snap

ARCHITECTURAL NEWS + PRODUCTS

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The magazine of sustainable design
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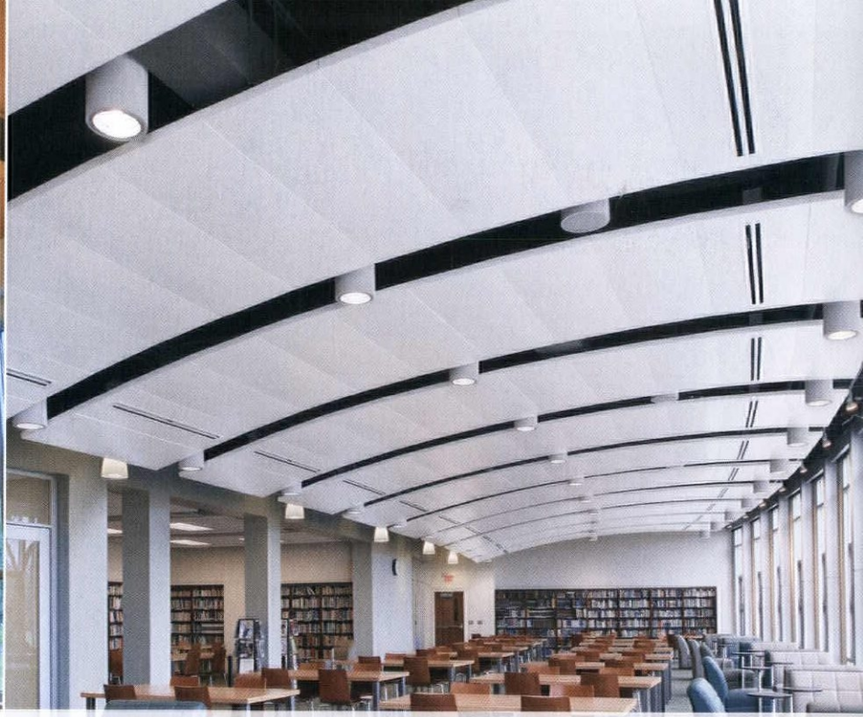

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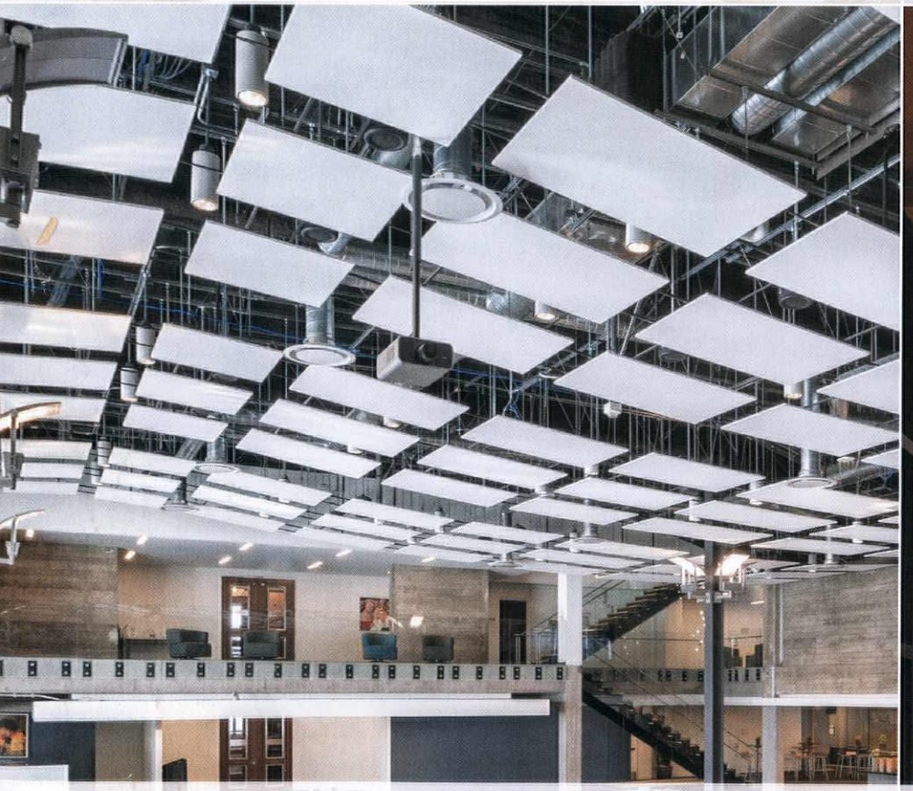

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CLOCKWISE FROM ABOVE
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Theory of (Office) Evolution

WHILE MOST PEOPLE associate summertime with vacation and relaxation, this edition of *SNAP*—the inaugural issue under new owners BNP Media—observes and celebrates the ever-changing face of the workplace.

In the feature "Welcome to Their World" (page 22), we highlight three office-building lobbies—by **STUDIOS Architecture**, **Robert A.M. Stern Architects**, and **AJC Architects**—whose vastly different designs help set a specific tone for both occupants and visitors.

This issue's "Case Study" (18) looks at the headquarters of Live Oak Bank, which **LS3P Associates** designed to give employees maximum views of the scenic landscape and easy access to the outdoors. Finally, in "Profile" (15), **FXFOWLE** designer Justyna Mrowiec-Chun tells us about some of the products and solutions her project team implemented in the recently completed, partially below-grade management offices for a sprawling New York City housing community.

Read on about new releases that are ideal for workplace design in the issue's Product Spec sections "Glass + Glazing" (26), "Walls + Partition" (28), "Interior Lighting" (30), "Contract Furnishings" (32), and HVAC (34).

Wishing you a great second half of summer!

Sheila Kim

SHEILA KIM *Editor*

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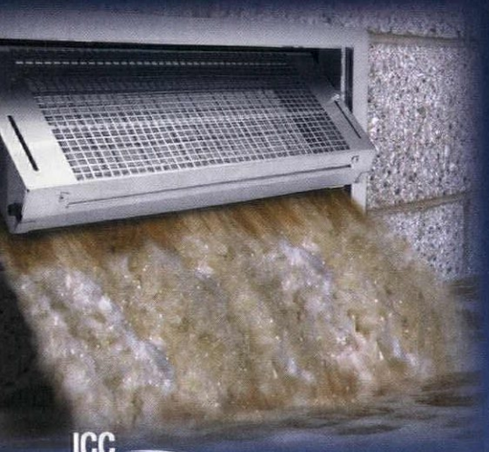

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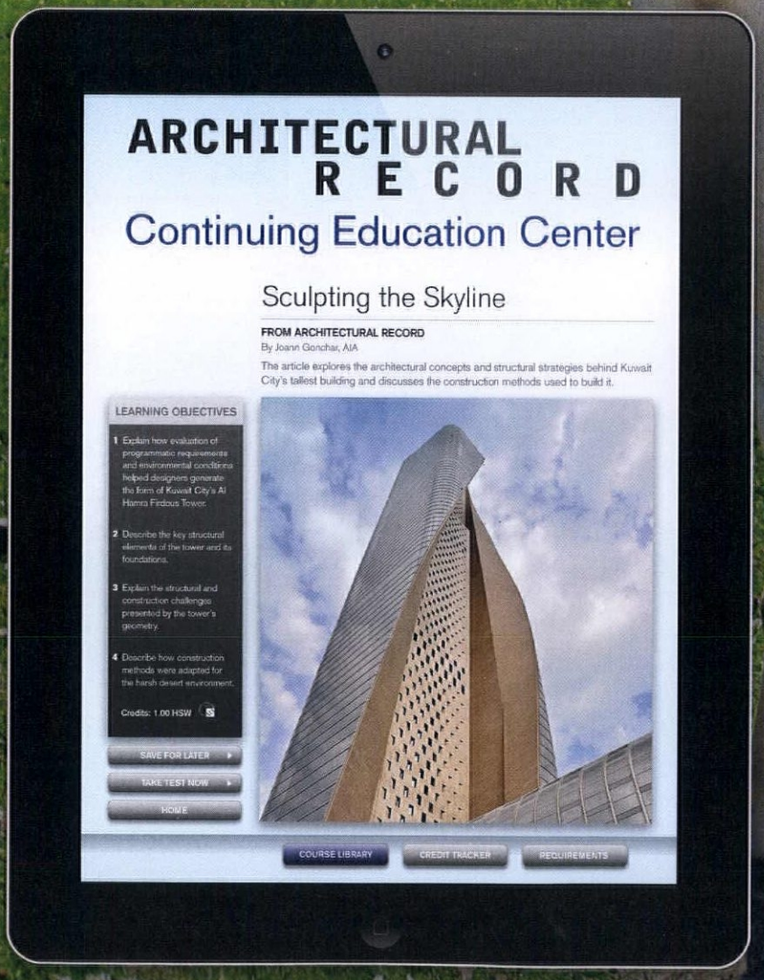

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in brief

"To build means to make architecture real on the borders of knowledge."

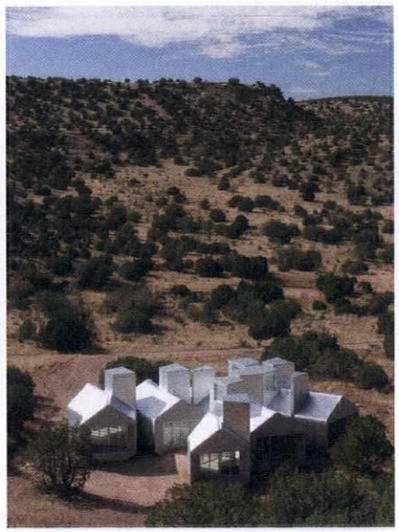
—FREI OTTO, 2015 PRITZKER ARCHITECTURE PRIZE LAUREATE

SNAP MATH

$8.6 BILLION

The global 3-D printing market is forecast to reach $8.6 billion by 2020, attaining a compound annual growth rate of 20.6%.

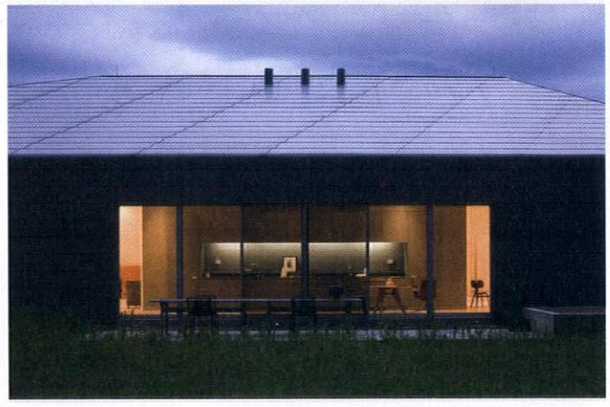
SOURCE: RESEARCH AND MARKETS, "3D PRINTING MARKET: GLOBAL FORECAST TO 2020"



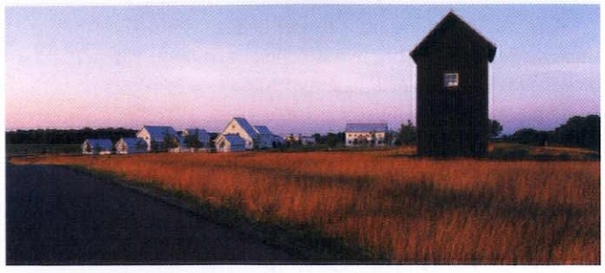
OBJECTS OF DESIRE Product Design awardee Stephen Burks (left) designed a chair for Roche Bobois (below) and his own line of basket-inspired home wares (bottom).

Cooper Hewitt Winners' Circle

A LOT IS HAPPENING these days at Cooper Hewitt Smithsonian Design Museum: since wrapping up a three-year, $91 million renovation of its facilities in December, the institution has mounted a plethora of cutting-edge exhibitions. Most recently, on May 5, the New York City museum announced the recipients of its 16th annual National Design Awards, established by the White House in 2000 to honor American innovators across a multitude of disciplines.



BEAUTY INSIDE AND OUT Coen + Partners principal Shane Coen (bottom left) devised master plans and landscaping for a community along the St. Croix River (below) and a border-patrol facility (left). MOS Architects (top left) designed the Element House (top right) and an artist's studio (above).



According to museum director Caroline Bauman, this year's honorees "represent the pinnacle of innovation in their field, with their focus on collaboration, social and environmental responsibility, and the fusion of technology and craftsmanship."

The late Michael Graves received a posthumous Lifetime Achievement award for his groundbreaking work in architecture, health care, and product design.

MOS Architects, which has worked in locales ranging from New Mexico to Nepal, received the Architecture Design Award. Minneapolis-based landscape and urban planning firm Coen + Partners took home this year's Landscape Architecture prize for its environmentally sensitive work. In the Product Design category, the museum cited Stephen Burks for his organic, colorful approach to seating, lighting, and clothing design with collaborators such as Harry Winston and Roche Bobois.

The remaining honors went to Commune (for Interior Design), Project Projects (Communication Design), threeASFOUR (Fashion Design), Jack Lenor Larsen (Director's Award), Rosanne Haggerty (Design Mind), Heath Ceramics (Corporate & Institutional Achievement), and John Underkoffler (Interaction Design).

The winners will be honored at a gala in New York City on October 15 as part of National Design Week. —*Anna Fixsen*

PHOTOGRAPHY (CLOCKWISE FROM TOP LEFT): MICHAEL VAHRENWALD; FLORIAN HOLZHERR; RANIER HORSCH; ROCHE BOBOIS; DANIEL HAKANSSON; PETER BASTIANELLI-KERZE; SHELLY MOSMAN; PAUL CROSBY; MICHAEL VAHRENWALD

in brief

CertainTeed and Saint-Gobain to Open New North American HQ

OPENING THIS FALL in Malvern, Pennsylvania, the new North American corporate headquarters of **Saint-Gobain** will serve as "a living laboratory" where the company plans to measure the impact of building materials from its own product portfolio on real workspace environments. The 65-acre campus will be transformed into a LEED-certified facility for approximately 800 employees of the company and the staff of its North American construction-materials subsidiary, **CertainTeed Corporation**. The two firms are now based in Valley Forge, Pennsylvania.

Lucas J. Hamilton, manager of Building Science Applications with CertainTeed, says the energy-saving products selected for the project include cool roofing by CertainTeed, electrochromic glazing by **Sage**, and thermally efficient glazing by Saint-Gobain. The bulk of the 320,000-square-foot headquarters will feature an open-plan office design with special features such as exercise trails, a softball field, and a stream that flows through the building via an open-air courtyard.

The design of the campus, which began last April, is led by **E. Kahn Development Corporation** and **J. Loew Associates** in collaboration with **AEGON Realty Advisors**. **Jacobs** is designing the interiors while **Bernardon Haber Holloway** is overseeing the exterior renovations and the lobby.

Based on preliminary scores, Saint-Gobain hopes to achieve LEED Gold status for both Core and Shell and Commercial Interiors. *—Rita Catinella Orrell*

A FITTING TRIBUTE Birdair installed a re-creation of a 1955 bandstand—designed by the late Frei Otto for the Federal Garden Exposition in Kassel, Germany—at Miami Beach's New World Center, site of the 2015 Pritzker Architecture Prize ceremony. It honored the architect, who died a day after winning the prize.

Birdair Pays Homage to Otto

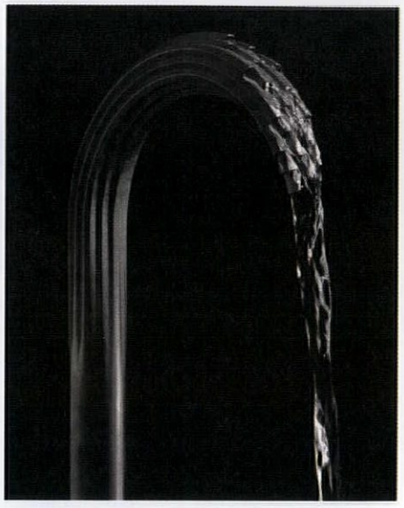
EVEN IN DEATH, the architect **Frei Otto** made history. On May 16, a replica of his 1955 hyperbolic bandstand for the Federal Garden Exposition in Kassel, Germany, sheltered guests entering the **Pritzker Architecture Prize** ceremony in Miami Beach. **Birdair** re-created the tensile membrane structure to stand in front of the **New World Center**, designed by Pritzker prize laureate **Frank Gehry** (1989).

On March 9, Otto was informed that he'd won the 2015 Pritzker prize. He passed away the very next day. "The ceremony was held to honor him," says Michele Roth, business development manager at Birdair, "so the committee wanted to build a replica of one of his famous designs from the 1950s."

Born in Germany in 1922, Otto began practicing in 1952, pioneering the use of lightweight, tent-like structures. He's best known for designing the roofing of the main sports facilities in the Munich Olympic Park for the 1972 Summer Olympics, the German pavilion at the 1967 International and Universal Exposition, and the Japan Pavilion at Expo 2000 in Hannover, Germany. *—J. Michael Welton*

A RIVER RUNS THROUGH IT As part of Saint-Gobain's North American headquarters transformation, a man-made stream will cascade down an open-air courtyard via a terraced channel.

A NEW ERA IN PLUMBING DXV by American Standard has introduced the world's first ready-for-market, 3-D-printed faucets.



3-D Printed Faucets?

IN A FIRST FOR THE plumbing industry, **DXV by American Standard** has introduced functional, ready-for-market 3-D-printed faucets. The new product is expected to go on sale within a year. American Standard approached the project as a learning experience, building its expertise in anticipation of a significant shift in production technologies.

The bathroom lav fittings are fabricated with Iconel, a nickel-chromium alloy commonly used for high-performance automotive and aerospace applications. In addition to being resistant to oxidation and corrosion, the metal is specially formulated to withstand extreme pressure and heat: the two principal forces generated by the selective laser sintering (SLS) manufacturing process used to create the faucets.

SLS is similar to conventional fused deposition modeling (FDM) printing, a technique often used to create plastic prototypes and study models. In it, a computer program virtually slices the design plans into very thin sections. For SLS printing, though, these layers are considerably thinner; once the design file is sent to the printer for output, a layer of powdered Iconel about 5 grains thick is laid down on the printing bed. A laser melts, or sinters, the metal powder into the shape of the first layer of what, in this case, will eventually become a faucet. After the first layer is sintered, another, top layer is applied and the process is repeated. It takes about 24 hours to construct one of the DXV taps in this manner; in the finishing process, any excess bits of metal are burnished away by hand.

Because the Iconel material has a high degree of structural integrity and is strong enough to be self-supporting, there is no need for visible reinforcements to detract from the aesthetics of the faucets. This ability to create essentially free-form armatures was key to developing the trio of fixtures that American Standard's vice president of design, Jean-Jacques L'Henaff, unveiled at the DXV showroom in New York City. Two of the three give the illusion that water is flowing through a central spout—but seemingly without the benefit of an actual spout. This startling effect is achieved via waterways that are concealed within the framework of the faucet.

NSF certified, the fittings utilize ordinary valving and connections; WaterSense approval is pending. *—Lisa Caldwell*

OH SNAP!

CORRECTIONS

In the May/June edition of *SNAP*, Gensler's Kap Malik referenced the use of Trespa cladding. These are high pressure laminate panels.

IMAGE: COURTESY BERNARDON HABER HOLLOWAY (LEFT)

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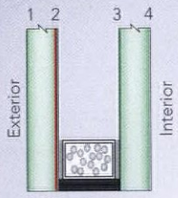

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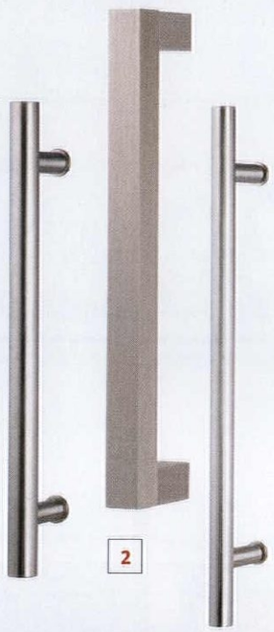

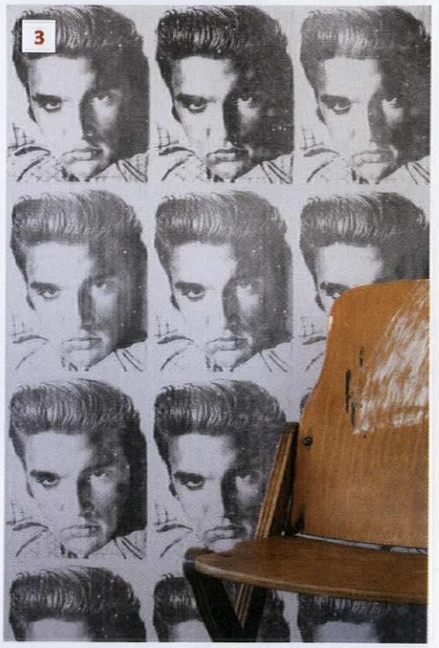

Spotlight on recent commercial and residential offerings

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ELEMENT

MANUFACTURER: Tech Lighting
PERFORMANCE: LED spot modules can be installed in any configuration within a recessed expandable-grid frame before being plastered into the ceiling for a seamless appearance.
PRICE RANGE: $$
APPLICATIONS: Ideal for office, hospitality, and any other commercial setting.
TECHLIGHTING.COM
(SNAP #01)

2.
DH3, DH4, DH5

MANUFACTURER: Doug Mockett
PERFORMANCE: The DH3 door handle has squared corners; the DH4 and DH5 styles are cylindrical. All 12-inch-long pulls are offered in a satin-nickel and satin- or polished-chrome finish.
PRICE RANGE: $
APPLICATIONS: Doors in residential or contract interiors.
MOCKETT.COM
(SNAP #02)

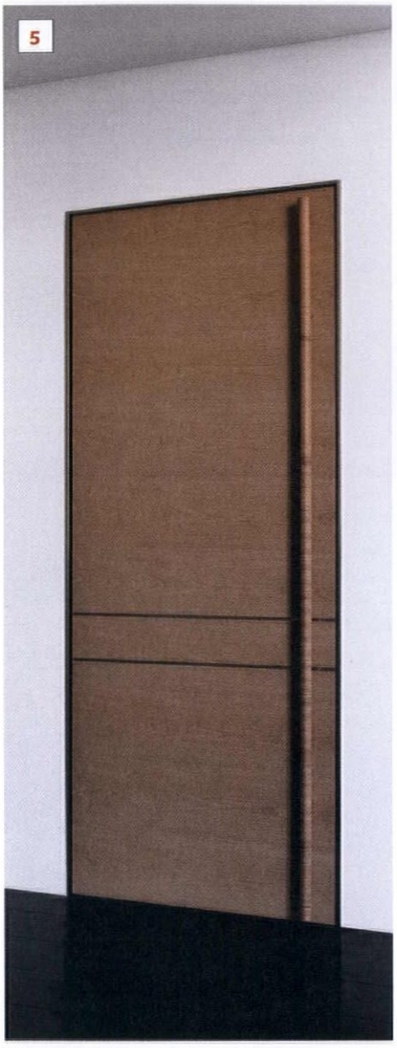
3.
ELVI

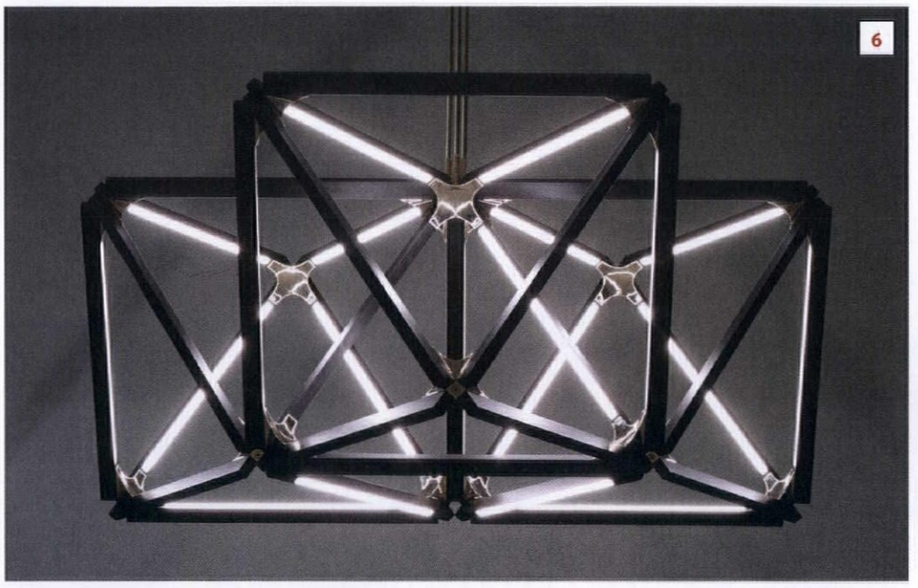
MANUFACTURER: Flavor Paper
PERFORMANCE: A new addition to the Andy Warhol x Flavor Paper collection, Elvi is a re-creation of Warhol's repeating Elvis Presley pattern. In graphite, blue suede, fire red, and white on clay-coated paper.
PRICE RANGE: $$
APPLICATIONS: Residential and smaller hospitality and contract interiors.
FLAVORPAPER.COM
(SNAP #03)

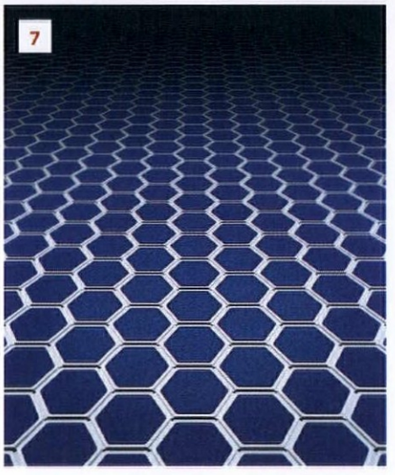
4.
MYROOM

MANUFACTURER: Lutron Electronics
PERFORMANCE: The manufacturer's Palladiom QS keypad and thermostat create a seamless control system that can operate lighting, climate, and even motorized draperies.
PRICE RANGE: $$$
APPLICATIONS: Hospitality, office, and residential projects.
LUTRON.COM
(SNAP #04)

KEY $=VALUE, $$=MID-RANGE, $$$=HIGH-END







5.
UPTOWN, MIDTOWN, DOWNTOWN

MANUFACTURER: Lualdi
PERFORMANCE: These stylish interior doors by David Rockwell are offered in dark oak or bleached walnut veneer with brushed antique bronze frame. Leather wraps the vertical-bar handle for a luxurious touch.
PRICE RANGE: $$$
APPLICATIONS: For residential use.
LUALDIPORTE.COM
(SNAP #05)

6.
X COLLECTION

MANUFACTURER: Stickbulb
PERFORMANCE: Straddling the lighting and furniture spheres, this LED fixture functions as a pendant or table lamp. Bulbs come in lengths of 1 to 6 feet.
PRICE RANGE: $$$
APPLICATIONS: The pendant works with any interior; the table version best suits residential or small hospitality projects.
STICKBULB.COM
(SNAP #06)

7.
FLOORMATIONS

MANUFACTURER: Construction Specialties
PERFORMANCE: This highly customizable aluminum entrance-flooring system is offered in eight geometric styles with optional carpet inserts from Shaw and recycled rubber.
PRICE RANGE: $$
APPLICATIONS: Designed to keep debris and water from entering all types of buildings.
FLOORMATIONS.COM
(SNAP #07)

8.
IDENTITY ONE

MANUFACTURER: Milliken
PERFORMANCE: This modular carpet collection, made of tufted, cut-pile nylon type 6,6, features an antimicrobial layer. Specifiers can play with the scale, palette, texture, and sequence of the tiles.
PRICE RANGE: $$
APPLICATIONS: Well suited to hospitality and office settings.
MILLIKENCARPET.COM
(SNAP #08)

Solus >> Brushed Aluminum with optional Light
Cool by Design
THE MOD-ERN FAN CO
A Collection of Ceiling Fans
Designed by Ron Rezek
SNAP 16
Celebrating the modern idiom
modernfan.com

Justyna Mrowiec-Chun

Designer, FXFOWLE, New York City

ARE YOU NOTICING ANY TRENDS OR NEEDS IN WORKPLACE DESIGN?

Clients want glass-front offices, open workstations, sit-to-stand desks, open pantries, and breakout areas. We perform a series of departmental interviews to make sure needs are met and conduct on-site observations to determine how a company works on a day-to-day basis.

HOW DID THOSE PROCESSES INFORM A RECENT PROJECT?

For the management offices of the Peter Cooper Village Stuyvesant Town [PCVST] housing complex in New York City, we took an activity-based approach. Since the employees are in and out of the office all the time, they could share the workstations, private offices, and huddle rooms.

THIS PROJECT HAS BELOW-GRADE SPACES. HOW DID YOU MAKE THEM FEEL LESS SUBTERRANEAN?

We designed skylights in the basement extension. The openings have integrated lighting so that even at night, they appear as gently lit openings to the PCVST community residents above, rather than just black holes. We drew inspiration for the palette from the various shades of blue in PCVST's branding as well as the property's beautiful landscaping. So this space incorporates deep greens and blues, natural woods, and fresh whites. Where natural light was inaccessible, the idea was to mimic the lighting shining through the true skylights.

WHAT DID YOU SPECIFY FOR STUYVESANT TOWN?

We chose walnut for its warmth and to contrast the cool palette. The wood floor in the staff touchdown area is Mirage's Natural Collection, and the ceiling is ACGI's Closed Linear Series. The tree-branch graphic glass in the conference space and on the reception desk is by Skyline Design through Produkt Glass. The furnishings are mostly Knoll and Arper [above].

WHAT OTHER PRODUCTS DO YOU LIKE WORKING WITH?

Shinnoki panels [right] are great prefabricated MDF panels with wood veneer for any type of millwork and to create a seamless look. LG Hi-Macs solid surface can be custom colored and is a durable solution for countertops, seating, and millwork.

JUSTYNA MROWIEC-CHUN *is a designer for the interiors division of FXFOWLE Architects in New York City. Since joining the firm in 2012, the FIT graduate has worked on projects such as the new United Nations Consolidation Tower—in collaboration with Fumihiko Maki—and the Brooklyn Friends School. Currently, she is renovating the School of American Ballet at Lincoln Center.*

2,300

The total square footage of walnut in the Peter Cooper Village Stuyvesant Town management-office project.

The designer stands in an employee touchdown area of the Peter Cooper Village Stuyvesant Town management office in New York City. To replicate the skylights elsewhere in the office, her team installed Barrisol fabric in newly carved apertures, backlit by low-profile 24-inch-square LED panels from Apogee Translite.

