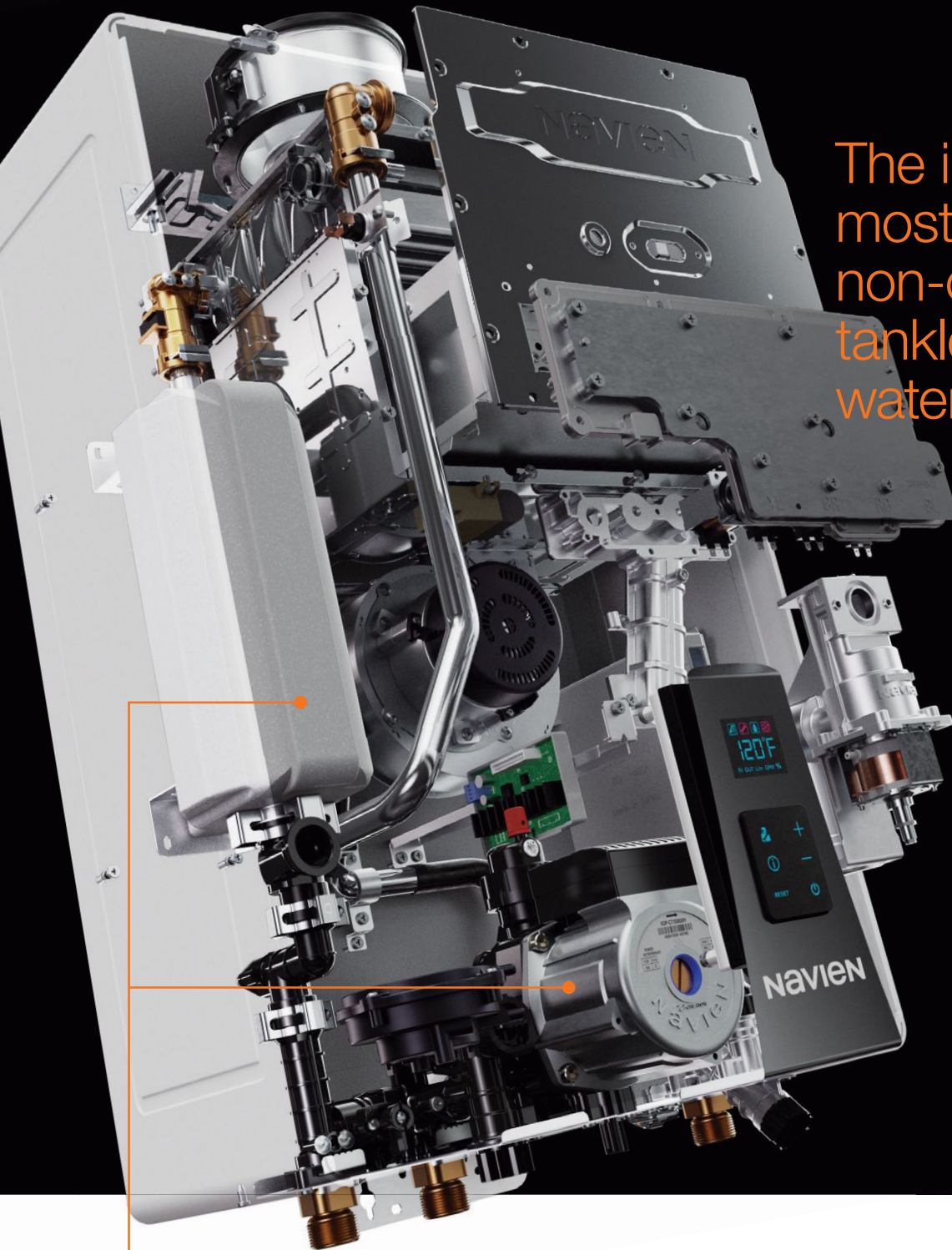
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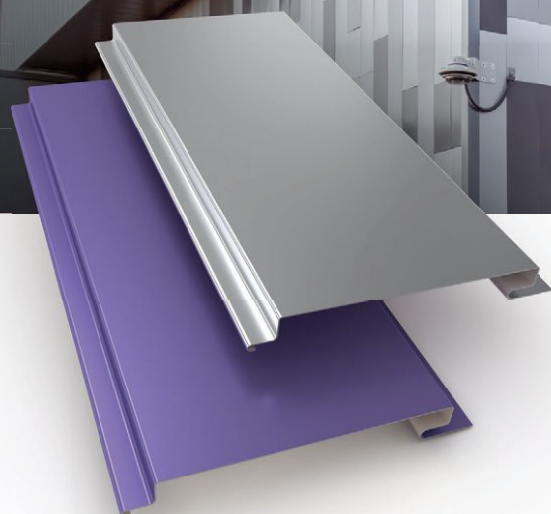
NHW-AI

NHW-AE



School Spirit

Photo: alanblakely.com



Colorful metal façade generates school pride

PAC-CLAD Flush panels in shades of gray form a lively abstract of the Millennium High School mascot's tiger stripes, topped by the school's signature purple to emphasize the building's interior volume.

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and the IBS Booth C8932

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- 1221 South Congress Ave., Austin, Texas
- Panorama, Brooklyn
- 400 Broad St., Gadsden, Ala.
- 166 Geary St., San Francisco



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COVER PHOTO: SAM FENTRESS

retrofit

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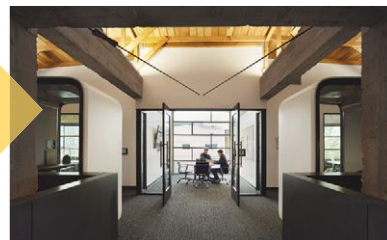
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A JOURNEY THROUGH TIME: REFLECTIONS ON 39 YEARS IN PUBLISHING

Hi everyone and a very Happy New Year!

Can you believe it's 2024 already? As I write this, I can't help but marvel at the passage of time. I've been in the publishing industry since 1985—a whopping 39 years—and what a journey it has been!

When I started my career, the world was a different place. No computers, no cell phones, and the internet was a concept that seemed light-years away. Smoking was not just a personal choice; it was a common occurrence in offices and even on planes! I find myself chuckling at the memory of those days, where the office atmosphere was thick with smoke and no one batted an eye.

Back in the mid-'80s, I worked for a landscaping magazine, a far cry from the digital landscapes we navigate today. Our tools were typewriters, not laptops, and communication meant face-to-face meetings or landline calls. I recall the days when we took clients out for martini lunches and navigating back to the office required skillful balance!

The camaraderie in the workplace was something out of “Mad Men,” a TV series that resonated with me because, in many ways, we lived those experiences. Secretaries were the unsung heroes, juggling contracts, proposals and calls—all while keeping our worlds organized. Martini lunches weren't just about drinks; they were opportunities to connect with clients in a way that transcended office formalities.

As I look back on these experiences, it's not just nostalgia that washes over me but a profound appreciation for how the industry has evolved. We've gone from manual typewriters to sophisticated digital platforms, from landlines to smartphones, and from smoke-filled offices to open spaces prioritizing health and wellbeing (consider the many office projects in this issue).

The publishing landscape has transformed, and so have we. Yet, amidst the changes, the essence of building relationships and navigating the ever-shifting currents of our industry remains. Here's to the next chapter in publishing, where the only constant is change, and the journey continues to unfold.

Always innovating to ensure our readers can read our content in all the places convenient for them, we have updated our **retrofit** website, www.retrofitmagazine.com, and launched an exciting new website for **retrofit home**, www.retrofithome.com, a residential sister publication created a few years ago. Both sites are mobile-friendly and showcase our digital editions, which include video content that auto-plays, bringing our stories, products and ads to life.

Cheers to the New Year and the innovations to come (like AI as written about in “Trend Alert”, page 60). I hope 2024 offers much success to you, your families and businesses!

JOHN RIESTER

Publisher, **retrofit**

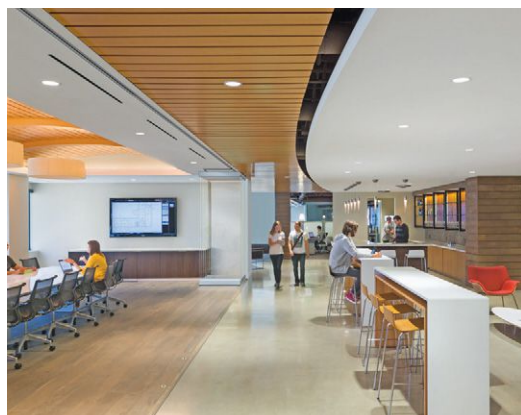
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Anywhere you see a video player icon, we've embedded a video in our digital edition of this issue. Visit www.retrofitmagazine.com and click on our digital edition on the right side. Then, flip to pages 4, 13, 26, 39 and 53 to watch videos that will give you more insight about the stories, products and ads you see in this issue.

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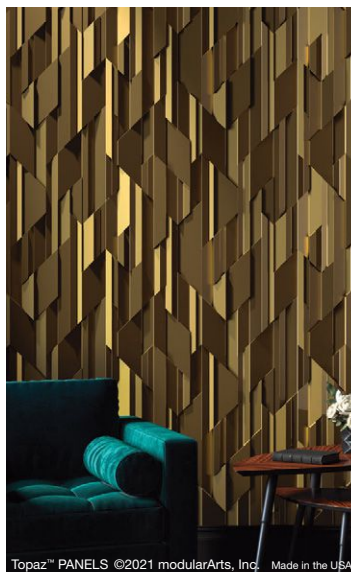
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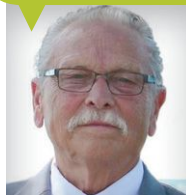
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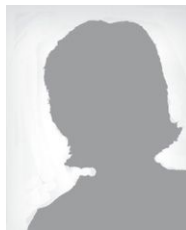
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Gerald Tracy retired as a battalion commander after 31 years with the New York City Fire Department. Since then, he has been a catalyst to research conducted by NIST, UL and NYU Polytechnic Institute on fire dynamics in high-rise buildings, as well as smoke management and control. In that vein, Tracy underscores the importance of collaborating with the local fire department when planning renovations on high-rise buildings in “Guidance”, page 24.



Jodie Crohn, LEED GA, is a project designer and **David Yates**, AIA, LEED AP, is a senior project architect at HOK. The pair explain in our “Cover Story”, page 26, how HOK retrofitted a 30,000-square-foot abandoned ironworks building and a residential flat in St. Louis as the Missouri Foundation for Health headquarters and community space that align with the foundation’s goal to make lasting positive changes in health.



As part of a building system, the roof and its insulation are just as important as walls, windows and mechanicals in maintaining comfortable building temperatures. **retrofit** contributor **Meredith Morton** recently had the opportunity to discuss polyiso insulation’s benefits for roof retrofits with Justin Koscher, president of the Polyisocyanurate Insulation Manufacturers Association. Read the Q&A in “Component” page 42.



Brent D. Zeigler, AIA, IIDA, is president and a principal at Dyer Brown & Associates. In “Component”, page 44, Zeigler uncovers the “good neighbor” updates made to a Class-A office property in downtown Boston’s historic Back Bay district. The high-impact, cost-effective solutions, including a new rooftop terrace, have made the property appealing again to prospective tenants.



As a brand strategist who works with architects, designers and builders, **Lisa Boquiren** shares how William Duff Architects celebrated a former light-industrial building’s original architecture while juxtaposing it with modern design in San Francisco’s South of Market neighborhood. Read the story in “Transformation”, page 48.



Gensler’s **Lena Kitson** (left), IIDA, NCIDQ, LEED AP, studio director, principal, and **Deanne Erpelding**, IIDA, CID, NCIDQ, managing director, associate, demonstrate how former big box stores’ stark, expansive spaces can elicit endless possibilities for conversion into attractive workplaces. Via two projects from Gensler’s portfolio, the duo outlines several major considerations to achieve successful results in “Transformation”, page 54.

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retrofit's TOP 25 PRODUCTS

Products are an integral part of any trade publication. As such, **retrofit** is celebrating the 25 products that received the most reader clicks on our website from October 2022 through October 2023. During that time, **retrofit**'s staff posted approximately 700 products to the magazine's website, so the Top 25 are standouts.

"We consider **retrofit** a source for our readers to find innovative solutions and products for their own retrofit projects," says Publisher John Riester. "The Top 25 Products special in our January-February issue is a great resource to our readers, showcasing the products readers' peers thought were most interesting within the pages of **retrofit** and on our website."

Enjoy **retrofit**'s 11th-annual Top 25 Products!

1 INSULATION BOARDS PROVIDE CONTINUOUS INSULATION SOLUTION

Siplast has added two high-performance polyiso wall insulation products to the company's existing WALLcontrol Air & Water-Resistive Barrier (AWB) Systems, offering an exterior continuous insulation solution and supporting the company's continued expansion into the building enclosure space. The new wall insulation solutions include Siplast WALLcontrol Polyiso Foil-Faced Insulation board, which combines high R-value, Class-A foam core and durable aluminum facers in a high-performance rigid wall insulation. Additionally, Siplast WALLcontrol Polyiso Glass-Faced Insulation board combines high R-value, Class-A foam core and durable coated glass facers in a high-performance rigid wall insulation. The WALLcontrol AWB Systems include wall membranes, critical transition membranes, and accessories that provide solutions for above-grade vertical walls and enable complex transitions from roofing and waterproofing systems.

www.siplast.com



2 DESIGN CUSTOM LIGHTING FIXTURES AND 3D PRINT THEM

Cooper Lighting Solutions' newest technology, PrentaLux, brings ideas to life in a matter of minutes with 3D-printed lighting technology. If a user can think it, the company can do it. Cooper Lighting Solutions allows creators to design custom lighting fixtures in any shape, color and texture they can imagine. Using the website's configuration tool, lighting fixtures can be designed in real-time and visualized in a space from the comfort of a

computer. PrentaLux products are positioned to be used in hospitality settings, as well as when performance lighting is needed.

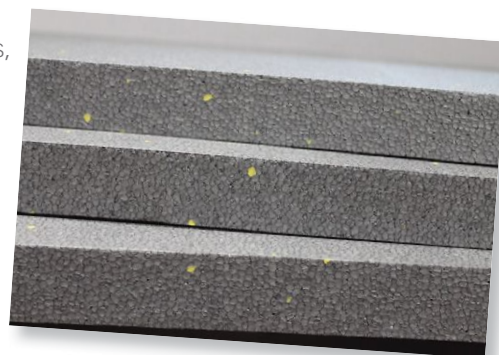
www.cooperlighting.com



3 POLYSTYRENE INSULATION BOARD OMITTS FLUOROCARBON-BLOWING AGENTS

Sto Corp. has introduced Sto GPS Board, a graphite-enhanced, 100 percent closed-cell expanded polystyrene insulation board that can be used in a variety of applications, including the new StoTherm ci GPS wall system and improved StoTherm ci MVES and StoPowerwall ci systems. Sto GPS Board is cut in thicknesses that align with ASHRAE 90.1 prescriptive continuous insulation requirements, optimizing economy while minimizing wall thickness. With an R-value per inch of 4.7 at 75 F, Sto GPS Board is comparable to extruded polystyrene products. Sto GPS Board does not contain fluorocarbon-blowing agents, meaning it has low global-warming potential and zero ozone-depletion potential. The product, which is available in all 50 states, is vapor semi-permeable, controlling inward vapor drive while preserving the ability of the wall to dry out if exposed to incidental moisture.

www.stocorp.com



4 ACOUSTIC PENDANT IS REDESIGNED AS PART OF ITS 10-YEAR ANNIVERSARY

Luxxbox, an international designer of acoustic lighting, has redesigned its iconic Vapor Echo acoustic pendant, which was released 10 years ago. The upgraded Vapor Echo's new PET joinery technique maximizes acoustic surface area, significantly increasing acoustic performance while refining the appearance of the internal structure. The redesign also delivers increased lumen output for brighter illumination and more sustainable construction, reducing metal components, packaging waste and carbon footprint during shipping. The product is available in three sizes, a wide range of colors, high-performance dimmable LED light source, optional upward wash and advanced controls. The shade is crafted from PET material manufactured from recycled plastics, and the fixture is fully recyclable at the end of its life.