PHOTOGRAPHY: © RYAN PFLUGER

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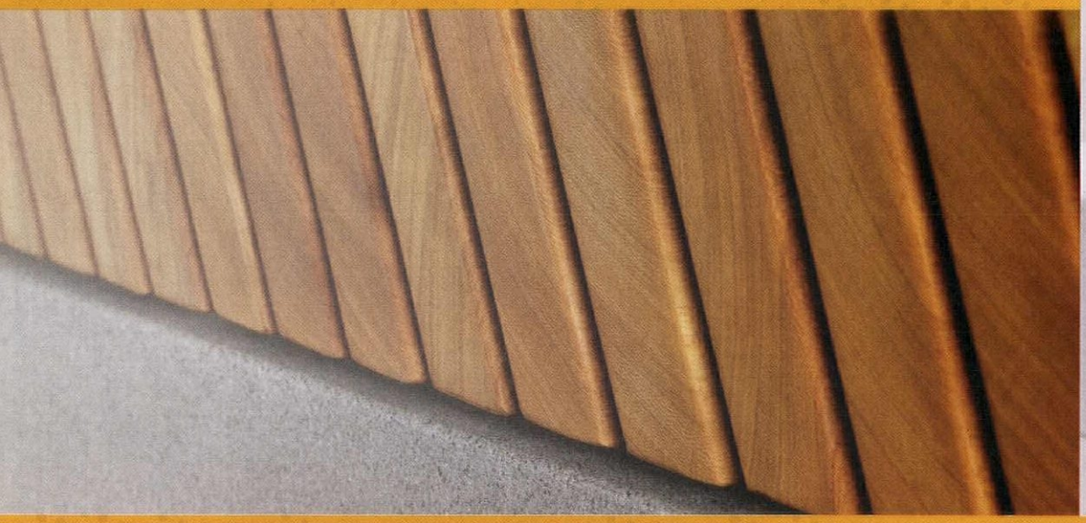

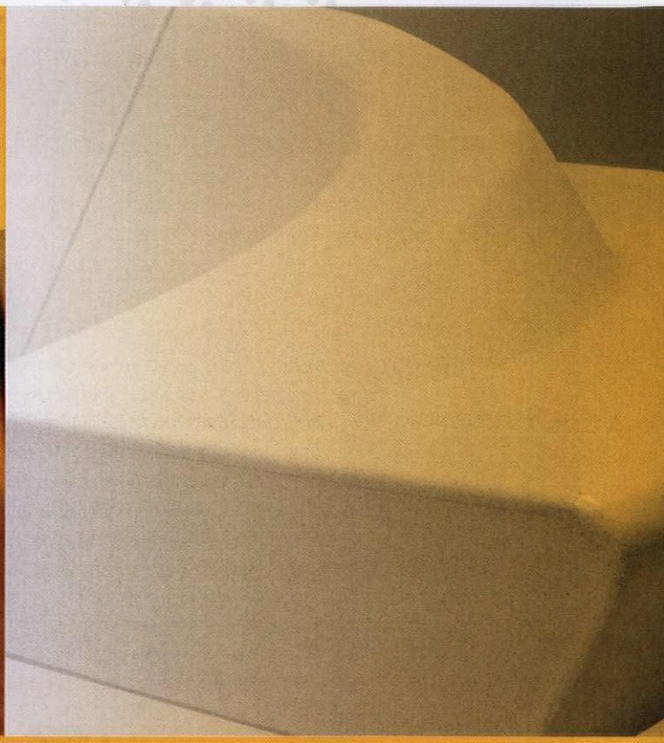

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PHOTOGRAPHY: MARK HERBOTH

LIVE OAK BANK HEADQUARTERS
WILMINGTON, NORTH CAROLINA

A Natural Fit

CHALLENGE: *Craft workspaces that connect employees to the outdoors, including a nearby nature preserve and an oak grove.*
SOLUTION: *Extensive glazing and a U-shaped plan that allows ample sunlight and views to permeate the office.*

THE LIVE OAK BANK HAS an unusual business model, cultivating close relationships with its small business clients. Since these interactions tend to occur remotely, the company was able to consider employee needs first when creating its new headquarters. Local architects competed to design the Wilmington, North Carolina, building, and it was architecture firm LS3P that came out on top.

"Live Oak Bank's very dedicated employees work long hours," says LS3P vice president and principal Laura Miller, "so we wanted the building to be as special as possible for them." That meant providing each employee with a view of—and access to—the site's surroundings, which include an adjacent nature preserve.

HOLDING COURT
The U-shaped design, an early concept, created the perfect spot for a courtyard.

An early and essential concept in the design was its U-shaped plan, which creates a sheltered courtyard oriented toward a grove of oak trees (the bank's namesake). Open offices line the courtyard and enjoy plenty of sunlight and bucolic vistas thanks to floor-to-ceiling glazing of high-performance glass by PPG Industries. To minimize solar heat gain from the intense North Carolina sun, the architects installed motorized blinds under deep overhangs and specified integrated sunshade modules on the south-facing curtain wall.

Glass interior walls chosen for the private offices, which are located along the outer perimeter of the U, admit natural light and keep sight lines open. All this openness doesn't compromise privacy, though: for acoustic separation, wall portions extend above the drop ceiling to the roof deck, and the slatted yellow pine ceiling conceals sound-dampening batting.

The entire premises have Wi-Fi coverage so employees can set up shop anyplace, from the courtyard terrace to the triple-height lounge at the U's midpoint. "You can pick up your laptop and go wherever you want," says LS3P's Laura Miller, "to work with a partner or just get a change of scenery."

The architects took particular care with the lounge, the gym, and other larger spaces. Glulam Southern yellow pine beams in these zones are outfitted with slender steel trusses that, in Miller's words, "draw your eyes to the ceiling and highlight the room's volume and natural light." The trusses, along with the wooden structure's steel details, serve as black accents against the yellow pine that runs throughout the interior.

When it came to the landscape, the LS3P team strove to keep it intact. "We tried to make it seem as if the building just fell from the sky," Miller explains. "We cleared as little land as possible, even weaving parking spots between the larger trees to conserve them." The only major new landscape feature? The retention pond, implemented as an amenity, was designed to be large enough to accommodate future growth. (In fact, a second structure is being built on the site this summer.)

In keeping with this approach, the project team clad much of the exterior in cypress; native to the region, the wood will weather to a silver-gray tone to blend in with the setting. Meanwhile, the Glulam beams reappear outside, spaced apart from the curtain wall to preserve views while supporting the overhangs.

The Live Oak Bank headquarters project has received distinctions including state and regional awards from the AIA and IIDA.

ARCHITECT
LS3P

TYPE Office

PRODUCT
Reliance curtain wall

MANUFACTURER
Oldcastle BuildingEnvelope

PERFORMANCE
Made without visible fasteners, this pressure-equalized curtain wall integrates two shading systems (see Solar Eclipse, below).

APPLICATIONS
Commercial glazing in a variety of climates.

PRICE RANGE
$$–$$$

OLDCASTLEBE.COM
(SNAP #10)

MADE IN THE SHADE
Curtain walls admit ample light inside while deep overhangs and exterior sunshades help control glare and solar heat gain.

IN THIS PROJECT

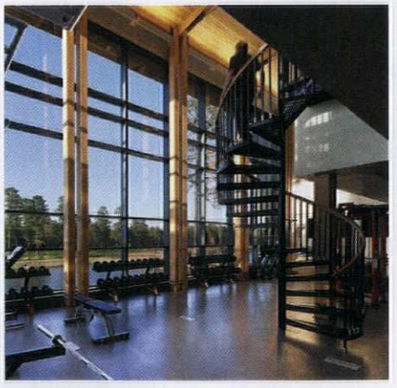
KEY $=VALUE, $$=MID-RANGE, $$$=HIGH-END

SOLAR ECLIPSE

MANUFACTURER: Oldcastle BuildingEnvelope
PERFORMANCE: An easy-to-install and highly customizable exterior shade for curtain walls, Solar Eclipse comes in numerous shapes and colors (anodized and painted). Projection depth can extend up to 27¾ inches.
PRICE RANGE: **$$–$$$**
APPLICATIONS: Passive solar control for curtain walls.
OLDCASTLEBE.COM
(SNAP #11)

4230 SHITAKE

MANUFACTURER: Caesarstone
PERFORMANCE: Though this polished, engineered surfacing material—of up to 93 percent quartz—looks and feels like stone, its nonporous and scratch-resistant qualities make for easy upkeep.
PRICE RANGE: **$$–$$$**
APPLICATIONS: Well suited to an array of residential and commercial applications such as countertops and walls.
CAESARSTONEUS.COM
(SNAP #12)



TRIUMPH SPORTS & MULTI-FUNCTION RUBBER FLOOR

MANUFACTURER: Johnsonite
PERFORMANCE: Made with more than 50 percent recycled materials, this durable and acoustically advanced rubber tile accommodates heavy foot traffic and sporting activities.
PRICE RANGE: **$$**
APPLICATIONS: Suitable for high-traffic zones and athletic facilities.
JOHNSONITE.COM
(SNAP #13)

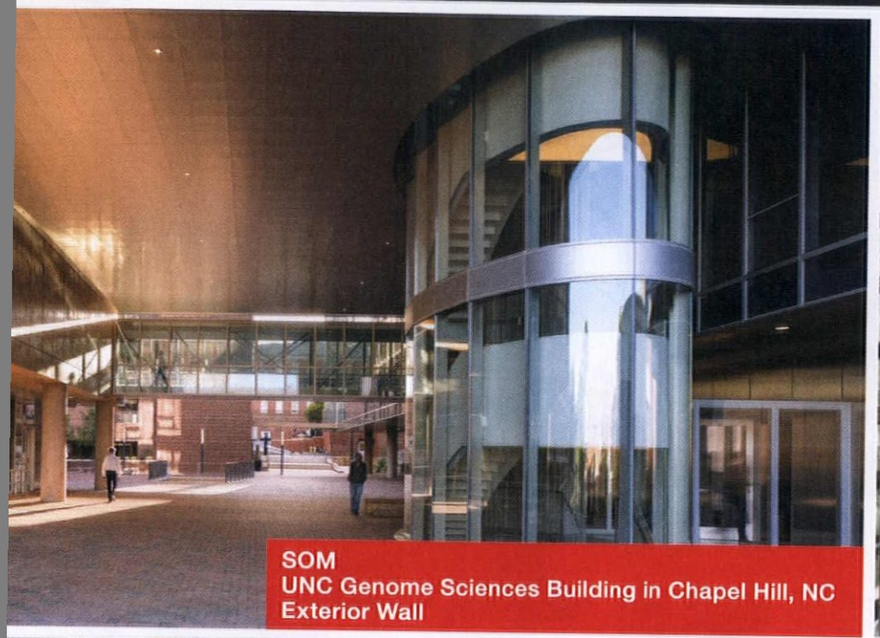
PLATOS 26039 SERIES

MANUFACTURER: Schmitz
PERFORMANCE: This suspension lighting fixture features a satin glass lens to provide even and diffuse illumination.
PRICE RANGE: **N/A**
APPLICATIONS: Ideal for both general and direct interior lighting.
SCHMITZ-LEUCHTEN.DE
(SNAP #14)

PHOTOGRAPHY: MARK HERBOTH

= ECO-FRIENDLY ATTRIBUTES

WHEN THE BEST WANT THE BEST!



SOM
UNC Genome Sciences Building in Chapel Hill, NC
Exterior Wall

Stantec
UC Davis Medical Center in Sacramento, CA
Interior Walls

SNAP 24

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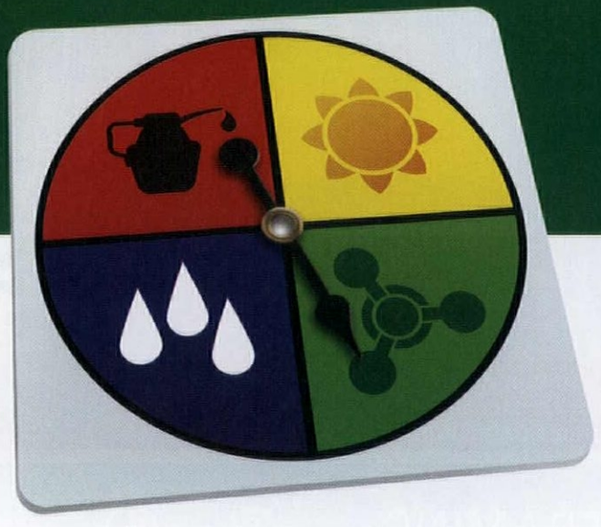

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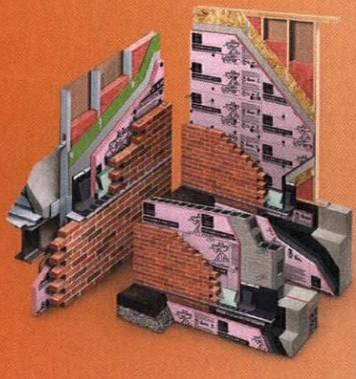

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SNAP 22

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Welcome to Their World

Three office buildings show how a carefully planned lobby can set a tone and meet the needs of occupants and clients alike. BY SAM LUBELL

EVERYONE'S FAMILIAR WITH "Don't judge a book by its cover." But first impressions are vital, particularly in an office-building lobby where a company needs to establish its brand and set a mood and priorities for employees and clients alike. While some lobbies are extensions of a single firm's workplace and amenities, others may have to cater to an array of building tenants. The following examples explore the varied styles found in today's office lobbies.

POLISHED GEM

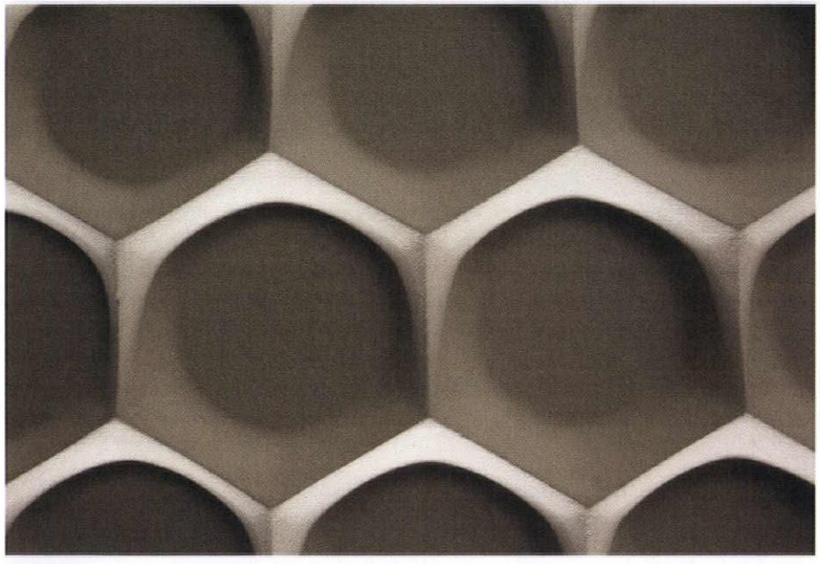
In renovating 285 Madison Avenue, a 28-story New York City building, **STUDIOS Architecture** aimed to reinforce the 1920s structure's stateliness while bringing the facilities—and the look—into the future. Naturally a new entryway was called for, so it has been expanded, modernized, and simplified, turning a cramped, awkward afterthought into a glowing centerpiece for its diverse tenants and their clients.

To start, the project team opened up the lobby by increasing its width from one to two bays, which brought in more daylight, usable space, and drama. The proscenium-like portico is clad in carved glass-fiber-reinforced concrete (GFRC) panels by **Architectural Molded Composite**, whose hexagonal pattern is a nod to an ornamental screen around the corner with a more modern spin. The geometric motif continues into the lobby proper, where Crane revolving doors by **Dorma** usher visitors inside.

The new storefront entry, fitted with **Oldcastle** glass, features a mullion system wrapped in bronze. The latter material also appears on columns, the reception desk, and elevator details and complements the existing limestone outside. The lobby palette includes other "noble, timeless materials," in lead architect Kevin Hamlett's

LUXE AND LOFTY For New York City's 285 Madison Avenue (above), STUDIOS Architecture opened up the lobby from one to two bays wide and added elegant touches such as bronze and stone finishes.

PHOTOGRAPHY (FROM ABOVE): BILYANA DIMITROVA (2)



MODERN ORNAMENTATION
The proscenium-like portico (above) of 285 Madison is clad in carved GFRC panels that are uplit at night. The hexagonal pattern (left) is a nod to a nearby existing ornamental screen.

words, with marble cladding walls and granite on floors. The lightness of the entry paneling, uplit at night by **Inter-lux** fixtures, gives way to the heaviness beyond, creating "a subtle manipulation of weight so everything is kind of flowing," says Hamlett.

The success of the lobby has resulted in other commissions from the client, **RFR Realty**, which owns many gems in the city. Explains Hamlett, "There's all this great building stock here and we want to get it up to speed for how people work today."

URBAN UPGRADE

Philadelphia's Navy Yard, a 1,200-acre former brownfield site about 15 minutes south of Center City, has transformed into a walkable urban area full of trails, parks, and dynamic mixed-use developments. **Robert A.M. Stern Architects**' new offices for **GlaxoSmithKline** in the Navy Yard reflect this new wave.

"We wanted the building to have its own unique identity," explains firm partner Meghan McDermott, "but reinforce the sense of urbanity that's emerging." At the core of RAMSA's strategy was the four-story atrium, designed to emulate a busy streetscape as opposed to your average office lobby.

The atrium lobby's windows and clerestories, which utilize **Guardian**'s high-performance, low-E, and low-iron SuperNeutral glass, flood the interiors with natural light. **MechoSystems**' mechanized shades can be lowered as needed. Entrances comprising doors, hardware, and security devices by **Tru-Fit Frame & Door Corporation** were placed at both ends of the space to keep any one side from being labeled front or back and to allow people to stroll right through. The office wings, also situated on both sides of the atrium, connect via bridges of tempered glass by **CBO Glass**.

Contrasting the light and airy glass palette is a weighty spiral staircase clad in maple veneer. This architectural element encourages employees to walk by, climb stairs, and interact with colleagues.

The lobby floor's programming—a bank terminal, dining facilities, a health clinic, a fitness center—add to the lively, amenity-filled street vibe, as do the furnishings in casual meeting and breakout spaces. Among the many pieces resting on the Jerusalem Gold honed-stone floor, **Davis Furniture**'s Arched Modular lounges provide flexibility while **Bene**'s high-backed lounges offer visual and acoustic privacy for employees who may choose to use the lobby intermittently as office space. "It's not just the Googles and the Facebooks that want to work in open environments," RAMSA's McDermott points out.

TO NEW HEIGHTS

Petzl, which sells outdoor equipment like climbing and caving gear, wanted to highlight themes of adventure and health with its new North American headquarters in West Valley City, Utah. The project, designed by **AJC Architects**, blends into the landscape thanks to an exterior of textured, reddish GFRC panels meant to evoke a red-rock canyon.

The project team carried this concept through to the interiors starting in the lobby, where the corporate culture and brand quickly unfold beyond the **Tubelite** T1400 storefront. Dropped ceiling

GRAND ENTRANCES

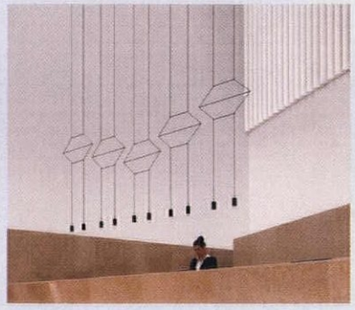
FROM SUSPENDED FIXTURES TO A SMART LIFT SYSTEM, THESE RECENT PRODUCTS HELP BEAUTIFY BUILDING LOBBIES

ARMSTRONG

SoundScapes Shapes ceiling panels, which enhance acoustics in open areas, can be used to cover swaths of ceiling or create clouds and canopies. They are available in a range of unique sizes, shapes, and colors as well as custom arrangements.
ARMSTRONG.COM

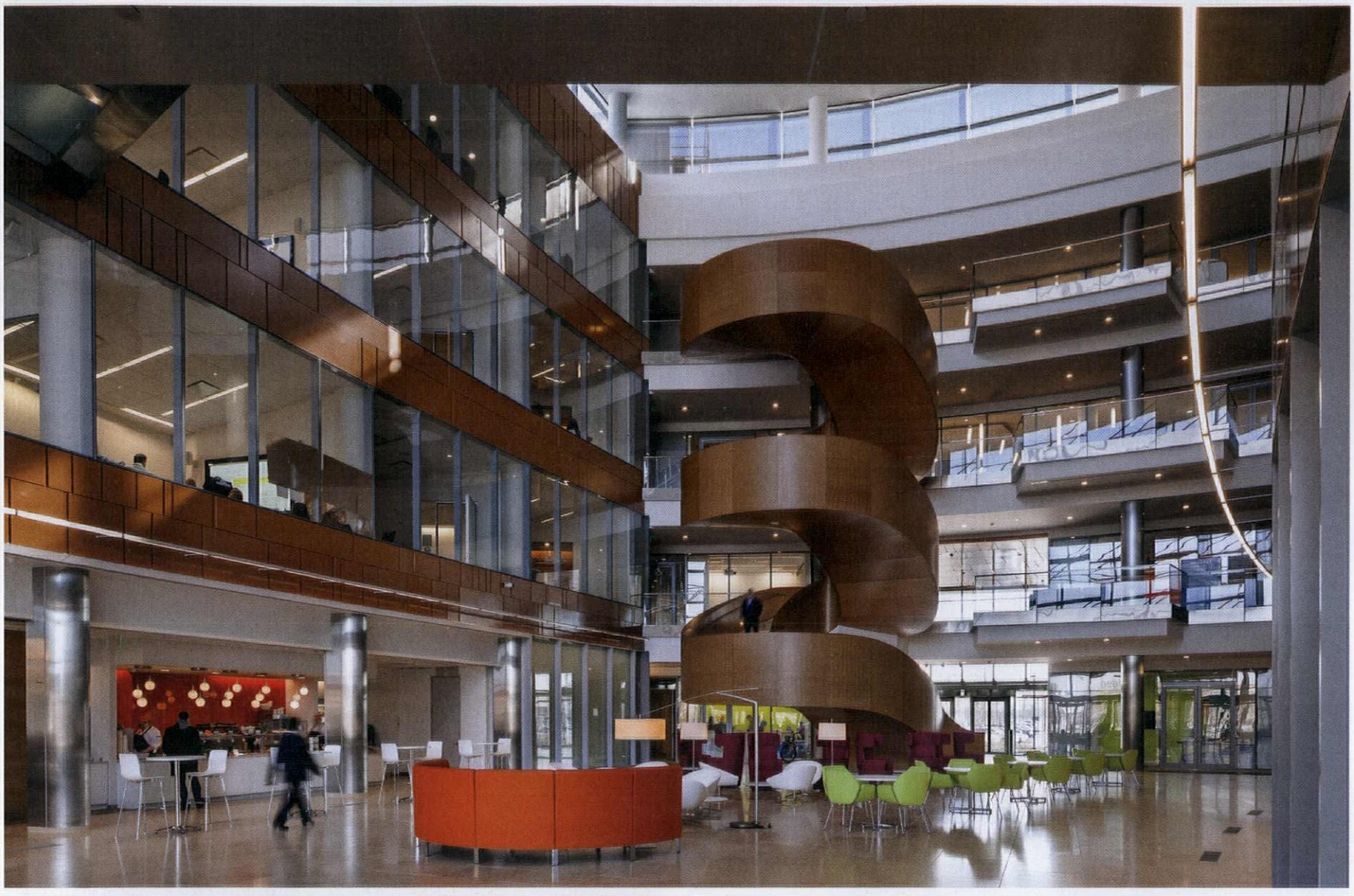
SCHINDLER

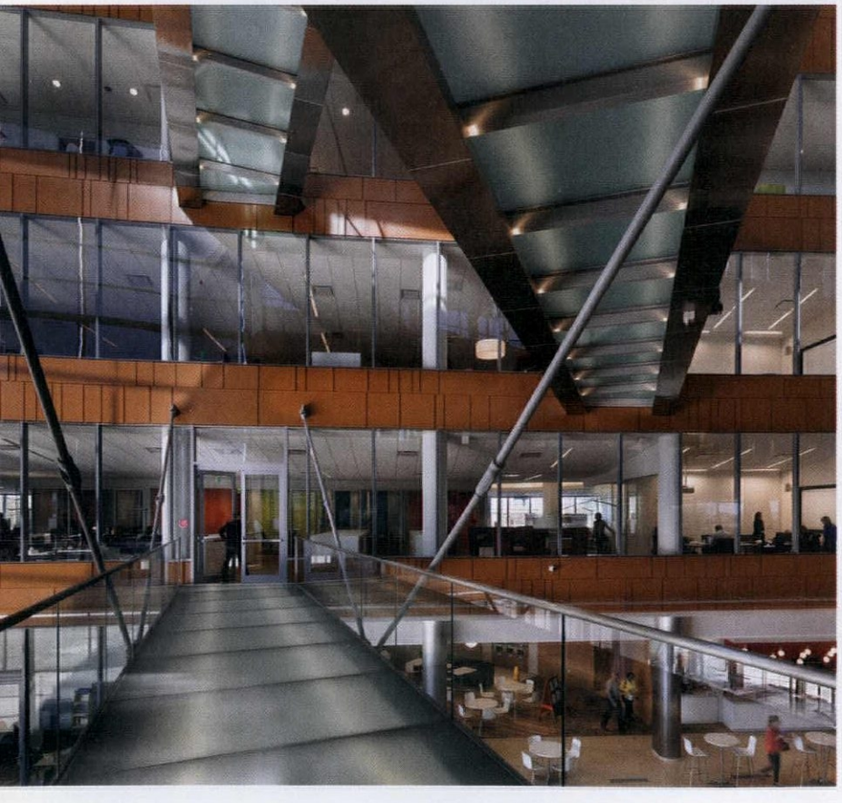
The company's Personal Occupant Requirement Terminal (PORT), a streamlined, digital trip-management system and interface, has been updated in both appearance and performance. In addition to offering sleek new customizable all-glass controls, Schindler has improved software for greater energy efficiency.
SCHINDLER.COM



VIBIA

The Wireflow luminaire, cleverly designed by Arik Levy, uses the pendant's own cables to create line drawing–like sculptures. The fixture, which takes LED lamping, is offered in 34 configurations.
VIBIA.COM



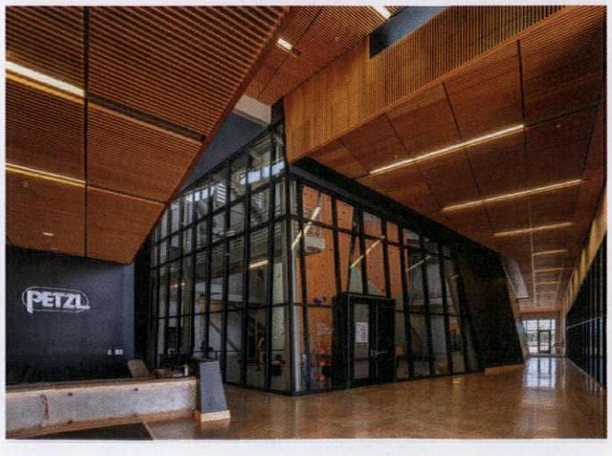


volumes clad in **Armstrong**'s Woodworks Grille linear wood-slat system arranged at varying heights create the sensation of walking through a crevasse into a large canyon.

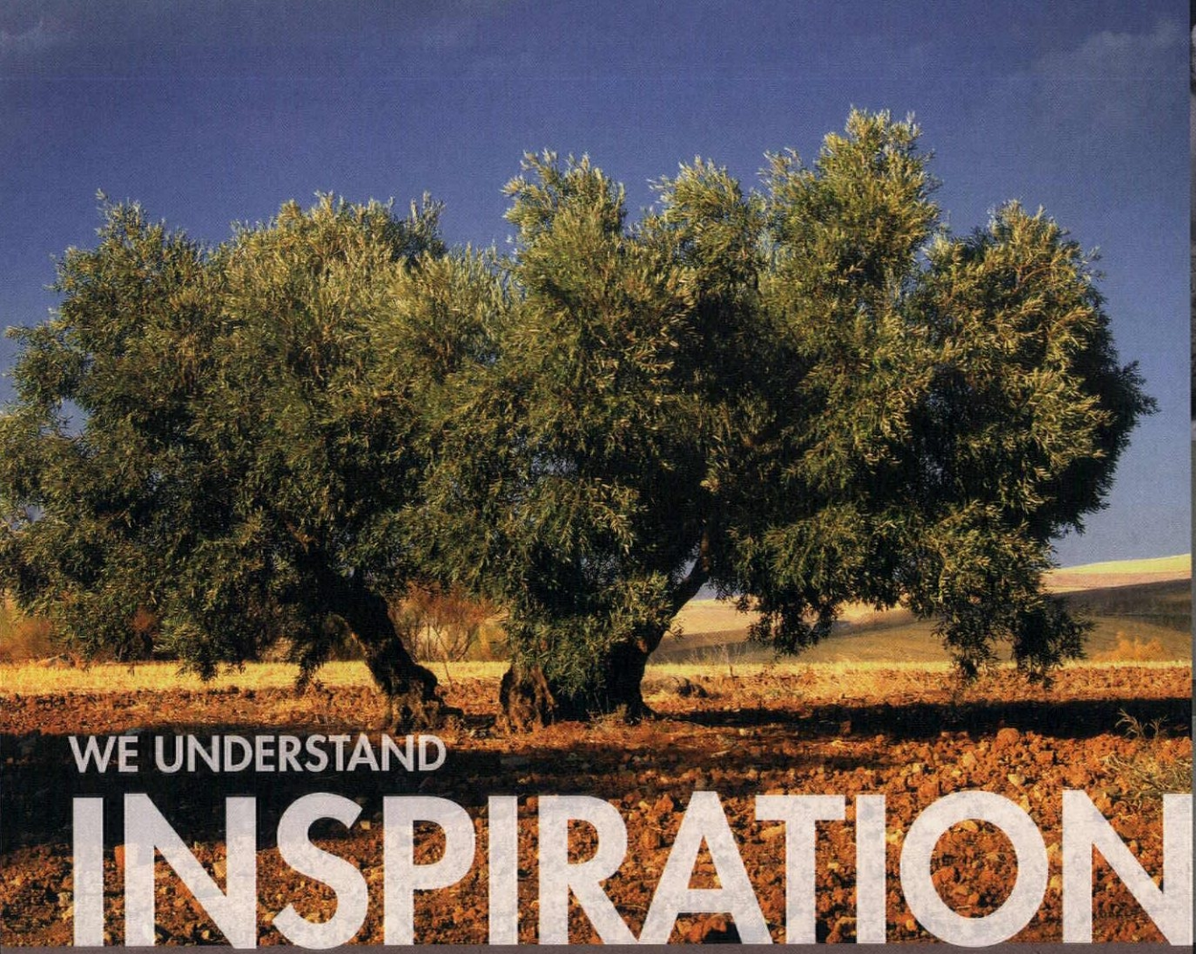
From the lobby, the building's Vertical Training Center and its 55-foot-high climbing wall are visible through a curtain wall of Solarban z50 and Starphire glass from **PPG Industries**. The reception desk's cast-glass front, produced by **Joel Berman Glass Studios**, is held in place with Petzl's own Laser Speed anchors.

According to project manager Tristan Shepherd, "The idea was to have the spaces be as bright and open as possible and to really stitch them together." ■

ON THE UP AND UP RAMSA's atrium lobby for GlaxoSmithKline (left and above) brings in light, movement, and energy. Varied-height ceilings and a climbing wall at Petzl (right) emphasize the core of the climbing-gear brand.