www.luxxbox.com/product/vapor-echo



5 STABILIZE GRASS WITH PLASTIC PERMEABLE PAVERS



TRUEGRID, a permeable paver company, has introduced TRUEGRID ROOT Permeable Pavers. The design serves

as a method for stabilizing grass, eliminating the need for ground excavation. ROOT can be positioned on existing grass surfaces, functioning as a protective mesh that enables pedestrians and cars to park on or traverse the surface without creating mud or ruts. The engineered design is comprised of flexible joints, strong cell walls and robust connectors. Its patented X-Anchor technology distributes the weight from people and vehicle tires and spreads the point load to the existing soil below. Over time, ROOT naturally becomes completely covered with grass, seamlessly blending into the surroundings like a turfgrass area. ROOT is constructed entirely from 100 percent post-consumer recycled high-density polyethylene.

www.truegridpaver.com

6 JAWS ARE COMPATIBLE WITH PRESS TOOLS

NIBCO INC. has released its jaws that are compatible with the NIBCO PC-280 tool for use on the PressACR product line. The new jaws can be used to press the full PressACR size range through 1 3/8 inches with one tool. Available in sizes, ranging from 1/4 to 1 3/8 inches, the patent-pending PressACR fittings feature an interior groove design on the press ends that help support high-pressure requirements of HVACR systems. The PressACR system is a copper tube joining method that delivers consistent joint quality and is designed to meet the demands of air-conditioning and refrigeration applications. In addition to the NIBCO PC-280 press tool, the new jaws (up to 1 1/8 inch) are compatible with other press tools, featuring a force of 32 kilonewtons, including tools manufactured by RIDGID and Milwaukee.

www.nibco.com



7 POLYISO PRODUCT IS SUITED FOR FOUNDATION WALLS, UNDER-SLAB USE

Atlas has introduced EnergyShield XR, a polyiso insulation product specifically engineered to provide continuous insulation for foundation walls and under-slab use. The polyiso rigid foam board is comprised of a closed-cell structure with impermeable, durable facers that offer a high R-value per inch of thickness and resist moisture absorption, providing an effective material to insulate in all climates. With a standard compression strength at 25 psi, EnergyShield XR resists pressures from backfill, and the durable facers offer added impact protection. Polyiso is compatible with the majority of mastic or solvent-based products, making component selection simpler and installation quicker. EnergyShield XR is manufactured with environmentally responsible processes, an established core formulation and recycled content.

wall.atlasrwi.com/energysield-xr



8 RECLAIMED TROPICAL HARDWOODS ARE FSC-CERTIFIED

Nova USA Wood Products has enhanced its premium line of Real Wood Solutions and accessories with the addition of reclaimed tropical hardwoods products. The descendants of European marine projects, all of Nova USA's reclaimed tropical hardwoods are 100 percent FSC-certified and available for the building of outdoor projects, ranging from large construction applications to beams, posts and frames, because of their strength and durability. The company's reclaimed Angelique tropical

hardwood, for example, offers the same durability as new, freshly cut supplies while boasting a gray patina that blends with many architectural designs. In addition, Nova USA supports every purchase with in-depth installation, care and maintenance information.

www.novausawood.com

9 STEEL STONE COATED ROOFS ARE CRR-CRATED

Westlake Royal Roofing Solutions has launched two Unified Steel Stone Coated Roofing colors that have been rated by the Cool Roof Rating Council. The new colors—Harborwood and Stirling Gray—are offered in PINE-CREST Shake and PACIFIC tile profiles. Harborwood and Stirling Grey also exceed California Energy Code Title 24

Part 6 Cool Roof Requirements and, with a Solar Reflective Index greater than 20, meet Los Angeles County's more stringent SRI requirements. Unified Steel Stone Coated Roofing is just 1 1/2 pounds-per-square-foot. When paired with above-sheathing ventilation, Unified Steel enhances energy efficiency. All Unified Steel products are Very Severe Hail-rated, offer a Class-A fire rating (when used with designated accompanying underlay materials) and are Hurricane Performance Rated with Miami-Dade County.

westlakeroyalroofing.com/unified-steel



10 MESH RAILING IS WEATHER-RESISTANT

Superior Aluminum Products has made available Series 9M mesh railing, which features a code-compliant, contemporary design. The railing combines a modern look with the benefits of low-maintenance aluminum frames. Mechanically fastened Series 9M is durable and resistant to wind, rain and extreme temperatures while allowing for a view beyond the barricade. Mesh is available in woven wire or round or square perforated panel options in four finishes: black, dark bronze, gray and white.

All products are built and installed to exact project specifications.

bit.ly/mesh-railing



11 INTELLIGENT HVAC LEARNS USERS' DAILY ROUTINES

KOVA has launched KOVA Comfort Intelligent HVAC, an AI-powered HVAC system that creates more comfortable environments based on a variety of inputs, including users' daily routines. KOVA Comfort harnesses advanced machine learning in conjunction with an AI-driven processor to enhance system performance over time, simultaneously improving energy efficiency and ensuring ultimate comfort within any given space. The product avoids inefficient downtime and excessive energy use by combining existing energy-efficiency capacities with AI and a variable-speed compressor and fan. The onboard processor captures, analyzes, and learns from diverse inputs, including ambient temperature, humidity, occupancy and day-to-day usage patterns. Standard thermostat controls and Bluetooth mesh connectivity are available between units to optimize comfort across living spaces.

kovaproducts.com



12 HEAT PUMPS, AIR CONDITIONER WORK WITH EXISTING INDOOR COMPONENTS

Allied Air Enterprises has released its Pro Series that features two new heat pumps and an air conditioner available exclusively through the Armstrong Air and AirEase brands. The new 4SHP22LX and 4SHP18LX heat pumps offer up to 22 SEER (20.9 SEER2) and 20 SEER (19 SEER2), respectively, and the new 4SCU23LX air conditioner features up to 23 SEER (21.5 SEER2) efficiency ratings. Allied Air's new Pro Series products work with existing indoor components to simplify the 2023 regulatory transition for distributors and dealers. The products allow dealers to fine-tune the capacity to the application and give consumers the widest range of compressor modulation for the best dehumidification and comfort when compared to the rest of the product line.

alliedair.com



13 EXPLORE SINGLE LENS SOLUTIONS IN ONE OPTICS KIT

New Energy has added its New Energy LEDiL Optics Kit, which consists of a single LED mounted on a printed circuit board (PCB) and attached to a heatsink. The PCB is manufactured with a series of precisely placed holes that correspond to the mounting pins of all the members of LEDiL's single-lens products. When aligned pins-to-holes, this assembly guarantees the proper alignment of the lens to the LED for maximal optical efficiency. Accompanying the LED/PCB/heatsink are 15 lenses, three each from five lens families. Users of this kit will be able to explore the many secondary optical distributions available to

them through LEDiL's precision-molded lens assemblies. The kits also can be customized to particular LED needs.

new-energyllc.com

14 DOOR COLLECTION FEATURES EXPANSIVE GLASS

The Veris collection from Therma-Tru includes folding, sliding, hinged and pivot glass doors with expansive glass for an abundance of natural light, in sleek designs and minimalist styles. The collection's pivot entry doors can be up to 5-feet wide by 10-feet tall with a pivot point inward on the door. Veris hinged entry doors are available in single and French-door configurations for a simplistic look in the front or back of the home. Veris folding glass doors can include an optional swing door to allow users to easily enter or exit a room without opening all the panels. Stainless-steel wheels provide easy operation in top- or bottom-hung applications. Veris



sliding glass doors can include optional built-in pocket doors to deliver unobstructed views when fully opened. Polymer rollers and stainless-steel bearings provide smooth, quiet operation.

veriscollection.com

15 EMERGENCY DRIVER IS 60 PERCENT SMALLER

IOTA has made available the ILBLP CP07 compact emergency driver, delivering advanced emergency performance in a minimal enclosure that is suited for limited and shallow compartment spaces in state-of-the-art lighting designs. The reduced size of the ILBLP CP07 provides an emergency solution that is up to 60 percent smaller than comparable emergency driver options. The compact emergency driver's 7-watt constant power output delivers consistent, non-diminishing emergency illumination for the entire runtime. It features self-test/self-diagnostics and intelligent AC Activate battery circuitry to simplify installation and labor time. Additionally, the compact emergency driver is available with side- or bottom-feed wire terminals to accommodate individual fixture designs.

www.iota-engineering.com

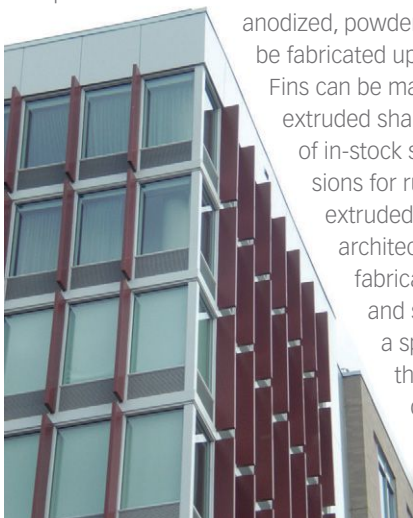


16 SUNSHADE FINS ARE DESIGNED FOR EXTERIOR WALLS

SAF has introduced vertical and horizontal sunshade fins for installation on exterior walls, primarily over windows or glazed openings, delivering benefits, ranging from energy savings to occupant comfort and more. SAF sunshade fins, which can be anodized, powder-coated or painted, can be fabricated up to 20 feet in length.

Fins can be made from sheet metal or extruded shapes. SAF offers a variety of in-stock sunshade fin extrusions for rush orders and custom extruded fin shapes for specialty architectural needs. Fins can be fabricated to varying shapes and sizes and installed in a specified orientation on the building to optimize daylight throughout an interior space.

www.saf.com



17 ALLOY VEINING LOOKS LIKE BRASS AND STEEL IN QUARTZ COUNTERTOPS

Cambria has launched six new designs for residential and commercial applications. Alloy veining is the key feature in the initial four designs of the Alloy Collection, which captures the reflectivity and luster of brass and steel. Three different surface characteristics—Smooth, Sculpted and Satin Ridge—are offered in the collection, with veining that jets against white, marbled canvases. Rounding out the offering are two additions to Cambria's marble-alternative designs. The understated tone-on-tone designs feature cool gray and warm gold veining. All Cambria quartz products are nonabsorbent; easy to clean; and resistant to scratches, chips and stains. They are made in America by a family-owned company and backed by a transferable Full Lifetime Warranty.

www.cambriausa.com



DID YOU KNOW?

Carlisle TPO membrane is available in **three standard colors and five specialty colors**, which is more than any other manufacturer offers.



CARLISLE
SYNTEC SYSTEMS



Viola Orissa

18 SURFACE MATERIAL LAUNCHES SIX NEW COLORS

To commemorate the brand's 10th anniversary, FENIX Innovative Materials is now available in six new colors inspired by

natural and manmade sights from around the world. Designed in Italy and available in North America exclusively through Formica Corp., the matte and soft-to-the-touch surface includes the following new colors: Giallo Evora, a delicate yellow inspired by the architecture of Evora, Portugal; Verde Katami, a soft green with tones of gray channeling the peaks of Kitami in the Hokkaido region of Japan; Blu Shaba, deep blue blending with nuanced shades of green like a malachite from the Shaba region of Congo; Viola Orissa, inspired by the Indian region said to be the birthplace of eggplant; Grigio Aragona, a bridge between the collection's existing browns and grays, inspired by Sicily's mud volcanos; and Rosso Namib, a warm brick red evoking imagery of the red desert of Namibia.

www.fenixforinteriors-na.com

19 FREESTANDING TUB FEATURES MULTI-FACETED TEXTURED SURFACE

Acquabella has released its Stelvio freestanding tub that features a singular textured surface mimicking the intricacy of a multi-faceted diamond or the natural cuts of an iceberg. Stelvio is built to look good from every angle and is crafted from Acquabella's signature Dolotek material, a mineral composite that creates a finish that is smooth to the touch. Dolotek features an easy-to-clean antibacterial surface that is durable and resistant to UV rays and thermal shock. The tub, which measures 66-inches long by 33-inches wide and is 25-inches deep, is available in a snow-white hue with options for a matte or gloss finish.

acqua bella.us



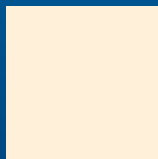
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20 TOUCHUP SCRATCHES ON METAL-PANEL FINISHES

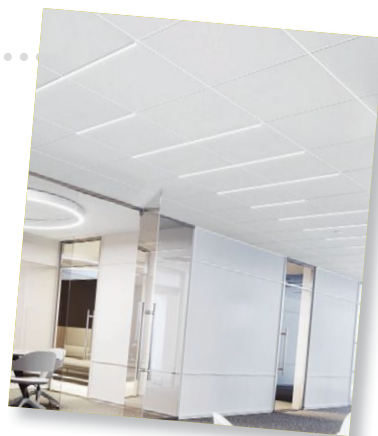
The PAC-CLAD Paint Pen is a convenient way to quickly, neatly and effectively touch up scratches and other damage to the PAC-CLAD finish. Applying PAC-CLAD touchup paint protects the metal substrate and returns a building's architectural metal façade to its intended appearance. The paint pens contain 0.28 ounces of PAC-CLAD paint and can be shipped anywhere. PAC-CLAD paint pens are available for standard colors, which do not include metallic, weathered copper, weathered steel, wood grain or ore finishes. The shelf life of the paint in the pens is one year, and the pen should be stored with the cap tightly secured and in a horizontal position.

www.pac-clad.com

21 CEILING PANELS PROVIDE THREE LEVELS OF SOUND ABSORPTION PLUS SOUND BLOCKING

Armstrong World Industries is increasing education around its portfolio of Total Acoustics ceilings to ensure architects, designers, owners, and managers of buildings of all shapes and sizes are aware of the options that exist for reducing noise and blocking sound from traveling to adjacent spaces. All Total Acoustics ceilings have a Ceiling Attenuation Class of 35 or higher, which delivers effective sound blocking, ensuring confidential speech privacy and sound isolation between adjacent spaces that share the same plenum. Moreover, Total Acoustics offers a wide variety of ceiling material options, including mineral fiber, metal, wood and wood fiber. To help customers select the best product for their project, Armstrong offers a complimentary custom acoustical report and has an NVLAP-accredited acoustical testing laboratory on its campus for quality control. Ceilings with Total Acoustics performance contribute to WELL and LEED and address acoustical design guidelines, including ANSI/ASA S12.60, FGI Guidelines, HIPAA and HCAHPS.

armstrongceilings.com/totalacoustics



22 CUSTOM ATTACHMENT SYSTEM IS SUITED FOR RAINSCREEN APPLICATIONS

Grad Concept USA and Tantimber USA jointly have introduced a custom attachment system for Tantimber's

range of ThermoWood decking and cladding products. The system, custom-built upon Grad's proprietary rail fasteners, enables Tantimber customers to save time and overall installation costs. Sourced from FSC- and PFEC-certified forests, Tantimber decking and cladding products are produced using the Thermowood manufacturing process, transforming the timber into stable and durable finished wood products standing up to extreme environments. The Grad system, introduced to the U.S. market in 2020, includes an award-winning attachment solution for cladding, suited for rainscreen applications. Grad's attachment components are virtually maintenance-free, offering maximum resistance to rot and promoting greater ventilation to help prevent cupping.

us.gradconcept.com, www.tantimber.com/en

23 EXTEND THE LIFE OF ARCHITECTURAL PRODUCTS WITH POWDER COATINGS

Axalta Coating Systems, a supplier of coatings solutions to the architectural and design segment, has launched its latest ICONICA collection of Alesta SD powder coatings as part of an exclusive global line to the U.S. market. ICONICA coatings are based on a super-durable polyester resin system. The collection combines higher-grade pigments and stabilizers with exterior durability that extends the life cycle of architectural projects. ICONICA is compliant with international standards, such as Qualicoat Class 2 and AAMA2604. The collection, which includes 40 finishes, comes with a warranty up to 25 years. The Alesta SD range of powder coatings is solvent- and VOC-emissions-free and produces significantly less hazardous waste compared with solvent-borne coatings solutions.

www.axalta.com





24 FAUCET LINE PAIRS COMMERCIAL CONSTRUCTION WITH AESTHETICS

T&S Brass and Bronze Works, a manufacturer of food-service and commercial plumbing products, has debuted its aesthetic faucet line,

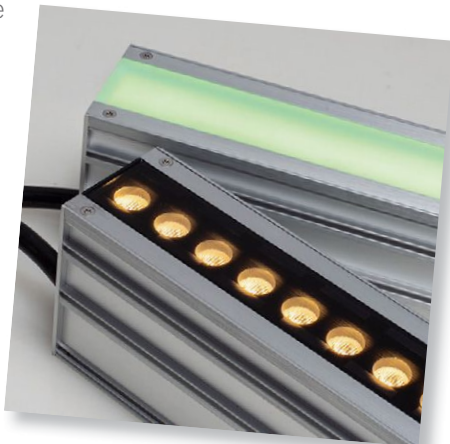
LakeCrest. The line features five designs, including single-lever faucets, a concealed widespread faucet design, metering faucet and a semi-pro kitchen faucet. Offering durability in an elegant modern package, LakeCrest's tapered shape meets the design needs of contemporary office buildings and public facilities. Constructed of stainless steel, the semi-pro kitchen faucet is a light-duty commercial faucet designed for customer-facing applications. The single-handle faucets—with models for single hole and 4-inch-center applications—are available in chrome and brushed nickel finishes.

www.tsbrass.com/brands/lakecrest

25 LIGHTING FIXTURE IS RATED TO BE WALKED AND DRIVEN OVER

Acclaim Lighting has introduced Terra Linear, a durable walk- and drive-over-rated fixture available in eight color options, including dynamic and static white, for long-run architectural lighting applications. Terra Linear has a drive-over rating of up to 6,000 pounds with an anti-slip top coating and anti-theft security screws for use in all public areas. It is available in a standard optic version or a 100 percent frosted glass, direct-view version. The inground linear series is available in 2700K, 3000K, 3500K, 4000K, Dynamic White (2700K-6000K), Quad Spectrum (RGBW, W=3000K), Quad White 4000K and Quad White 6000K. The white version of the fixture produces up to 1400 lumens while the color versions deliver up to 700 lumens. The fixtures offer many beam angles, as well as asymmetric wall wash. They are available in four different output levels, from 20 watts per linear foot to 2.5 watts per linear foot.

acclaimlighting.com/terra-linear



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LIFE SAFETY

Collaborate with the Fire Department During Every High-rise Renovation

I am a retired battalion commander for the New York City Fire Department and frequently speak to firefighters about all topics related to their development. I have gained credibility in the fire service during my tenure and after retirement by pioneering research that has revolutionized fire- and life-safety specific to high-rise buildings.