PHOTOGRAPHY (CLOCKWISE FROM LEFT): FRANCIS DZIKOWSKI / OTTO (2); ALAN BLAKELY PHOTOGRAPHY



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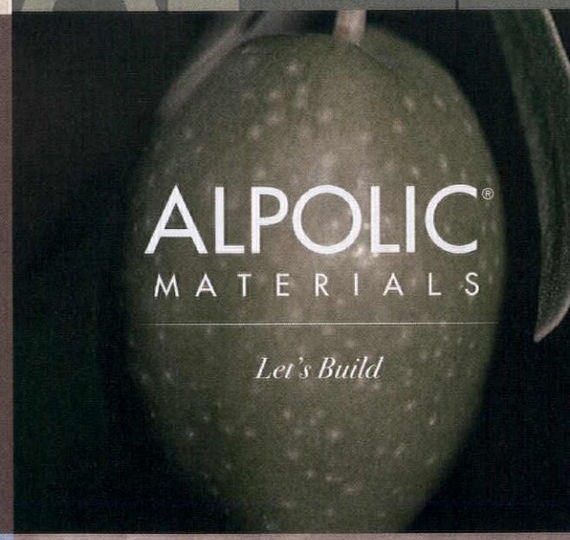

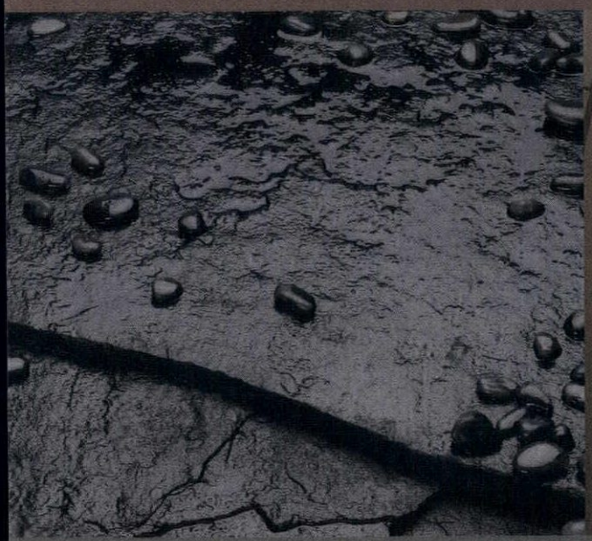

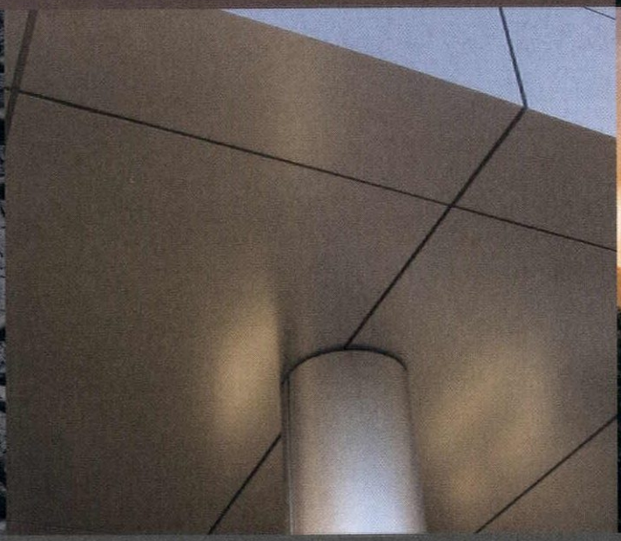

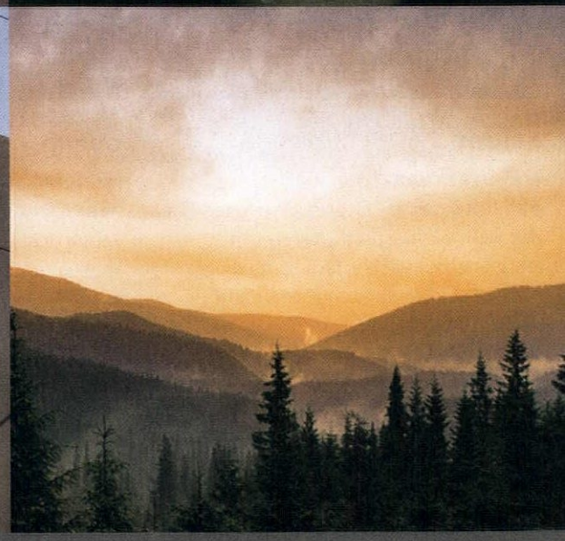

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Built to Last

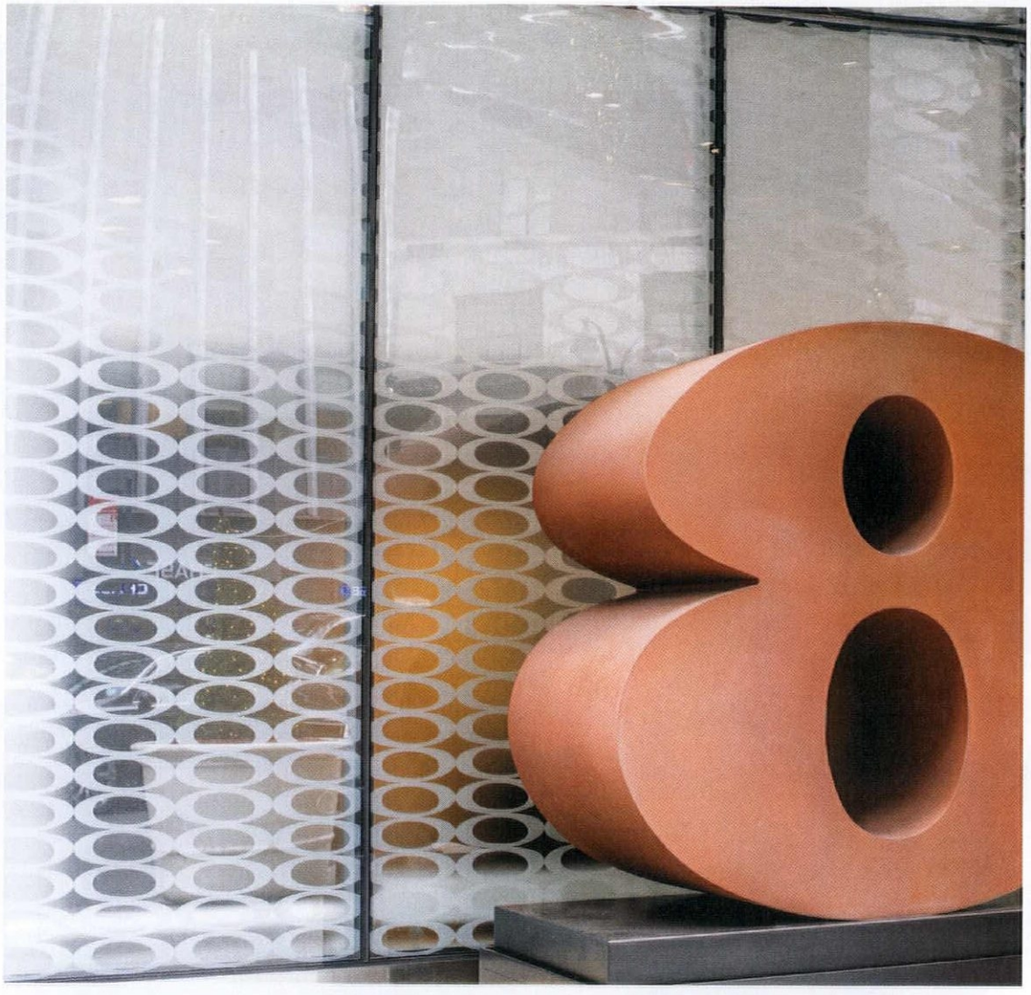
THE SYMBOL FOR INFINITY, a sideways figure eight, inspired an unusual new feature at 261 Madison Avenue in New York City.

"We played with many patterns, shapes, and numbers, and infinity really appealed to the client," says Eugene Flotteron, principal at CetraRuddy, the architecture firm charged with renovating the property. "It's more than just a pattern; it has meaning, symbolizing fortune and wealth."

Once the client and building owner, the Sapir Organization, bought into the concept, architectural glass specialist CARVART began etching it onto 400 linear feet of glass panels. These now form a two-story, frameless curtain wall on the building's facade.

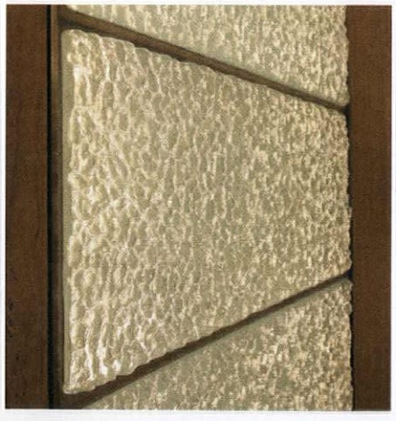
The 1⅜-inch-thick panels are actually composed of two layers of glass sandwiching a half inch of air: The pattern appears on both sides of the front sheet; the rear layer is frosted on one side and mirrored on the other.

"The result is luminous," Flotterton says. "The modern facade unifies the building from 38th to 39th Street along Madison." —*J. Michael Welton*



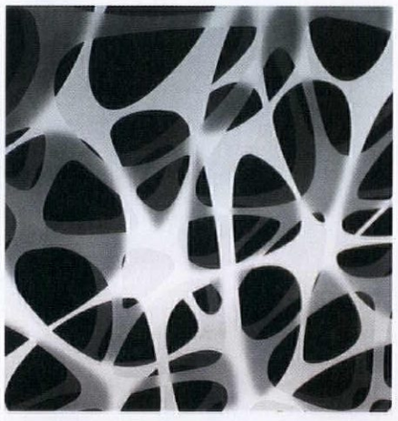
FROM HERE TO ETERNITY CetraRuddy's design for the street-level facade of 261 Madison, in New York City, features a two-story curtain wall made with CARVART custom-etched glass.

KEY $=VALUE, $$=MID-RANGE, $$$=HIGH-END



ALIGHT

MANUFACTURER: Pulp Studio
PERFORMANCE: This glass, developed by a pair of Brooklyn artisans, features an intriguing bas-relief surface. Its framing system is supplied and engineered as a complete installation.
PRICE RANGE: $$
APPLICATIONS: Custom installed for interior or exterior commercial applications.
PULPSTUDIO.COM
(SNAP #15)

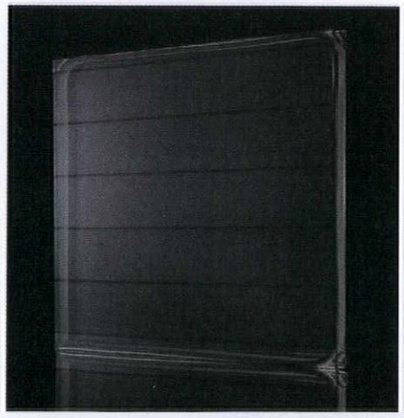


OBERON

MANUFACTURER: Bendheim
PERFORMANCE: The dual-sided, obscuring design, acid-etched on ½-inch-thick architectural glass allows for semiprivacy, daylight, and a sense of openness. It also helps reduce the risk of bird collisions.
PRICE RANGE: $$
APPLICATIONS: The decorative glass can be specified for stair railings, balustrades, shower doors, ceilings, doors, partitions, and windows as well as facades.
BENDHEIMARCHITECTURAL.COM
(SNAP #16)

NEW GLAZING OPTIONS

MANUFACTURER: Integrity from Marvin Windows and Doors
PERFORMANCE: Marvin's Integrity brand now offers All Ultrex Low-E3/ERS Glazing, Non-Tempered Obscure glass as well as California Fire glass. Both high-performing, durable solutions are energy-efficient.
PRICE RANGE: $–$$
APPLICATIONS: Suited to single-family and multifamily residences and smaller hospitality projects.
MARVIN.COM
(SNAP #17)



AVIPROTEK T

MANUFACTURER: Walker Glass
PERFORMANCE: This acid-etched glass helps reduce bird collisions by presenting contrast with UV markers on its outside surface. The effect also renders it less noticeable to the human eye.
PRICE RANGE: N/A
APPLICATIONS: The exterior glazing product can be used in insulated units and combined with a low-E glass on position.
WALKERGLASS.COM
(SNAP #18)

SNAP BACK: GLASS + GLAZING

BRETT HAUTOP
Managing Director
Gensler
Raleigh, North Carolina

"An active aperture allows a building to breathe—to open and close—depending on the time of day and the sun's position. Gensler's Shanghai Tower has two skins to let fresh air in, with spaces naturally ventilated but protected from wind."

NIZAN KIZILSENCER
Cofounder and Principal
Strata Architects
New York City

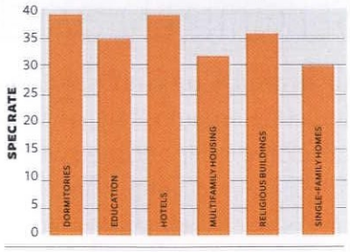
"Recently we've been considering using glass to enclose an entire tower. The project overlooks a harbor and port, but it's also turning toward the sun. Because it faces southwest, we mitigated cooling by introducing elements like SIP panels along with the glass."

ADAM MESHBERG
Principal
Meshberg Group
Brooklyn

"Glass blocks have kind of been forgotten in last decade, but we found one with a circle in the center and the client loved it. We mixed it with blackened steel and an aluminum system for a window wall. When the lights are on, it glows nicely from the inside."

SNAPSHOTS

LOW-E GLASS/GLAZING
SPEC RATE BY BUILDING TYPE
(JULY 2014 TO JUNE 2015)



SOURCE: DODGE DATA & ANALYTICS

SNAP MATH

Of *Glass Magazine's* Top 50 Glaziers, 71% reported an increase in year-over-year sales in 2014.
This marks the third consecutive year in which at least two-thirds of the Top 50 companies saw growth.

SOURCE: *GLASS MAGAZINE*

Come Together

MONTREAL-BASED ÆDIFICA'S transformation of a vacant space between two 1950s brick office buildings into a glass-enclosed atrium for year-round use had a dramatic effect on the business.

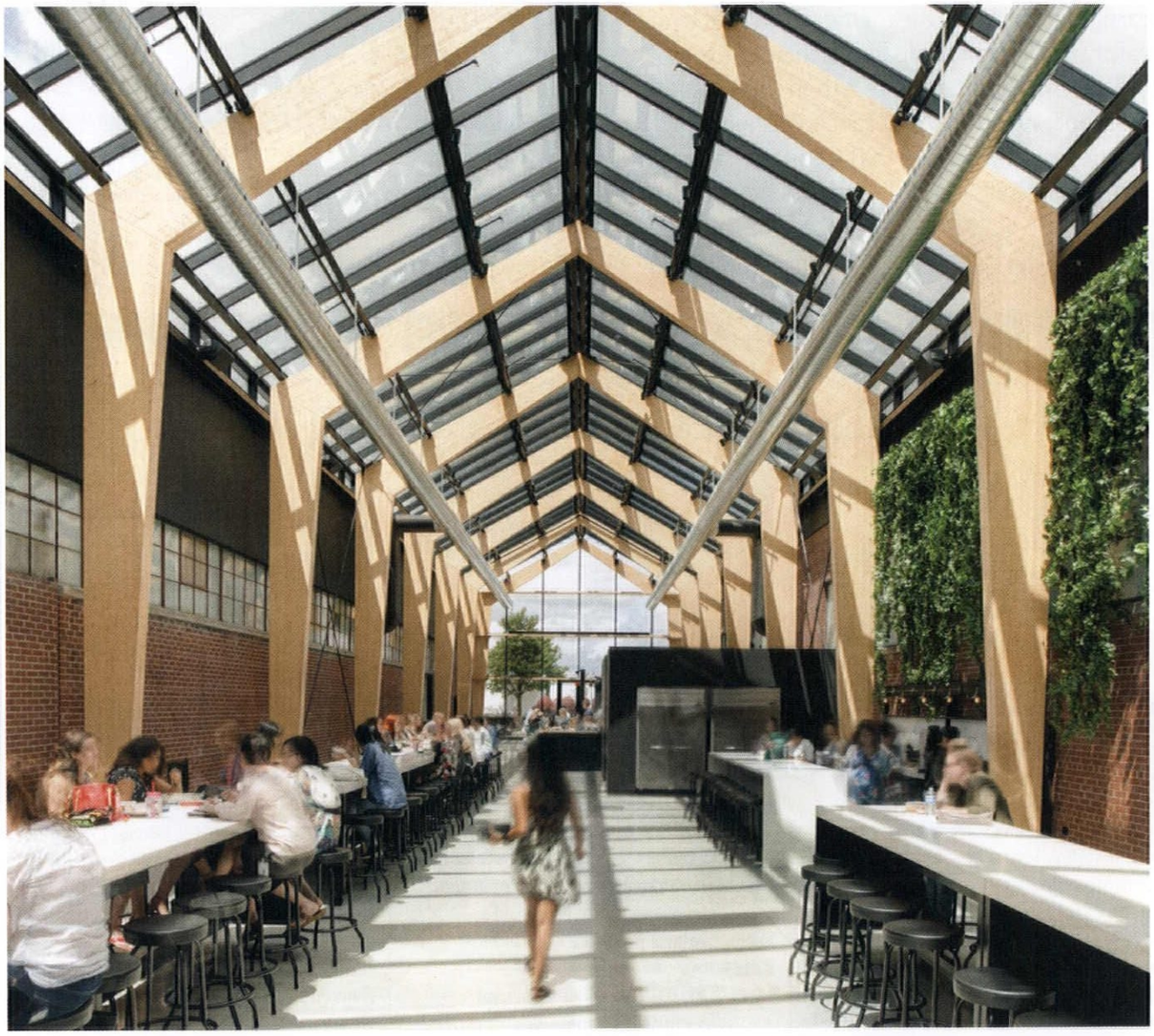
"The atrium completely changed the building operation and dynamic of work," says Ciro Falluh, senior director of construction and maintenance for the client, **Groupe Dynamite**. "It is like night and day."

Groupe Dynamite owns Dynamite and Garage, two apparel brands for young women. Each has its own building, and the atrium connects the two. Before it was built, employees from the separate brands barely interacted; now it's hard to keep them apart.

"The employees' wish was for a well-lit, open space they could use as a cafeteria and for meetings, events, and parties, too," says Thomas Schweitzer, director of architecture at Ædifica.

The space, 290 feet long and 33 feet wide, is enclosed by glass 33 feet high. Supported by Glulam laminated timber arches, it's bolstered by a secondary structure of steel, with aluminum mullions.

"The envelope protects people from a harsh climate and brings light into the two adjoining buildings," Schweitzer says. One unexpected perk of the addition? It provides a perfect setting for impromptu fashion shows. —*JMW*



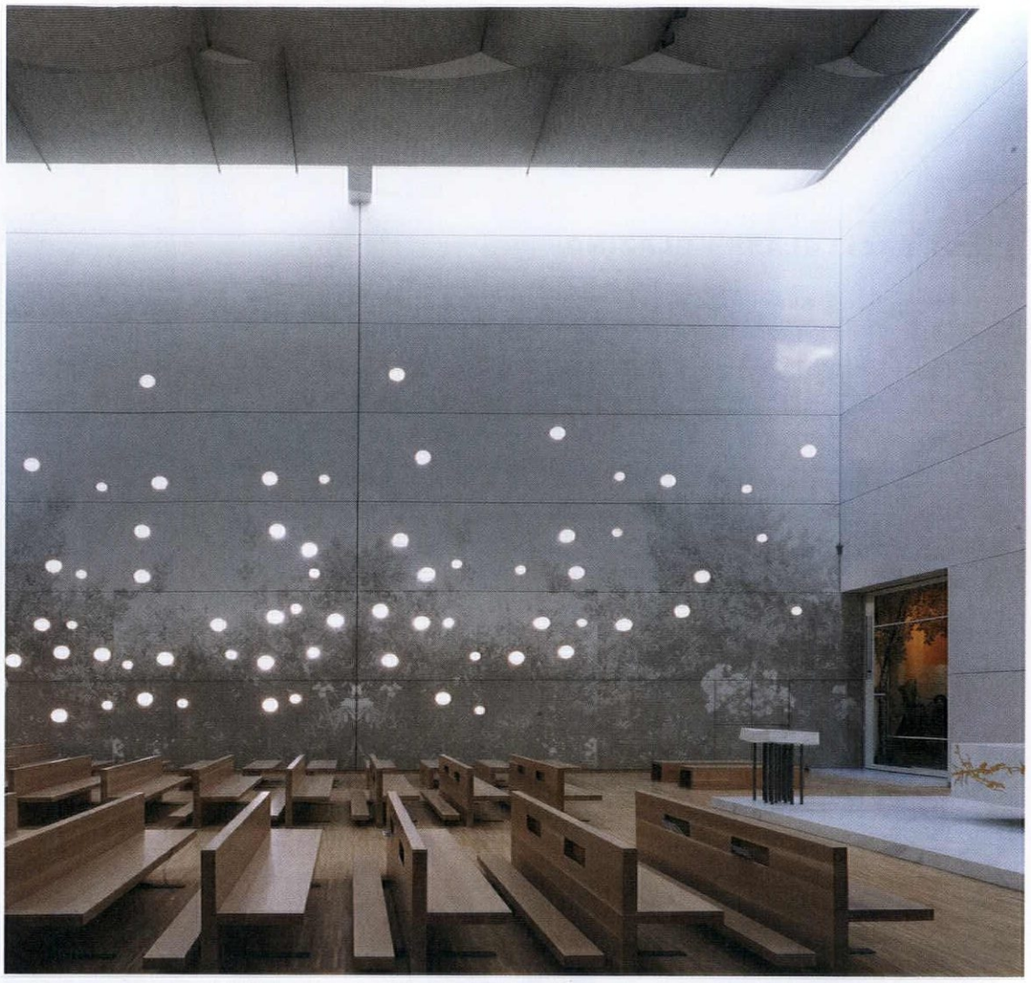
HIGH-IMPACT ARCHITECTURE When Montreal's Ædifica designed an atrium for Groupe Dynamite to link two buildings and apparel brands, company dynamics underwent a sea change.

PHOTOGRAPHY: F. DESCOTEAUX

Strength and Grace

THE INTERIOR OF THE Ospedale Giovanni XXIII Chapel in Bergamo, Italy, is not your traditional house of worship adorned with sculptures in niches and gilt-frame paintings. Instead, the Traversi + Traversi Architetti and Aymeric Zublena–designed space is lined with precast concrete panels that integrate plant- and flower-themed graphics. The imagery, conjured by designer Stefano Arienti, intends to evoke the Garden of Eden. The large-scale pattern was realized using delicate rasterized images and a special formula for cement that selectively creates a textured finish.

Finnish firm Graphic Concrete developed the method, producing a membrane that's used in the prefabrication process of concrete. The desired image is printed on the membrane with a surface retardant, after which the membrane is sent to a local prefabrication company (in this case, the Styl-Comp Group). Concrete is then cast on the membrane. When the retardant is washed away, both the smooth, fair face of the concrete and the rough exposed aggregate is revealed. *—Lisa Caldwell*

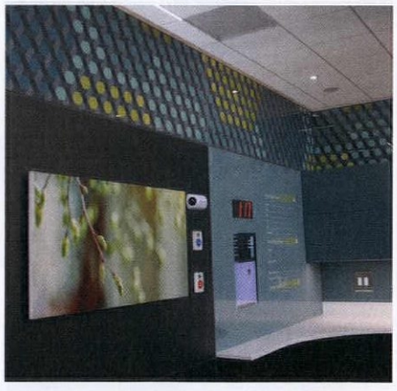


REVELATIONS Stefano Arienti created a Garden of Eden–like motif for precast concrete walls in this Italian chapel project by Aymeric Zublena and Traversi + Traversi. The image was achieved via a print-and-wash process developed by Graphic Concrete.

KEY $ = VALUE, $$ = MID-RANGE, $$$ = HIGH-END

BEYOND MOVABLE WALLS

MANUFACTURER: Allsteel
PERFORMANCE: A polymer extrusion enhances the acoustic seal at each panel's base, typically a vulnerable spot for sound transmission. A new low-profile, 2½-inch base trim features a slim minimalist design, a preference in many offices today.
PRICE RANGE: $$
APPLICATIONS: Office settings.
ALLSTEELOFFICE.COM
(SNAP #19)

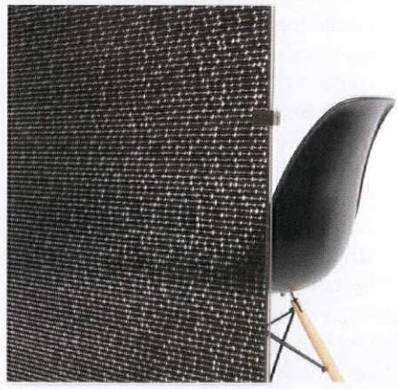


CORNING WILLOW GLASS FOR DIRTT

MANUFACTURER: DIRTT
PERFORMANCE: Thirty times thinner and lighter than standard 6mm soda-lime glass, the bendable display-grade Willow Glass is chemically durable, scratch-resistant, and easy to clean—and it's now offered as a protective layer on DIRTT wall systems.
PRICE RANGE: $$
APPLICATIONS: Provides enhanced acoustics and design capabilities to corporate, health-care, and education projects.
DIRTT.NET
(SNAP #20)

CUSTOM RETRACTABLE WALLS

MANUFACTURER: Tudelü
PERFORMANCE: It takes less than a minute to raise or lower these vertically retractable walls via remote control. Levels of visual and acoustic privacy vary according to material choice.
PRICE RANGE: $$
APPLICATIONS: Suitable for office and residential environments, these mechanized roller-style walls come in felt, woven fabric, wood, steel mesh, and vinyl. Indoor- and outdoor-rated models are offered.
TUDELU.COM
(SNAP #21)



OPTICAL WOODS

MANUFACTURER: 3form
PERFORMANCE: A kinetic visual effect is achieved by layering printed wood patterns on transparent Varia Ecoresin panels. The panels can be heat-formed and are offered in 48 by 96 and 48 by 120 inches.
PRICE RANGE: $$
APPLICATIONS: The panels suit office, hospitality, and commercial settings alike. Four patterns—in walnut, wenge, and white and gray oak—blend transparency with opacity.
3-FORM.COM
(SNAP #22)

PHOTOGRAPHY: COURTESY GRAPHIC CONCRETE

= ECO-FRIENDLY ATTRIBUTES

SNAP BACK: WALLS + PARTITIONS

ANDREA BRANDT
Principal, Project Director
NELSON
Chicago

"It's important that any demountable wall system 'flows' with the architectural wall detailing proposed in many of our spaces. Beyond Walls has proved a versatile and well-detailed system, and it hits the mark on both design and economic review. The feedback we have received from clients has been overwhelmingly positive."

COLIN BRICE
Founder and Principal
Mapos
New York City

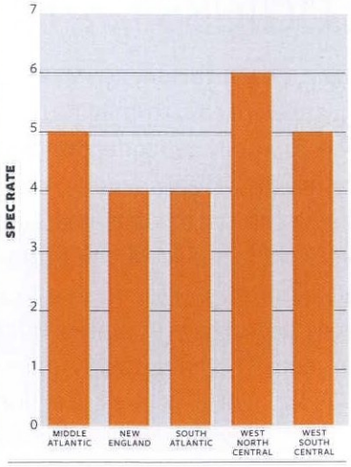
"Movable walls let us be more flexible and ultimately more efficient with space. A conference room can expand into a lobby and event space; an outdoor terrace can easily grow into a living room. Rooms not limited in size can be used more often. Floor tracks are the only downside—if trenching is not an option, there's a design challenge."

GARTH ROCKCASTLE
Principal
Meyer, Scherer & Rockcastle
Minneapolis

"Underscoring the value of movable walls is the need for spaces to be more responsive or enclosed. But they're plagued by issues of cost, size, durability, and performance, especially their limited acoustic properties. Progress is being made technically and materially, and on the edges of these improvements are expanding frontiers for hybrid variations components."

OPERABLE PARTITIONS

SPEC RATE BY REGION
(JULY 2014 TO JUNE 2015)



SOURCE: DODGE DATA & ANALYTICS

A Sure Bet

NOT SURPRISINGLY, television and streaming media are affecting attendance at major sport venues. When historic **Santa Anita Park**, a horse-racing track in Arcadia, California, underwent a substantial overhaul of its facilities, the owners wanted to draw viewers back by emphasizing the uniquely visceral experience of live action.

Key to this goal was both the visual and physical linkage between the spectators and the racetrack. **CRL-U.S. Aluminum** was engaged by **Shawmut Design and Construction** to supply glass railings, partitions, and wall systems throughout the complex.

Using two of the CRL's systems—Monterey Bi-Folding Glass Door and Wall and CRL SPS Stacking Partition—created fluid indoor/outdoor environments tying the grandstand and turf together. The aluminum-framed Monterey units are delivered fully assembled (with or without glazing) thus expediting the installation process. A choice of inward- or outward-stacking positions permits the most efficient use of space. Meanwhile, the SPS Stacking Partition system, even when closed, preserves views of not only the track but also the towering San Gabriel Mountains in the distance. —*LC*

I CAN SEE CLEARLY NOW
A new luxury suite at Santa Anita Park affords visitors unobstructed views thanks to the CRL SPS Stacking Partition system.

PHOTOGRAPHY: DREW CARLSON (TOP RIGHT)

Endless Light

ONCE, CONTINUOUS, SEAMLESS, ELEGANT lines of light were easy to imagine but hard to deliver in a world wholly dependent on fluorescent tubes. Thanks to the rapid development and acceptance of LEDs, all that has changed. Lines of light were everywhere at this year's Lightfair, and linear-fixture manufacturers presented an panoply of new options: recessed, surface-mount, pendant-mount, straight, curved, and even zigzag.

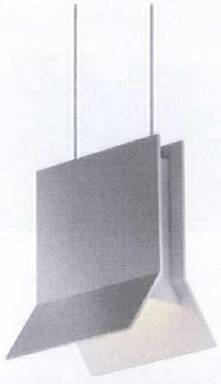
Delta Light's Profiles collection includes the Endless, Nanoline, Uniline, Femtoline, and Microline models. Zumtobel, long the design leader in slim lighting solutions, continues to expand its Spotlight line. Spotlight II features a luminance-reducing optic that allows it to be used above workstations. XAL's Curve produces circles, ellipses, and sinuous lines. Lumenpulse offers lumenline, while iGuzzini has the iN30. Particularly elegant is Pure Lighting's TruLine LED; its paintable aluminum extrusion blends so seamlessly into drywall that now any wall can be a canvas for light art. *—Allison Craig*

LINE DANCING TruLine .5A from Pure Lighting both illuminates and animates an office space designed by idGroup Dallas.

KEY $ = VALUE, $$ = MID-RANGE, $$$ = HIGH-END

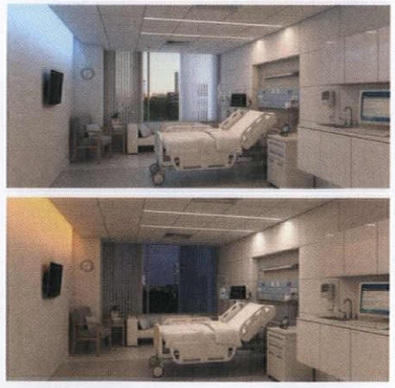
LUMIFI

MANUFACTURER: LumiFi
PERFORMANCE: With wireless LED technology and the LumiFi app, users can experience fully composed lighting scenes with a tap of their smartphone. The app—download a free version at the iTunes App and Android Play stores—communicates with Wi-Fi bulbs such as Philips HUE to create custom or preset modes like Relax and Focus.
PRICE RANGE: $$
APPLICATIONS: For hotel, home, and workplace environments.
LUMIFI.COM
(SNAP #23)



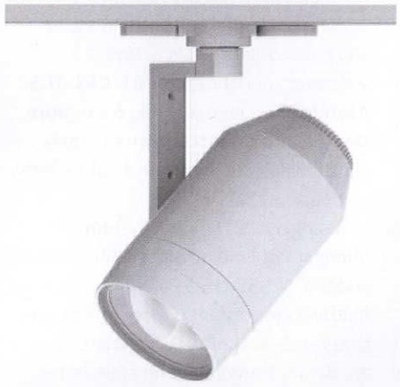
LAMBDA

MANUFACTURER: Sonneman
PERFORMANCE: This modern LED pendant consists of two simply flanged die-cast aluminum plates set apart to form a striking reveal. Powered by a 13-watt LED, the fixture comes in a bright satin-aluminum version and a textured white one.
PRICE RANGE: $$
APPLICATIONS: Suitable for an array of contemporary, commercial, and residential settings.
SONNEMANAWAYOFLIGHT.COM
(SNAP #24)



HEALWELL

MANUFACTURER: Philips
PERFORMANCE: HealWell combined tunable LED luminaires with integrated controls and remote management and came up with a health-care lighting solution that supports circadian rhythms. The result is a better night's sleep for patients and a more comfortable environment for staff and caregivers.
PRICE RANGE: $$$
APPLICATIONS: Specifically designed for use in patient hospital rooms.
PHILIPS.COM
(SNAP #25)



PALOMA

MANUFACTURER: WAC Lighting
PERFORMANCE: This LED track luminaire, created for use on WAC Lighting's W track systems, allows you to adjust its beam angle from 15 to 60 degrees. All it takes is a turn of the knob on the back of the track head.
PRICE RANGE: $$
APPLICATIONS: Offered in black, platinum, and white architectural finishes to accommodate nearly any application.
WACLIGHTING.COM
(SNAP #26)

SNAP BACK: INTERIOR LIGHTING

KATHY PRYZGODA
Principal Designer
lightstudioLA
Culver City, California

"Lightfair 2015 was all about great LED products. Until now, I wasn't 100 percent sold on 'flicker-free' dimming capabilities so felt nervous about specifying some LED products. But the manufacturers have really listened and addressed our needs with regard to LED dimming, color temperature, and color rendering."

JERED WIDMER
Associate Principal
the lighting practice
Philadelphia

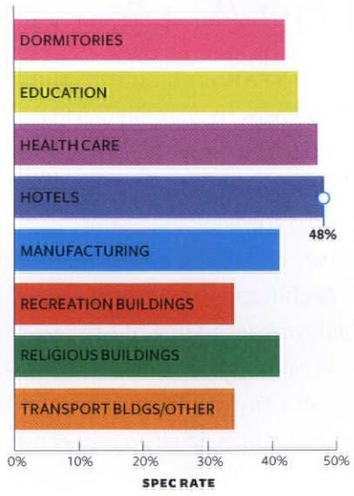
"Most of the manufacturers offer flexible LED strips that can mount in a variety of aluminum extrusions to meet different architectural needs. A few years ago, the offerings were limited to two color temperatures and two outputs. Now the variety in lumen outputs and CCTs has increased quite a bit. I see this variety a lot with ModaLight, Luminii, and Edge Lighting. These new tools really expand the possibilities."