For example, I established a close working relationship with the National Institute of Standards and Technology. Our first study was to develop effective methods and techniques for smoke management and control in high-rise buildings. (Learn more at bit.ly/46ECU7i.) Our research continued with the study of fire behavior (dynamics) in tall buildings with residential and/or commercial occupancies (www.nist.gov/publications/wind-driven-fires-structures). Our focus has been on the life safety of those that live and work in these buildings, as well as the firefighters called upon for fire suppression, rescue and evacuation.

Instrumental to our research was when Mayor Richard M. Daley of Chicago authorized us to use an unoccupied high-rise building in the city to conduct research with live fire. That particular venture, back in 2006, demonstrated actual fire dynamics in conjunction with methods of smoke management that would prove effective. The project resulted in further research on the specifics of fire dynamics when wind is a factor. When windows fail, a blow-torch-type fire occurs. These types of fires have caused fatalities to occupants and firefighters worldwide. We now have

WRITTEN BY | GERALD TRACY

“

I think it's highly important a relationship be established for **collaboration** between the project team and fire service.

”

developed methods, means and procedures to meet that challenge.

I also co-authored a book, *High-Rise Buildings: Understanding the Vertical Challenges*, published in 2023. In it, a full chapter (chapter 11) examines renovations and alterations in detail. (Check out the book at fireengineeringbooks.com/books/high-rise-buildings-understanding-the-vertical-challenges.)

I have recently lectured about fire safety during retrofits and renovations to the Fire and Life Safety Directors Association (FLSDA) of Greater New York. Those in attendance included those in contracting trade organizations, building owners and BOMA members. I became intrigued with

the subject matter and content *retrofit* presents to those that are planning or in the process of enhancing their properties. *retrofit* provides insight to trends and technology driving change to buildings as they exist. The fire service is compelled to keep pace with this.


My lecture to the FLSDA emphasized the safety factors important to life safety during renovations and alterations and what these attendees should be mindful of during these project enhancements.

I think it's highly important a relationship be established for collaboration between the project team and fire service. The reason is all about life safety during a renovation/retrofit.

The collaboration should begin in the planning stage. The project must be scrutinized on how it will impact the occupied tenant spaces while the work is being performed. For example, can the transportation systems of stairs and elevators be used by the contractors simultaneously with the occupants without impacting their availability? It may be possible to use a service elevator exclusive to the contractors and not impact the passenger elevators. The floors being renovated may require passenger elevators be taken out of service for occupants' safety. An exterior scaffold with an elevator hoist should be erected if interior transport systems are not feasible. Existing transport systems are vital emergency egress points for all occupants (construction floor(s)/tenant spaces) should a fire or emergency occur and when shelter-in-place mode is not an option. Fires and emergencies are

commonplace in buildings while being renovated or alterations are underway (see bit.ly/4a2Uftu). A potential emergency event is a valid reason to include the local fire department in the initial planning stages of a project.

There is the possibility that the local fire department does not provide emergency medical response; then, whatever agency or service available should be included in the planning, as well. Explore what resources are available onsite to fulfill the emergency medical response services with dedicated access to the facility. Providing first responders admittance to the building, particularly the construction floor(s) for familiarization will reveal what resources are available to assist their services and uncover what else may be needed. A fire department site visit can determine the best access for their arrival to expedite emergency services and what building intelligence will be available and exchanged, including the status of building and fire protection systems. In addition, emergency services must have a means to communicate with all building occupants to inform them of the situation, understand occupants' status and provide instructions when warranted.

It is vital to collaborate early with the fire department and emergency medical services to avoid any adverse event during a project that is intended to enhance the building; its infrastructure, including its fire-protection features; and its strength in the marketplace. 



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A HEALTHY FOUNDATION



WRITTEN BY | JODIE CROHN, LEED GA, AND DAVID YATES, AIA, LEED AP

With a mission to eliminate underlying causes of health inequities, transform systems and enable individuals and communities to thrive, Missouri Foundation for Health positively impacts communities across the state. Approaching the end of its lease in a previous location, the foundation selected HOK to design its new workplace closer to the partners it serves. The space needed to align with the organization's core values of equity, integrity, humility and commitment.

PHOTOS: SAM FENTRESS unless otherwise noted

Dormant Urban Properties Are Reimagined as a Healthy Workplace and Community Asset

THE CORNER SITE IN THE CENTRALLY LOCATED AND VIBRANT FOREST PARK SOUTHEAST NEIGHBORHOOD OF ST. LOUIS INCLUDED A 30,000-SQUARE-FOOT ABANDONED IRONWORKS BUILDING AND TWO RESIDENTIAL FLATS.

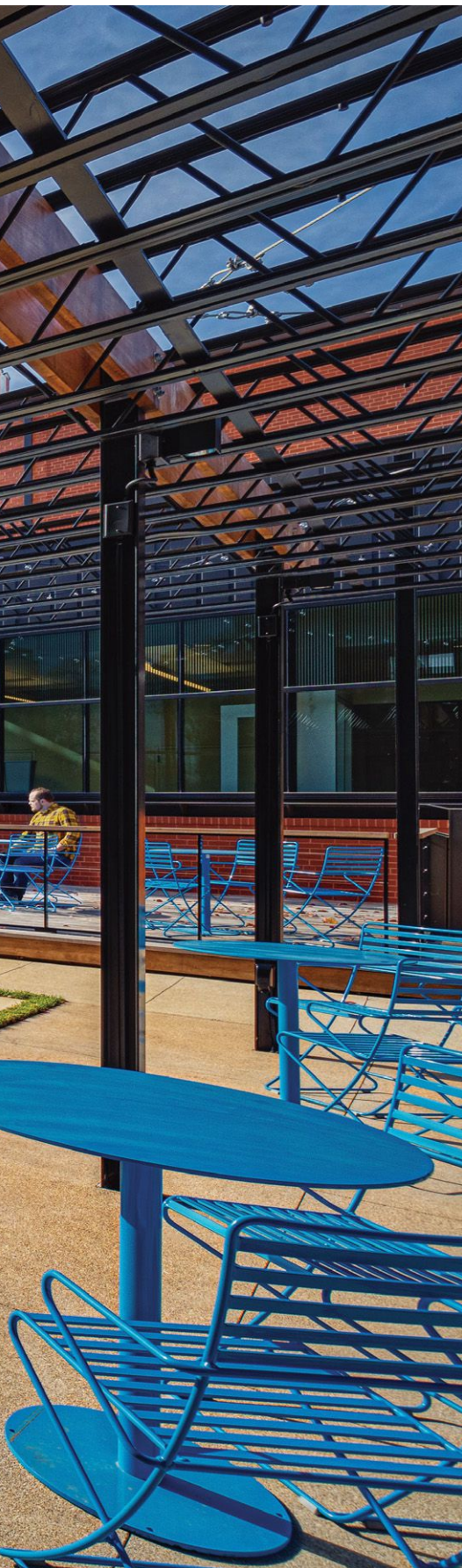
BEFORE

BEFORE PHOTOS: HOK

BEFORE



“ THE SPACE WAS IN ROUGH
CONDITION, BUT THE LEADERS OF
THE FOUNDATION TRUSTED US AND
WERE WILLING TO GO DOWN THIS
PATH WITH US. —Margaret McDonald,
senior principal, HOK ”



Completed in 2022, the foundation's new LEED-certified headquarters in St. Louis brings new life to buildings lost to time and provides a homebase for work happening to help build a more equitable future in Missouri.

REIMAGINING THE SITE

The design team worked with Missouri Foundation for Health to find a site that would allow the organization to grow and offer easy access to partners. The corner site in the centrally located and vibrant Forest Park Southeast neighborhood of St. Louis included a 30,000-square-foot abandoned ironworks building and two residential flats. Starting with dirt floors, debris and crumbling interior walls, HOK renewed the 2.6-acre site into a modern, healthy and resilient workplace that supports the foundation's goals.

"The space was in rough condition, but the leaders of the foundation trusted us and were willing to go down this path with us," explains Margaret McDonald, senior principal at HOK. "It was really a top-down approach to get all staff excited about creating the new campus and moving into one of the communities that Missouri Foundation for Health serves."

Through surveys, one-on-one interviews and workshops, the design team helped the foundation establish its vision for the workplace and prioritize its needs. Foundation employees participated in 12 workshops on topics, ranging from joint-use programming to materials and landscaping, throughout the design process.

Overall, employees wanted the workplace to feel collaborative, be inclusive of employees and the communities they serve, and reflect the foundation's mission. The new campus needed to foster innovation and engagement while providing inspiring and healthy spaces for work. Employees also valued cutting-edge technology to enhance communication and new ways of work.

A CENTRAL COURTYARD WITH FIREPITS AND OUTDOOR SEATING CONNECTS THE THREE BUILDINGS AND PROVIDES A GATHERING PLACE FOR RESPITE AND COMMUNITY OUTREACH EVENTS.

RETROFIT TEAM

ARCHITECT, STRUCTURAL ENGINEER, INTERIOR DESIGN, PLANNING AND URBAN DESIGN, AND SUSTAINABLE DESIGN // HOK, www.hok.com

- Margaret McDonald, LEED AP, principal in charge
- Barb Anderson-Kerlin, AIA, NCARB, LEED AP BD+C, project manager
- David Yates, AIA, LEED AP, project architect
- Jodie Crohn, LEED GA, project designer
- Allison Johnson, AIA, LEED AP BD+C, WELL AP, USGBC, sustainable design leader
- Steven Crang, P.E., SE, LEED GA, structural engineer
- Tom Kaczowski, AIA, LEED GA, lighting designer
- Jeff Davis, PLA, ASLA, landscape architect

MEP/FP ENGINEER // McClure Engineering, mcclureeng.com

CIVIL ENGINEER // Volz Inc., www.volzinc.com

GENERAL CONTRACTOR // HBD Russell, www.russellco.com

MATERIALS

CEILING TILES // Armstrong World Industries, www.armstrongceilings.com

CARPET // Interface, www.interface.com, and Bentley Mills, www.bentleymills.com

FURNITURE FABRICS // Maharam, www.maharam.com

ACOUSTIC PANELS // Zintra Acoustic, zintraacoustic.com

FURNITURE DEALER // Interior Investments, interiorinvestments.com

WORKSTATION FURNITURE // Herman Miller, www.hermanmiller.com

PAINT // Sherwin-Williams, www.sherwin-williams.com

FOLDING PARTITIONS // Modernfold, www.modernfold.com

STOREFRONTS AND CURTAINWALLS // Oldcastle BuildingEnvelope, obe.com

WINDOWS // Marvin, www.marvin.com

WINDOW TREATMENTS // Mecho, www.mechoshade.com

CLAY MASONRY // The Belden Brick Company, www.beldenbrick.com



CREATING A FLEXIBLE WORKPLACE

Missouri Foundation for Health's inclusive design supports different work styles for each person and task. The open-office design divides the former ironworks building along a strong central spine, separating focused workspaces from more collaborative meeting spaces, which also can be used for community events.

"A driving force behind our building concept is that the footprint is roughly twice the area needed for the foundation's workplace program," says Barb Anderson-Kerlin, senior project manager at HOK. "That extra space allowed the foundation to think beyond their depth and provide gathering spaces that can be used by other organizations aligned with the foundation's mission for seminars, workshops and other events."

The variety of gathering spaces in the office encourages communal collaboration and allows people to select the right-sized space for their needs. The gathering spaces, including huddle rooms, conference spaces, open lounges and additional meeting rooms, offer the latest technology to support a high-performance workplace. A pre-function space with moveable walls provides flexibility for meetings and events of different sizes.

More than 40 workstations, 15 private offices and eight focus/phone rooms provide spaces for heads-down work. Strategic grouping of the workstations also promotes productivity and enhances communication.

HOK also designed office space within one of the renovated residential flats on the campus, which is subleased by community groups and non-profits aligned with the

THE FORMER **IRONWORKS BUILDING'S INDUSTRIAL BONES** ARE ON DISPLAY THROUGHOUT THE WORKPLACE. THE PROJECT TEAM RETAINED ALL THE EXISTING BRICK MASONRY AND STRUCTURAL STEEL. THE LOBBY, INTERIOR WALLS AND FURNISHINGS FEATURE RECLAIMED WOOD FROM THE IRONWORKS BUILDING. CONCRETE FLOORS, EXPOSED PIPE AND LARGE INDUSTRIAL LIGHTS ALSO ADD TO THE HISTORIC FEEL.



STARTING WITH DIRT FLOORS, DEBRIS AND CRUMBLING INTERIOR WALLS, HOK RENEWED THE 2.6-ACRE SITE INTO A MODERN, HEALTHY AND RESILIENT WORKPLACE THAT SUPPORTS THE FOUNDATION'S GOALS.





foundation's mission. While the project was underway, the other 3-story residential flat on the northwest corner of campus partially collapsed, deeming it unfit for restoration. To pivot, the project team collaborated with the foundation and the City of St. Louis' Cultural Resources Office to re-create the original flat. This new flat now includes an employee amenity space and a boardroom.

REPURPOSING THE PAST

The former ironworks building's industrial bones are on display throughout the workplace. The project team retained all the existing brick masonry and structural steel. The lobby, interior walls and furnishings feature reclaimed wood from the ironworks building. Concrete floors, exposed pipe and large industrial lights also add to the historic feel.

The re-created residential flat includes 17 unique hand-formed brick shapes and required 3D scanning technology to ensure the design team could match the brickwork on the new building's main façade to its predecessor.

During this process, the project team determined it would be cost-prohibitive to build all three levels of the flat, which were not needed from a programming standpoint. The team built the front façade up to the three levels with a tall ceiling inside on the ground floor. The back half of the building complements the modern design of the revitalized ironworks building next door.

WELLNESS IN THE WORKPLACE

Aligning with its goal to make lasting positive changes in health, Missouri Foundation for Health wanted its new headquarters to be a beacon of sustainability and wellness. The design needed to elevate the health and wellbeing of the surrounding community and all who visit the campus.


Skylights and expansive windows with fritted glazing fill the workplace with daylight, saving energy and connecting employees to nature. To further support employee wellness, HOK's design updated the rebuilt residential flat into an amenity space, complete with a fitness center and yoga studio.

The campus and LEED-certified former

ironworks building create an urban oasis in the compact Forest Park Southeast neighborhood. Employees and visitors pass rain gardens and native landscaping as they enter the foundation's front door. Permeable paving in the parking lot mitigates stormwater runoff while enhancing the green space. A central courtyard with firepits and outdoor seating connects the three buildings and provides a gathering place for respite and community outreach events.

The design team also preserved one of the city's largest pin oak trees on the campus. The site was initially so overgrown with weeds and failing trees that the team did not notice the pin oak. HOK's landscape design team carefully protected the tree, which sits on the campus parking lot. The team used permeable pavers beneath the tree's canopy, giving its root system access to rainwater while allowing the foundation to use the surrounding space for overflow parking during community events.

INVESTING IN MISSOURI'S FUTURE

Through thoughtful restoration and rejuvenation, Missouri Foundation for Health's new campus creates a sense of place for the organization and surrounding community. The 2.6-acre campus, which recently won an Honor Award from the St. Louis Chapter of the AIA, creates a unified space for the Missouri Foundation for Health that supports wellness, inclusivity and resilience. 



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PHOTOS: JMACONOCHIE.COM

INTEGRATED ARCHITECTURE

Grand Rapids, Mich.

► RETROFIT TEAM

ARCHITECT: Integrated Architecture,
www.intarch.com

METAL WALL PANEL INSTALLER: Action Roofing
& Sheet Metal, (616) 846-3827

METAL WALL PANEL SUPPLIER: Oakland Metal
Sales, www.oaklandmetalsales.com

► MATERIALS

A derelict printing plant has been transformed into Integrated Architecture's new headquarters. Of particular note is the care installers of the building's exterior metal cladding took in creating the structure's bespoke corners. Of course, when the client is also the designer, close attention to such finishing touches is an expected part of the job.

Integrated Architecture previously had been located on the outskirts of Grand Rapids but found a need for a more central location. "While our previous location was a unique piece of architecture and served us well for many years, we found ourselves needing a more efficient and flexible workplace

closer to the clients and community we serve," explains Randy Pease, AIA, director of design and a principal with the firm.

The 97-year-old former printing plant had sat empty for a decade. Design work began by targeting elements of the structure the architects wanted to retain. "The building had evolved with a collection of additions and renovations," Pease notes. "The goal was to preserve many of its architectural elements, including large window openings, some of which had been infilled."

The building also needed a more distinctive entry to give it a presence on the street, and the designers opted for a metal wall system for its visual appeal and the possibility its attachment system offered increased insulation. "The ribbed metal-panel system over a deep furring system created an efficient, insulated wrapper for the existing masonry building," Pease says. "The ribbed metal wall panels were used to create texture and shadow for the façade while subtly reinforcing the horizontality of the building."

Working with Action Roofing & Sheet Metal, the

designers opted for corrugated PAC-CLAD HWP wall panels from Petersen. The job posed some challenges for Action Roofing & Sheet Metal's team, starting with those corners.

"There was a lot of learning there because the corners were epoxy-welded," says Dave Metcalf, Action Roofing & Sheet Metal's owner, noting those elements started out as flat pieces that had to be fabricated in the company's shop. "The real trick was to get the corners to look good at eye level."

However, Metcalf had confidence in the panels. "We install a lot of Petersen products," he notes. "PAC-CLAD is a great product. They've set up a great distribution network and they're known as a premium brand. They make it easy; that's how I want it."

The designers and installers are enthusiastic about the finished job. "It's a great example for our clients of adaptive reuse of a building to create a simple, modern workplace," Pease says.

METAL WALL PANELS: Petersen,
www.pac-clad.com

1221 SOUTH CONGRESS AVE. | Austin, Texas

► RETROFIT TEAM

ARCHITECT: Gensler, www.gensler.com

GENERAL CONTRACTOR:

Rand Construction, randcc.com

FRAMING AND DRYWALL CONTRACTOR:

Marek Brothers, www.marekbros.com

► MATERIALS

A new tenant-lease space is grabbing attention in Austin because it has changed the vibe of the building it's in while maintaining the "Keeping Austin Weird" vibe.

Marek Brothers installed 16-gauge 6-inch and 20-gauge 3 5/8-inch Flex-C Trac and 20 gauge 2 1/4-inch Flex-C Angle for the 6,650-square-foot office space for a confidential financial tech firm.

Danny Hogan, estimator/project manager with Marek Brothers, says using Flex-Ability Concepts' products was not part of the original plan. He substituted the products in the specs because of the large amounts of radius walls and furr downs in the office space.

"The install was smooth and easy," Hogan says. "By switching to Flex-C Trac and Flex-C Angle, we had better production time and improved installation accuracy versus snipping standard track."

Flex-C Angle is just like Flex-C Trac except, having only one leg, it easily lets metal framing lay flat over the product. It is well suited for furr downs or other installs where the second leg of the track would interfere with the perpendicular framing components. Flex-C Trac and Flex-C Angle have Flex-Ability Concepts' Hammer-Lock feature, where the Hammer-Lock tabs are hammered into place to embed them into the web and secure the shape of the products. For added strength, self-tapping screws can be embedded into the side of Flex-C Trac or Flex-C Angle.

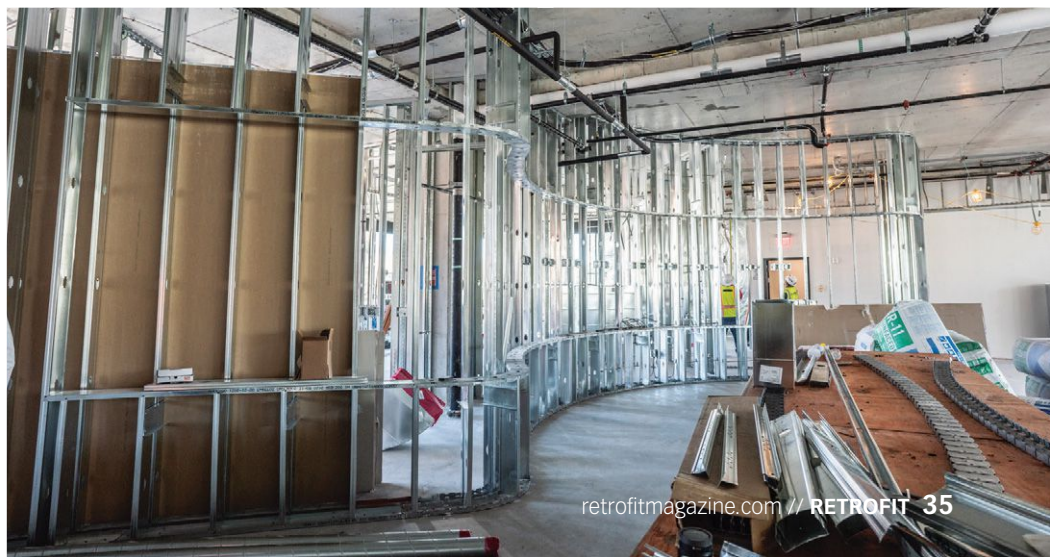
FLEXIBLE FRAMING PRODUCTS:

Flex-Ability Concepts,

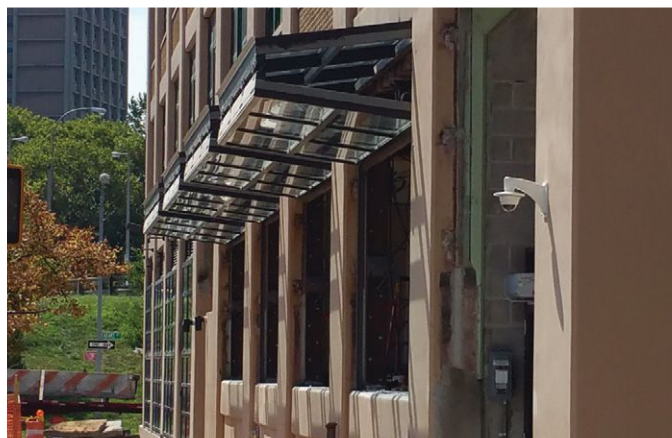
www.flexabilityconcepts.com



PHOTOS: FLEX-ABILITY CONCEPTS



PANORAMA | Brooklyn



» RETROFIT TEAM

ARCHITECT: Zyscovich Architects,
www.zyscovich.com

BIFOLD DOOR INSTALLER: AC Window and Door
 Inc., (929) 344-5528

» MATERIALS

Anchored at the nexus of the Brooklyn Tech Triangle and a thriving art district, Panorama is a five-building campus along the East River waterfront that comprises more than 1.2 million square feet of office, retail and high-tech space. With an efficient floor plate, high ceilings, options for private roof decks and ample natural light, the buildings on the campus are primed for any tenant.

On the ground floor, 10 Schweiss glass designer bifold doors were installed on two of the buildings (eight on one building and two on another). The bifold liftstrap doors range from 20-feet, 5-inches wide to 8-feet, 7-inches wide, and heights range from 13 feet, 5 inches to 9 feet, 4 inches. They are all equipped with top overrides, side latch jiggle switches, electric photo eye sensors and door-base safety edges. Each of the 10 doors have top-drive Leeson motors and exterior-keyed entry switches.

Joe Breuer, project manager for AC Window and Door Inc., which completed all the door and window installation work for the five renovated buildings, says the Schweiss steel doors are nice. "Schweiss had great installation instructions and great

customer service whenever we needed answers for anything. There were a lot of details to work out," he says.

BIFOLD DOORS: Schweiss, www.bifold.com

» THE RETROFIT

The \$100 million overhaul former Jehovah's Witnesses Watchtower has been transformed into a sleek office/retail and high-tech campus complex. Surrounded by 10 colleges and universities, 80 arts and cultural institutions and thousands of new residential units, Panorama is central to the thriving community. The \$100 million overhaul features a gourmet market, pet-friendly spaces, daycare facilities and bicycle storage.



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400 BROAD ST. | Gadsden, Ala.

► RETROFIT TEAM

DEVELOPER/DESIGNER: The Sterling Companies, (256) 547-4407

► MATERIALS

Phillip Carr, president and CEO of The Sterling Companies, changed his renovation plans when he discovered the drab former pawn shop he purchased to house his real-estate management company actually was an ornate historic building from the 1880s. Instead of gutting the structure and constructing plain office space, he decided to restore the building's original grandeur. In a labor of love, he redesigned the interior in a style that honors the building's 19th century origins, brought in a specialty mason to re-create the original brick façade, found an expert to rebuild the 1901 freight elevator and discovered a replacement for the original stamped-metal ceilings—thermoformed ceiling tiles.

The building's stamped metal ceilings were badly rusted and damaged. Only a small, inadequate number of tiles could be reused.

"Tin and copper ceilings are just unbelievably expensive," Carr recalls. After researching options online, he found Ceilume thermoformed tiles. Ceilume makes 40 different patterns of 3D tiles,

including several that closely replicate the look of stamped metal ceilings. Among the color and finish options are three metallic finishes.

Carr selected Ceilume's Empire pattern in a Copper finish for the building's atrium and second-floor hallway. The pattern features a border row of Ceilume's Fleur-de-Lis pattern, also in Copper. The tiles were installed in standard 2- by 2-foot suspension grids, which were painted to match the tile.

The first-floor reception area and connecting hallways ceilings feature Ceilume's Stratford pattern, a low-profile design of concentric squares, in white. The pattern creates a sense of formality reminiscent of coffered ceilings and works well with the fluted moldings around the office doors.

THERMOFORMED CEILING TILES: Ceilume, www.ceilume.com

► THE RETROFIT

Constructed shortly after an 1883 fire that burned much of the downtown area, 400 Broad Street was built by a Prussian immigrant, Herman Herzberg, who fought in the Civil War and then went into the mercantile business. His store operated on the site until 1944. In 1979, the building became a large pawn shop. When Carr purchased the building, his team

discovered the decorative brick front was covered by a flat metal façade and the side and back exterior brick were coated with an inch of concrete. Half of the interior was closed off for storage or abandoned, and the building had been deteriorating slowly. When Carr's team found a photo of the original structure in the collections of the Library of Congress, everyone was amazed at what the building once looked like.

"We said if we were going to do this, we had to do it justice and return it to its original glory," Carr relates. The team removed the metal façade, but discovered the brick underneath the concrete could not be saved. Instead, Carr found a specialty mason to re-create the original brick design in a new layer.

Front glass was restored and expanded on both floors of the building. A new 2-story atrium rises from the main entrance to the second-floor landing/lounge. The two floors are linked by an elegant iron spiral stairway. The upper landing is a lounge area, furnished with pieces reminiscent of the 19th century. Wrought-iron chandeliers light the space. Exposed brick is paired with white formal millwork panels and moldings, set off by dark oak floors. A corridor of office spaces runs down either side of the building, accented with white moldings against taupe walls.



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166 GEARY ST. | San Francisco

» RETROFIT TEAM

ELEVATOR DESIGNER: Unique Elevator Interiors, uniqueelevator.com

» MATERIALS

In San Francisco's upscale Union Square district, 166 Geary Street stands tall with 16 stories of commercial and office spaces. The 1907 building boasts many classic design features, brought to life with modern renovations honoring the building's history. When updating the 100-year-old elevator cab, the designers at Unique Elevator Interiors selected Banker Wire's M33-2 in bronze to put the inner workings of the shaft on display while remaining true to the vintage elegance of the building.

Because of its advanced age, the elevator cab needed a complete overhaul. Unique Elevator Interiors crafted new cab shell walls with Banker Wire's mesh, keeping the original dome to retain the ornamental design. The bronze tones of M33-2 imbue the cab interior with warmth, complementing the star-patterned metal backing of the ceiling's filigreed corners.

"We wanted to see if we could update the design of the cab and still make it look classic," states Duane Bolt of Unique Elevator Interiors. "We knew Banker Wire and their woven wire mesh would be a great fit."

Chosen for its sturdiness and opacity, woven wire mesh pattern M33-2 was built into the frame of the cab, making up the majority of the visible structure. With its 9.2 percent open area, the wire mesh creates a slightly transparent façade, allowing glimpses of the elevator shaft and mechanics beyond. The flat-faced basket weave adds texture to the surrounding walls with glistening highlights and deep shadows.

WOVEN WIRE MESH: Banker Wire, www.bankerwire.com/products/m33-2-architectural-woven-wire-mesh

PHOTOS: BANKER WIRE





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WRITTEN BY | MEREDITH MORTON

POLYISO IN ROOF RETROFITS

PHOTOS: POLYISOCYANURATE INSULATION MANUFACTURERS ASSOCIATION

A Q&A with PIMA President Justin Koscher Underscores the Benefits of Rigid Roof Insulation

Roofs are the often-overlooked superstars of buildings. They are the first line of defense against all types of weather, including heat and cold. As part of a building system, the roof and its insulation are just as important as walls, windows and mechanicals in maintaining comfortable temperatures within a building.

retrofit recently had the opportunity to discuss the benefits of polyiso insulation for roof retrofits with Justin Koscher, president of the Polyisocyanurate Insulation Manufacturers Association (PIMA). The association represents manufacturers of polyiso, raw materials suppliers and businesses that provide testing services to manufacturers, all of whom seek to educate the design and construction industry about the benefits of polyiso.



« **JUSTIN KOSCHER** is president of the Polyisocyanurate Insulation Manufacturers Association (PIMA).

Q: What makes polyiso insulation a popular choice for reroofing projects?

A: As a rigid foam board insulation, polyiso has one of the highest R-values per inch compared to other insulating options, providing excellent resistance to heat transfer. It is also lightweight and widely available in incremental thicknesses, typically ranging from 1 inch to 4 1/2 inches with greater thickness options available. Because of its proven performance and design versatility, building teams can utilize polyiso in a multi-layered system with staggered joints to successfully achieve the desired R-value in their reroofing projects and meet energy-efficiency goals.

Many architects, specifiers and contractors turn to high-density [HD] polyiso roof coverboards to add R-value while enhancing the overall durability of the new roof system. The high-performance solution can help extend the life of a roof assembly by providing a tough, resilient layer for improved wind-uplift resistance, increased impact resistance from construction/service traffic and high compressive strength. HD polyiso coverboards also are lightweight, which means they are easy to maneuver and install.

Q. One of the primary reasons for roof failures is moisture intrusion or ponding water. Can polyiso insulation products help provide a solution?