BRIENNE WILLCOCK
Lighting Designer
Illuminart
Ypsilanti, Michigan

"Integrating optics as design elements instead of applied lenses is an interesting development that really celebrates the uniqueness of LEDs. Eaton's WaveStream technology and Cree's WaveMax both have blades of light with no source glare, but there's still a sparkle to it. And speaking of sparkle, the LiteControl LiteWeave product from Hubbell is neat."

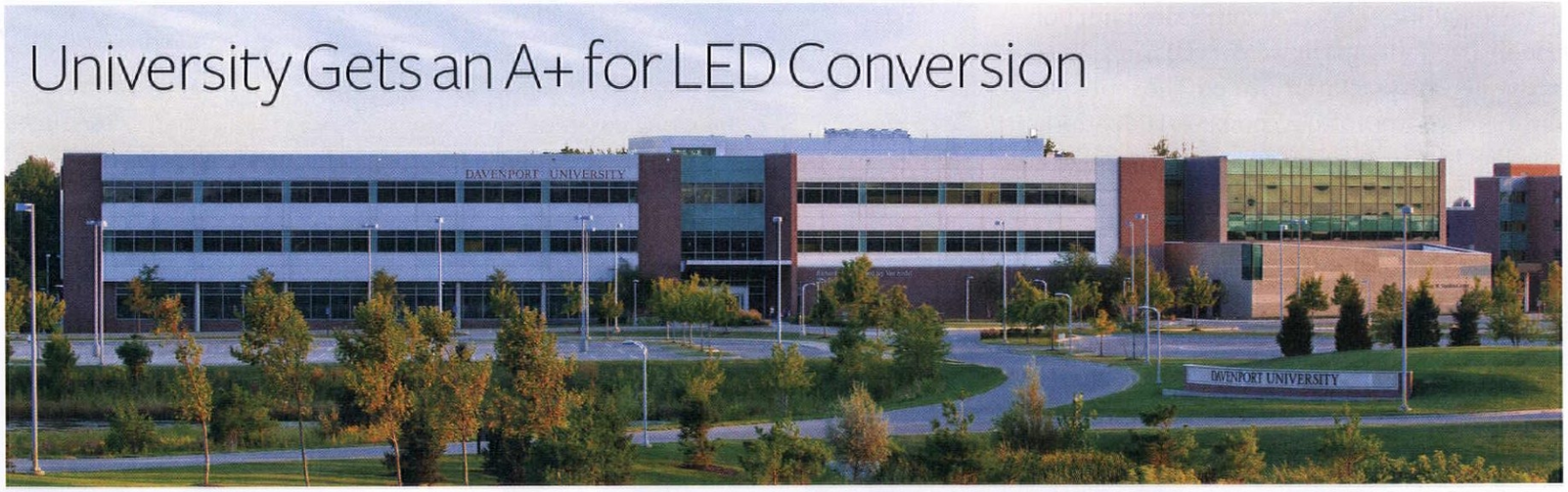
SNAPSHOTS

INTERIOR RECESSED AND DOWN LIGHTING
SPEC RATE BY BUILDING TYPE
(JULY 2014 TO JUNE 2015)



SOURCE: DODGE DATA & ANALYTICS

University Gets an A+ for LED Conversion



DAVENPORT UNIVERSITY in Grand Rapids has joined the growing list of schools converting to energy-efficient LED lighting. The university's ambitious five-year project encompasses 920,000 square feet across all 17 campus buildings. Project manager **Brightview Lighting** audited the campus and chose **LG Electronics** fixtures for the project—the company's workhorse 2-by-4-foot LED troffers, in particular—for their high lumens per watt, uniform light outputs, and customizable warranties.

"Universities tend to take a progressive view of LED lighting, focusing more on total return and energy savings than initial installed cost," says Sean Lafferty, head of LED lighting at LG Electronics USA. "This makes our performance troffers a terrific option." Since 2014, when the process began, Davenport has already generated energy savings by more than 70,000 kilowatt-hours per year. By completion, they're estimated to reach upwards of 1.5 million kWh per year.

Davenport could not be happier with its decision. "It just made fiscal sense to do the entire university, and the reaction has been very favorable," says Nathan McCormick, the university's executive director of facility operations. "Both students and staff have commented on how much brighter the buildings appear and how all the problems associated with fluorescents are gone." —*AC*

SEEING THE LIGHT
Only one year into a five-year LED-conversion plan, the Grand Rapids university has saved on energy costs—and the change is a big hit on campus.

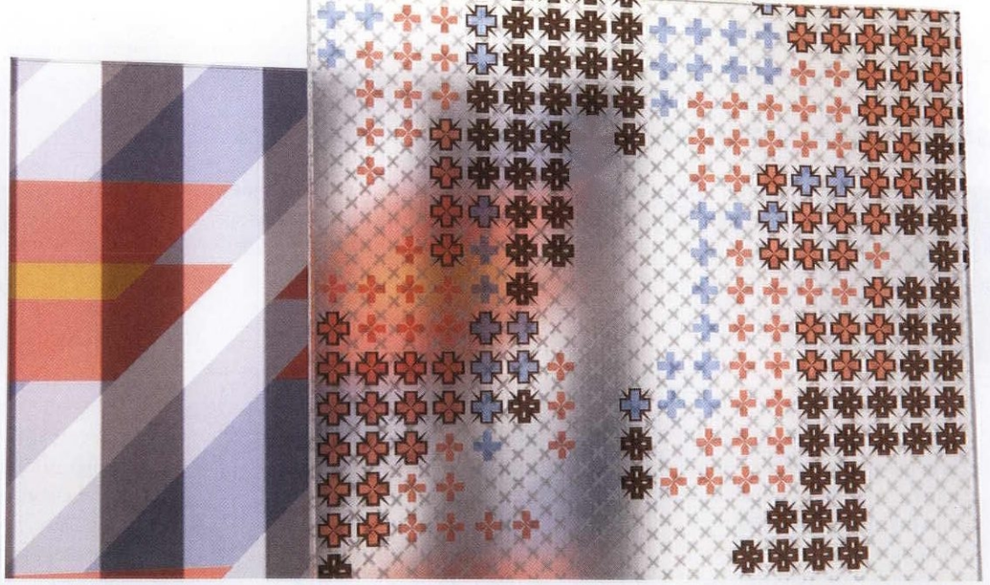
PHOTOGRAPHY: COURTESY LG ELECTRONICS

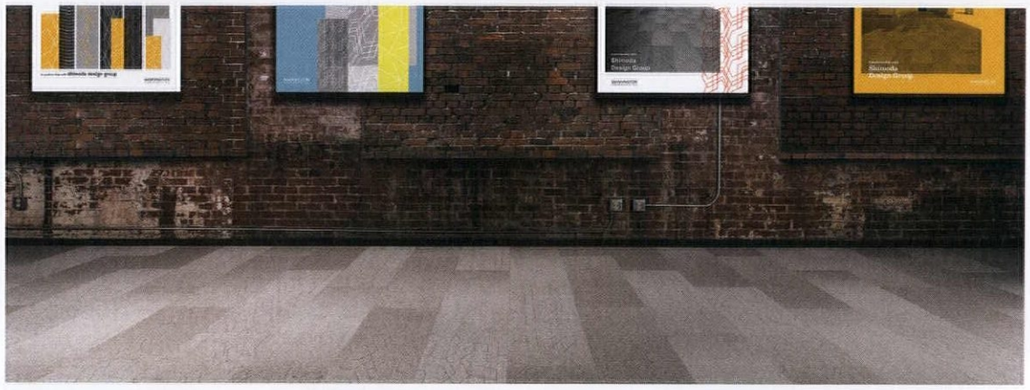
The A-Teams

EVERY YEAR, architecture and design professionals in the know head to NeoCon to check out the latest trends in contract furnishings and finishes. But the 2015 show, held in June in Chicago, shifted the spotlight to some of their peers as a number of A+D heavy hitters collaborated with exhibiting manufacturers.

Architect David Adjaye followed up his Knoll furniture with a line of African-inspired fabrics and wallcoverings for KnollTextiles. Patricia Urquiola ventured into architectural glass for Skyline Design, devising three layered patterns: an abstracted plaid, symbols as pixels, and a diagonal stripe.

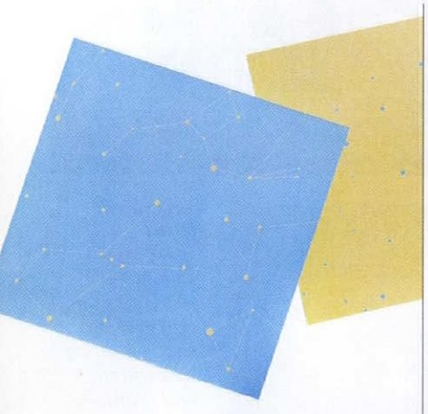
Design firm 13&9 worked with the Mohawk Group on Moving Floors, a carpet-tile collection of patterns that seem to shift in lenticular fashion as the viewer changes perspective. And Joey Shimoda teamed up with Mannington Commercial and created Traction Avenue, named after the downtown Los Angeles stretch where his practice is located. The series of 12-by-48-inch carpet planks combines line patterns with color play to evoke the urban grit, art, and industry of the eponymous street. —*Sheila Kim*





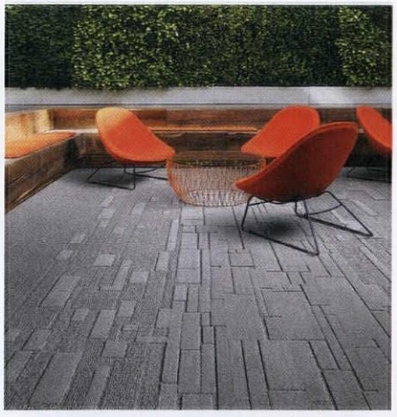
GREAT COLLABORATIONS Patricia Urquiola's namesake series for Skyline Design (top) consists of layered architectural glass patterns. Mannington Commercial debuted its Traction Avenue carpet collection (above), designed by architect Joey Shimoda.

KEY $=VALUE, $$=MID-RANGE, $$$=HIGH-END



NEW INK DESIGNS

MANUFACTURER: Arborite
PERFORMANCE: Following the successful launch of Ink, its collaborative laminate collection, Arborite is introducing eight new patterns. The durable melamine surfacing products require minimal maintenance.
PRICE RANGE: $–$$
APPLICATIONS: The 4-by-8-foot panels are suitable for walls, countertops, and furniture in health-care, education, office, and hospitality projects.
ARBORITE.COM
(SNAP #27)



EQUAL MEASURE

MANUFACTURER: Interface
PERFORMANCE: Inspired by the intersection of man-made and natural environments, this skinny-plank carpet collection features textures and patterns recalling cobblestone and bark. A transitional option blends the patterns of both designs. It is constructed of 100 percent recycled nylon.
PRICE RANGE: $$
APPLICATIONS: Well suited to office, education, and hospitality settings.
INTERFACE.COM
(SNAP #28)

O PHONE BOOTH

MANUFACTURER: Framery Acoustics
PERFORMANCE: This compact soundproof booth includes a tabletop, LED lighting, an electric outlet, and air ventilation system. Materials such as sound-control glass, felt, and carpet contribute to the overall sound insulation.
PRICE RANGE: $$$
APPLICATIONS: Ideal for office, hospitality, and other commercial interiors, the booths can be moved and reassembled as needed.
FRAMERYACOUSTICS.COM
(SNAP #29)

WEST ELM WORKSPACE

MANUFACTURER: West Elm and Inscape
PERFORMANCE: Residential furnishings retailer West Elm has teamed up with contract furnishings manufacturer Inscape to produce desks, benching systems, case goods, lighting, and seating that blur the lines between home and office.
PRICE RANGE: $$
APPLICATIONS: The 75-plus pieces work best in modern or transitional office spaces, whether open plan or private.
WESTELMWORKSCAPE.COM
(SNAP #30)

= ECO-FRIENDLY ATTRIBUTES

SNAP BACK: CONTRACT FURNISHINGS

ELVIRA GERSHENGORN
Senior Project Designer
Huntsman Architectural Group
New York City

"In this year's furniture lines, flexibility is the common thread. Sit/stand desks address the increasing demand for a healthier work style; it's even possible now to control work-surface height through a smartphone app. Working collaboratively with remote business partners on a same project is all the buzz: Haworth's Bluescape virtual workspace is an impressive tool in this arena."

FAUZIA KHANANI
Principal
Foz Design
New York City

"Resilient flooring options used to be very limited. But now manufacturers are making an effort to provide products that are more aesthetically appealing. On a recently completed office project, we specified vinyl plank flooring for the pantries. It looks remarkably like real wood but will withstand the high traffic. It made for a great wall finish as well: to add more character to the spaces, we used it as a backsplash."

ROGER SEKOL
Senior Associate
HOK
Houston

"The mobile workplace has created many opportunities to expand beyond the traditional office, thus blurring the line between workplace and coffee shop, airport and hotel, living room and breakfast nook. As a result, residential brands are entering the corporate market. Furniture is a key component in the function and mood of these spaces, so this sort of cross-pollination comes as no surprise."

U.S. OFFICE FURNITURE CONSUMPTION

SOURCE: BIFMA.ORG

(Don't) Bring In the Noise

WHILE SOME FACILITIES MANAGERS applaud open-plan office design, others recognize that it can compromise audio privacy and noise control. Fortunately, it doesn't take a complete overhaul to remedy or improve on these scenarios.

Belgian company **BuzziSpace** uses its proprietary eco-friendly noise-dampening felt on everything from geometric wall tiles and quirky lampshades to furniture. Most recently, it launched BuzziFalls, a CNC-cut felt screen that functions as either a space divider or a wall hanging. Offered in a choice of seven designs, it comes with a metal profile and set of cables.

The Australian company **Baresque**, a wallcoverings distributor since the 1970s, now develops and manufactures its own acoustic wall products: the Zintra series, for one. The line features basic panels in fashion-forward colors as well as versions with intricate cutout patterns or three-dimensional reliefs. Also available are whole, prefabricated compositions of wall blades and ceiling clouds that read like works of art.

Numerous other contract manufacturers are sounding off, so to speak, with solutions. **Seeyond** has 3D Acoustic Wall Facings, **Framery** offers sound-insulated booths (see opposite), and a slew of companies have released their own high-walled, enveloping seating nooks. —*SK*

BRING IN THE FUNK Birch (above) is one of seven designs in the new BuzziFalls collection of CNC-cut felt screens. The Zintra series by Baresque (above left) includes a range of large-scale acoustic wall panels and systems.

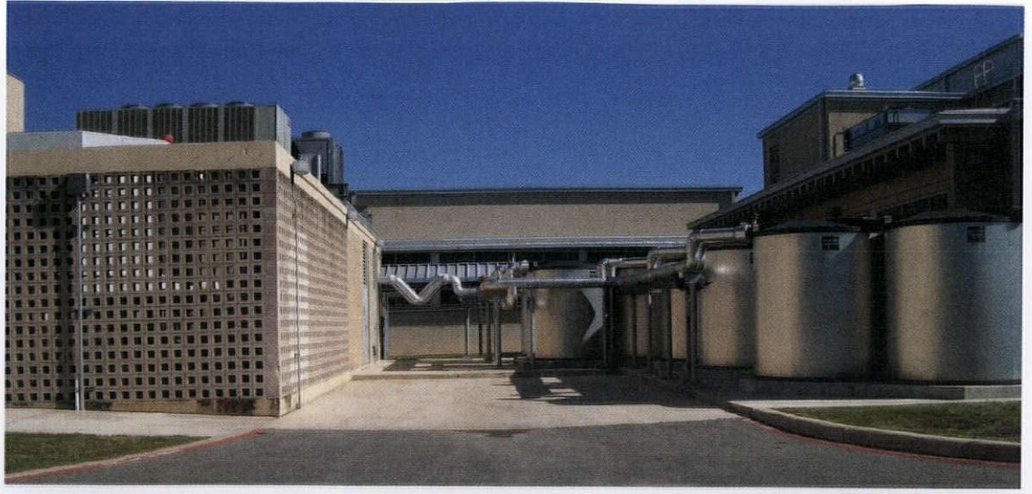
The Ice Age Cometh

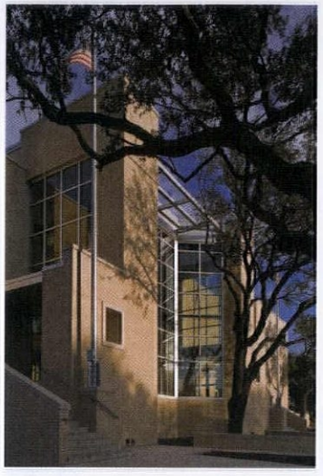
IN AN EFFORT TO HELP REDUCE operating costs, the Alamo Heights Independent School District in Texas installed a 500-kilowatt solar system that serves two campuses while adding supplemental ice-based energy storage for cooling to reduce peak demand.

The IceBank energy system by CALMAC consists of chillers, tubing, and air handlers. It creates cooling in the form of ice at night and, when demand is low and energy prices are discounted, stores it within the tanks.

"The next day the chillers turn off and circulate antifreeze through the tubing," explains company CEO Mark MacCracken. "The antifreeze melts a bit of the ice, then cold liquid goes through air-handling coils in the building and absorbs heat from the building before going back down to the coils in the tank to repeat the process."

School officials say the system, which came online in 2012, helped reduce peak demand energy consumption by roughly 21 percent in the first year of operation. —*Nigel F. Maynard*





CHILL OUT CALMAC's IceBank tanks at the Alamo Heights Independent School District, which cool more than 325,000 square feet across five school buildings on two campuses, have reduced peak energy consumption by more than 20 percent.

KEY $ = VALUE, $$ = MID-RANGE, $$$ = HIGH-END

WHISPERGREEN SELECT

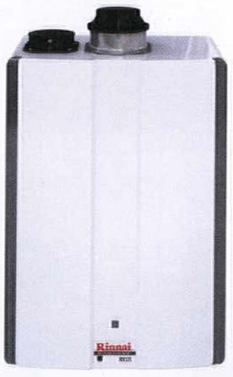
MANUFACTURER: Panasonic
PERFORMANCE: This vent fan allows architects to customize the unit's flow speed. Featuring a motion sensor and LED nightlight, it installs quickly and easily thanks to its Flex-Z Fast bracket.
PRICE RANGE: $
APPLICATIONS: Suitable for baths in single- and multifamily residential projects.
PANASONIC.COM
(SNAP #31)

H2I P-SERIES HEAT PUMP

MANUFACTURER: Mitsubishi Electric
PERFORMANCE: The updated P-Series boasts greater efficiency and improved heating capacity at low ambient temperatures. It offers multiple fan speeds and a mode that helps combat excess moisture in rooms.
PRICE RANGE: $$
APPLICATIONS: Ideal for light commercial applications such as offices, retail shops, restaurants, and schools.
MEHVAC.COM
(SNAP #32)

AC SMART IV CONTROLLER

MANUFACTURER: LG
PERFORMANCE: The 10.2-inch LCD touchscreen controller communicates with LG indoor units and controls third-party HVAC systems. It allows Web access, error e-mail notification, and visual floor-plan navigation in buildings. Users may set up to 200 programmable schedule events.
PRICE RANGE: $$
APPLICATIONS: A good option for office buildings, schools, and other commercial sites.
LG-VRF.COM
(SNAP #33)



RUCS75 TANKLESS WATER HEATER

MANUFACTURER: Rinnai
PERFORMANCE: This condensing tankless heater offers lower BTUs (160,000), concentric/dual-pipe venting options, and status monitor control. It delivers 6.5 gallons of hot water per minute and has built-in freeze protection down to -22°F.
PRICE RANGE: $$
APPLICATIONS: For smaller single-family homes and multifamily projects.
RINNAI.US
(SNAP #34)

PHOTOGRAPHY: COURTESY CALMAC

SNAP BACK: HVAC

KEVIN DEFREITAS
Principal
Kevin deFreitas Architects
San Diego

"I practice in temperate San Diego, where cooling a building is of primary importance. The Chilled Beam system is one that really captures my imagination; I want to understand it better and, hopefully, implement it. Essentially noiseless, the system eliminates drafts, takes up minimal space, and is highly efficient."

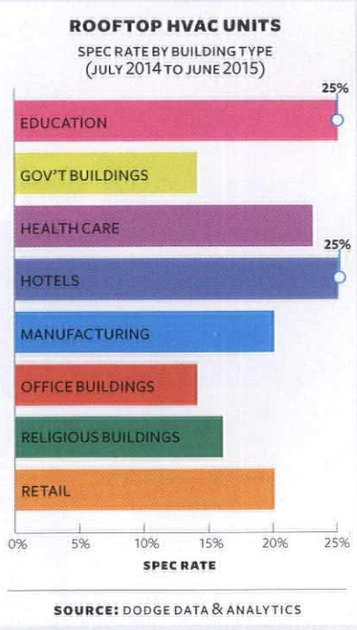
GABRIEL KELLER
Principal
Peterssen/Keller Architecture
Minneapolis

"The most advanced system we have specified is a fully integrated, forced air/hydronic in-floor heat/geothermal/photovoltaic system in which the PVs power the geothermal pumps. When combined with insulation much higher than code, the setup allows the house to approach net zero throughout the year. The most advanced systems we've seen, however, turn mechanical systems into passive ones."

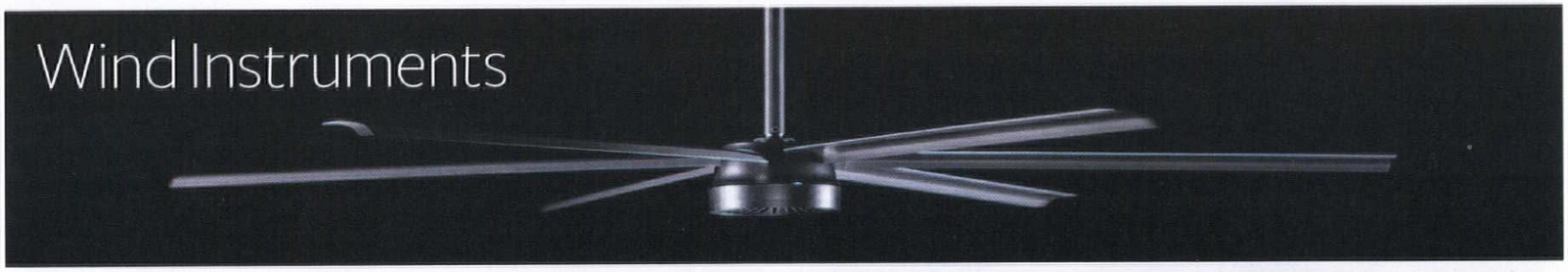
MATTHEW O'MALIA
Partner
GO Logic
Belfast, Maine

"While HVAC systems have changed in the past decade with the rise of air-source heat pumps, so have building technologies and their energy performance. We've transitioned from slightly improved conventional construction to the Passive House standard, which proposes an 80% improvement on energy efficiency. Given the dramatic performance demands, mechanical system design has had to adapt."

SNAPSHOTS



Wind Instruments



CEILING FANS WERE a mostly ho-hum product category until industrial designer Ron Rezek came along in the 1980s and shook things up with his contemporary Stratos model. Now there are high-tech and high-design options aplenty.

One innovative introduction is the minimalist AirVolution-D from San Bernardino, California–based **MacroAir**. The company says its line is the only one on the market using gearless, direct-drive technology, which translates into fewer problems and less maintenance. The gearless motor reportedly generates 50 percent more air movement than conventional motors, making it more efficient, too.

Also making a splash is Lexington, Kentucky–based **Big Ass Fans**, with its energy-efficient, ultrastylish Haiku fans. The sleek modern unit offers SenseME technology, an onboard sensor that monitors environmental conditions, detects occupancy, and stores user preferences.

Most ceiling fans today have sleek aerodynamic blades, but **Exhale Fans** in Corydon, Indiana, has eliminated them entirely. The company says air exits its fans in all directions horizontally and at a 45-degree angle, creating a vortex that makes occupants feel cooler. There are 10 designer colors to choose from. —*NFM*

AIR FORCE
Available in four models, AirVolution-D features a gearless motor that generates 50 percent more air movement than a conventional one.

PHOTOGRAPHY: COURTESY MACROAIR

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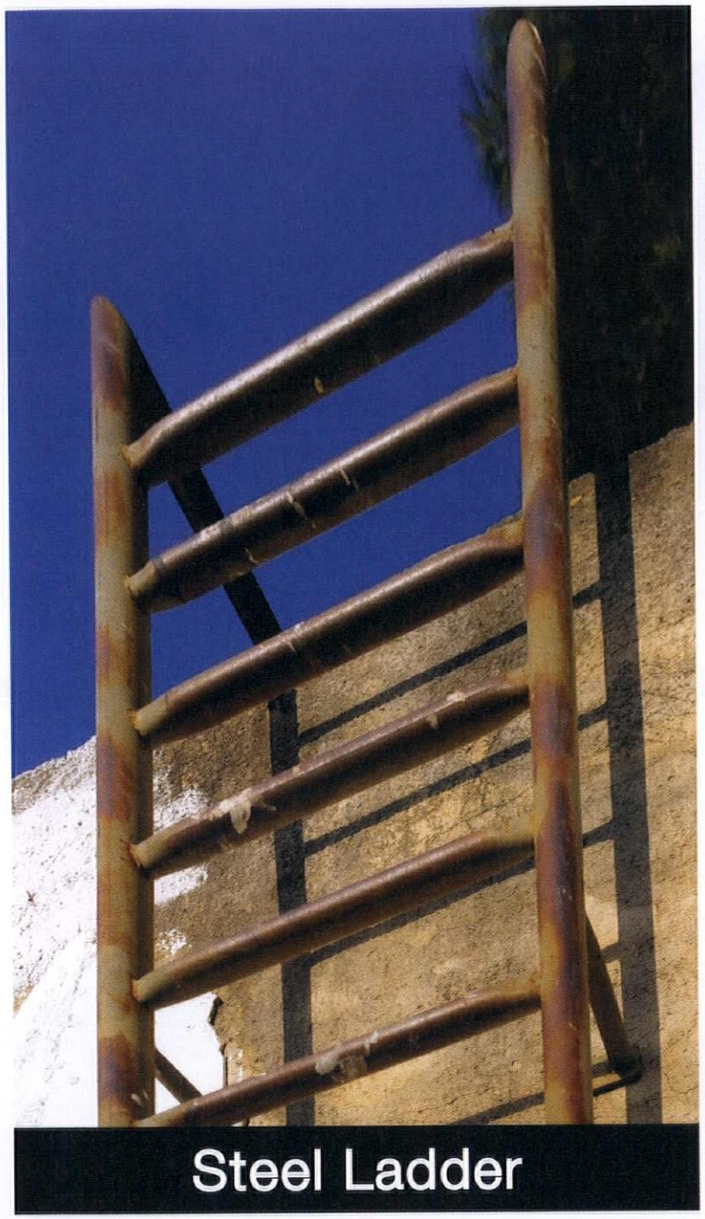
IT'S HOW YOU GET TO THE TOP THAT MATTERS!

SNAP 25



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Growth Curve

Gulf State manufacturers are optimistic.

BY J. MICHAEL WELTON

MANUFACTURING IN the Gulf Coast States—especially for companies engaged in nonresidential construction—is climbing back steadily from the depths of the recession.

"Five years ago, we were in the middle of the biggest downturn in the nonresidential construction industry since 1967," says Bill Coleman, president of Houston-based **MBCI**, a manufacturer of metal roof and wall panels. Coleman compares an estimated 1.7 billion square feet of nonresidential construction in 2007 to 675 million square feet in 2009. And though current figures now average between 800 and 900 million square feet, the industry is still not quite back to 2007 levels.

At **Horton Automatics** in Corpus Christi, Texas, coming out of the recession was definitely not "all rainbows and puppy dogs," says Jed Foglesong, marketing manager. A 2014 manufacturing systems implementation slowed the company's recovery, too. "A year ago, business wasn't quite flat, but there was not as much growth as there could have been. But we did pretty well."

In Bossier City, Louisiana, **Gordon, Inc.** has seen steady growth for the past five years with record-setting volumes, according to Chess Hutchings, director of marketing. He credits the recovery to a diverse product offering that serves multiple markets, among other factors.

And in Alexander City, Alabama, Scott Howell, vice president, general manager, and co-owner of **Robinson Steel**, says the company's custom cast-iron business is improving. "This year we have a big backlog, and everybody is yelling for it to be delivered, so that's a good thing," he explains.

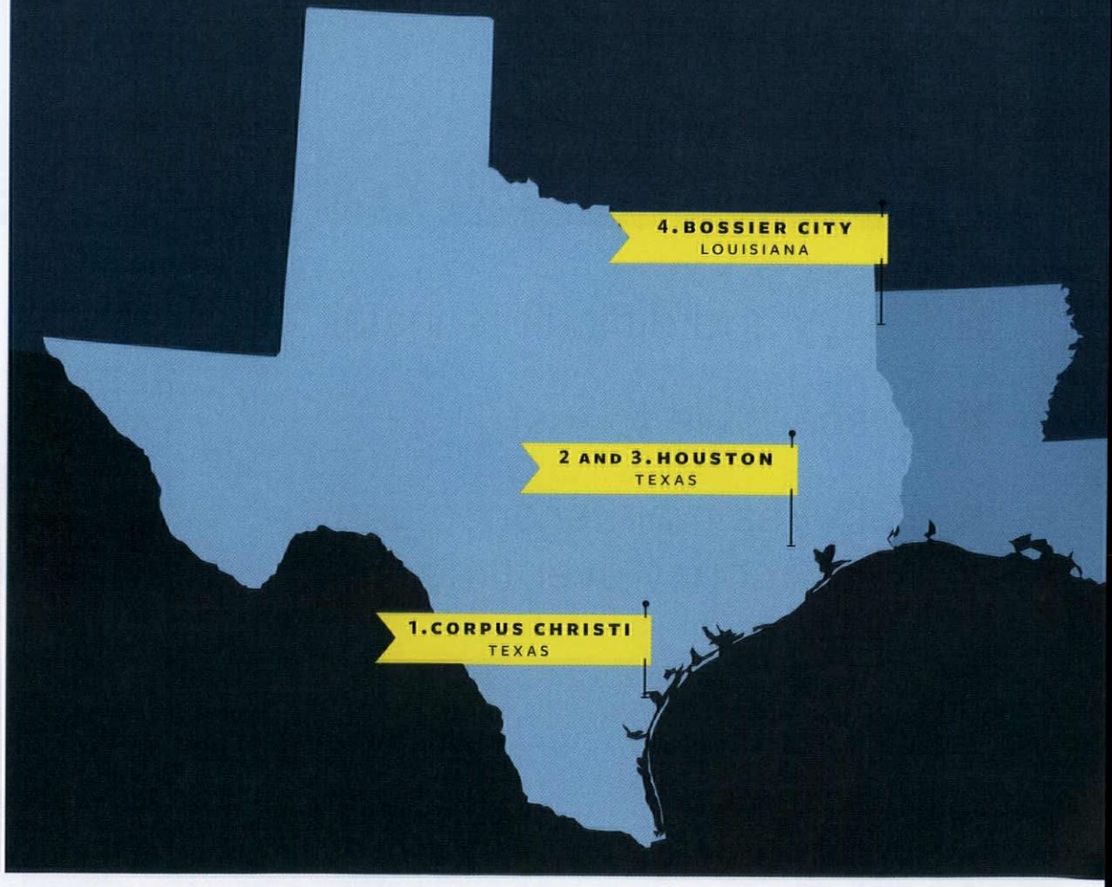
All remain positive about the future. "We see improvements happening in the next two to three years and we'll respond accordingly," says MBCI's Coleman.

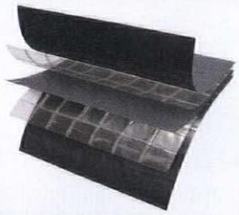
"Texas is going to be No. 1 for growth in nonresidential construction in the next five years," asserts Horton's Foglesong. Sounds like full steam ahead!

Alabama, Florida, Louisiana, Texas

1 **MANUFACTURER:** Horton Automatics
LOCATION: Corpus Christi, Texas
PRODUCTS: Engineered access stations (principally automatic doors) that facilitate pedestrian traffic flow, enhance the safety, security, convenience, and style of commercial, institutional, and transit facilities.
FOUNDED: 1960 **EMPLOYEES:** 130
PRICE RANGE: $$-$$$ HORTONDOORS.COM

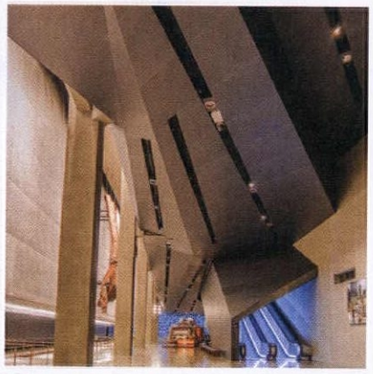
2 **MANUFACTURER:** MBCI
LOCATION: Houston
PRODUCTS: Metal roof and wall panels, including single skin, insulated, and retrofit solutions.
FOUNDED: 1976
EMPLOYEES: 850
PRICE RANGE: $-$$$
MBCI.COM

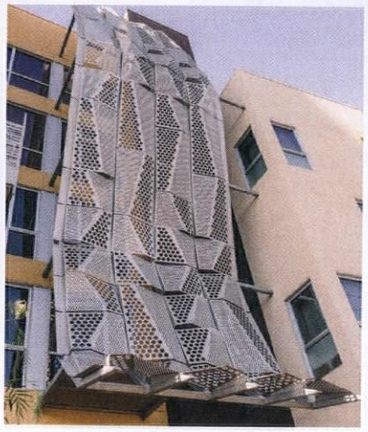




3 **MANUFACTURER:** Reef Industries, Inc.
LOCATION: Houston
PRODUCTS: Griffolyn vapor barriers for under slabs, walls, and roofs.
FOUNDED: 1957 **EMPLOYEES:** 150
PRICE RANGE: $–$$$
REEFINDUSTRIES.COM

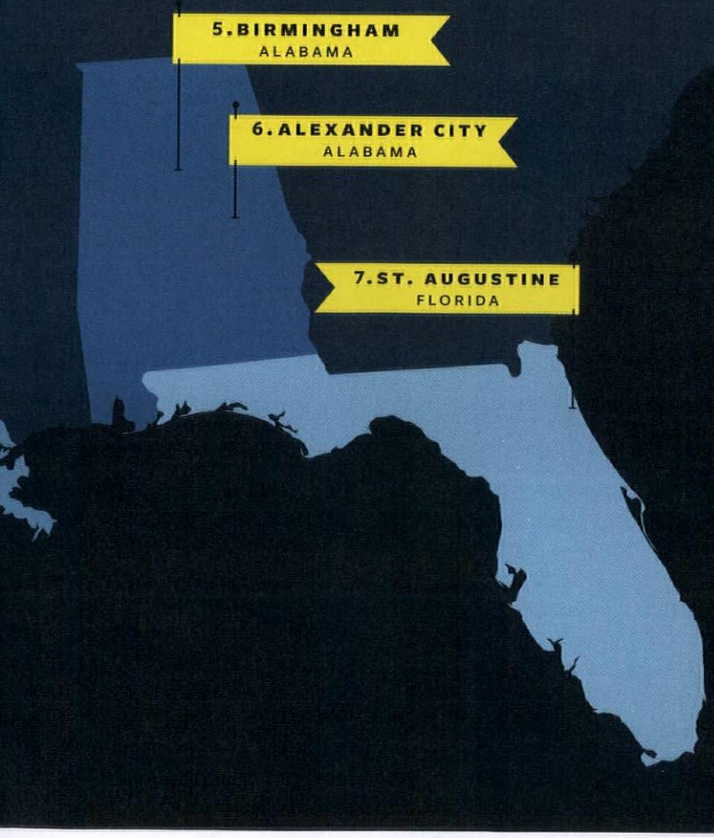
4 **MANUFACTURER:** Gordon, Inc.
LOCATION: Bossier City, Louisiana
PRODUCTS: Sustainable interior and exterior metal systems (ceilings, walls, acoustical products, decorative trims, column enclosures/covers, perimeter panels, louvers, sunscreens).
FOUNDED: 1964 **EMPLOYEES:** 100+
PRICE RANGE: $–$$ **GORDON-INC.COM**





5 **MANUFACTURER:** AMICO, a Gibraltar Company
LOCATION: Birmingham, Alabama
PRODUCTS: Interior and exterior architectural cladding.
FOUNDED: 1939 **EMPLOYEES:** 700+
PRICE RANGE: $$ **AMICOGLOBAL.COM**

6 **MANUFACTURER:** Robinson Iron
LOCATION: Alexander City, Alabama
PRODUCTS: New and historic cast-iron lawn and garden ornaments such as fountains, lampposts, urns, planters, statuary, and furniture.
FOUNDED: 1946 **EMPLOYEES:** 54
PRICE RANGE: $$ **ROBINSON.COM**



7 **MANUFACTURER:** Rulon International
LOCATION: St. Augustine, Florida
PRODUCTS: Suspended wood ceilings, wood acoustical wall panels, suspended engineered polymer ceilings, and canopy systems.
FOUNDED: 1976 (incorporated)
EMPLOYEES: 120–160 **PRICE RANGE:** $–$$
RULONCO.COM

SNAPSHOTS

ALABAMA

In Alabama, 650 forest-product manufacturing companies employ more than 47,000 people. The state boasts **22.9 million acres** of forested land.

Alabama is home to more than **1,100 metal manufacturers,** both domestic and international.

SOURCE: MADE IN ALABAMA

FLORIDA

The number of people the state's architectural and structural steel manufacturing sector employs.

12,153

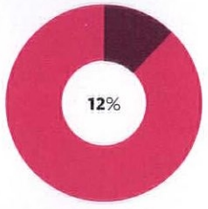
In 2014, Florida's global exports amounted to **$58.6 billion**.

SOURCE: ENTERPRISE FLORIDA

LOUISIANA

From May 2013 to May 2014, manufacturers in the state added **1,896 industrial jobs**, a 1% increase.

Fabricated metal production accounts for **12%** of manufacturing annually in Louisiana.



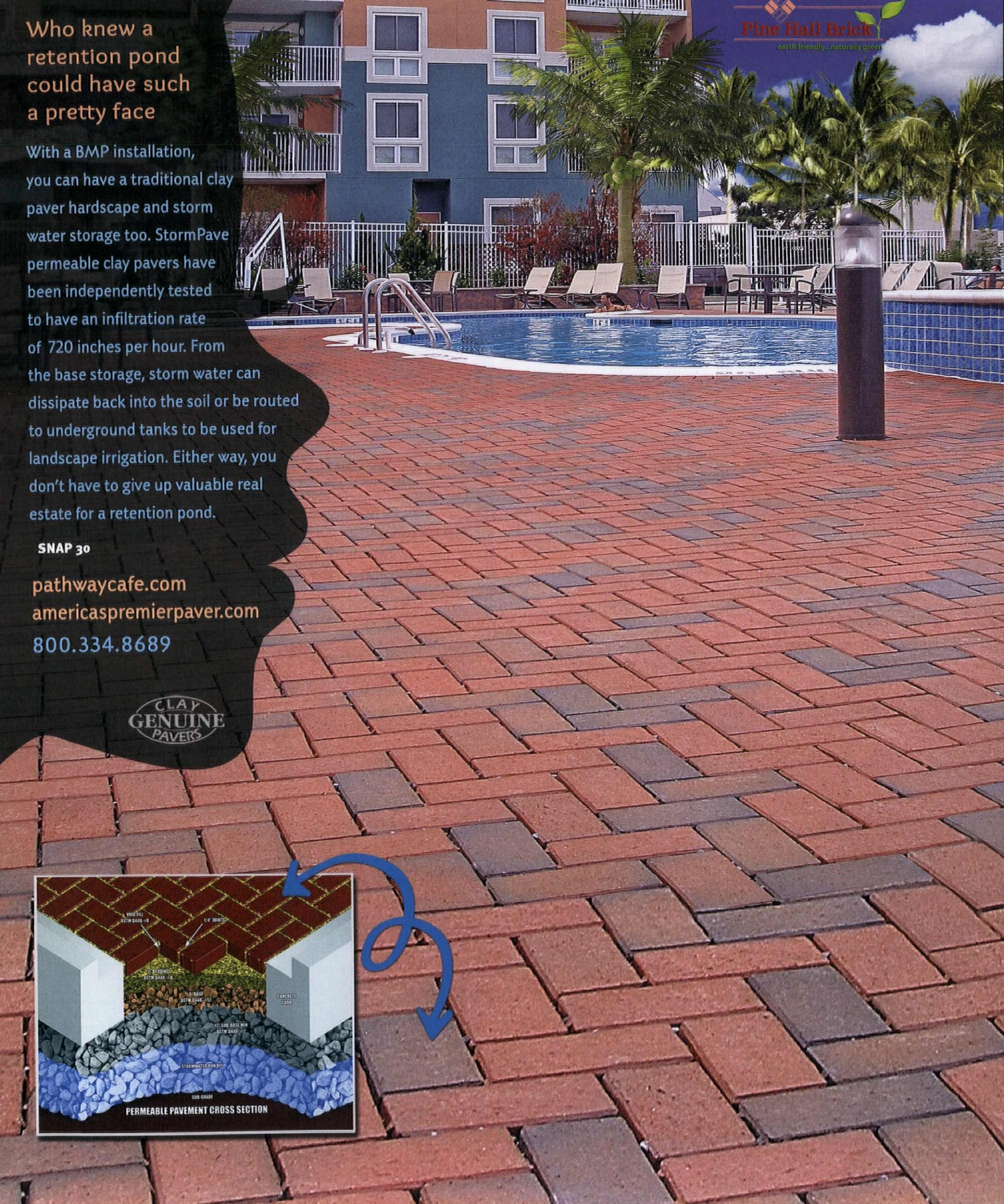
SOURCES: LOUISIANA FOREST PRODUCTS COMMUNITY, *MANUFACTURERS' NEWS*

TEXAS

The state's fabricated metals sector accounted for **123,617 jobs** in 2014, up 2.4% from the previous year.

In 2014, Texas was home to **22,567 manufacturers** employing 1,236,617 workers.

SOURCE: *MANUFACTURERS' NEWS*



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SNAP 30

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PROJECT: Intexure Architects Studio and Residence

LOCATION: Houston, Texas

ARCHITECT: Intexure Architects

CONTRACTOR: Mealy Company Builders

PANEL PROFILE: PBC (Galvalume Plus®)

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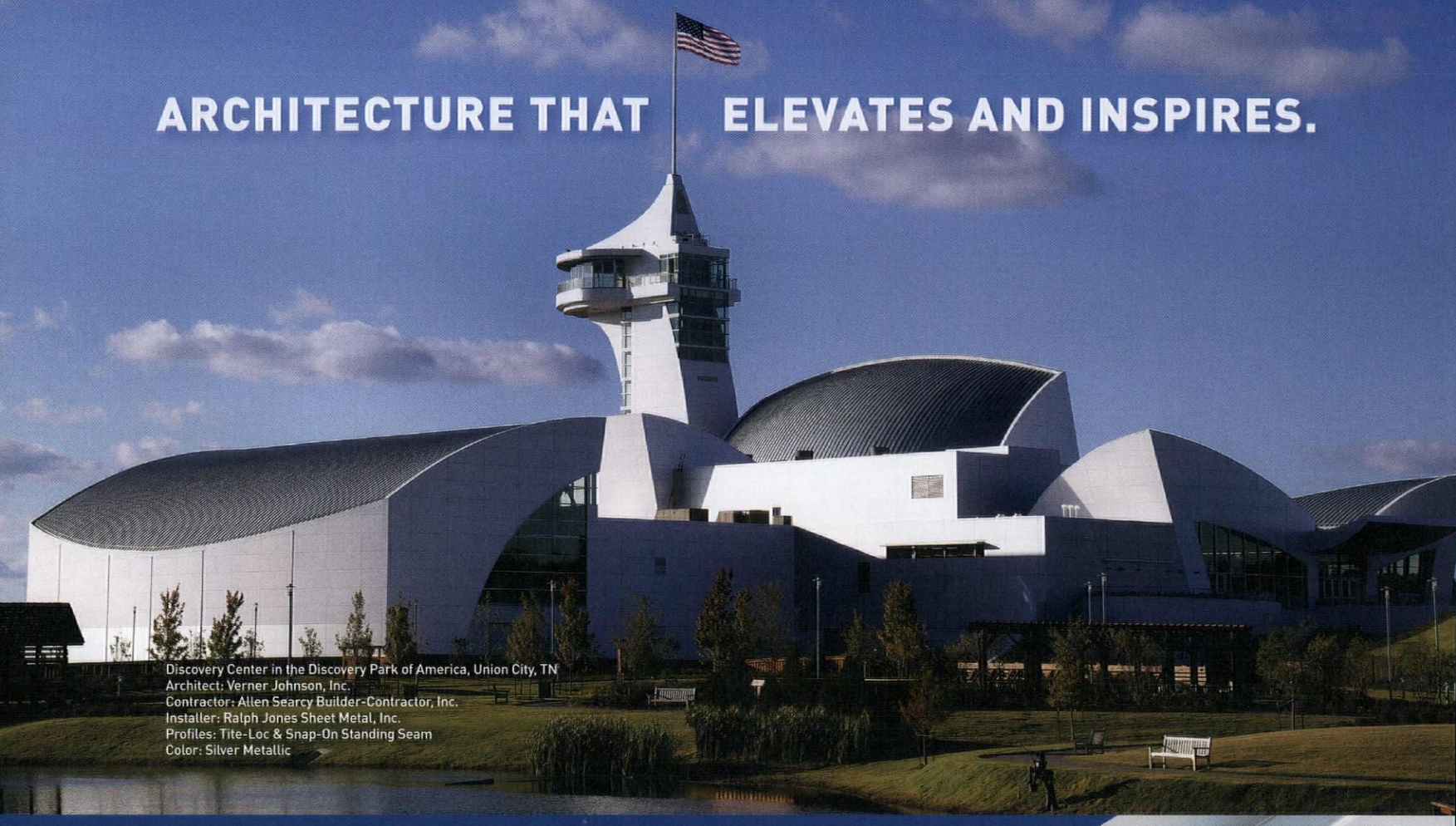

Discovery Center in the Discovery Park of America, Union City, TN
Architect: Verner Johnson, Inc.
Contractor: Allen Searcy Builder-Contractor, Inc.
Installer: Ralph Jones Sheet Metal, Inc.
Profiles: Tite-Loc & Snap-On Standing Seam
Color: Silver Metallic

"This was one of the more complex jobs we've done in our 35 year history. I wouldn't have tackled a job like this without Petersen Aluminum. We knew we could count on them to get the job done and get it done right."

— Gordon Jones, president, Ralph Jones Sheet Metal

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CASE STUDY

Though the forms envisioned for the new centerpiece of the Discovery Park of America were not standard, the use of PAC-CLAD metal roofing materials made for a straight-forward application. PAC-CLAD Tite-Loc and Snap-On Standing Seam panels combine architectural aesthetics with ease-of-use and structural performance, backed by a 20-year non-prorated finish warranty.

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OVERVIEW **PAGE 45**
We look at the myriad green certification processes and organizations.

Q&A **PAGE 47**
Amanda Kaminsky discusses healthy building through the building-supply chain.

PRODUCTS **PAGE 49**
Products receive the new Cradle to Cradle Material Health Certificate.

CASE STUDIES **PAGE 50**
>CBRE Global Corporate Headquarters
>The Willow School Health, Wellness & Nutrition Center

SOLUTION **PAGE 58**
Architect Andrés Jaque purifies water inside MoMA PS1's courtyard.

EARTHWATCH **PAGE 60**
Artist Agnes Denes builds a green pyramid in New York City.

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THE MAGAZINE OF SUSTAINABLE DESIGN

The Many Routes to Green Certification

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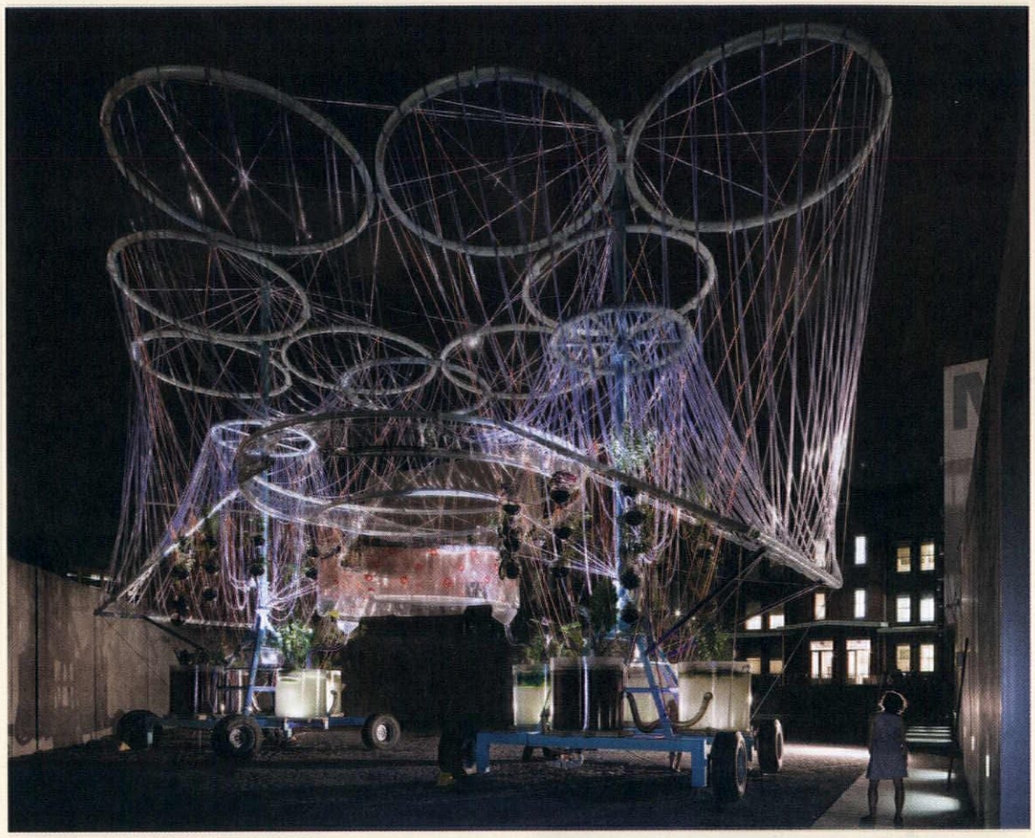
"A small change at the beginning of the design process defines an entirely different product at the end."
– JONATHAN IVE



IN THIS ISSUE

Certificate of Merit

Building green is not just about making green buildings. Over the years, sustainability in construction has evolved to include not only buildings that have less impact on the environment, but also those that contribute to the well-being of their occupants. Recently introduced, the WELL Building Standard (WELL) is the world's first building standard focused exclusively on human health and wellness.

Our first case study takes a look at the Gensler-designed CBRE global corporate headquarters in Los Angeles, one of the first projects in the country to be certified WELL. Over 10 million square feet of space, in buildings located throughout the world, are on the path to WELL certification. While impressive, that figure is dwarfed by numbers for LEED-certified projects.

Now more than 20 years old, LEED, administered by the U.S. Green Building Council, remains the standard bearer for sustainable design. But more and more, architects are looking beyond LEED. At the Willow School in New Jersey, Farewell Architects recently completed the Health, Wellness & Nutrition Center (HWNC). It far surpasses the two previous campus buildings, also designed by Farewell and built in 2002 and 2007. While those achieved LEED Gold and LEED Platinum, respectively, HWNC aims for Living Building certification through the International Living Future Institute. (It is also tracking LEED Platinum and net positive for energy.)

Sustainable building products contribute to the health of both a building and its occupants. This issue's products section features a handful of interior products that have received the new Cradle to Cradle Material Health Certificate, which is governed by the Cradle to Cradle Products Innovation Institute and has a narrower focus on human health. Accredited assessment bodies—trained and audited by the institute—conduct the assessments and submit them for review and verification. When complete, the institute administers the certificates, which are valid for two years.

Amanda Kaminsky, the subject of our Q&A, knows a thing or two about healthy building products. As senior sustainability manager at the Durst Organization, she ensures that building-supply chains adhere to strict environmental compliance. "We develop buildings owned and managed by Durst in perpetuity," Kaminsky explains. "Therefore, as you can imagine, purchasing decisions made during design and construction today constitute a legacy that is passed down to future generations." As manager of the new Building Product Ecosystems, she helps target holistic improvement in building materials cycles.

While some might argue that the myriad certification processes, rating systems, and governing bodies confuse rather than complement each other, each is committed to having a positive impact on human and environmental health. GS

Open offices at CBRE's global corporate headquarters in Los Angeles (top left). Architect Andrés Jaque's water-purifying installation in MoMA PS1's courtyard (top right). Solar panels atop the Willow School's new Health, Wellness & Nutrition Center produce 205,000 AC Kw hours per year (above).

MORE ONLINE

See more sustainable design features on **architecturalrecord.com**. For the *GreenSource* magazine archives, go to **greensourcemag.com**.

BY JOSEPHINE MINUTILLO

CLOCKWISE FROM TOP LEFT: RYAN GOBUTY, MIGUEL DE GUZMÁN, ROBERT I. FAULKNER

Inside cover illustration by LEANDRO CASTELAO / DUTCH UNCLE

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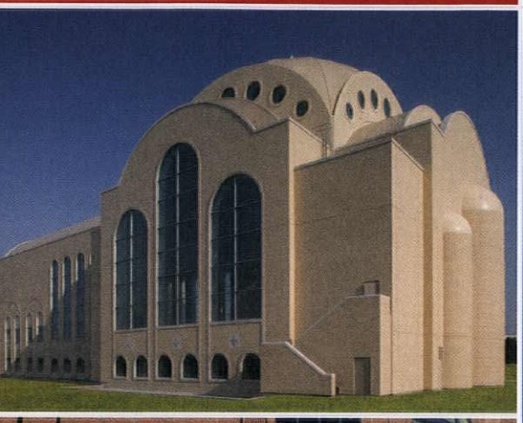

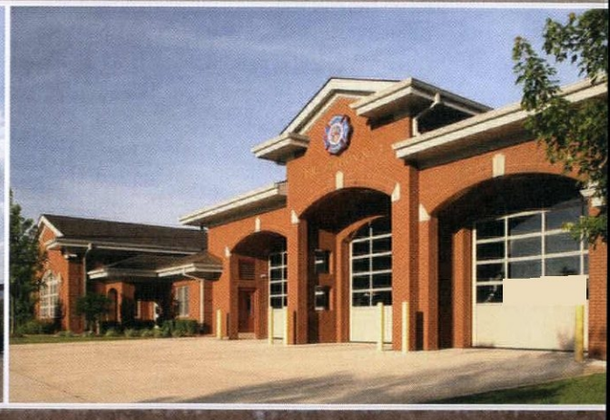

The Standard of Comparison since 1885

An ISO 9001 Compliant Quality Management System.

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SNAP 5

The Standard of Comparison Since 1885

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Q&A

Life Affirming

Amanda Kaminsky has been a sustainable-construction manager at New York real estate powerhouse the Durst Organization for the past decade. In that time, she has collaborated closely with design and construction teams. A key component of her work is making sure that contractors and their supply chains adhere to strict environmental compliance measures around optimized material reuse and recycling, air and water quality protections, and the integrity of installed materials and systems through sustainable purchasing and careful quality controls onsite.

BY JOSEPHINE MINUTILLO

Amanda Kaminsky photographed by Caridad Bojorquez at One Bryant Park, in New York.

GREENSOURCE: You're on the board of several organizations that promote transparency in building-product supply chains to improve the health of occupants. Why is this topic so important?
AMANDA KAMINSKY: Transparency is critical in strengthening understanding and trust between consumers and manufacturers to evolve the safety and performance of the products and systems we all build with. As demonstrated in the Environmental Working Group Body Burden studies, which the general public has access to, data clearly show substances in building products are also commonly found in humans. Some ingredients are benign, and some are not. There is a lot to understand about paths of exposure in manufacture, use, and disposal. But all of us together, as an industry that conscientiously provides shelter to protect and enhance life, are responsible for better understanding our building products and their potential health impacts.

Tell us about Building Product Ecosystems, which you manage and which was initiated by the Durst Organization, in partnership with the New School, City University of New York, Vidaris Energy & Environmental, and Healthy Building Network, and how it differs from other organizations. Building Product Ecosystems targets holistic improvement in the human and ecological health of our building materials cycles, from product manufacturing through product afterlife. We currently run three working groups. One is evolving gypsum wallboard systems, another is incorporating ground-glass pozzolan into cast-in-place concrete, and the third deals with flame retardants and codes. Each group is composed of manufacturers, owners/developers, scientists, designers, trade groups, academics, advocacy groups, policy makers, and recyclers. The understanding and problem-solving capacity of these sectors working together regularly, complemented by targeted university lab research, has led to fast, actionable progress after only one year of collaboration.

Is there a way for groups to work together to more effectively promote healthier building? Green building standards, systems, and certifications increasingly share a common goal of improving human and environmental health. The more we can harmonize terminology, metrics, reporting mechanisms, and streamlined data input, the easier it will be for everyone to engage with the synergies among these systems. The Material Health Harmonization Task Group funded by USGBC involving Cradle to Cradle, Clean Production Action, BIFMA, Healthy Building Network, and Health Product Declaration Collaborative is a good example of ongoing efforts to minimize barriers to engagement for manufacturers and purchasers alike through collaborative alignment.

What have been some of the most significant improvements in building products over the last decade? The increasing availability of engineered wood products like MDF, plywood, and particle board that minimize and exclude urea formaldehyde binders, a known human carcinogen and asthmagen, is significant. There is also increasing concern over the amounts of the chemical in products such as flooring made in China. Education and advocacy campaigns of groups like Healthy Building Network, along with the LEED Low-Emitting Materials credit and California Air Resources Board standards, have educated consumers and required manufacturers to provide products that are healthier and safer not just for building occupants, but also for factory workers and communities surrounding manufacturing facilities. There is still a long way to go with improvements to disclosure and health in products with complex supply chains. As some suppliers respond, pressure is inherently applied to their competitors to follow suit, but this takes some time. I suppose I am impatient for transparent, accurate health data! GS

> "All of us together, as an industry that conscientiously provides shelter to protect and enhance life, are responsible for better understanding our building products and their potential health impacts."
>
> AMANDA KAMINSKY
> *Senior Sustainability Manager, the Durst Organization*

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Colleen Sweitzer, Fairmont Chicago
Marketing Manager and Sustainability Team member

Paper Towels Have Checked Out

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SNAP 296

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troldtekt.com

Troldtekt acoustic ceiling and wall panels are made completely from natural materials, including wood from Danish forests. The product's sound-absorbing properties ensure good acoustics in any room, and its natural resilience can handle moist environments while also providing effective fire protection. Troldtekt has documented sustainability throughout its life cycle. It is available in a number of combinations that vary according to surface structure, edge, installation system, color, dimension, and thickness. **SNAP #40**

2 Scoop Stool

Turnstone
Grand Rapids, MI
myturnstone.com

Inspired by a grain scoop, designer Kirt Martin created Scoop as a casual stool with minimalist lines. The wire-rod frame is available in various heights in black or platinum metallic. The molded plastic seat features an optional upholstered cushion for added comfort. The stool is part of Turnstone's collection of office furniture solutions for entrepreneurs seeking something different. **SNAP #41**

3 Barcode Ecotrust

Ege
Long Island City, NY
ege.us

With a guaranteed minimum content of 100% recycled fibers, Barcode Ecotrust is a unique and sustainable collection of carpet tiles. Barcode Ecotrust's patented backing also is made of 100% recycled material, and, like all of ege's tile backings, it does not contain PVC or bitumen. **SNAP #42**

4 TruRenew LVT-LVP Flooring Adhesive

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CASE STUDY 01

The Officeless Office

Gensler's offices for CBRE serve as a test bed for a new way of working and for a rating system that aims to improve the health of occupants.

BY JOANN GONCHAR, AIA

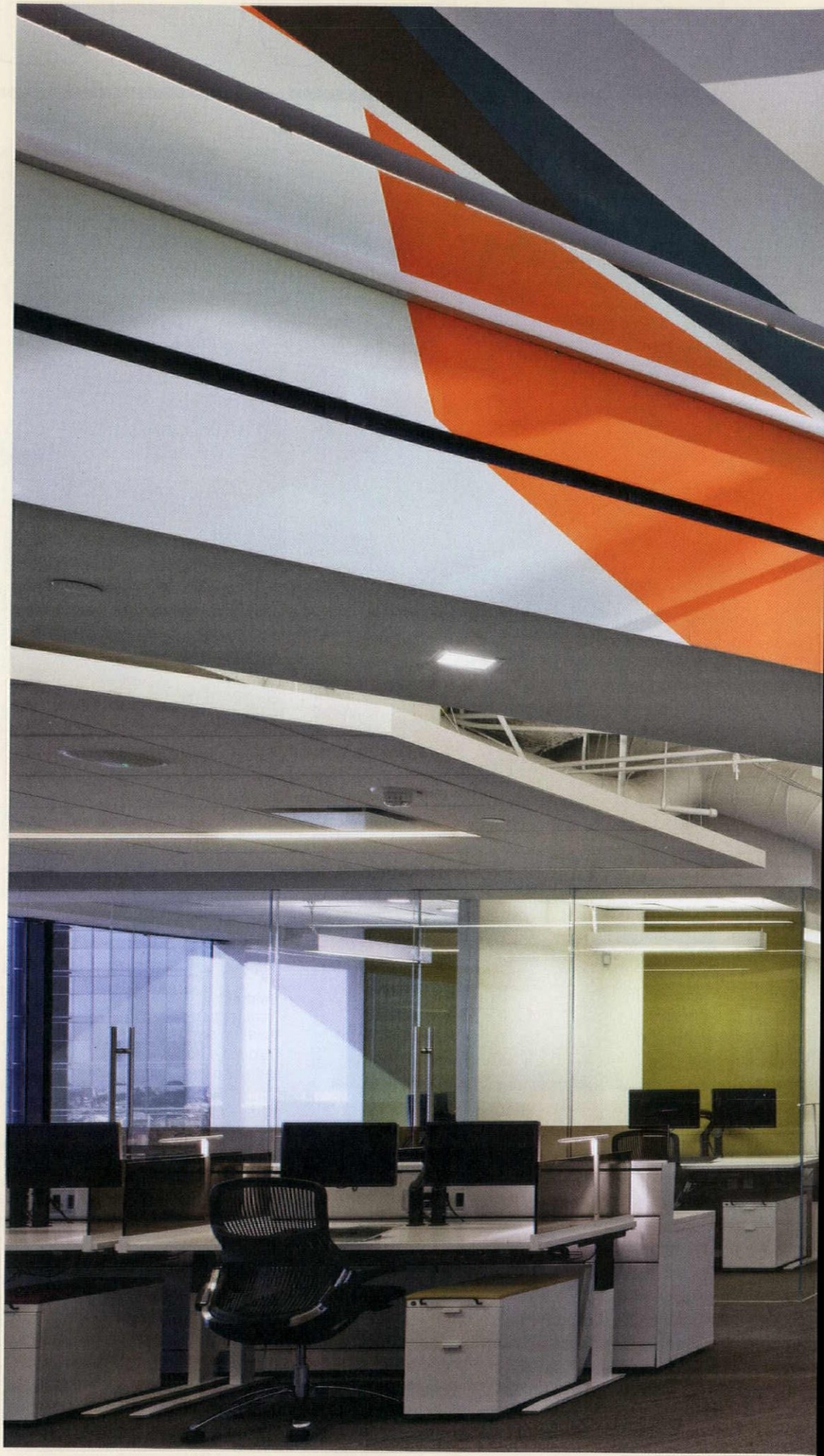
The global corporate headquarters for real-estate services and investment company CBRE, which occupies the top two floors of a 1980s office tower in downtown Los Angeles, has many of the features one would expect from a LEED Gold interior. The finishes emit few volatile organic compounds, the wood in its furnishings is FSC-certified, and plenty of daylight streams in through the skylight over its dramatic double-story collaboration space.

The distinguishing sustainable feature of this recently opened Gensler-designed workspace is its so-called "free-address system." Instead of tethering employees to assigned desks, it allows them to choose from a variety of environments that suit their individual preferences and are optimal for the task at hand, including open workstations, enclosed focus rooms, and living-room-like areas with upholstered seating.