A. It makes sense that shedding water is generally deemed one of the primary functions of a well-designed roof assembly. But a roof's ability to shed or drain water effectively has less to do with the roof membrane itself and more to do with the overall assembly's ability to control the flow of water and direct it toward proper drainage devices. By employing a tapered roof insulation system, building teams can create slopes in any direction, which can help reduce or nearly eliminate the risk of ponding water. These systems can be particularly effective in retrofit projects that lack proper roof slopes and conditions where achieving the desired slope through structural changes is impractical or cost-prohibitive. The use of tapered polyiso insulation can be incorporated for optimal roof performance.

A code-compliant approach to water management, tapered polyiso insulation systems offer numerous benefits, in addition to providing positive drainage: enhanced thermal performance to meet energy-code requirements, versatility, customization to accommodate project-by-project complexity and compatibility with other roof system components.

» **MANY ARCHITECTS**, specifiers and contractors turn to high-density polyiso roof coverboards to add R-value while enhancing the overall durability of the new roof system.

Q. What are the energy-code requirements for reroofing projects? Are there benefits to code-compliant roof upgrades?


A. Current energy codes require that new roofing systems—whether installed on new or existing buildings—meet the minimum R-value requirements for the building thermal envelope. This means that if the local codes require roof systems of newly constructed buildings be a minimum of R-25, the systems installed as part of roof replacements also need to meet that criterion. Although the required R-value primarily depends on climate zones and local code adaptation, base values generally range from R-25 to R-35.

In the same vein, reroofing projects that use high-performance insulation can help design teams enhance the energy efficiency of a building envelope and, in turn, reduce its carbon footprint. The quantitative benefits of energy-efficient roof replacements are highlighted in a recent study commissioned by a coalition of insulation trade associations, including PIMA. (Read the study at www.polyiso.org/page/InsulationSavingsExistingBuildings.) For example, the study found that over a 30-year service life, simple building envelope insulation upgrades can offset emissions associated with 40 percent of total natural-gas-fired generation in the U.S. The study's findings underscore the potential of utilizing proven polyiso solutions, like HD coverboards and tapered insulation systems, in reroofing projects to meet energy-code requirements.

» **A RECENT STUDY** commissioned by a coalition of insulation trade associations, including PIMA, found that over a 30-year service life, simple building envelope insulation upgrades can offset emissions associated with 40 percent of total natural-gas-fired generation in the U.S.

Q. What about the environmental impacts of polyiso? Are there resources available that share more details?

A. Yes, PIMA maintains third-party verified, ISO-compliant Environmental Product Declarations, or EPDs, that provide industry-averaged environmental impact information for polyiso roof insulation, HD polyiso coverboards and polyiso wall insulation manufactured across the U.S. and Canada. These cradle-to-grave reports cover the full product life cycle of polyiso insulation over a 75-year building service life as specified in the Product Category Rule for thermal insulation. They include environmental impacts from the supply and transport of raw materials, as well as the manufacturing, transportation, installation, replacement (in the case of roofing materials) and disposal of polyiso products.

In particular, the EPD specific to roof insulation boards covers polyiso roof insulation manufactured with glass reinforced facers and polymer-bonded coated glass facers at specific product thicknesses. The report includes an analysis that explains how the environmental impacts from the manufacturing process are quickly recouped through building energy-use savings when polyiso is installed on existing buildings as part of a roof replacement project. It also illustrates how by utilizing environmentally conscious and high-performing polyiso insulation products, building teams can champion energy requirements and meet sustainability benchmarks. 



» **LEARN MORE**

To read more about polyiso and its benefits, visit the Polyisocyanurate Insulation Manufacturers Association's website at www.polyiso.org.

A VIEW ON CLASS-A REPOSITIONING

A New Rooftop Terrace on an Existing Boston Building Attracts Prime Tenants

WRITTEN BY | BRENT D. ZEIGLER, AIA, IIDA

Prior to the pandemic, the most talked-about issue in workplace-related professions and the office property management community was the debate swirling around open office plans, following a controversial Harvard study. (Read the study at www.hbs.edu/news/articles/Pages/bernstein-open-offices.aspx, and Dyer Brown & Associates' response at www.fastcompany.com/90218754/in-defense-of-open-offices.)

Now the discussions start from an entirely different viewpoint, centering on whether offices are still needed at all (for the record: they are) or how vacant properties can and should be converted to other uses, like affordable housing or research science. These are important discussions, and conversions are definitely needed in some markets where Class-A vacancies remain at all-time highs. Yet a majority continue to recognize the importance—for productivity and on-the-job satisfaction—

of employees coming together in a shared workplace for collaboration and inspiration.

Savvy property owners are working hard to get out in front of this issue, realigning their portfolios to help high-value tenants strike the proper balance for a hybrid workforce. Striving to make the office an attractive, even irresistible, place to do one's work by introducing upgrades to shared and en suite amenities has the effect of encouraging people to come back to the office, which in turn drives rental rates and lease sizes upward. Partnering with workplace strategy experts on investments in cost-effective, impactful amenities packages results in comfortable, healthy and productive workplaces that appeal to tenant firms' employees and support company culture and workflow.

One example of this type of repositioning revitalized 116 Huntington Avenue in Boston for owner Columbia Property Trust. The redesign combined "good neighbor" exterior renovations with a vibrant double-height lobby, revitalized elevator core, restroom upgrades, a complete overhaul of the two-floor penthouse suite interior, as well as two enviable rooftop terrace installations.

THE 'GOOD NEIGHBOR'

Built in the 1980s, the 271,000-square-foot Class-A office property in downtown Boston's historic Back Bay district required attention inside and out to fully deliver on the promise of its location and locally iconic wedding-cake-style architecture. Columbia Property Trust enlisted frequent collaborator Dyer Brown & Associates to lead the project based on one of the firm's unique service areas: its Asset Design + Support studio, which provides on-call architecture and design services to owners, developers and property managers who want to increase the appeal of their properties to optimize their value and minimize vacancies.

As a multi-city owner of top office buildings, Columbia Property Trust knew that with the right strategic redesign to enhance the property's cachet, the 15-story Huntington building could be a high-performing asset competing ably for prestigious tenants. The architecture already included unique features, like the one-of-a-kind penthouse oculus window and the possibility of rooftop terrace access. Columbia Property Trust's stated goal was to modernize the somewhat dated aesthetics and architecture to realize a simple,

« **THE OWNER OF 116 HUNTINGTON AVENUE** knew it could be a high-performing asset competing ably for prestigious tenants. The architecture already included unique features, like the one-of-a-kind penthouse oculus window and the possibility of rooftop terrace access.



PHOTO: COURTESY DYER BROWN & ASSOCIATES



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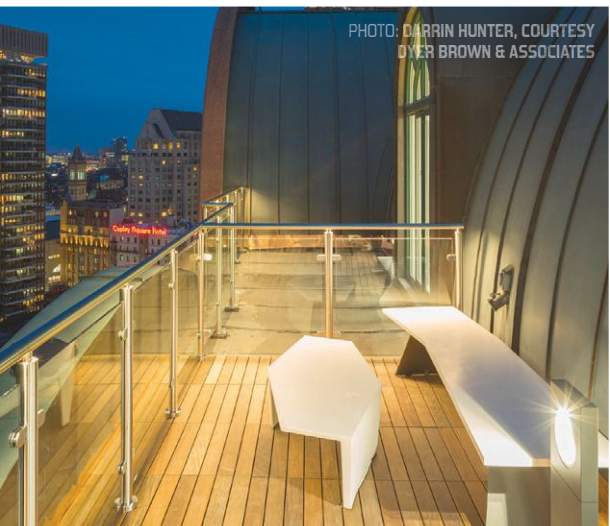


PHOTO: DARRIN HUNTER, COURTESY DYER BROWN & ASSOCIATES



PHOTO: DARRIN HUNTER, COURTESY DYER BROWN & ASSOCIATES

RETROFIT TEAM

ARCHITECT AND INTERIOR DESIGN //

Dyer Brown & Associates,
www.dyerbrown.com

OWNER/DEVELOPER //

Columbia Property Trust,
columbia.reit

GENERAL CONTRACTOR

// Shawmut Design and
Construction,
www.shawmut.com

STRUCTURAL ENGINEER

// McNamara Salvia
Structural Engineers,
www.mcsal.com

MEP ENGINEER // WB

Engineers + Consultants,
wbengineering.com

PROGRAM MANAGER //

Redgate, redgate-re.com

ARCHITECTURAL

MILLWORK // Walter A.

Furman Co.,
www.walterafurman.com

clean image and more effective, appealing workspaces. Importantly, firm representatives wanted to focus on the street-level experience of the building to improve interactions with pedestrian traffic and overall make 116 Huntington a “good neighbor,” perceived as enhancing the neighborhood.

As project architects, Dyer Brown began to assess the property to determine the highest-impact, most cost-effective approaches and helped assemble a seasoned project team to execute the plan: project manager Redgate, general contractor Shawmut Design and Construction, and structural engineer McNamara Salvia Structural Engineers, among others.

FOCUS ON AMENITIES, SHARED SPACES

The 2-story penthouse suite certainly stands out as the centerpiece of the redesign, embodying the owner group’s hopes for the project. For example, the design team focused on making the best of the building’s available natural light, which led to an aggressive effort to recapture interior access to the distinctive oversized oculus window, a hallmark feature of

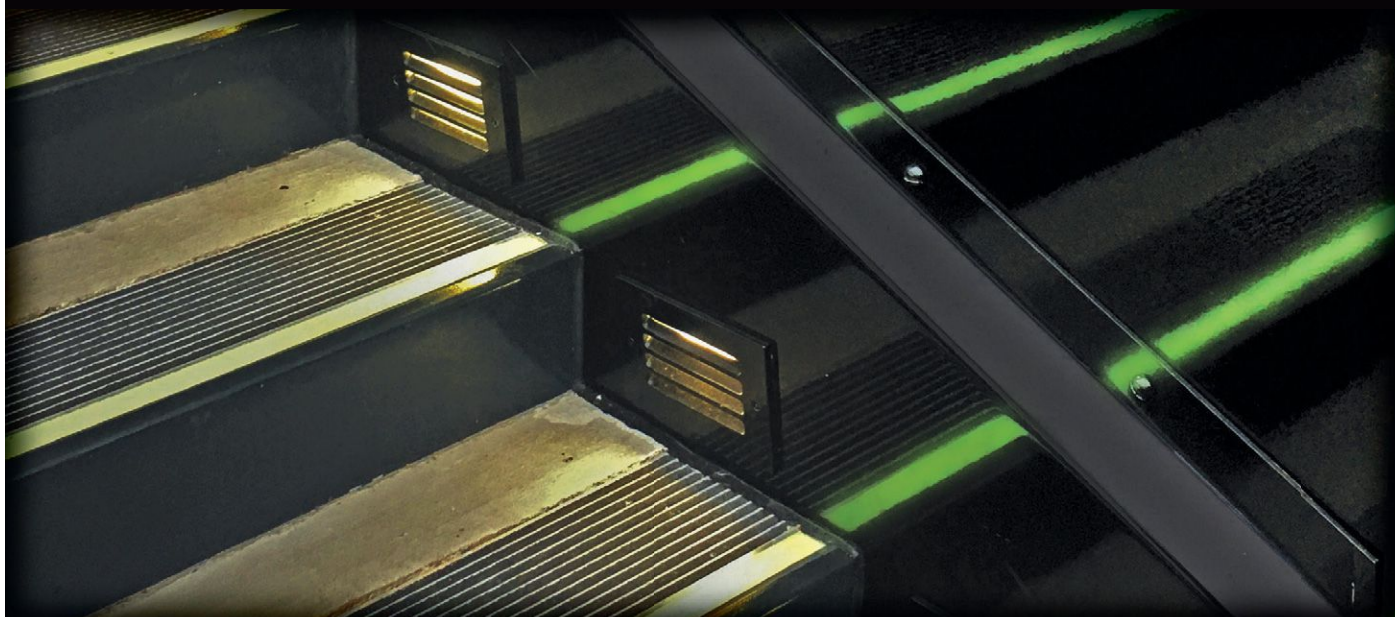
116 Huntington’s architecture.

For the double-height volume inside the oculus, Dyer Brown proposed a grand stair to connect the two penthouse floors, presenting landings for enjoying sunshine and spectacular views of the Prudential Center, the Back Bay neighborhood and the Charles River beyond it. The Asset Design + Support team also recommended opening up the penthouse office space and making it brighter with a palette of finishes in neutral colors, plus wood for warmth and brass accents.

A standout feature of the suite is exclusive access to two outdoor roof terraces, totaling more than 1,500 square feet. As architects for the project, Dyer Brown was tasked with making the terraces not only safe and accessible but appealing. The design team specified wood decking for its beauty and durability, designed new custom glass railings, and furnished the terraces with comfortable bench seating for relaxing and taking in views. The terraces offer a vibrant setting, adding an exclusive amenity for prospective penthouse tenants looking for a breathtaking, bespoke office environment.

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The repositioning effort also featured upgrades of shared amenities and public spaces throughout the building, including new finishes and flooring in elevators, lobbies and corridors, while public restrooms were updated with a simple, clean aesthetic to complement that of the rest of the building. Most notably, the front entrance and lobby were completely redesigned to present a new image of 116 Huntington to passersby.

AN EMBRACING PRESENCE

Previously the lobby featured a heavy, coffered arched ceiling that lacked the intended sense of space and grandeur. Dyer Brown's design removed and raised the ceiling to create a soaring volume of white finishes and recessed lighting with the rear wall finished in rich wood and brushed metal panels, surrounding the old familiar arch that remains over the elevator banks, and a new sculptural ceiling installation overhead. To further engender the building's new image, the entry façade was removed and replaced with a 25'-by-25-foot curtainwall of frameless structural glass, creating the welcoming effect of greeting

visitors and tenants with an unimpeded view of the updated interior while helping to flood the lobby with natural daylight.

Outside, the project team took care to fashion a welcoming experience for pedestrians and street traffic, renovating the exterior arcade to connect the building lobby visually to its surroundings and wrapping the building's first two floors in bronze panels with a new exterior lighting system, setting it apart from its neighbors and enhancing the neighborhood's metropolitan vibe.

For Columbia Property Trust, the acquisition of 116 Huntington Avenue held enormous promise with its convenient Back Bay location surrounded by shopping, hotels, transportation and world-class dining options. Contributing to the transformation of the building from a familiar Class-A workhorse to a striking and beloved neighborhood icon was a great privilege. And for those owners and developers who see the potential in a rooftop to become a distinctive urban amenity, based on the success of 116 Huntington, Dyer Brown highly recommends investigating the possibility. 

MATERIALS

STONE ON RECEPTION DESK AND LOBBY FLOORING //

Stone Source,
www.stonesource.com

EXTERIOR LIGHTING // USAI

Lighting, www.usalighting.com;
Gotham, gothamlighting.com;
acuitybrands.com; Elliptipar,
www.thelightingquotient.com;
and LED Linear,
www.ledlinearusa.com

ROOF TERRACE WOOD DECKING // Bison Innovative Products, bisonip.com

ROOF TERRACE GLASS RAILINGS // Ipswich Bay Glass, www.ibglass.com

ROOF INSULATION // BASF, www.basf.com

ROOF MEMBRANE // Elevate, www.holcimelevate.com

FRAMELESS STRUCTURAL GLASS CURTAINWALL // W&W Glass, www.wwglass.com



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WRITTEN BY | LISA BOQUIREN

An Architecture Firm's New Office Inside a Former Industrial Building Makes the Case for Adaptive Reuse

PHOTOS: MATTHEW MILLMAN unless otherwise noted

“ We had to sandblast decades of paint and industrial residue to reveal the inherent beauty of the old space, which then provided our canvas,” notes William S. Duff Jr., AIA, founder and managing principal of William Duff Architects (WDA), of his firm's new office inside a former light-industrial building on the western part of San Francisco's South of Market (SoMa) neighborhood, or West SoMa.



Founded in 1998, the architecture and design firm has almost always been located in SoMa—where some of the city's most significant new construction projects of the last 30 years are located. In East SoMa, near the Embarcadero waterfront, these new buildings include luxury residences, such as 181 Fremont, Mira, and Yerba Buena Lofts (designed by Heller Manus, Studio Gang, and Stanley Saitowitz with Natoma Architects, respectively).

In Central SoMa—the cultural and civic core of the neighborhood and within a short walking distance from Union Square—built projects include the Moscone Center Expansion (SOM with Mark Cavagnero), Jewish Contemporary Art Museum (Studio Daniel Libeskind), SFMOMA (Snohetta with EHDD), Yerba Buena Center for the Arts (Fumihiko Maki) and the Museum of the African Diaspora (the late Philip Freelon).

West SoMa, on the other hand, is where the existing building stock, some of which dates back to the late 19th century, tells the story of SoMa's past—as a tent city for prospectors during the Gold Rush era and a neighborhood for working-class immigrants after the 1906 earthquake and retired shipyard workers in the mid-20th century. Since the start of the 21st century, West SoMa is a destination for technology startups and technology workers.

When WDA leadership decided to relocate their office from

leased space to their own building while remaining in West SoMa, William Duff and the rest of the team knew with few opportunities for a new build in the area, the adaptive reuse of an existing building would be their most viable option.

“Adaptive reuse allows us to give new life to old buildings that have character and good bones,” explains Principal David K. Plotkin, AIA, LEED AP, NCARB, the project lead. “From a design standpoint, we find it very alluring to celebrate a building's original architecture, then juxtapose it with modern design.”



▲ **BEFORE BECOMING WDA'S OFFICE**, 1275 Folsom Street, which likely was constructed after the 1906 earthquake, had housed a variety of light-industrial businesses—an ornamental iron shop, ice machinery shop, a printing press and commercial flooring store.



▲ **SIXTEEN5HUNDRED**, the lighting designer, provided expertise to illuminate the bowstring truss ceiling without any visible conduit or exposed wires.

DUE DILIGENCE

WDA found its historic canvas on which to layer a modern aesthetic at 1275 Folsom Street. The property was developed in the 1800s though the current building was constructed likely after the 1906 earthquake and fire (charred wood was discovered during excavation for the new foundation). Over the years, the building has housed a variety of light-industrial businesses—from an ornamental iron shop, ice machinery shop and a printing press to a commercial flooring store.

It is along a major thoroughfare undergoing transformation: A streetscape and public infrastructure project is underway to support Folsom Street's evolution into an aesthetically pleasing and safe corridor for pedestrians, bicyclists and motorists. The proximity to public transit is important, as Duff puts it, to "enhance our staff's ability to commute."

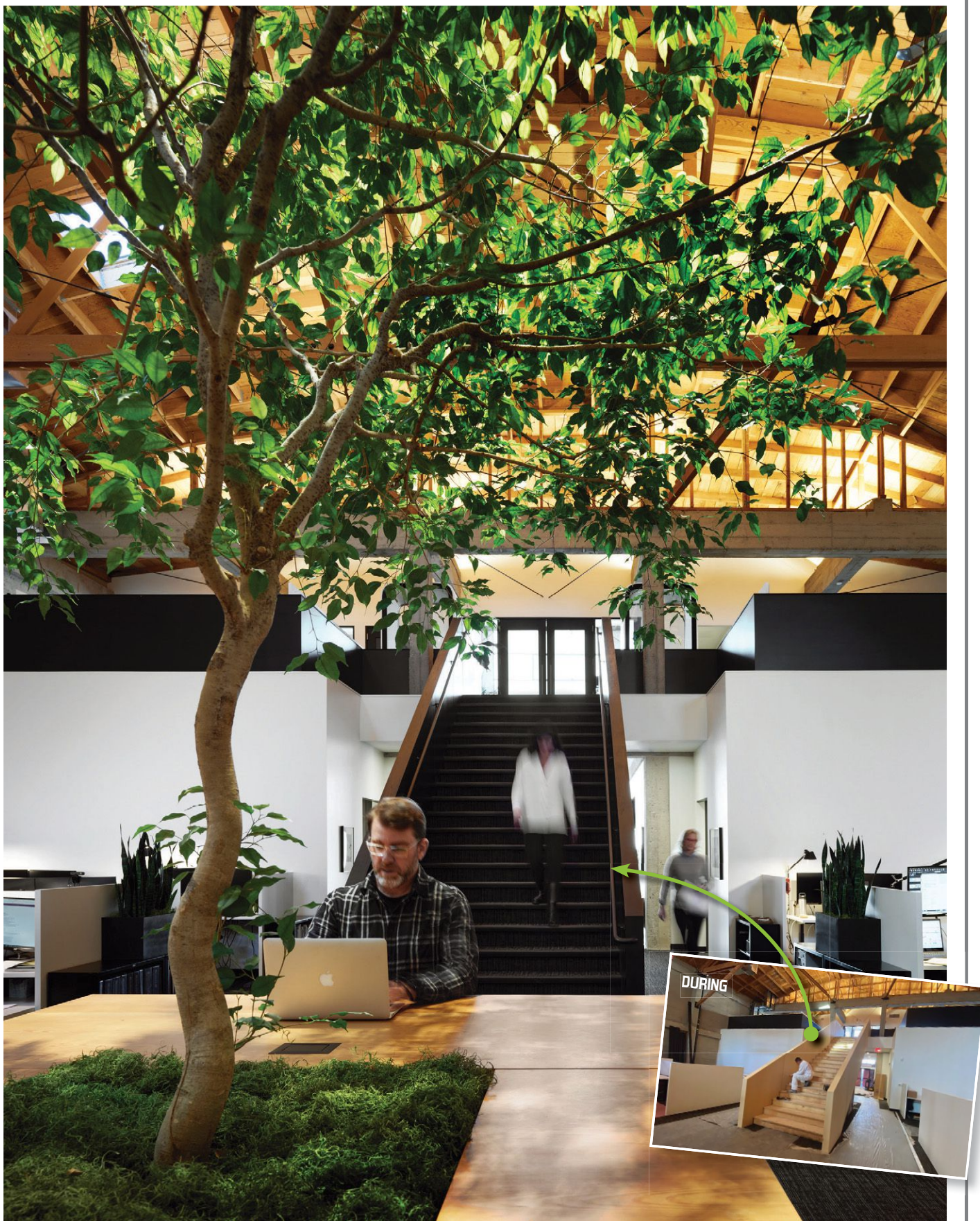
Duff adds that the building checked off the rest of the WDA team's wish list, including, "a large volume of space with natural materials that we could highlight;

access to outdoor space, fresh air and natural light; and a significant street frontage, so we could have more of an integral presence within the community."

For Duff, among the most challenging aspects of an adaptive-reuse project was the big picture. One part involved "working with jurisdictional agencies so they could better understand how a change-of-use would benefit not only the building itself, but also the surrounding neighborhood".

Through its long-standing Commercial Practice, WDA understood the other part of the big picture early. "It's important to do due diligence before you purchase a building," states Plotkin, who previously headed the Commercial Practice. "You should understand what the investment could be. Structural upgrades, a seismic

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FROM A DESIGN STANDPOINT, WE FIND IT VERY ALLURING TO CELEBRATE A BUILDING'S ORIGINAL ARCHITECTURE, THEN JUXTAPOSE IT WITH MODERN DESIGN.



—David K. Plotkin, AIA, LEED AP, NCARB, principal, William Duff Architects

■ Retrofit Team

ARCHITECT AND CLIENT // William Duff Architects/WDA, wdarch.com

GENERAL CONTRACTOR // EVOLV, evolvconstruction.com

STRUCTURAL ENGINEER // Holmes, www.holmes.us

MEP CONSULTANT // Interface Engineering, interfaceengineering.com

GEOTECHNICAL ENGINEER // Rockridge Geotechnical, www.rockridgegeo.com

LIGHTING CONSULTANT // Sixteen5Hundred, 16500.com

ART CONSULTANT // Laura Grigsby Art Consulting, lauragrigsby.com

MILLWORKER // Michael Dotter

■ Materials

WORKSTATIONS // Haworth, www.haworth.com

CARPET // Patcraft, www.patcraft.com

SHADES // Mecho, www.mechoshade.com

BREAKROOM CABINETS // IKEA, www.ikea.com

BREAKROOM COUNTERTOP // Da Vinci Marble, davincimarble.com

CONFERENCE ROOM CUSTOM TABLE // Northwood Design Partners, northwooddp.com

FANS // Big Ass Fans, bigassfans.com

RESTROOMS // Kohler, www.kohler.com

SHOWER // Best Bath Systems, bestbath.com

STOREFRONT // Arcadia, arcadiainc.com

LIGHTING // ERCO, www.erco.com, and dweLED from WAC Lighting, www.waclighting.com

APPLIANCES // Panasonic, www.panasonic.com; KitchenAid, www.kitchenaid.com; Bosch, www.bosch-home.com; and Insinkerator, insinkerator.emerson.com

PAINT // Dunn Edwards, www.dunnedwards.com, and Benjamin Moore, www.benjaminmoore.com

retrofit, ADA accessibility and other updates could be required by code, especially if you are applying for a change-of-use permit."

The building at 1275 Folsom was constructed for manufacturing, so systems and utilities—power distribution, data setup, HVAC—were upgraded to service office use. Interface Engineering, the MEP consultant, worked closely with WDA to redesign the mechanical system. WDA specified energy-efficient cooling and heating equipment, along with a more efficient state-of-the-art MERV 13-rated mechanical system for air circulation, independent fresh-air intake for all conference rooms, and improved insulation and seals at walls and openings, resulting in a workplace that provides occupant health and comfort and supports the Well Building Standard.

CREATING THE WORKSHOP

Along with addressing these adaptive-reuse requirements, WDA was able to bring to life its design vision for what Duff describes as "an architecture workshop."

On the building's exterior, a simple side door was removed to bring the façade back to its original symmetrical form. Exterior blade signage features WDA's new logo, part of a rebranding effort the firm accomplished concurrently with moving into its new office. Flanking the street-level entrance and lobby, and creating visual engagement with the street scene, are an office café and a large conference room with expansive, street-facing windows. Duff notes, "The programming in front of our building is more activated now than it was during its prior use as a retail shop and warehouse."

Inside, past the entrance and lobby, the 7,200-square-foot space expands to double-height and a natural-light-filled open floor plan. The original ceiling and bowstring truss structure were sandblasted and juxtaposed with modern elements, such as a neutral palette of black, white

► THE TEAM MADE SIGNIFICANT


EFFORTS to reuse the elements of the existing shell and concrete as efficiently as possible. For example, the original ceiling and bowstring truss structure were sandblasted and are visible.

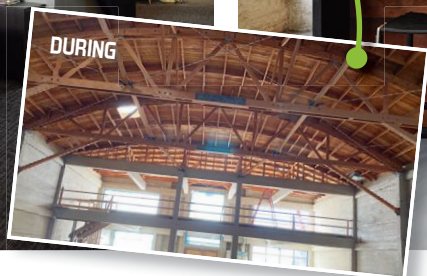
and accented gray. Located on axis with the entry lobby and a tree-anchored central gathering area, a new statement staircase in black leads to a spacious mezzanine.

Other areas for gathering, working and meeting abound, including a materials library, print room with more space to lay out plans, two smaller conference rooms and two private phone booths. Amenities include wellness and breakrooms; well-appointed restrooms; indoor bicycle parking next to a shower; a rear deck that connects with the outdoors, accessed through a large rollup door; and an art program curated by art consultant Laura Grigsby.

Sixteen5Hundred, the lighting designer and vendor, provided expertise to help WDA illuminate the office without visible fixtures. For example, the bowstring truss roof is illuminated without any visible conduit or exposed wires.

The WDA team worked with Holmes structural engineers on significant efforts to reuse the elements of the existing shell and concrete as efficiently as possible. When part of the existing framing had to be taken down, the joists were reused to expand the mezzanine, and repurposed by Millworker Michael Dotter for cabinetry and countertops in the café.

WDA's office offers a modern, hybrid-style work environment—a place Duff describes as "a space for serendipitous exchange among staff and relaxed conversations with clients." The purposefully outward-facing adaptive reuse of the building is also a boon for this part of West SoMa. Duff observes, "Since we've moved in, we've seen growth within the design community in our neighborhood and we anticipate seeing more in the future." 



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Thinking Outside the (BIG) Box

Lackluster Retail Shells Can Be Reimagined as Vibrant Workplaces

WRITTEN BY | LENA KITSON, IIDA, NCIDQ, LEED AP, AND DEANNE ERPELDING, IIDA, CID, NCIDQ

Propelled by historic-preservation laws and our deep connection to spaces with cultural value, adaptive reuse of older buildings is thriving with many early 20th century department stores morphing into enviable office and residential buildings. But what about the other end of the spectrum—former big box stores from the last few decades that lack ornate details or antique character? What value do we assign to buildings that do not carry historical significance but have surpassed their intended use?

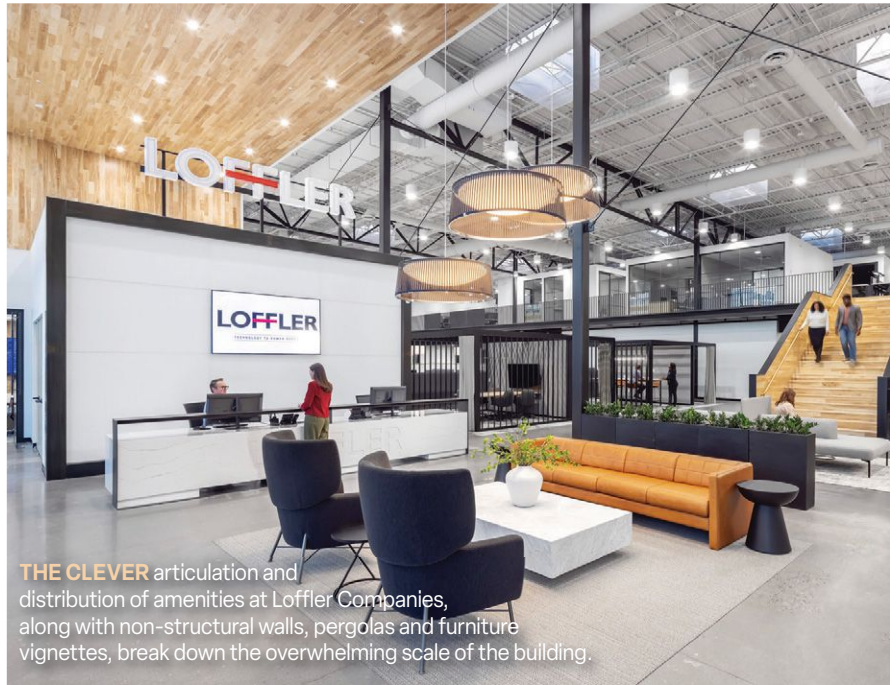


For one, these stark, expansive spaces can elicit endless possibilities, much like a blank canvas. With brick-and-mortar retail evolving rapidly, they are also plentiful, making the reasonable cost and frequent availability an economic advantage, along with the already built-in assets, like parking lots and loading docks. Often located in first-tier suburbs, these conversions can be attractive workplaces for those who live outside the city, providing an

easy commute and the perks of an urban office. Most importantly, in the words of Carl Elefante, former president of the American Institute of Architects, "The greenest building is the one that already exists." Carbon emissions from adaptive-reuse projects are drastically lower than ground-up construction projects, making retail-to-office conversions a good choice in support of sustainability goals.

As investors and designers explore the

A FORMER SAM'S CLUB in the Minneapolis suburb of St. Louis Park now is home to Loffler Companies. Focusing on the horizontality of the building, the design team created zones of communal environments while keeping a cohesive visual feel akin to an internal campus.



THE CLEVER articulation and distribution of amenities at Loffler Companies, along with non-structural walls, pergolas and furniture vignettes, break down the overwhelming scale of the building.

Loffler Companies

■ Retrofit Team

ARCHITECT // Gensler, www.gensler.com

- Bill Baxley, principal-in-charge/design principal, architect
- Steve Bieringer, design manager
- Brooke Smalley, designer

GENERAL CONTRACTOR // Crawford Merz, crawfordmerz.com

MEP ENGINEER // Emanuelson-Podas, epinc.com

STRUCTURAL ENGINEER // ERA Structural Engineering, www.eraeng.com

MILLWORK // St. Germain's Cabinet Inc., stgermainscabinet.com

■ Materials

CARPET // Saveur from Tarkett, commercial.tarkett.com

CAFÉ COUNTERTOPS // Woodcroft from Cambria, www.cambriausa.com

RECEPTION DESK // Ella from Cambria, www.cambriausa.com

RECEPTION LOFFLER SIGN // Archetype, archetypesign.com

WOOD STAIRS AND CEILING // Natural Ash from Nydree, nydreeflooring.com

CEILING BAFFLES // Slab from Turf, turf.design/products/slab

GLASS OFFICE FRONTS // Teknion, www.teknion.com

TRELLIS MEETING ROOMS // Pergola from Haworth, www.haworth.com

WORKSTATIONS // Teknion, www.teknion.com

process of transforming big box stores into vibrant workplaces, there are several major considerations that must be addressed to achieve successful results. From thinking about mechanical systems and lighting to examining how the office can support workers' wellbeing, these conversions must elevate big box spaces from cavernous buildings for products and transactions to inspiring and efficient workplaces.