This way of working can be considered a conservation strategy—especially if space is thought of as a resource. And it is an approach that made particular sense for CBRE due to the nature of its work. A study of the former LA offices showed that the utilization rate was only about 50 percent, says Carlos Posada, a Gensler principal. "Workers are often with clients, at job sites, or working remotely," he explains.

When CBRE started planning the new global headquarters, the company already had a free-address system in place in Amsterdam, but LA would be its first major U.S. location to have such a set up. The initiative, which CBRE has dubbed "Workplace360," has since been rolled out in the company's offices in other American cities, including San Diego, Baltimore, and Honolulu. "The project was very much thought of as a prototype," says Posada.

The LA offices were also considered a test bed for the WELL Building Standard—a new certification program intended to promote the health of occupants. The branchild of Paul Scialla, a former Goldman Sachs partner, and developed with the input of medical and health professionals, WELL was officially launched last October. The CBRE space was certified as part of a pilot program when it was completed in late 2013. Although the headquarters is still among only a handful of projects that have achieved certification, more than 10 million square feet in buildings around the world are in the certification pipeline, according to the WELL Building Institute, the entity that administers the standard.



BENNY CHAN

For its new headquarters, CBRE commissioned Los Angeles artist Augustine Kofie to create a mural for the wall surfaces below a skylight that illuminates much of the two-story space.

TEAM

ARCHITECT Gensler

Engineers ARC (m/e/p); Newson Brown (structure)

Consultants Newson Brown (acoustics); Kaplan Gehring McCarroll Architectural Lighting (lighting)

General contractor Taslimi Construction

SOURCES

Doors Eggers Industries

Window coverings MechoSystems

Carpet and resilient flooring Shaw, Mannington Commercial, Azrock, Armstrong, Burke

Furnishings Knoll, Steelcase, Coalesse

Ceiling tile Armstrong

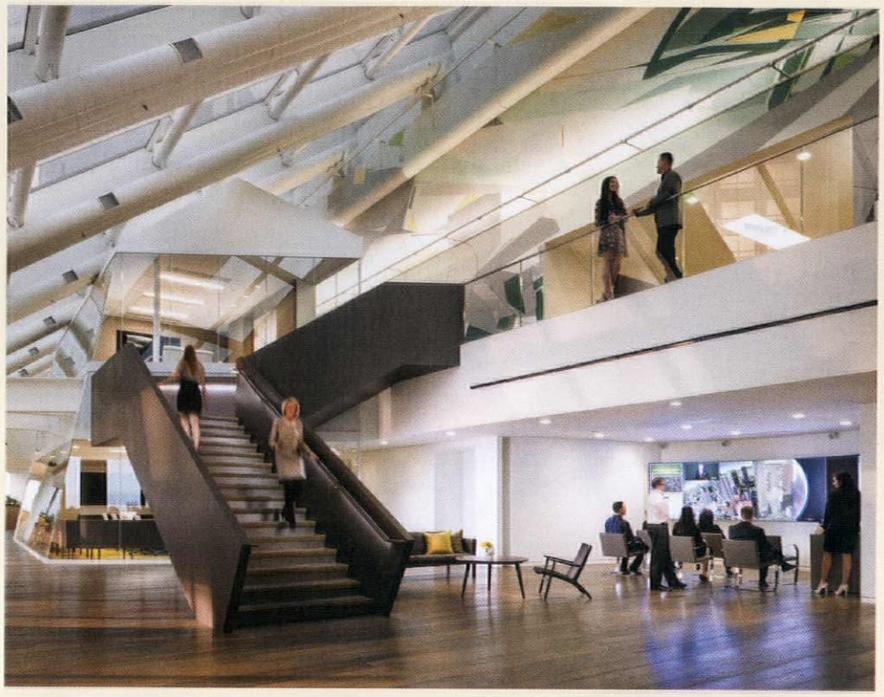
Millwork Martin Brattud

Fire extinguisher cabinets Potter Roemer

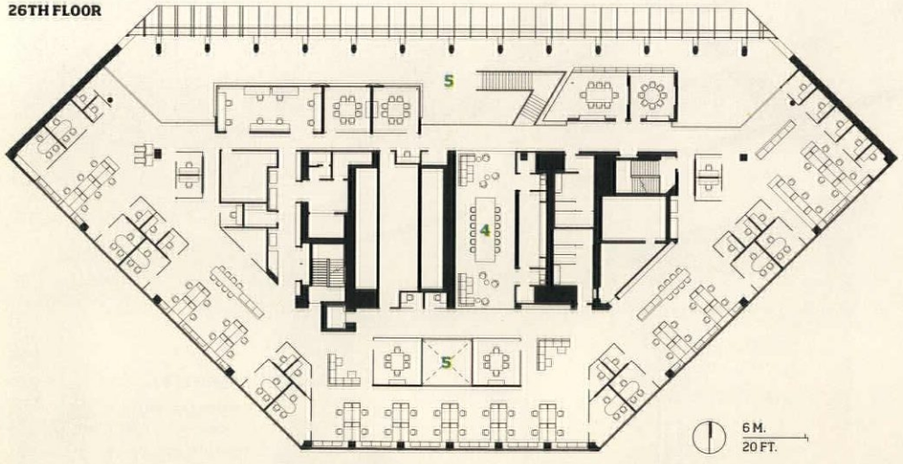
Posada found some overlap between LEED and WELL, but says that the two programs have complimentary but distinct goals. "LEED's focus is on the build out, while with WELL, the focus is on the experience of the end user," he says. Some of the aspects of the CBRE space that helped it earn certification under the new standard include advanced air filtration to reduce allergens and toxins, lighting intended to minimize the disruption of the body's circadian rhythms, and ergonomic features such as standup desks and cork underlayment for the floors.

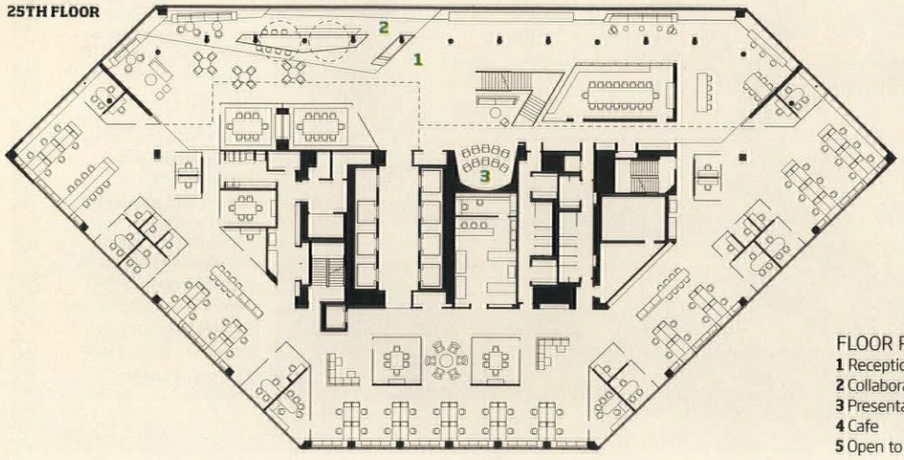
The decision to pursue WELL was made late in the design process, after preliminary plans were already well developed, says Onno Zwaneveld, a CBRE executive vice president. Even so, the health-promoting features added only about 1.7 percent to the construction budget—a small premium considering the potential recruitment and retention benefits, in addition to the possibility of reducing absenteeism and health-care costs.

Fully understanding the influence of the new space on its users will take time. "A lot of different factors contribute to people's health," acknowledges Zwaneveld. But the offices have received high marks from employees. More than 90 percent of respondents to a post-occupancy survey conducted almost a year after project completion said that the offices had a positive impact on their business performance. Meanwhile, 92 percent said that the space has had a positive effect on their health and well-being. With grades like these, CBRE's approach may well point to a new direction in office design. GS



The sculptural stair connecting the two office floors is intended to serve as an appealing alternative to the elevators and encourage occupants to be less sedentary.





FLOOR PLAN
1 Reception
2 Collaboration Space
3 Presentation Area
4 Cafe
5 Open to below

Employees can choose among a variety of work spaces, such as open offices and enclosed focus rooms. Furnishings include sit-stand desks.

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CASE STUDY 02

Lofty Goals

Reflecting the curriculum's core values, the new Health, Wellness & Nutrition Center at the Willow School aims for Living Building certification.

BY JOSEPHINE MINUTILLO

When the classroom building opened at the newly established Willow School in 2002, it became the first school building in the United States to achieve LEED Gold certification. Willow's second construction project, the Barn, a space for art, music, and handcrafts, became one of only seven other structures in the nation, and the first in New Jersey, to receive LEED Platinum status in 2007. For its third building, The Health, Wellness & Nutrition Center (HWNC), inaugurated in May, the Willow School is aiming even higher—the center is positioned to become the largest Living Building school project in the country.

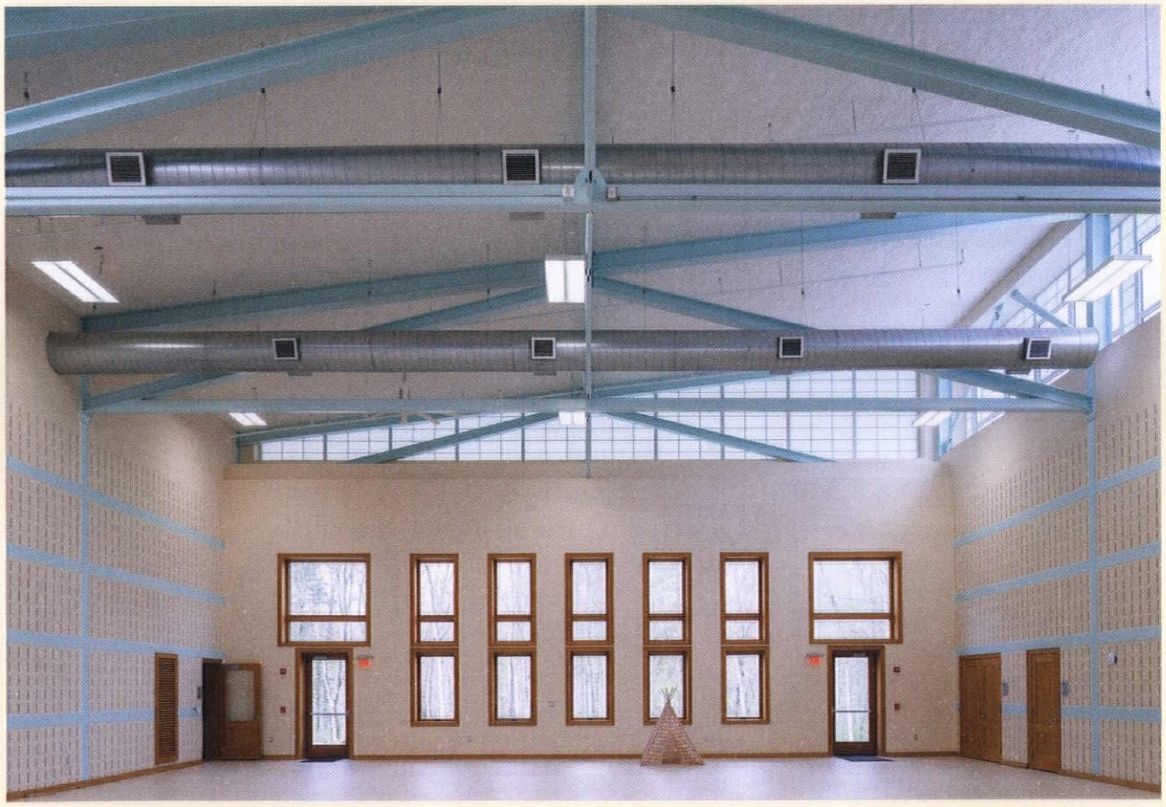
"I don't know if we set out to do it, but each building has surpassed the previous one," says Michael Farewell, principal of Princeton, New Jersey-based Farewell Architects, the firm behind the design of all of them. "Each is a cutting-edge demonstration of sustainability at the time it was built." Farewell also helped school founders Mark Biedron and Gretchen Johnson Biedron find a site back in 2000 when they embarked on establishing an independent day school centered around an ethical approach to academic excellence in the context of the natural world. The campus stretches over 34 acres of a former farmstead, once a vital part of fox-hunting country for the Pfizers and other families historic to the area, located about an hour from New York City.

The HWNC functions as a central and integral piece of the physical campus, while also serving as a figurative embodiment of the school's curriculum and core values. "Learning in a Living Building provides an enhanced educational opportunity that is smarter, healthier, and better for our students," according to Mark Biedron. "Studies have shown that green schools broaden the curriculum, increase student engagement and productivity, and improve academic performance. It's an ideal learning environment."

While the HWNC has not yet achieved Living Building status—the International Living Future Institute, which administers the Living Building Challenge, requires a full year of occupancy before assessing a building for performance criteria—Farewell has submitted a preliminary audit. The project is concurrently pursuing LEED Platinum certification.

ROBERT I. FAULKNER

The design of windows and skylights throughout the building was optimized for daylighting. Stone from disused barns forms the facade.



TEAM

ARCHITECT Farewell Architects - Michael Farewell, partner

Engineers Apgar Associates (civil); Joseph R. Loring & Associates (m/e/p); Christie Engineering (structural)

Consultants Back to Nature (landscape); Sustainable Growth Technologies (environmental); 7group (energy modeling); Advanced Food Service Solutions (food service)

SOURCES

Insulated Plastic Panels Kalwall

Skylights Carlisle SynTec

Metal Roofing Panels Drexel Metals

Photovoltaics SunPower Corporation

Partitions Yemm & Hart

Rainwater Cistern Conservation Technology

Plumbing Fixtures American Standard, Moyer Diebel

Chairs WBG Furniture

Flooring Forbo

One of the unique features of the HWNC is the teaching kitchen, inspired by Alice Waters' Edible Schoolyard Project and the Garden to Table integrated curriculum. Together with the supporting gardens—encompassing 10,000 square feet, including composting areas—it will provide opportunities for hands-on learning as children study the agricultural process and sustainable living.

The 20,000-square-foot facility, which opens to southern light and views, also includes four classrooms and a faculty room on one side of a central circulation spine. A commercial kitchen, dining room, performance-arts space, heath and wellness area, and energy gallery round out the program on the opposite side.

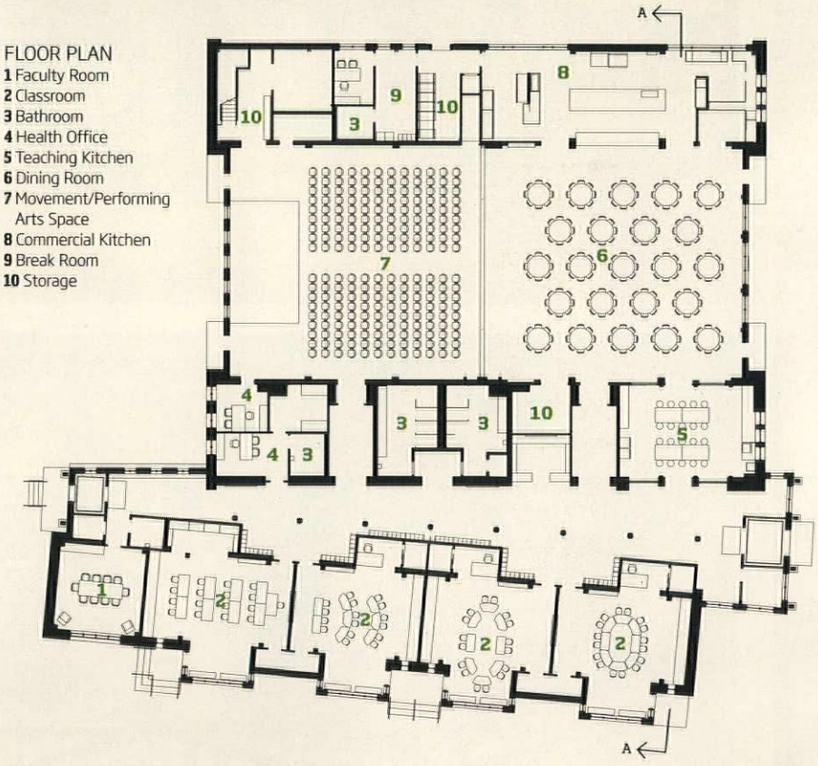
The energy gallery will display a real-time energy monitoring system for tracking rainwater harvesting as well as solar energy production and usage, allowing students to participate in and learn from the process. A 10,000-gallon water tank collects rainwater and recharges the local aquifer, thereby contributing to a restorative process on the site. On the building's roof, 251 solar panels compose a carefully sized PV array that provides all the electricity for heating, cooling, lighting, and plug loads. A hybrid heating and cooling system turns off when the outside temperature is between 65 and 80 degrees. Concurrently, a green light in each room signals that it is time to open the windows for natural ventilation.

The building features a tightly sealed envelope that allows minimal air infiltration. Behind the mostly masonry facade—comprising stones acquired from disused barns throughout central Pennsylvania—are thick walls made up of dense-packed cellulose insulation. The slab on grade construction includes insulation below the slab to isolate it from the ground. (Mineral slag was used to replace Portland cement in the concrete to reduce carbon dioxide off-gassing.) A 22-inch cavity below the roof helps to give it the highest R-value (60) of the building envelope. Triple-glazed windows and skylights were positioned to optimize daylighting. With 85-percent daylight autonomy, the majority of the building's lighting needs during the school's operating hours are met.

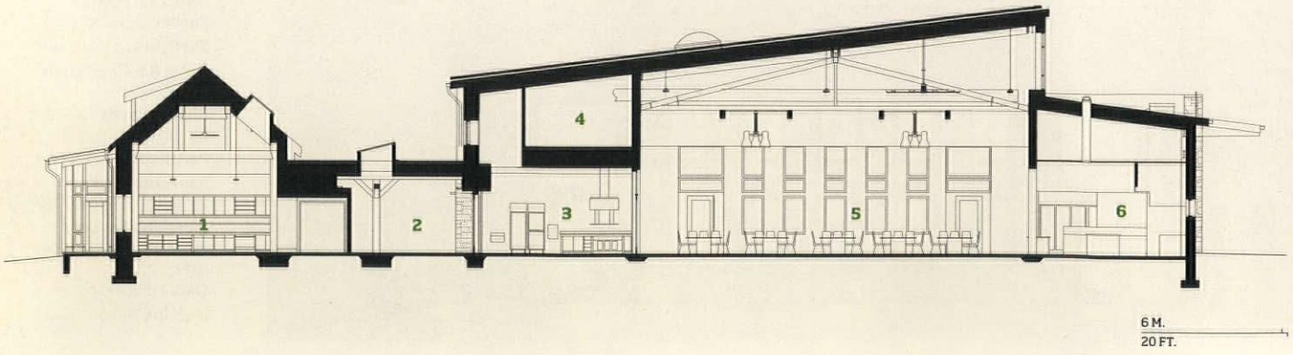
Building products are also held to a high standard. Carefully considered and recycled when possible—like the facade stone and wood used for interior structural columns—all products are sourced as close to the site as possible.

"This is by far the most sustainable project we've ever built," says Farewell, whose office also completed a LEED Platinum environmental center. "Aside from being off the grid, we use no fossil fuels." That, of course, is a requirement of the Living Building Challenge, considered the built environment's most rigorous performance standard. But the HWNC goes one step further—it offers a replicable model for other educational institutions. GS

The hallway structural columns, or "trees," are reclaimed timbers from a 1920s North Carolina mill.



FLOOR PLAN
1 Faculty Room
2 Classroom
3 Bathroom
4 Health Office
5 Teaching Kitchen
6 Dining Room
7 Movement/Performing Arts Space
8 Commercial Kitchen
9 Break Room
10 Storage



SECTION A-A
1 Classroom
2 Corridor
3 Teaching Kitchen
4 Mechanical Attic
5 Dining Room
6 Commercial Kitchen

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SOLUTION

Testing the Waters

Architect Andrés Jaque designs a towering assemblage of ecosystems to serve as both a water purification mechanism and a backdrop for summer parties.

BY ANNA FIXSEN

It's name is COSMO. As the winning proposal for this year's MoMA PS1 Young Architects Program (YAP) pavilion inside the museum's courtyard in Long Island City, Queens, COSMO serves as a colossal canopy for PS1's Warm Up outdoor concert series, as well as a self-contained ecosystem that is expected to filter 3,000 gallons of water. In short, COSMO is the architectural love child of a disco ball and a science project.

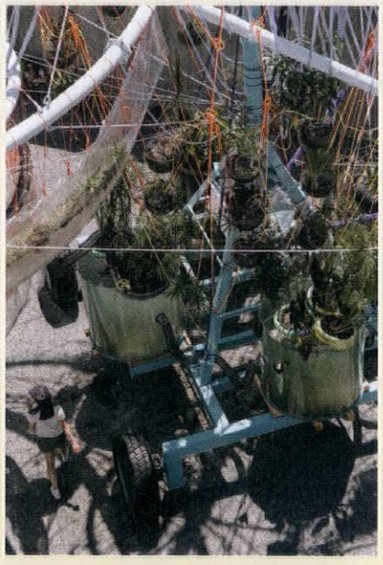
Designed by Andrés Jaque's Madrid- and New York-based firm Office for Political Innovation, COSMO addresses the statistic put forth by the United Nations that estimates that by 2025 two thirds of the global population will live in countries that lack sufficient water. This is the 16th year of PS1's YAP, which hosts an annual competition to build a temporary installation in the museum's courtyard as a commitment to offering emerging architectural talent the opportunity to design and present innovative projects. "This year's proposal takes one of the Young Architects Program's essential requirements–providing a water feature for leisure and fun–and highlights water itself as a scarce resource," said Pedro Gadanho, curator in MoMA's Department of Architecture and Design. Its purpose is to trigger awareness and to be easily reproduced all around the world, giving people access to drinking water and to spur a dialogue about it.

For Jaque and his team, the challenge was, he said, "How to work with ordinary materials, and get very precise performance." The pavilion consists of twin crop-irrigator chassis (imported from Turkey) that support a sinuous network of rubber tubing, suspended from rings of hula-hoop-shaped piping. At each chassis' base are four tanks filled with murky water and illuminated by multicolored lights. The water circulates through COSMO's network of plastic tubing and suspended plant ecosystems and will become completely purified over the summer months. Upon installation in late June, special microbes were introduced to the water to glow when the water reaches a specific level of purity. The architect estimated it would take several weeks for the water to be potable.

It took three weeks to assemble COSMO (which was sponsored by Bloomberg Philanthropies) and about 80 team members—including experts from the Queens Botanical Garden, Arup, BAC engineering, and an algae farm on Long Island.

Jaque hopes that exposing water networks will spark dialogue about global water shortages, without being overly didactic. According to the architect, "COSMO is designed to show how infrastructure could gain from the architectural tradition."

Inside PS1's courtyard, a sinuous network of rubber tubing is suspended from a ring of hula-hoop-shaped piping.



COSMO is a moveable artifact made out of customized irrigation components.

A series of plant ecosystems hangs within the construction.

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THE LIVING PYRAMID, photo courtesy of SOCRATES SCULPTURE PARK

EARTHWATCH

It's not difficult to understand man's obsession with ancient pyramids. Even today, archaeologists are mystified as to how they were built, how many workers were involved, and how the stones were successfully transported and stacked. Occult lore abounds. Many Egyptologists believe the tombs are triangular to represent sunbeams, their sides deliberately sloped to symbolically allow dead pharaohs to climb up to the sky and party on forever. Did you know mammoths still groggily wandered the Earth while the Great Pyramid of Giza was being built? Or that the placement of the three Giza pyramids aligns perfectly with the constellation Orion?

If you think we're getting carried away with our own pyramidal preoccupations, wait until you witness the work of New York City-based artist Agnes Denes. For nearly five decades, Denes has used pyramids to examine environmental issues and social hierarchies–a trend that reaches its apex with *The Living Pyramid*.

Situated in Socrates Sculpture Park on the East River waterfront in Long Island City, Queens, the towering structure, rising thirty feet in the air from its four-sided base, is constructed from several tons of soil and planted grass. It is Denes's first public installation in New York City since her 1982 iconic "urban intervention" *Wheatfield - A Confrontation*, and it examines all of her pet themes–semiotics, epistemology, mathematics, history, and ecology. Marking the first occasion in which the artist's visual pyramid concepts are transformed into site-specific, sculptural public art, the work manages to be as breathtaking as the Manhattan skyline that is its backdrop.

"What pyramids all convey is the human drama," Denes says. "Our hopes and dreams against great odds. Some pyramids float in apparent weightlessness, while others are made of the weight of conscience." The project will continue to grow and evolve throughout the summer. "Transformed into blossoms, the pyramid renews itself as evolution renews our species," Denes says. "The rigid angle becomes an arc to reach above; to reach what it wishes to reach." GS

BY DEREK DE KOFF

CRITICAL POINT

SOCRATES SCULPTURE PARK
Long Island City, NY
Unveiled in May, *The Living Pyramid* remains on view through August 30th.

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SNAP 32

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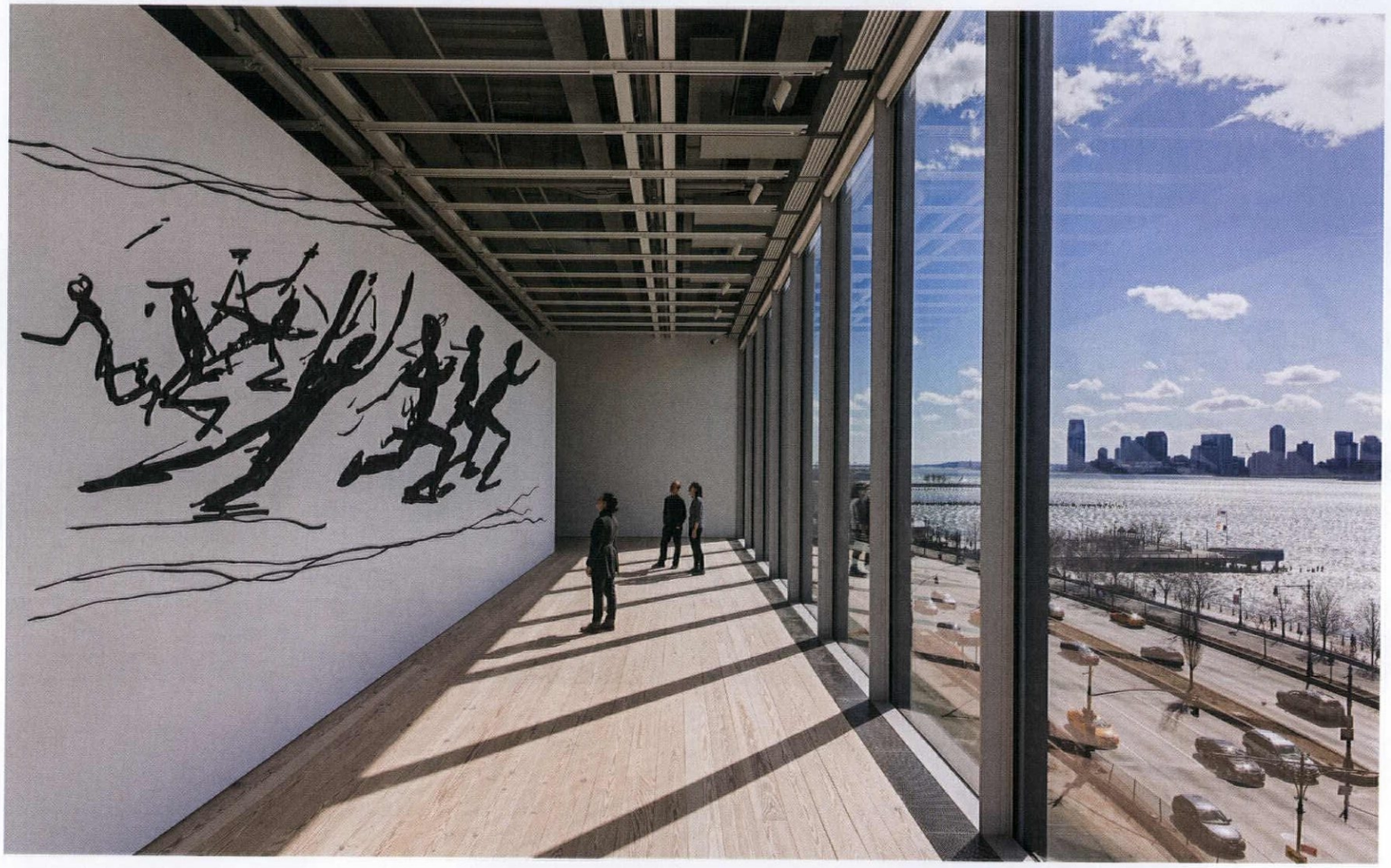
ARCHITECTURAL CANOPIES

Flirting with Disaster

Two recent art museums with prime waterfront sites protect their buildings and collections from severe weather and rising water levels. BY JOANN GONCHAR, AIA



THE MOVE OF THE Whitney Museum of American Art from its Marcel Breuer–designed quarters on Manhattan's Upper East Side to the city's Meatpacking District presented a host of challenges, flooding among them. The museum knew that the new downtown site—sandwiched between the Hudson River and the increasingly popular High Line—would be at risk in an intense storm. That's one of the reasons why the building's architects, Renzo Piano Building Workshop (RPBW) and Cooper Robertson, opted to locate the permanent galleries and art storage for the recently opened museum [*Architectural Record*, May 2015, page 181] in the upper reaches of the eight-story structure. It is also why they raised the lobby a foot and a half above the 500-year floodplain.

But when Hurricane Sandy slammed New York in October 2012, while the museum was still under construction, the storm surge brought more than 6 million gallons of river water into the basement. Although the building was already framed to the fifth-floor level

RISKS AND REWARDS One advantage of the Whitney's location is the Hudson River view from a fifth-floor gallery space (above). The space, which features a work by Jonathan Borofsky, has a glazed wall and projects from the west facade (opposite). A vulnerability associated with the proximity to the Hudson is the risk of flooding: during Hurricane Sandy, while the museum was still under construction, its basement filled with more than 6 million gallons of water (left).

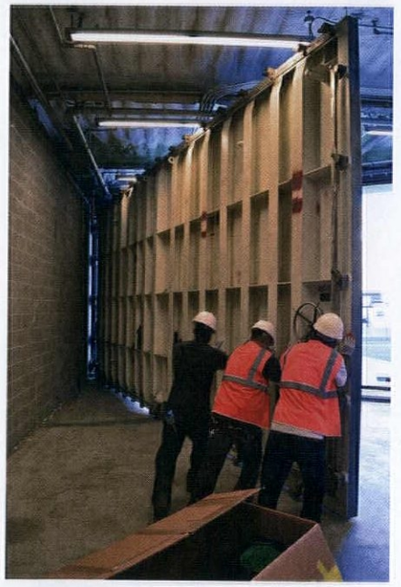
PHOTOGRAPHY: © JEFF GOLDBERG/ESTO (TOP); COURTESY COOPER ROBERTSON (BOTTOM); WHITNEY MUSEUM OF AMERICAN ART/KARIN JOBST (OPPOSITE)

212,599

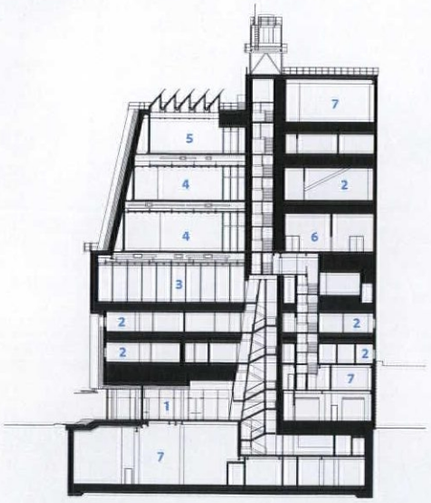
(making it impractical to radically rethink the design), the project team insists that the event provided an opportunity in disguise. "We were lucky it happened when it did," says Tom Wittrock, a Cooper Robertson partner.

Sandy was the impetus for the museum to seek the help of a German team of engineers—WTM, which specializes in port and marine structures—along with experts in storm modeling from the Franzius-Institute at the Leibniz University of Hannover. They came up with a plan for protecting the museum up to 16½ feet above the Manhattan Datum—a level 6½ feet higher than the lobby floor and more than 5 feet higher than Sandy's floodwaters. They accomplished this with strategies that should go unnoticed by visitors.