Existing Conditions

The first consideration is the most obvious: converting big box stores requires an in-depth evaluation of the existing infrastructure, examining each element within the framework of the space's new function as a modern office. Mechanical, electrical and plumbing will likely need to be improved during the transition, and the building will need to formally change from a mercantile to a business occupancy, following local ordinances and zoning requirements.

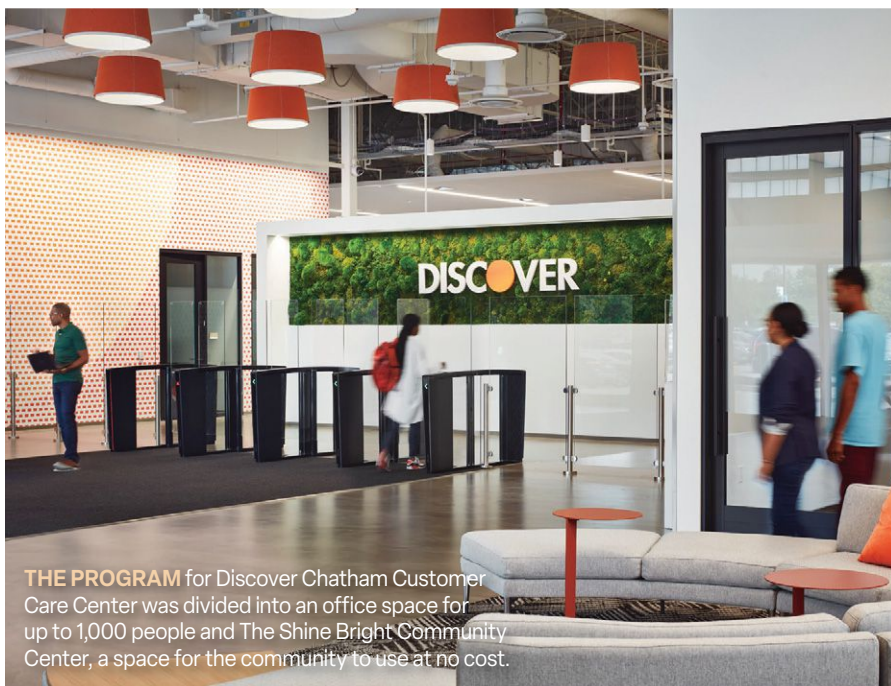
As an example, Discover Chatham Customer Care Center and Shine Bright Community Center serve as a pipeline for new jobs and multi-generational change in a community that has struggled during the last decade with little economic growth, few job opportunities, and a lack of public

amenities. This significant resource, located on Chicago's South Side, began by reawakening a shuttered Target store and recasting it as a symbol of opportunity.

The building needed extensive infrastructure upgrades as a first step in its metamorphosis, clearing a path for a dynamic design and brand presence. Plumbing fixtures were in extreme deficit and required an overhaul, including increasing the sanitary connections for the influx of people working and visiting Discover Chatham daily. All the electrical panels in the 120,000-square-foot space had to be relocated to facilitate the new technology needed, which was greater than a typical office. The land surrounding the building and the large parking lot also went through numerous adjustments, revamping the entire parcel, in addition to the building. Although many of these modifications to the infrastructure are not visible or obvious in the final design, they are vital to the building's revamped life cycle and use.

Volume and Openness

Another key consideration for converting a big box store is understanding how to shift the vast volume of space innate to the building type into a more human-scaled, welcoming office space. Designers



THE PROGRAM for Discover Chatham Customer Care Center was divided into an office space for up to 1,000 people and The Shine Bright Community Center, a space for the community to use at no cost.

must carefully plan architectural interventions that can work within a voluminous big box shell, balancing dramatic moments with more intimately scaled vignettes. An open plan with creative features for meetings and specialty spaces is ideal for flexible design elements, like moveable walls and modular furniture. Located in the first-ring Minneapolis suburb of St. Louis Park, Loffler Companies successfully renovated a purpose-built static retail space during the pandemic, transforming it into a Class-A flexible workplace, meeting local codes, while on a tight timeframe and modest budget. Utilizing the volume of a former Sam's Club, the non-traditional asset conversion allowed for an approach that was free from the conformity of conventional commercial office buildings.

Focusing on the horizontality of the building, the design team created zones of communal environments while keeping a cohesive visual feel akin to an internal campus. The clever articulation and distribution of amenities, along with non-structural walls, pergolas and furniture vignettes, break down the overwhelming scale of the building. A second level with open catwalks divides the space vertically, adding lofted square footage without sacrificing the open feel of the space.

Stairs jag between the two levels in a bold, diagonal gesture, and floor-to-ceiling stadium seating, where Loffler Companies' full staff can gather, further emphasizes the height of the space.

Natural Light

Although a deep floor plate and lofty ceilings are advantageous for an office, most big box conversions start off windowless. Therefore, bringing natural light into the interior is a top design driver to consider. In addition to reducing electrical costs, natural light positively affects workers' health by regulating circadian rhythms, increasing energy and productivity, and providing a connection to the outdoors.

The Discover Chatham conversion lacked access to daylight. Adding large windows to the façade brought in the natural light needed for the office space while adding visual interest to the exterior. Courtyards were cut into the large volume of space, directing light and fresh air further into the floor plate. These green spaces also created safe, communal outdoor areas for employees to enjoy during the three shifts of work that take place in this building.

Similarly, Loffler Companies made adjustments to the building's shell, adding south-facing glazing that brings daylight



PHOTOS: KENDALL MCCAUGHERTY, DESIGN BY GENSLER

Discover Chatham Customer Care Center and Shine Bright Community Center

■ Retrofit Team

ARCHITECT // Gensler, www.gensler.com

- Kimberly Zeiser, design manager
- Christine Dumich, design director
- Stephanie Birner, project architect

ARCHITECT // Brook Architecture, brookarchitecture.com

GENERAL CONTRACTOR // Reed Construction, reedcorp.com, and Brown & Momen Inc., brownmomen.com

AUDIOVISUAL // AVI-SPL, avispl.com

LIGHTING // CharterSills, www.chartersills.com

MEP/FP ENGINEER // ESD, www.esdglobal.com

CIVIL ENGINEER // V3 Companies, www.v3co.com

LANDSCAPE ARCHITECT // Site Design Group, www.site-design.com

LANDSCAPE AND PAVER CONTRACTOR // Twin Oaks Landscaping, www.twinoakslandscaping.com

MILLWORK // Amberleaf Home, www.amberleafhome.us

■ Materials

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ACOUSTIC CEILING AND WALL PANELS // Turf, turf.design/products/slab

ACOUSTIC WALL PANELS // Acoufelt, www.acoufelt.com

CURTAINWALL GLAZING // US Architectural Glass & Metal, (312) 462-3257

SOBOTEC RAINSCREEN METAL PANEL SYSTEM // Christopher Glass & Aluminum, www.christopherglasschicago.com

CARPET TILE // Shaw Contract Group, www.shawcontract.com



THE DISCOVER CHATHAM CONVERSION, within a former Target store, lacked access to daylight. Courtyards were cut into the large volume of space, directing light and fresh air further into the floor plate. These green spaces create another safe, communal area for employees to enjoy during the three shifts of work that take place in the building.

deep into the office space. Non-structural interior walls that were parallel to the exterior were also glazed, extending the light that beams in from the new, warehouse-style windows. Circulation paths were converted into interior streets and existing skylights were enhanced with translucent shades, directing light and animating the ceiling. Through all these tactics to harness light, Loffler Companies' carbon footprint was reduced further, building on the company's commitment to its sustainability values and to our collective resources.

Wellbeing and Culture

The last group of considerations brings character and dynamism to the blank canvas of the big box structure, adding humanizing elements that celebrate company culture and promote workers' wellbeing. Gensler's most recent workplace survey (www.gensler.com/gri/us-workplace-survey-2022) reported that most people would go to the office more often if it met their ideal mix of experiences, underscoring the fact that there is a powerful draw to the workplace as a destination. Amenities and wellness initiatives are all part of the new office ecosystem that supports


a worker beyond the nine-to-five. Accordingly, generously sized big box conversions allow for a space plan and amenities to be created from scratch, and they provide a prime opportunity for designers to explore many creative solutions.

The program for Discover Chatham Customer Care Center was divided into an office space for up to 1,000 people and The Shine Bright Community Center, a multi-purpose, multi-generational space for members of the community to use at no cost for meetings and events, whether they be businesses, non-profits or schools. A mural featuring well-known Chatham neighborhood heroes and a rotating selection of art throughout the space reinforces the corporate community connection.

Discover Chatham also opened a technology hub inside of the space with the goal of exposing its growing talent pool to jobs in the IT field, as well as providing training and career support. A year in, Discover's high-retention rate, with many employees earning promotions, speaks to the project as a next-generation workplace and a beacon of community engagement, benefitting from access to amenities, art, technology and employment

under one roof.

Guided by employee surveys and research, the design for the Loffler Companies headquarters was centered around the wellbeing of staff. The hybrid office environment includes numerous work and play amenities, including a café, fitness center, yoga studio, golf simulator, access to a nearby bike trail, a 3,000-square-foot covered outdoor veranda and future light-rail access. The bar and lounge space has proved especially popular and can be rented out by employees, partners, and non-profits for special events. Both projects required inventive, expansive thinking to invigorate these simple structures with the cultural heart of the companies occupying them.

Designing for adaptation is an exercise in strategic insertion and subtraction, giving a building or interior space a refreshed sense of authenticity in line with its new purpose. As companies strive to create authentic experiences for their workers that represent their brand, adapting retail structures into highly customized offices promises an atypical environment with more unique character than those found in the traditional office-building market. 



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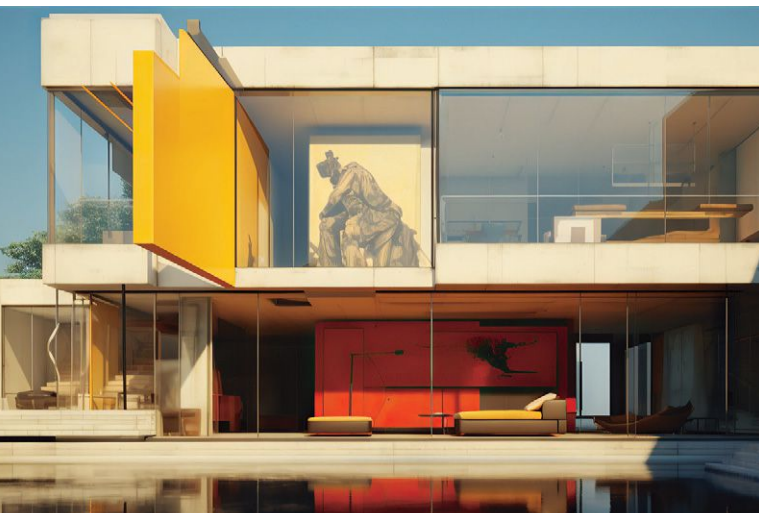
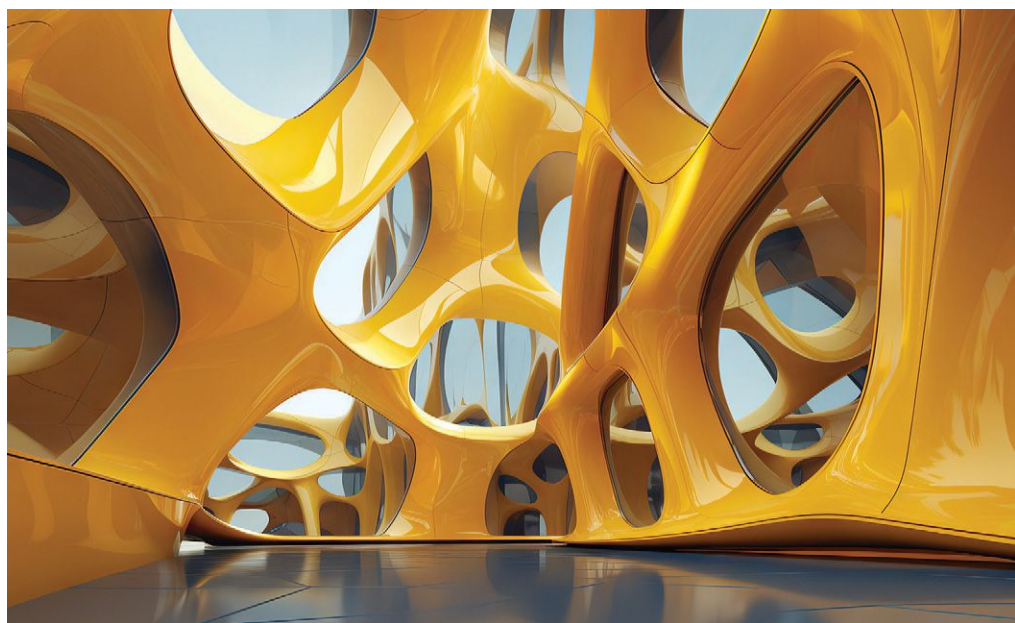


THE PROMISE OF AI



ARTIFICIAL
INTELLIGENCE
PRESENTS NEW
POSSIBILITIES,
CONSIDERATIONS
AND CHALLENGES
FOR ARCHITECTURE
AND CONSTRUCTION

WRITTEN BY | JIM SCHNEIDER



AI-GENERATED IMAGES: DAMON LEVERETT, AIA

The idea of Artificial Intelligence is not new, but it was in the realm of science fiction, set in the distant future. The future came sooner than expected. In the past year, with the launch of applications, like ChatGPT, AI has leapt from science fiction to science fact. Now widely available, it already has become a game changer and disruptor in many industries. It inspires excitement and fear and, in the workplace, results have often been mixed. But what is the current reality for this technology in architecture and construction?

“We are excited by the promise of AI and believe the creative world, including architects, can truly benefit from its access to a wide range of data, its analysis and subsequent optimization of that data, as well as its generative abilities,” says Matthias Hollwich, founding principal of HWKN Architecture. “It has supercharged how we work as a firm, impacting how we plan and experience buildings and cities. We have developed a design process that vastly improves not just outcomes for our clients but for the communities where we design. AI allows for inputs from a much wider range of stakeholders. We think when communities and others in our profession see its benefits, it will alleviate some of the concerns surrounding its use.”

“Construction was one of the early adopters of AI,” says Katie King, CEO of the United Kingdom-based consultancy AI in Business. “There have been some great use cases in recent years, and I would say the biggest gains have been made in efficiency, safety and design. Some businesses have begun using generative AI for construction design. This enables construction designers and engineers to optimize and test different versions of their designs with less effort, less speculation and without having

AI enables designers and engineers to optimize and test different versions of their designs with less effort, less speculation and without having to invest resources into trying out different options. It also allows them to be playful and spontaneous.

to invest resources into trying out different options.”

“Currently, I see AI focused primarily on visualization,” says Michael Schroeder, chief technology officer and partner at architecture firm SGA. “For example, you could take a traditional architectural napkin sketch, bring that into a diffusion model, and say, ‘let’s give this environmental qualities or material qualities.’ AI can build you a photorealistic rendering quickly. There will be many errors, of course, because you can’t napkin sketch to scale. But it’s amazing how these tools can generate something that used to take days of rendering.”



HISTORY TELLS US THAT DISRUPTIVE NEW TECHNOLOGIES CAUSE A SHIFT IN LABOR BUT USUALLY RESULT IN MORE JOBS, NOT LESS, BUT THE NEW JOBS ARE DIFFERENT. CAD WAS INTRODUCED AS A SIGNIFICANT EVOLUTION OF THE DESIGN PROCESS, AND WE ARE STILL HERE.

— *Damon Leverett, AIA, senior lecturer, University of Arizona School of Architecture, College of Information*



“Text-to-image generators seem to have most of the attention among architects now; however, many tools are relevant to the architectural process, and new ones emerge every few months,” says Damon Leverett, AIA, senior lecturer, University of Arizona School of Architecture and the College of Information. “Additionally, we asked students to develop conceptual structural sizing with AI chatbots and compare their results with traditional manual calculations as a critical-thinking exercise. The AI toolkit also includes several architecture-oriented technologies for design and modeling, sketch recognition, energy efficiency and sustainability analysis, project planning, plugins for CAD/BIM and tools to foster compliance with building codes.”