For example, the loading-dock entry, which sits at street level and faces the river, is protected by a 27-by-14-foot hinged floodgate. Made by a fabricator of watertight doors for naval vessels, the 8-inch-

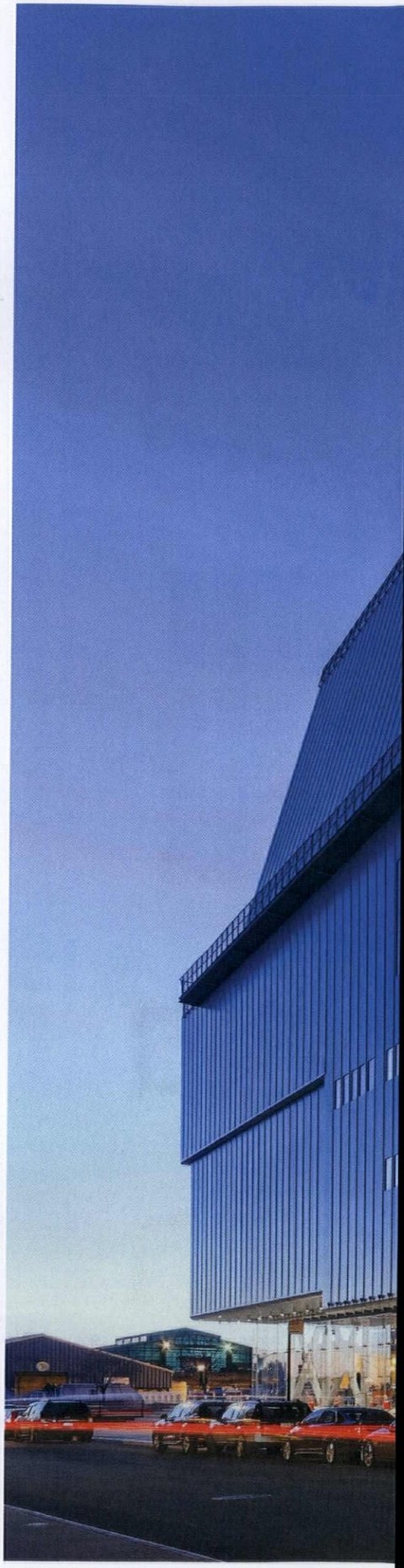


BATTENING THE HATCHES
If a severe storm is expected, the Whitney will protect its glass-enclosed lobby (right) with a temporary flood barrier of aluminum "logs" stacked between vertical anchors (top). It will also close the loading dock's 15,000-pound floodgate (above), which was made by a fabricator of doors for naval vessels.

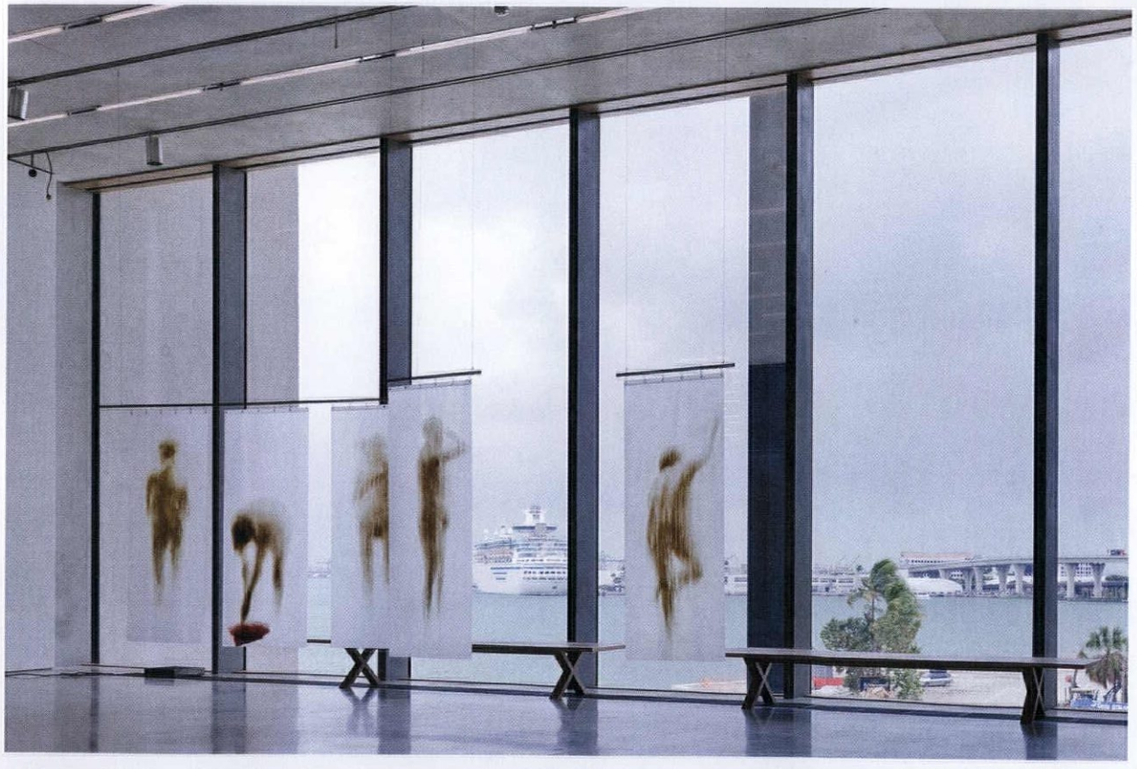


SECTION 0 30 FT. 9 M

1 LOBBY
2 OFFICE
3 TEMPORARY EXHIBITIONS
4 COLLECTION GALLERY
5 SPECIAL PROJECTS
6 WORKS ON PAPER
7 MECHANICAL



PHOTOGRAPHY: COURTESY COOPER ROBERTSON (2); © JEFF GOLDBERG/ESTO (RIGHT)



TOUGH TRANSPARENCY
To protect the Perez Art Museum Miami from storm surges, architects Herzog & de Meuron placed the three-story building on a plinth (above). Arguably, the museum's most notable hurricane-resistant features are its windows, which are as large as 7 feet 6 inches wide and 17 feet 3 inches tall. They flood the galleries with daylight and help show off pieces like *Cortinas de Baño* (left) by Oscar Muñoz. The Perez's glazing assemblies are considered the largest to undergo a "missile impact test," which entails firing a two-by-four from a cannon at the glass (opposite).

PHOTOGRAPHY: © PAMM/DANIEL AZOULAY (TOP); IWAN BAAN (BOTTOM)

thick steel door, weighing approximately 15,000 pounds, requires two people to close it.

One of the Whitney's most vulnerable features is the lobby, which is enclosed by floor-to-ceiling glass on three sides. Here the engineers devised a deployable watertight barrier of stackable aluminum "logs." If a severe storm is predicted, a crew of 20 workers can erect the temporary wall in about seven hours. The demountable nature of the barrier preserves a key aspect of the design: "The idea was to create an open and transparent ground floor and treat the outside and inside as one," explains Elisabetta Trezzani, an RPBW partner. The lobby, she says, was conceived as "a big piazza for the city."

The Whitney is not the only art museum to grapple with flood mitigation. Just one of several such institutions is Herzog & de Meuron's Perez Art Museum Miami, which sits on the edge of Biscayne Bay. To protect the three-story glass-and-concrete building and its art exhibits from a storm surge, the architects raised it above sea level on a plinth, with the space below dedicated to parking.

But in addition to water, the other severe weather threat that the Perez design team had to consider was hurricane-force winds, and any material they could carry. To safeguard against damage in an intense storm, the impossibly thin-looking concrete piloti that support an expansive trellis have been heavily reinforced to withstand both lateral forces and the impact of wind-borne debris. The suspension and irrigation systems for the hanging gardens, designed by green-wall pioneer Patrick Blanc, have also been carefully braced.

Arguably, the Perez's most notable hurricane-resistant features are its windows, the largest of which span 7 feet 6 inches between their ultrahigh-performance reinforced concrete mullions and 17 feet 3 inches from slab to slab. By code, the double-glazed units were required to undergo a battery of tests, including a so-called missile impact test. This entails firing an 8-foot-long two-by-four at a speed of 50 feet per second at the glass assemblies. The Perez windows are said to be the largest so far to undergo this testing regimen in the U.S.

The code dictates that the missile-impact test must be conducted by an independent laboratory. But the project's facade contractor, Seele, opted to perform its own "pretesting" in its glass-fabrication facility in Germany in order to help determine the optimal glazing assembly. Ultimately Seele settled on an outer lite of two layers of 12-millimeter heat-strengthened glass and an inner one of two layers of 8-millimeter fully tempered glass. Both included a reinforced PVB interlayer.

Results from the company's pretesting of the glazing system were consistent with the official preconstruction test subsequently performed in a lab in York, Pennsylvania. In both instances, the two-by-fours caused significant damage to the unit's outer lite while the inner one remained intact, as the code mandates. The inside layers of glass are considered the last line of defense. "They are sacrosanct," explains Bruce Nichol, a partner with Front, the project's facade consultant, while the outer lite is thought of as "sacrificial," he says.

The Perez has yet to undergo a real-life test. The storm seasons since its opening in late 2013 have been unusually calm, notes interim director Leann Standish. But that doesn't mean that she and her staff are just waiting for the next one to hit. Annually, they reevaluate their emergency procedures, including plans for moving or securing the regularly changing outdoor sculpture. "The only good thing about a hurricane," she says, "is that you know it is coming." ■

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1. Explain how green infrastructure can be used to bolster traditional hard infrastructure for flood control.
2. Describe how green infrastructure tactics can be used to remove pollutants from stormwater.
3. Discuss measures implemented by two recent art museums as protection from flooding.
4. Outline the testing regimen for hurricane-resistant glazing.

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QUIET REVOLUTION These days, workspaces need to accommodate both focused and collaborative activities.

1 INNOVATIONS IN ACOUSTICAL CEILINGS FOR TODAY'S FLEXIBLE INTERIORS

Open plans in offices, classrooms, and other interior spaces present an acoustical design challenge. This course explains effective noise-control techniques for such environments. (Sponsored by Armstrong Commercial Ceilings)

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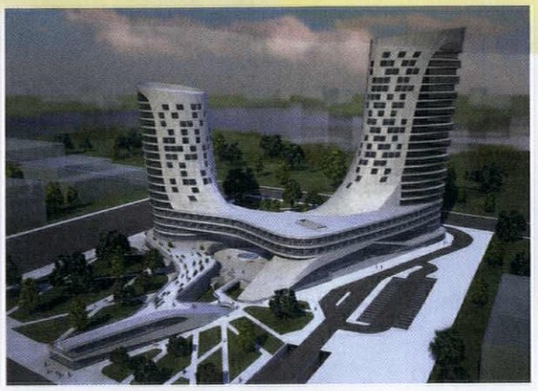

EARLY AND OFTEN A growing number of architects are using building information modeling as a design tool.

2 BUILDING INFORMATION MODELING AS A DESIGN PROCESS

Building information modeling, or BIM, has long been thought of as a process that begins only when preliminary design is complete. This article debunks that myth, explaining how BIM can be appropriately integrated into a project's earliest stages. (Sponsored by Nemetschek Vectorworks)

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WORTH REPEATING Overall motifs add visual interest, define spaces, and act as camouflage.

3 PATTERN MAPPING FOR LASTING DESIGN

There are many ways to use patterned panels in architecture: as wayfinding devices, as privacy screens, as shading elements, or simply as decorative cladding. This piece serves as a primer for the design of patterned panels for all manner of applications. (Sponsored by Parasoleil)

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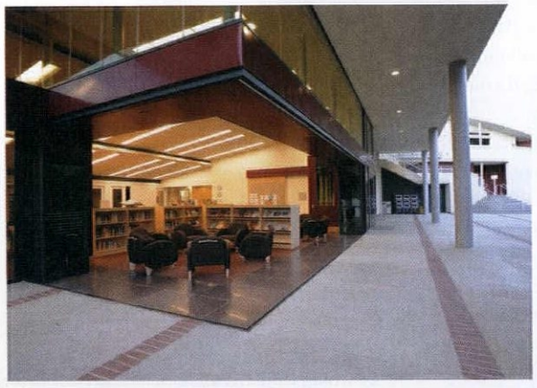

NOW YOU SEE IT Folding glass doors help open a building up to the outdoors and connect with its surroundings.

4 FOLDING GLASS DOORS ARE AN ASSET FOR COMMERCIAL SPACES

A folding glass door can maximize valuable space and serve as a dramatic design element. This piece explores options for folding glass doors and examines their impact resistance and energy efficiency, among other performance characteristics. (Sponsored by LaCantina Doors)

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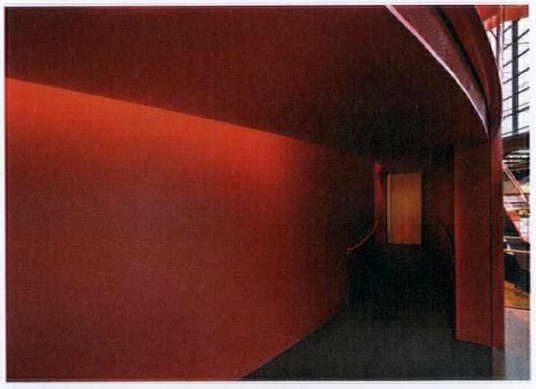

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5 DOORWAY TO DISTINCTIVE DESIGN

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6 ADVANCES IN MANUFACTURED MASONRY THIN VENEERS

Manufactured masonry veneers are increasingly popular in both commercial and residential construction. Learn about installation options and the best detailing for energy efficiency and moisture control. (Sponsored by Oldcastle Architectural)

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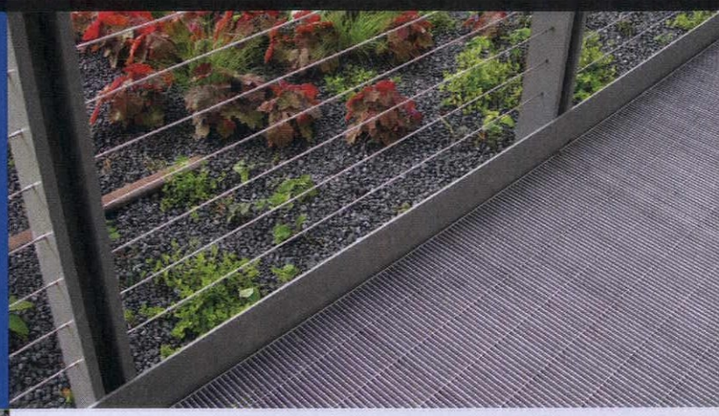

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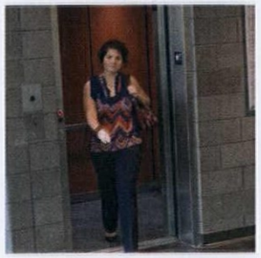

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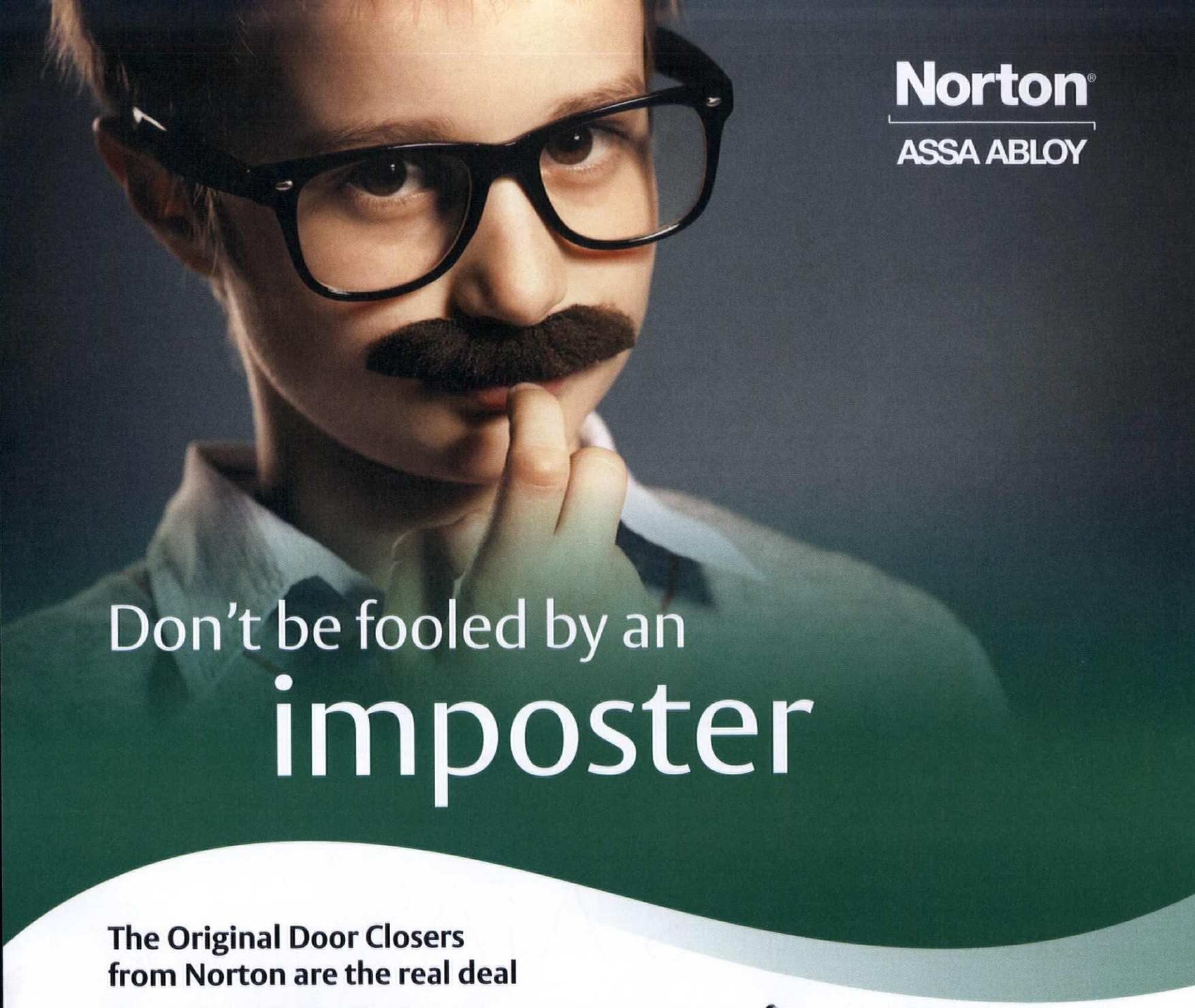

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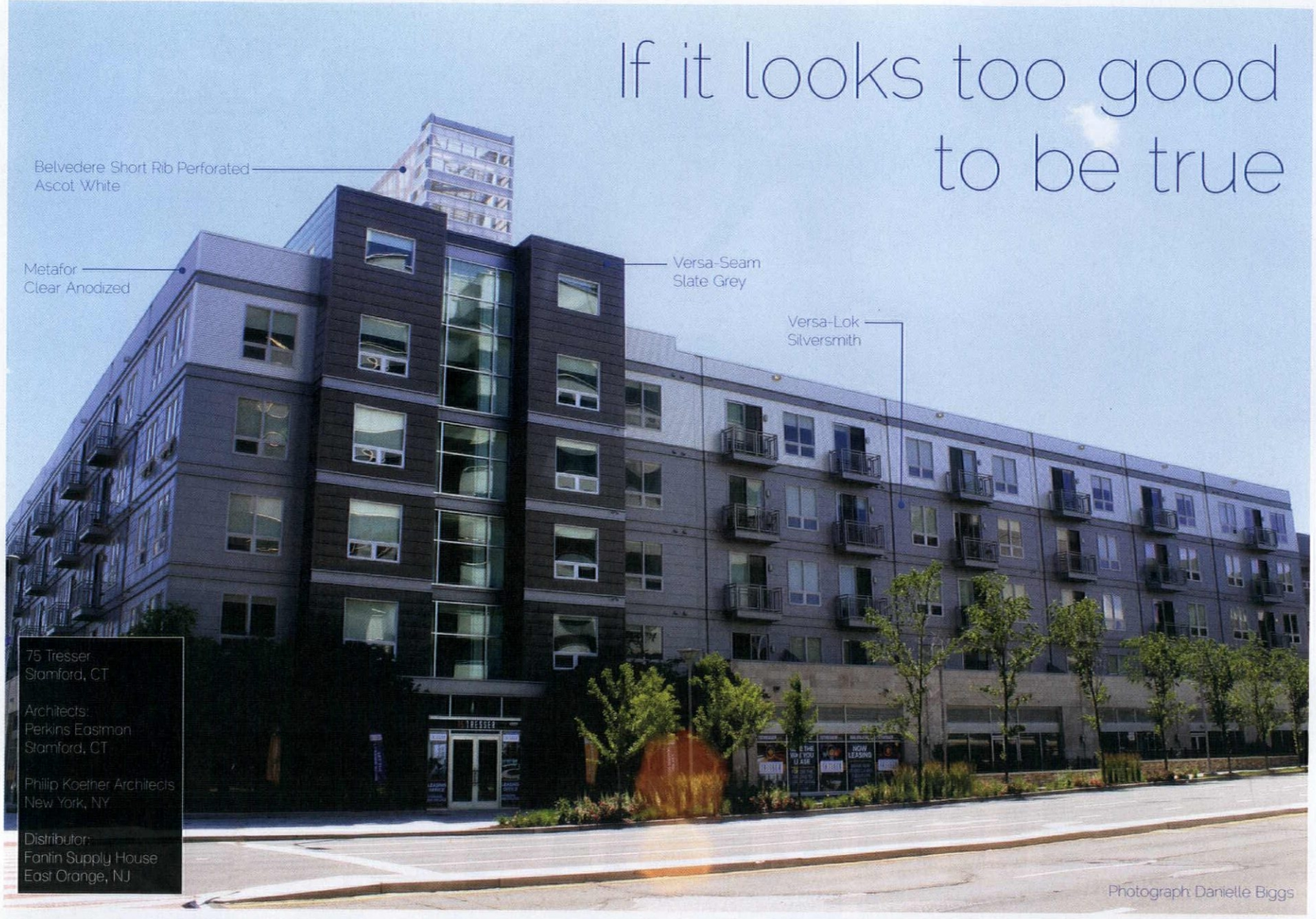

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Milliken's Identity One is a cut-pile nylon type 6,6 carpet collection. **(SNAP #08)**

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Specialty Products Pgs. 96-98

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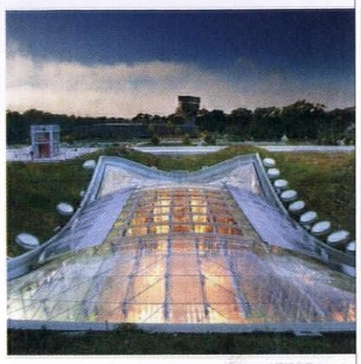

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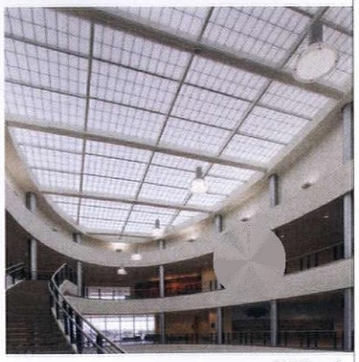

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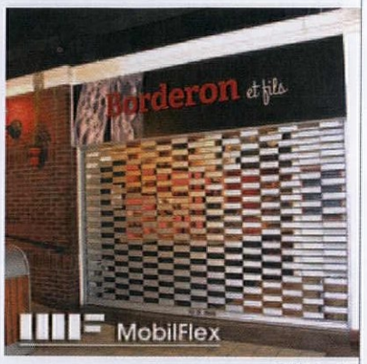

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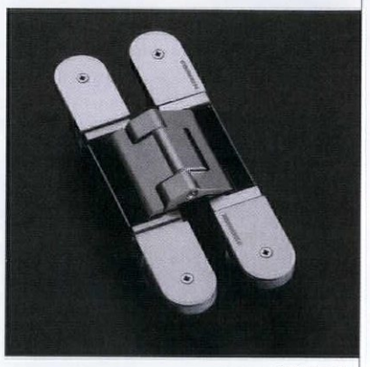

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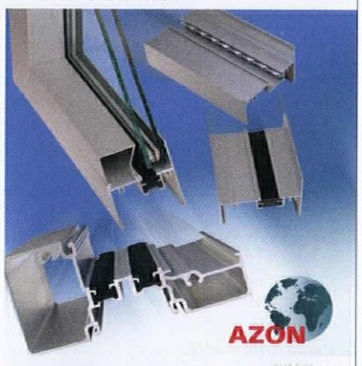
- Intelligent technologies reduce overall U-factor
- Higher CRF (condensation resistance factor)



www.azonintl.com
800.788.5942

SNAP 111

DOORS, WINDOWS

LIBRARY LADDERS & SLIDING DOOR HARDWARE

Specialty Doors

World's largest selection of sliding door hardware.

Product Application

- Wine cellars
- Restaurants/bars
- Libraries
- Closets
- Kitchens

Performance Data

- German precision
- Telescoping top
- Curves available

www.specialtydoors.com
866.815.8151 | Tom Gross

SNAP 112

DOORS, WINDOWS

IN-FLOOR ELECTROMECHANICAL SWING DOOR OPERATOR

WR

Tormax Technologies, Inc.

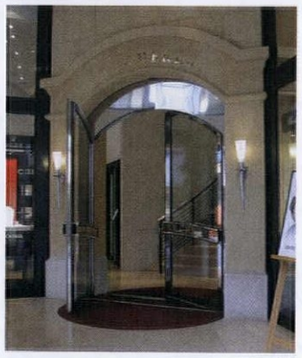
Fully concealed in-floor operator was designed for rigorous conditions of commercial use for doors weighing up to 1,000 lb.

Product Application

- Buildings that meet the Historic Preservation Society guidelines

Performance Data

- Solid glass, wood, metal, fiberglass and/or arched doors
- Elevated design for convenience, comfort, safety
- Eco-friendly, 110-VAC electromechanical operator



www.tormaxusa.com
888.685.3707

SNAP 113

DOORS, WINDOWS

HEAVY-DUTY PIVOT SET

Rixson

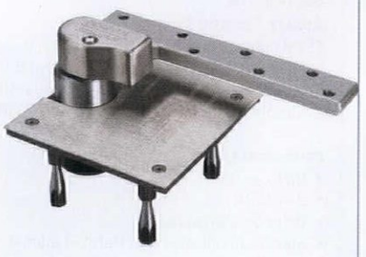
Rixson's L117 pivot is the ideal way to hang a heavy door that does not need to be self closing.

Product Application

- Exterior or interior doors
- Lead-lined, heavy or high-traffic doors

Performance Data

- Weights up to 1,750 lb
- Available for fire door assemblies
- Doors will swing 180°, trim permitting



www.Rixson.com
704.233.1586 | Lana Kirkpatrick

SNAP 114

WON-DOOR
Cross Corridor FIREGUARD™

FireGuard Cross Corridor in Lieu of Swing Type Doors for Cost and Space Savings

- Wide open corridors
- No exposed hardware
- Low maintenance
- Integrated pocket cover door
- "Green" self-supporting track system
- Meets all egress requirements
- Up to 60 percent pocket depth reduction

WON-DOOR CORPORATION

WWW.WONDOOR.COM
SALES@WONDOOR.COM

TOTOTO + Zed

TOTOTO

Zed

landscapeforms®

TOTOTO and Zed put the fun in function. Playful, colorful and stackable these user-friendly chairs from Italian innovator Maxdesign instantly transform mundane space into social space.

Designed by
TOTOTO by Studio Hannes Wettstein
Zed by Hannes Wettstein.

Find us at landscapeforms.com or contact us toll free at 800.290.6240.

SNAP 13

DESIGN. CULTURE. CRAFT.

Evolution™

Thermal and Moisture Protection

Thermal and Moisture Protection Roof and Wall Panels

Division 7 Thermal and Moisture Protection Specification Section 07411 - Manufactured Roof Panels

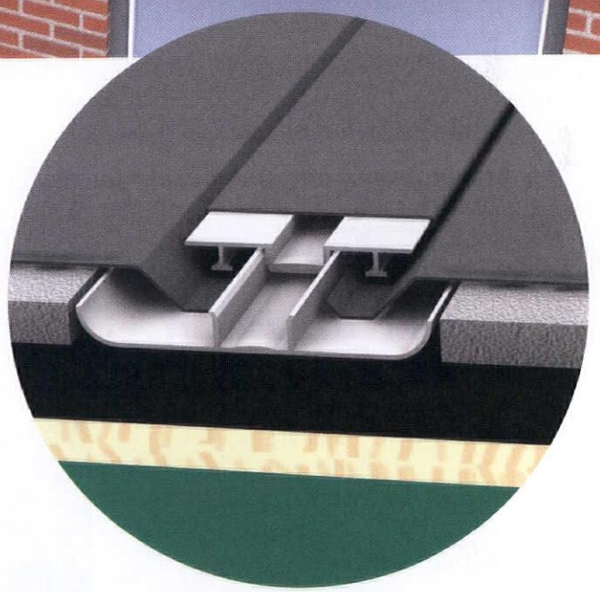
The Overly *Evolution* metal wall and roof system is without raised batten or standing seams and exposed fasteners. The system consists of a hidden drain channel, compression bar, cover cap and cladding sheets. The smooth, contemporary design appears monolithic when viewed from just a short distance. It's an 'Evolution' to all the standard metal wall and roof systems available throughout the history of the industry.

Applications

The Overly *Evolution* system can be installed on sloped roofs and vertical walls. Panels can be curved and/or tapered for barrel vaults and domes or spherical shapes. The system features hidden fasteners and an internal drainage component which removes any moisture that migrates into the system and skillfully designed joints which allow for expansion and contraction. The system is the exterior exposed component of a wall/roof composite assembly. Several composite assemblies are available ranging from thin to thick as determined by aesthetic preferences or as necessary to meet performance requirements such as thermal, structural and fire ratings.

Materials

- Aluminum Alloy 3003-H14, Standard Thickness 18 gauge (.040")–16 gauge (.050") available in painted K500 finishes, brushed and mill finishes
- Stainless Steel type 304 and type 316, 24 gauge (.024") –20 gauge (.036") available in 2B, 2D, #4 and several custom directional and non-directional finishes
- Titanium Grade 1, gauges .018"–.024" available in standard mill or matte finishes
- Zinc, gauge .028"–.032" available in natural or pre-weathered finishes
- Recycled content varies upon material selected. 100% recyclability of all metal components



System Design Data

- Width of Compression Cover: 2.75"
- Mininum/Maximum Spacing between Compression Covers: 12"–48"
- Maximum Length of Panels: 40'
- Compression Extrusion Thickness: .056"
- Channel Extrusion Thickness: .056"
- Test data in accordance with ASTM E 283, ASTM E 330, ASTM E 331 and UL 580 (Class 90 available upon request)

It's more than metal...*it's personal.*

OVERLY

MANUFACTURING COMPANY

P.O. Box 70
Greensburg, PA 15601-0070 USA
Phone: (724) 834-7300
Fax: (724) 830-2877
E-mail: overly@overly.com
Website: www.overly.com

PRODUCT SPOTLIGHTS

Doors, Windows	Pgs.	75-76
ELECTRICAL, LIGHTING	PGS.	80
Equipment	Pgs.	82
Interior Finishes, Furnishings	Pgs.	84
Landscaping, Sitework	Pgs.	86
Materials	Pgs.	88
Mechanical Systems, HVAC, Plumbing	Pgs.	90
Roofing, Siding, Thermal & Moisture Protection	Pgs.	92-94
Specialty Products	Pgs.	96-98

ELECTRICAL, LIGHTING

LED RAIL LIGHT KITS FOR ALUMINUM RAILINGS

WR | GREEN

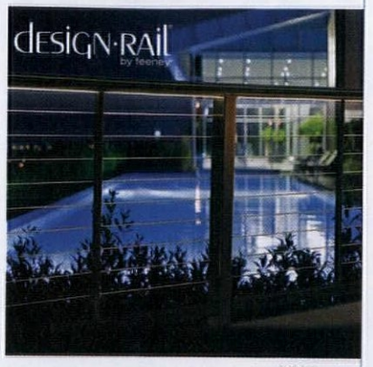
Feeney, Inc. (DesignRail®)

Weatherproof, energy-efficient LED lighting kits for DesignRail® aluminum railings with high-bond installation adhesive strips, special snap-on light-diffusing lenses and remote control dimmers.