AI is being used to speed up or enhance many tasks with new and creative ways to utilize the technology being rolled out every day. Artificial Intelligence is poised to become part of doing business, not just for architects, but for everyone in construction.

“Other uses for AI include scheduling, document management, equipment

maintenance, predictive modeling and performance management,” King says. “I have also heard of firms using AI for offsite construction, using automated manufacturing to assemble different elements, such as walls, HVAC and other components that can be transported to the job site.”

The Role of AI

There are legitimate concerns about potential negative impacts of Artificial Intelligence. The technology’s rapid growth inspires anxiety, and many people worry about AI replacing jobs traditionally done by humans. There are different points of

view on this issue, but it appears much of what AI brings to construction today is more to supplement rather than replace the work of human beings.

“The intent is not to introduce technology to supplant traditional methods but to examine and compare its outcomes with the natural world,” explains Leverett. “My generation was a part of the transition from hand drafting to CAD in the mid-1980s. I see the same questions and concerns architects expressed then, mainly, ‘Will AI replace architects or cause me to lose my job?’ Just replace the word AI with CAD, and it becomes apparent that the concerns are similar. History tells us that disruptive new technologies cause a shift in labor but usually result in more jobs, not less, but the new jobs are different. CAD was introduced as a significant evolution of the design process, and we are still here.”

“While AI is still new and intimidating to some, the creative world can truly benefit from the data, analysis and optimization it brings,” Hollwich explains. “AI is poised to revolutionize how we plan, experience



AI-GENERATED IMAGES: HWKN ARCHITECTURE

REIMAGINING the Chrysler Building in New York City with AI.

and manage buildings in the near future, ultimately transforming the architectural landscape. Many designers are embracing the technological evolution of these tools and I'm excited to see what the future holds for architecture, enhanced by AI."

With the power and hype around AI, it's easy to think it is an all-powerful panacea or not of any real use. Reality lies squarely in between, and proper application of AI means understanding its strengths and limitations. It also may require an all-new way of thinking about the interaction between people and technology.

"AI is not infallible, and many of us fall into a trap of trusting it too much," King explains. "It's smart but not perfect. It lacks the contextual understanding and judgment that humans possess. We need humans in the mix to apply judgment to AI outputs. If there's no oversight, things slip through the cracks and mistakes happen. In construction, those mistakes come with high stakes. Inaccuracies and cut corners can lead to safety issues, structural issues or suboptimal design, so AI adoption needs to be a partnership rather than a takeover."

"I don't see AI as a tool as much as I see it as another member of the team," Schroeder says. "A screwdriver is a tool, but AI is quite a bit different. With AI, you have another member of the team walking on a job site. At our firm, we have a people-process-technology approach. We've had to expand that. AI is not a person. It's not a technology, per se. It's not just a process, but it is going to change how we do things. I think at this point, AI needs its own little bucket. We have to think about it differently."

Safety and Policy

Given how rapidly the power and utilization of AI is growing, it raises many alarms about safety and security. Careful thought and policy action needs to be taken to ensure it is used properly. Perhaps more than any technology before it, AI requires firms and individuals to be very clear about what they want and do not want it to do.

"We recognized that AI use in consulting has significant opportunities and

risks. This is new and uncharted territory," explains Brie Zoller, chief problem solver at Brie Z Operations, a small business operations consulting firm. "Our main concern is that we have a duty to protect our client's data and information. AI is so powerful and uses the data we provide to evolve. We need to be careful about what information we are entering into it."

In developing policy around AI use for her client, Lotus Sustainability & Engineering, Zoller has worked to address security gaps and anticipate potential uses and pitfalls. Zoller suggests that firms revisit their AI policy often—perhaps even quarterly—simply because the technological landscape is changing so quickly.

"We created a list of approved uses for AI, such as idea generation, first drafts, code generation, transcription, translations and templates," Zoller continues. "Prohibited uses included confidential data, research and citations, data analysis and solution development. We instituted requirements for use, which involve review, verification, edit output, disclosure of AI use and brand alignment. In addition, we stated a commitment to equity in which we will not replace jobs with AI."

"Most of the AI policies I have seen in firms revolve around risk awareness," Leverett says. "Many concerns parallel those in the real world, like protecting confidential and proprietary information or recognizing intellectual property concerns. Also, AI is imperfect and errors may occur, so it is essential to confirm and verify outcomes whenever possible. I typically advise that firms consult their attorneys and insurance carriers when making AI policy."

"The first step should always be identifying a need," King says. "What are you looking to achieve? What problems are you trying to solve? You may find that AI is the fix, or you may find that there is a better solution. Businesses can't afford to embark on vanity AI projects just for the sake of it. There must be a clear need and a problem to solve. Once you know what you are trying to achieve and how you intend to use AI, you can build your policies around it."

(continues on page 64)

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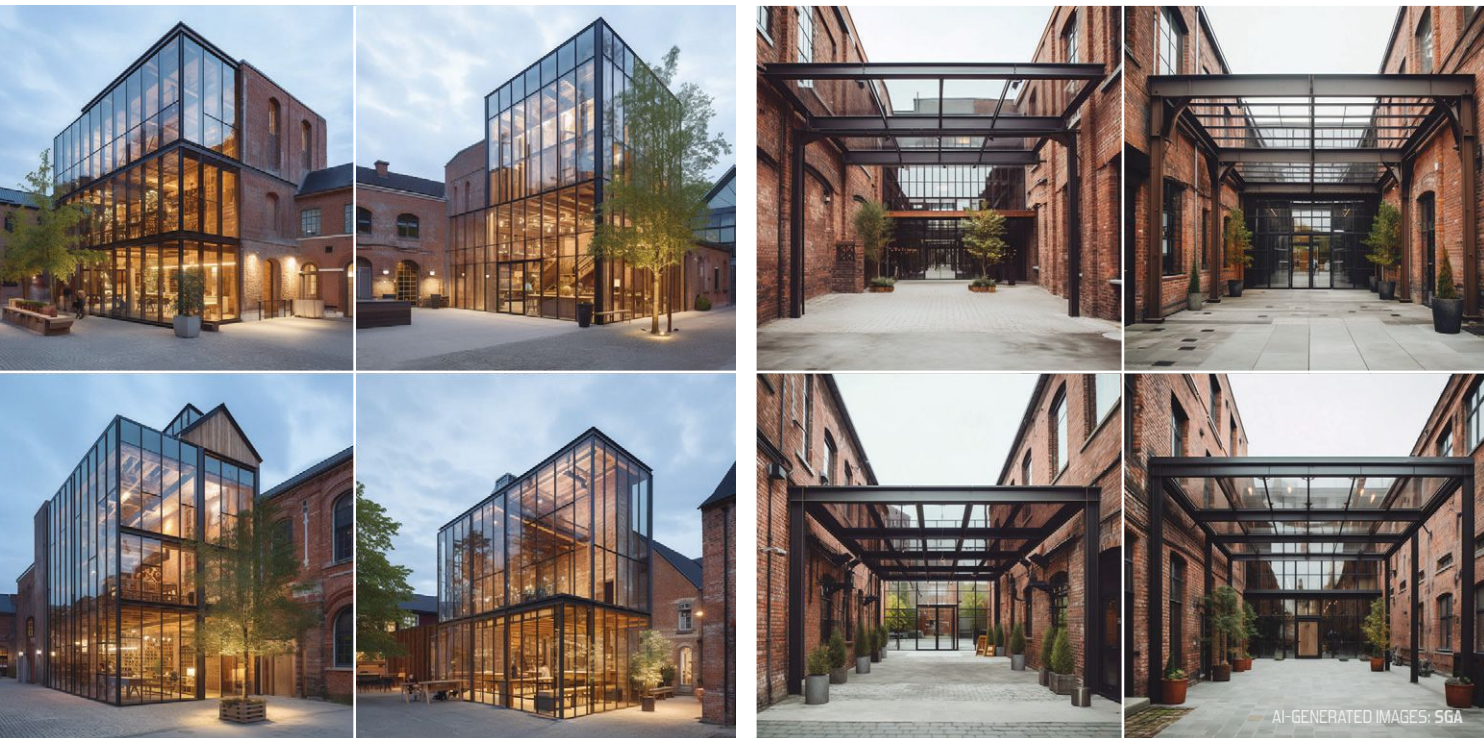
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SGA GENERATED renderings with the help of AI for a commercial repositioning. Michael Schroeder, SGA's chief technology officer and partner, sees AI as a quick visualization tool. For example, a traditional architectural napkin sketch can be made into a photorealistic rendering quickly with AI—something that previously would've taken days.

“BUSINESSES CAN'T AFFORD TO EMBARK ON VANITY AI PROJECTS JUST FOR THE SAKE OF IT. THERE MUST BE A CLEAR NEED AND A PROBLEM TO SOLVE. ONCE YOU KNOW WHAT YOU ARE TRYING TO ACHIEVE AND HOW YOU INTEND TO USE AI, YOU CAN BUILD YOUR POLICIES AROUND IT.”

—Katie King, CEO,
AI in Business

The Future of AI

We are just beginning to realize and utilize AI's potential. The underlying technology is built for exponential growth in speed and computing power, so it is bound to evolve and change the industry and the world as it does.


“The integration of AI with other technologies in design, construction and building operation holds the potential to create a whole new level of interaction, information and performance,” Hollwich says. “These fields often operate in isolated silos but over time they will inevitably engage and merge. As we progress toward fabricating buildings through AI-enhanced processes, we will be able to quickly generate and evaluate designs we co-pilot with feedback as to their impact, feasibility and cost.”

“Right now, AI is limited by general domain knowledge,” Schroeder explains. “It has been trained on the internet, which is fast and has deep knowledge, but is not vertically integrated and doesn't have domain expertise. The next generation of AI is going to be able to reason much more deeply. It won't be just recalling information it has gathered. Next-generation AIs will learn the

rules behind the data, which will give them new capabilities.”

No matter what the future has in store, AI is here today and poised to make a big impact in the short and long term. Whether firms are using it right now or not, it's important to look ahead and develop effective strategies for proper use and implementation.

“One of the major considerations of AI adoption is the human cost,” King points out. “Introducing such a disruptive and transformative technology is going to be a major adjustment for all involved. You are likely to face resistance in various forms. The best thing organizations and their leadership can do is work with their people to bring them into the fold and make them active participants in this new chapter. If you want any momentum at all, you need to have buy-in. Make it clear what you plan to do, why you're doing it and how it's going to happen.”

“Approaching the use of AI with an ethical foundation is critical for responsible and sustainable business practices,” Hollwich says. “But we also have to remember to be playful and explore the creative and sometimes spontaneous use of this new tool.” 

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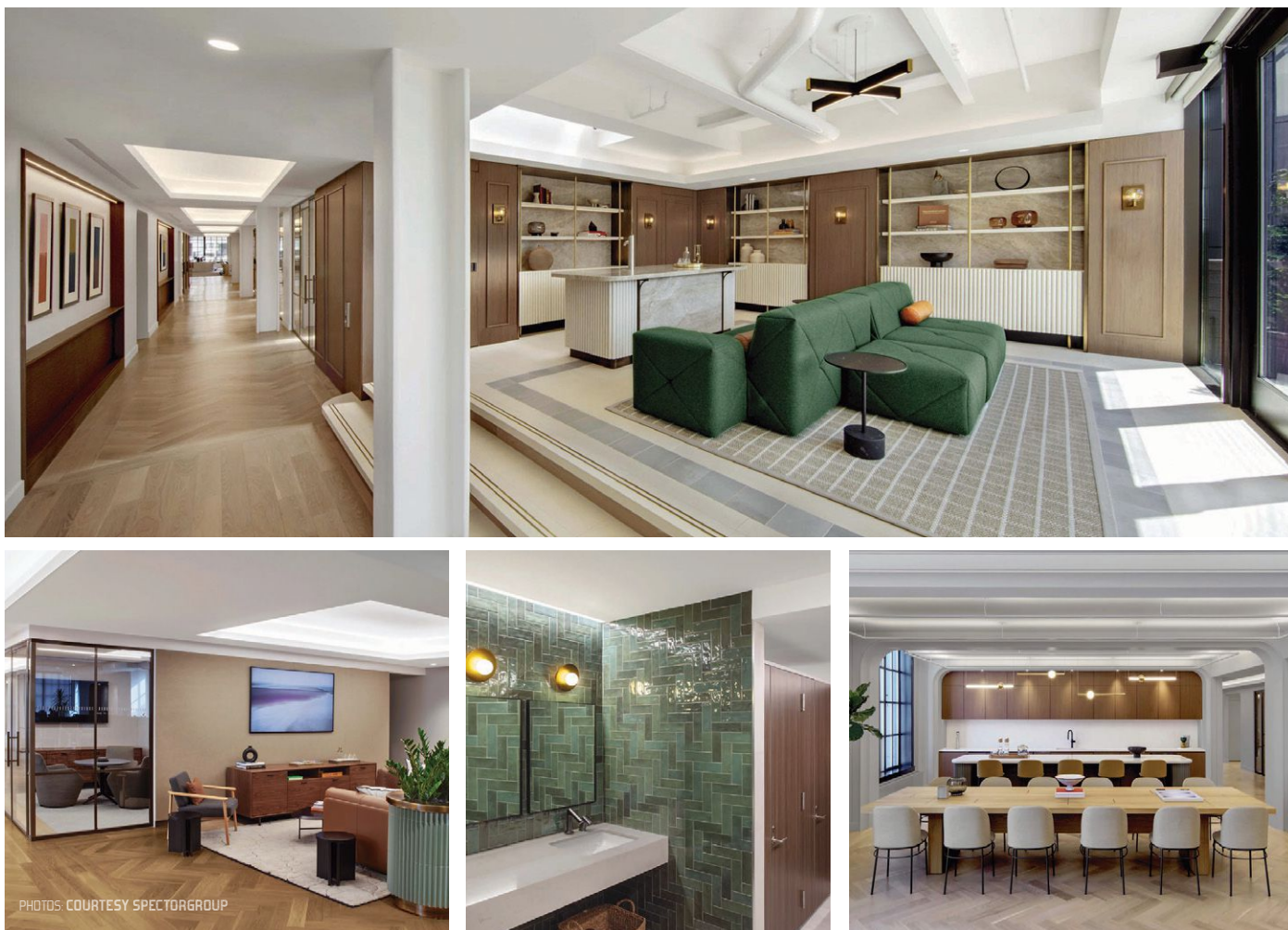
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An Office Upgrade Merges Functionality with Aesthetics



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Looking to elevate and enliven its workplace experience, Kimmeridge, an asset manager focused exclusively on the energy sector, turned to Spectorgroup to design a hospitality-forward environment that goes beyond the standard office for its New York City headquarters. Inspired by the vibrancy of old-world Miami and the electrifying spirit of New York City, Kimmeridge wanted to create a rich environment that promotes the staff's best work and celebrates the company's people and clients.

Upon arrival, a raised welcome lounge—equipped with a hospitality bar and butler pantry designed to host events—connects to a large roof terrace, complete with lush gardens overlooking the Hudson River and the bustling Meatpacking District.

Journeying further into the space, a suite of meeting and phone rooms are strategically placed to deliver a curated experience. The focus then

shifts to the employee with a large pantry and lounge, framed by a series of arches that serve as a transitional zone to the open work area.

Every detail enhances the overall concept and aesthetic of layering architectural elements with function. The design embraces the transformative power of lighting, sculpting it to extenuate the curves of the coffered ceilings created by the archways. Skylights offer natural light, casting a soft glow throughout the space. The office is bright and inviting with notes of subtle warmth from herringbone wood floors, fluted wood millwork, plaster walls, decorative brass accents and greenery throughout.

With a clear design vision in mind, Spectorgroup built a vibrant, open office that merges functionality and aesthetics while placing a strong emphasis on hospitality. As a future growth strategy, Spectorgroup designed an additional floor for tenant sublet, matching Kimmeridge's design standards. 



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A minimalist room with a large window and a wall, both labeled R16. The room has a wooden floor and a white wall. The window looks out onto a city skyline. The wall is on the left, and the window is on the right. Both are labeled with an orange box containing the text 'R16'.

R16

R16

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