Product Application
- Fits all styles of DesignRail® aluminum railings
- Residential, commercial, institutional settings
- Outdoor lighting accent & visual aid for low-light areas

Performance Data
- High CRI (80) LEDs, better color rendering, up to 50,000 hours
- 24 volt DC, fully weatherproof, plug & go components

www.feeney6.com
800.888.2418 | Trang Nguyen-Soriano



SNAP 115

ELECTRICAL, LIGHTING

LED SIGNS – COMPACT, LOW VOLTAGE

$ | GREEN

RT Technologies Inc.

These LED room information signs are extra low-voltage (24V DC), low-energy, low-profile signs.

Product Application
- Hospitals
- Educational facilities
- Industrial & office workplaces
- Military installations

Performance Data
- Compact, contemporary appearance
- Lifetime in excess of 50,000 operational hours

www.rtlasersafety.com
770.332.0092 | contact@rtlasersafety.com

SNAP 116

ELECTRICAL, LIGHTING

ELECTRIC VEHICLE CHARGING STATIONS

WR | GREEN

SemaConnect, Inc.

The ChargePro Electric Vehicle Charging Station comes bundled with free station management software, giving owners a full turn-key solution for deploying a program at your property.

Product Application
- Commercial real estate
- Multifamily
- Retail

www.semaconnect.com
301.352.3730

SNAP 117

SoundTex®

Acoustic Nonwoven

Effective Sound Absorption

Extensive Design Options

Simple Installation

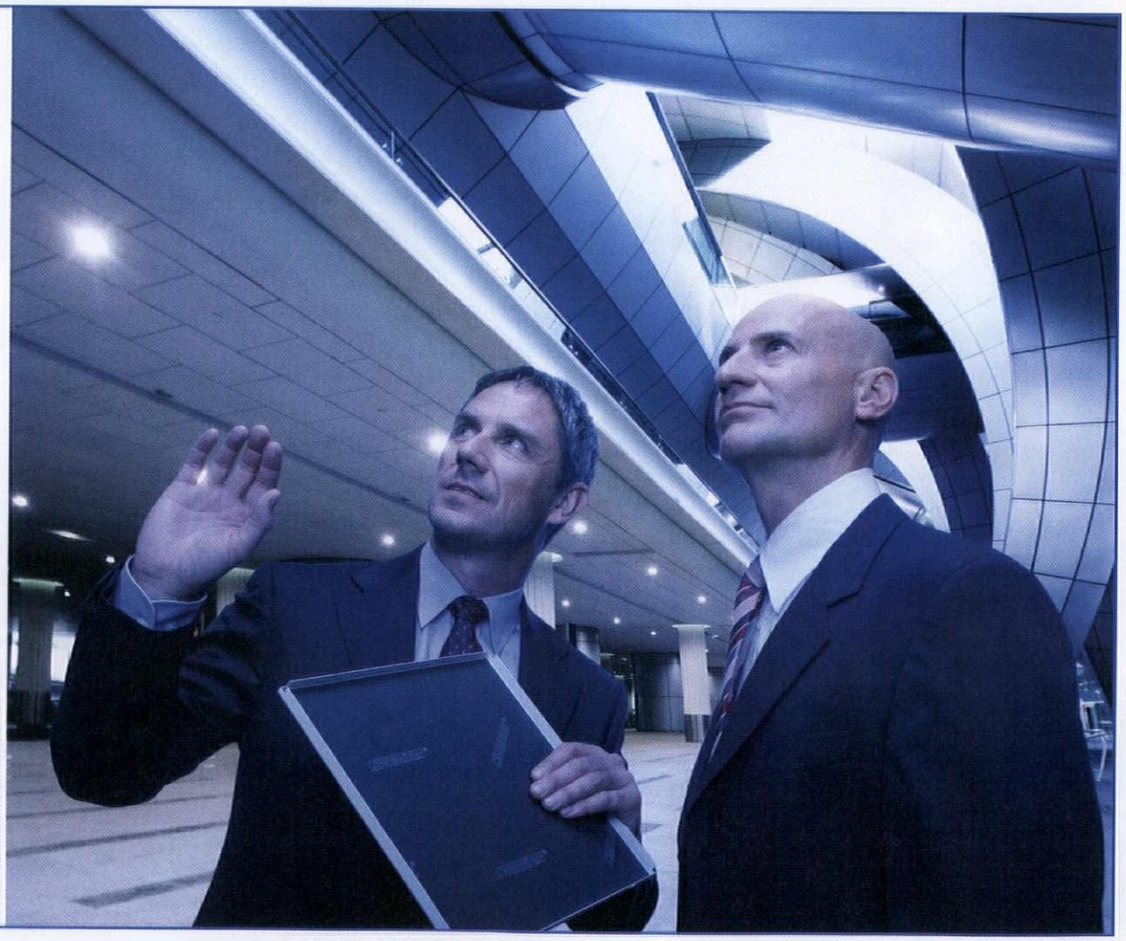
Cost Effective

Freudenberg Performance Materials, LP
3500 Industrial Drive
Durham, NC 27704

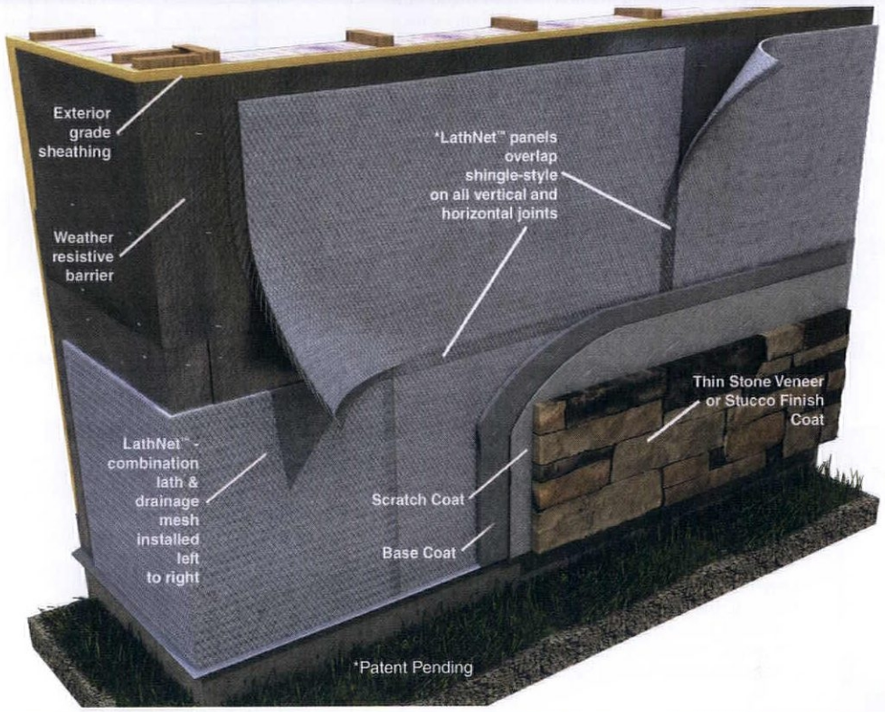
bill.mordecai@freudenberg-pm.com
TEL: (919)620-7074

www.soundtex.com

Freudenberg



NEW *LathNet™ – Drainage Mesh and Metal Lath in One



LathNet™

For Stucco and Adhered Masonry

Install the metal lath and drainage plane in one simple step

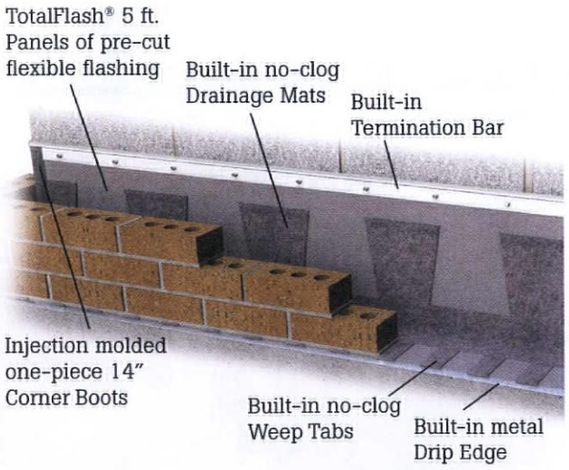
- Reduces labor time and costs
- Reduces wall penetrations
- Installs and performs just like regular metal lath
- Walls dry fast, stay drier than with lath alone

Call or email for samples:
technicalservices@mortarnet.com

800.664.6638
mortarnet.com

SNAP 17

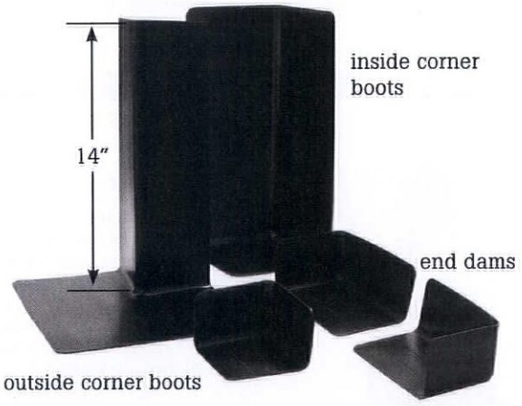
Mortar Net SOLUTIONS



TotalFlash® – Complete Masonry Cavity Wall Drainage Solution

Cuts Flashing System Installation Time, Helps Keep Veneer Walls Dry

- 5′ (net) panels with flashing membrane, drainage mat, weep tabs, termination bar and drip edge
- Applicable in all flashing locations, including base of wall, parapet walls, and above bond beams, wall openings and structural steel members
- Perfect for new construction and masonry restoration
- Available in EPDM, TPO, SR and PVC stabilized with Elvaloy® KEE



CompleteFlash – Industry-First 14" High Corner Boots, only from Mortar Net Solutions

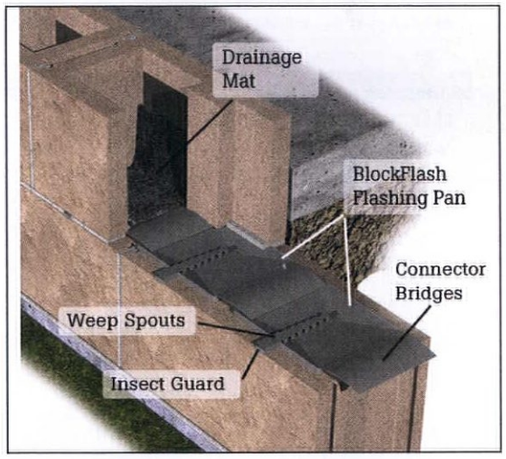
The only corner boots that extend above standard flashing

- One-piece, injection molded
- Highly puncture-resistant to prevent leaks
- Available in synthetic rubber/polypropylene blend (SR), TPO and PVC stabilized with Elvaloy® KEE

Inside and outside corner boots, right, left and universal end dams available.

Mortar Net SOLUTIONS

326 Melton Road
Burns Harbor, Indiana 46304
Phone: 800.664.6638
Fax: 219.787.5088



BlockFlash® – The Only Embeddable Flashing Solution For Single-Wythe CMU Walls

- Sloped pans with integrated weep spouts collect and channel moisture out of the wall
- Up to 50% faster installation than through-wall flashing
- Included drainage mesh prevents mortar damming
- 10X stronger block bond than through-wall flashing
- Snap-off connector bridge for easy installation at grouted cells and corners
- Integrated insect guards keep bugs out

PRODUCT SPOTLIGHTS

Doors, Windows	Pgs.	75-76
Electrical, Lighting	Pgs.	80
EQUIPMENT	**PGS.**	**82**
Interior Finishes, Furnishings	Pgs.	84
Landscaping, Sitework	Pgs.	86
Materials	Pgs.	88
Mechanical Systems, HVAC, Plumbing	Pgs.	90
Roofing, Siding, Thermal & Moisture Protection	Pgs.	92-94
Specialty Products	Pgs.	96-98

EQUIPMENT

NEW SERIES DOCK LIFTS

Advance Lifts

Advance Lifts is proud to announce their totally new 3400 series, which will replace the old 4100 series.

- New features include: Same capacities and platform sizes as the old 4100 lift models
- 15-in. lowered heights
- Cantilevered platform design just like the other 3000 series dock lifts
- New lower prices, which means greater value

www.advancelifts.com
800.843.3625 | michaelr@advancelifts.com

SNAP 118

EQUIPMENT

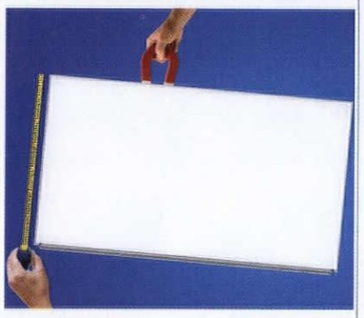
NEW IDEAS

Da-Lite

The new IDEA™ line provides optimal touch performance, and is the best screen on the market for interactivity. New standard features include a magnetic surface and thin frame.

Product Application
- Erasable
- Compatible with any dry erase marker

Performance Data
- Hotspot free



www.da-lite.com/NewIDEAs
800.622.3737 | info@da-lite.com

SNAP 119

EQUIPMENT

DISHWASHER

$$ | NEW

Maytag® Home Appliances

Their Quietest Dishwasher Ever has all the cleaning power of the Maytag brand without the ruckus. They built this large-capacity dishwasher with tough stainless steel to take on the worst messes.

Performance Data
- 4-blade stainless steel chopper
- Features PowerBlast™ rinse cycle
- Premium ball-bearing rack glides
- Product SKU: MDB8969SDM

www.insideadvantage.com
800.253.1301

SNAP 120

EQUIPMENT

ELECTRIC KILNS & POTTERY WHEELS

WR | GREEN

Skutt Ceramic Products Inc.

The Skutt KM1027-3 electric kiln has 20% more insulation, helping schools cut costs. Add KilnLink as an option and monitor your kiln from anywhere you have an internet connection.

Product Application
- Currently used in hundreds of schools nationwide

Performance Data
- UL safety listed
- Automatic controller w/ diagnostic software
- Ergonomic lid lifter included
- Avail. w/ optional downdraft fume venting system

www.skutt.com
503.774.6000 | Mike Sievers

SNAP 181

EQUIPMENT

MACHINE-ROOMLESS HYDRAULIC ELEVATOR

$$

Otis Elevator Company

Otis offers the HydroFit™, a machine-roomless, holeless hydraulic elevator that gives architects true design freedom in low-rise structures.

Product Application
- Low-rise buildings up to 26 ft 6 in.
- Design freedom: no machine room required
- Save construction time and cost

Performance Data
- Energy-efficient LED lighting and sleep mode
- Industry-renowned proven reliability and uptime

HydroFit™

OTIS
United Technologies

www.otis.com
843.432.4220 | Mary Ryan

SNAP 182

EQUIPMENT

MRL FOR MID-RISE

Schindler Elevator Corporation

New Schindler 5500 machine room-less elevator delivers flexibility, efficiency and performance.

Product Application
- Mid-rise buildings up to 350 ft (33 stops, 45 openings)
- Fits the requirements of commercial, mid- and high-end residential buildings

Performance Data
- Machine room-less design for more usable building space
- Regenerative drives use up to 30% less energy while returning energy to a building's power grid

www.us.schindler.com
973.397.6489

SNAP 183

EQUIPMENT

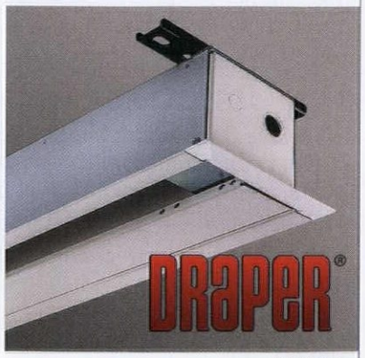
CEILING RECESSED PROJECTION SCREEN

Draper, Inc.

Draper's Access FIT projection screen is an all-new member of the Access line of projection screens that fits into tighter ceiling cavities than ever before—the case is less than 6 inches tall!

Product Application
- Case height is only 5-11/16 in.
- Self-supporting screen surfaces up to 120 in. wide
- Tab-tensioned screen surfaces up to 104 in. wide

Performance Data
- Same rugged components as other Access screens



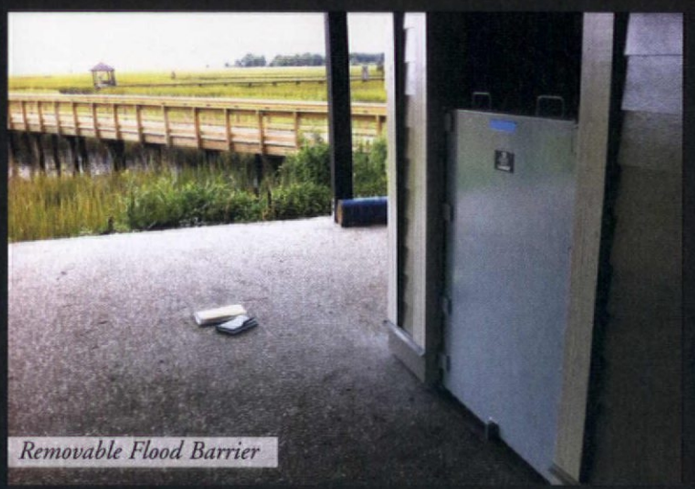
www.draperinc.com
800.238.7999

SNAP 184

ENGINEERING + EXPERIENCE EQUALS A WINNING TRADITION

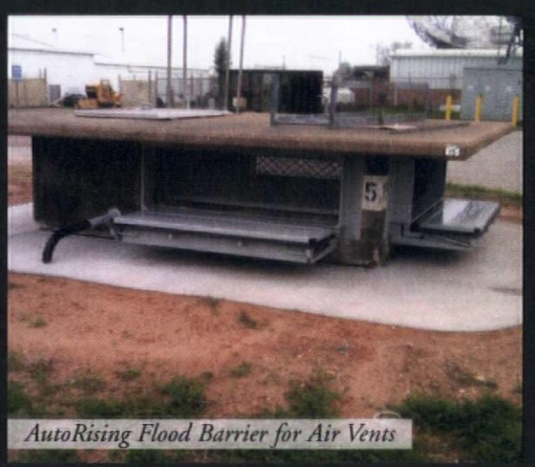
FLOOD BARRIERS AND WATERTIGHT & BLAST RESISTANT DOORS SINCE 1939

Airtight Door


Removable Flood Barrier

High Pressure Door for Tunnel

Blast Door


AutoRising Flood Barrier for Air Vents

Fast Delivery | Cost Effective | Designed for Any Pressure | Any Location

Contact the experts at Walz & Krenzer for all your flood barrier, watertight and blast closure needs.

Walz & Krenzer, Inc.

91 Willenbrock Rd., Unit B4, Oxford, CT 06478 • www.floodbarriers.com
Tel: 203-267-5712 • Fax: 203-267-5716 • E-mail: sales@wkdoors.com

SNAP 27

PRODUCT SPOTLIGHTS

Doors, Windows	Pgs.	75-76
Electrical, Lighting	Pgs.	80
Equipment	Pgs.	82
INTERIOR FINISHES, FURNISHINGS	**PGS.**	**84**
Landscaping, Sitework	Pgs.	86
Materials	Pgs.	88
Mechanical Systems, HVAC, Plumbing	Pgs.	90
Roofing, Siding, Thermal & Moisture Protection	Pgs.	92-94
Specialty Products	Pgs.	96-98

LUXURY STAINLESS-STEEL TOWEL WARMER

Amba Products

Sirio S-2142: Italian-designed stainless-steel towel warmer with a unique modern look offers a stylish and functional solution for bathrooms, hotels or even spas.

Product Application
- Keeps towels warm, dry and mold/mildew free
- Doubles as a space-heater for cold/moist bathrooms
- Energy-saving solutions with included Digital Heat Controller

Performance Data
- BTUs: 586
- Average temp range: 133 - 167°F

ambaproducts.com
404.350.9738 | Fred Salati

SNAP 121

VANITY BRACKETS

$ | GREEN

Rangine Corporation/Rakks

Rakks ADA-compliant aluminum vanity brackets simplify and reduce the cost of installing sinks and provide a stable mounting surface for custom-built enclosures.

Performance Data
- Supplied with wooden strips on the front faces to provide convenient mounting or removal of surface panels
- Available in standard sizes and made-to-order

www.rakks.com
800.826.6006 | David Greenberg

SNAP 122

ZERO-VOC PAINT

PPG Paints

Speedhide zero is a low-odor, no-VOC latex paint designed for professional application.

Product Application
- Recommended for interior walls, ceilings and trim and ideal for painting occupied spaces

Performance Data
- Quick dry for faster recoat
- Uniform, durable and washable finish

www.ppgpaints.com
866.298.7245

SNAP 123

MULTI-USE SPORTS FLOORING

GREEN

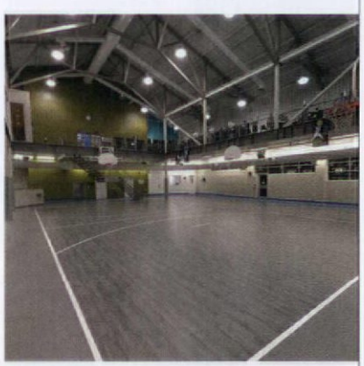
Tarkett Sports

Omnisports flooring meets the demands of today's multi-use sports environments. It is versatile, easy to maintain and produced using phthalate-free manufacturing.

Product Application
- School gymnasiums
- Churches
- Recreation centers

Performance Data
- Asthma & allergy friendly™ (6.5 mm and 8.3 mm)
- Phthalate-free manufacturing
- ASTM F2772 sports performance

tarkettsportsindoor.com
888.364.6541



SNAP 124

SEAMLESS HIGH-DESIGN FLOOR SYSTEMS

$$

Stonhard

Stontec URF is a seamless, chemical-, stain- and impact-resistant, urethane-based floor system with a decorative flake-infused design. A designer's choice.

Product Application
- Stadiums and entertainment venues
- Restaurants, food courts and concessions
- Box suites, locker rooms and concourses

Performance Data
- Seamless, easy to clean and high performing
- Stands up to heavy traffic and continuous use

www.stonhard.com
800.257.7953

SNAP 125

HIGH DEFINITION GLAZED PORCELAIN FLOOR & WALL

NEW | GREEN

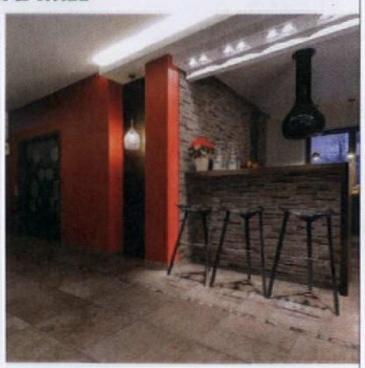
Florida Tile

Since 1954, Florida Tile has been an innovator, from building the first floor tile plant in the USA to introducing the first digitally printed products with its HDP – High Definition Porcelain® lines.

Product Application
- All residential and commercial wall, countertop and backsplash applications, all residential and most commercial floor applications

Performance Data
- EarthstoneHDP by Florida Tile is the newest HDP line featuring four earthy tones

www.floridatile.com
800.352.8453 | sales@floridatile.com



SNAP 126

ARCHITECTURAL GLASS

$$

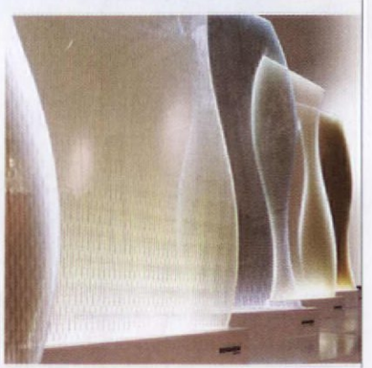
Bendheim

The KOVA for Bendheim Collection of safety laminated glass features decorative textile interlayers, creating new possibilities for dividing interior spaces.

Product Application
- Screens & partitions
- Stair railings & balustrades
- Canopies & ceilings
- Lighting & furniture

Performance Data
- Can improve STC rating by 4 points to STC 35 or better
- Laminated safety glass meets building codes

www.BendheimArchitectural.com
800.221.7379 | info@bendheim.com



SNAP 127

NEW

OPTIMIZED ANGLE REDUCES STRAIN

DESIGNED FOR A MORE NATURAL HAND POSITION THAN TRADITIONAL PLIERS

DO MORE ON THE JOB

irwin.com

IRWIN VISE-GRIP ERGOMULTI LONG NOSE PLIERS

Gripping, twisting, stripping and crimping wire in tight working conditions just got a whole lot easier with our new multi-functioning long nose pliers. Plus, their three-zone comfort grips allow for optimum control.

Backed by the IRWIN VISE-GRIP Lifetime Guarantee.
Experience the ergonomic difference for yourself at your local tools retailer or distributor.

IRWIN®
VISE-GRIP®

© 2015 IRWIN Industrial Tools. All Rights Reserved.

PRODUCT SPOTLIGHTS

Doors, Windows	Pgs.	75-76
Electrical, Lighting	Pgs.	80
Equipment	Pgs.	82
Interior Finishes, Furnishings	Pgs.	84
LANDSCAPING, SITEWORK	**PGS.**	**86**
Materials	Pgs.	88
Mechanical Systems, HVAC, Plumbing	Pgs.	90
Roofing, Siding, Thermal & Moisture Protection	Pgs.	92-94
Specialty Products	Pgs.	96-98

LANDSCAPING, SITEWORK

CUSTOM SHELTER DESIGN & FABRICATION

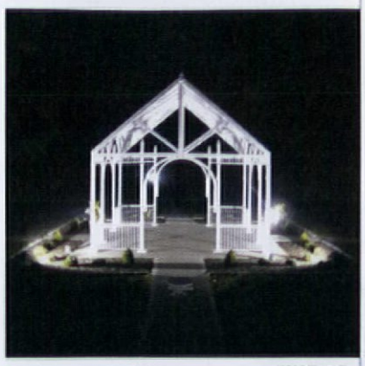
$$

ICON Shelter Systems Inc.

The experienced designers, structural engineers and CAD technicians at ICON can custom design any type of outdoor structure to meet your site requirements.

Product Application
- Wedding gazebo in Greenville, KY (shown)
- Custom arbor structure in Jersey City, NJ
- Smoking shelter at The Plaza in Chicago, IL

Performance Data
- Structural steel e-coated and powder coated
- Custom designed to local building codes
- Sealed engineering calculations and drawings



www.iconshelters.com
800.748.0985 | ben@iconshelters.com

Booth: 225 ASLA **SNAP 128**

LANDSCAPING, SITEWORK

BICYCLE SHELTERS

ICON Shelter Systems Inc.

Open, partially enclosed or fully enclosed bicycle structures help to protect and secure non-motorized bikes from sun, rain and vandalism.

Product Application
- RH11X40M2C-P4, Riverside Plaza, Chicago, IL (shown)
- Bicycle garage and waiting station, Valparaiso, IN
- SG15.5X37.8M-P4, Sunnyside Trailhead, Clovis, CA
- Integrated bicycle racks
- Windscreens, doors and benches available
- Steel frame E-coated/powder coated 8-12 mils thick

www.iconshelters.com
800.748.0985

Booth: 225 ASLA **SNAP 129**

LANDSCAPING, SITEWORK

GRASS PAVEMENT

WR | GREEN

Invisible Structures

Grass flexible plastic porous pavement.

Product Application
- Fire lanes
- Overflow parking lots
- Access roads

Performance Data
- 5,721 psi compressive strength
- 100% grass coverage

www.invisiblestructures.com
800.233.1510 | Dustin Glist

SNAP 130

LANDSCAPING, SITEWORK

A UNIQUE PERMEABLE PAVING SYSTEM

GREEN | $$

Soil Retention Products, Inc.

Drivable Grass® is a permeable, flexible and plantable concrete paving system that can be used for a wide variety of applications.

Product Application
- Parking lots
- Driveways
- Golf courses
- RV parking
- Pathways
- Boat ramps
- Fire lanes
- Drainage swales

www.soilretention.com
800.346.7995 | info@soilretention.com

Booth: 738 AIA Expo **SNAP 131**

LANDSCAPING, SITEWORK

CRASH-TESTED BOLLARDS – SHALLOW FOUNDATION

Tymetal Corp.

K4 Bollard: patent-pending, energy-absorbing spring steel. Shallow mount (8 in.), removable or fixed, stainless steel covers. Or use as planter, bike rack, bench (street furniture).

Product Application
- Used extensively in 2012 London Olympics
- Protects pedestrians from vehicle accidents
- Protects property from intentional attack

Performance Data
- Crash-tested K4 or K12
- Meets new ASTM F3016 for storefront safety
- Spring steel absorbs energy, allows for shallow footing

www.tymetal.com
800.328.4283 | Dick Krieger

SNAP 132

LANDSCAPING, SITEWORK

FIBERGLASS FENCE SYSTEMS

$$ | GREEN

F&F Composite Group, Inc.

Maintenance-free, weatherproof, waterproof, fiberglass fence systems, three times tensile strength of steel, variety of colors, non-conductivity, lifetime warranty, green.

Product Application
- Kona International Airport, HI
- Hurst Conference Center, Hurst, TX
- US AFB, Portugal
- Alcoa, Washington

Performance Data
- Highest strength in a fence product
- Sustainable, no maintenance

www.fiberfence.com
817.379.4411 | Suzanne Seely

SNAP 133

LANDSCAPING, SITEWORK

TERRAZZO – A PERFORMING ART

National Terrazzo & Mosaic Association

Rustic terrazzo offers unique alternatives to interior and exterior paving with the flexibility to accommodate designs from classic traditional to artistically unique floor and wall surfaces.

Product Application
- Exterior
- Commercial
- Artistic

Performance Data
- Slip resistant
- Durable

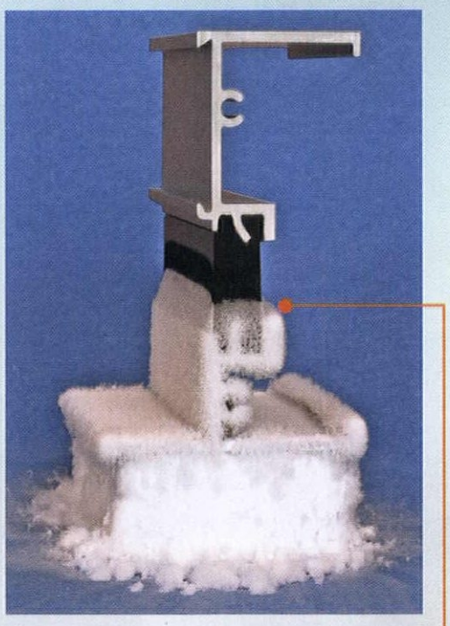
www.ntma.com
800.323.9736 | info@ntma.com

Booth: 3070 AIA Expo **SNAP 134**

Azon Saves Energy

Daylighting systems produced with Azon structural thermal barrier technologies—the **MLP™** or **Dual Cavity**—for aluminum windows and high performance glazing components for insulating glass, will yield a fenestration system capable of upholding the highest efficiency and sustainability standards.

- Polyurethane polymer with superior insulating properties for the best balance of energy efficiency and performance
- NEW: MLP™(mechanical lock profile) and dual cavity designs for fenestration products used in the most demanding climates and conditions
- High strength for larger spans—industry's strongest thermal barrier for aluminum storefront, curtain wall and windows
- AZO/Tec® technical services with expertise in window design



Extreme cold temperatures of -100ºC (-148ºF) will not transfer through an aluminum frame with a modern pour and debridge thermal barrier (and *neither will high temperatures in very hot environments*)

CONTINUING EDUCATION AIA

1 HSW Learning Unit

1-800-788-5942 | www.azonintl.com

AZON

SNAP 4

Learn about the role of Azon thermal barriers in energy conservation.

PRODUCT SPOTLIGHTS

Doors, Windows	Pgs.	75-76
Electrical, Lighting	Pgs.	80
Equipment	Pgs.	82
Interior Finishes, Furnishings	Pgs.	84
Landscaping, Sitework	Pgs.	86
MATERIALS	**PGS.**	**88**
Mechanical Systems, HVAC, Plumbing	Pgs.	90
Roofing, Siding, Thermal & Moisture Protection	Pgs.	92-94
Specialty Products	Pgs.	96-98

MATERIALS

LINEAR METAL CEILINGS & WALLS

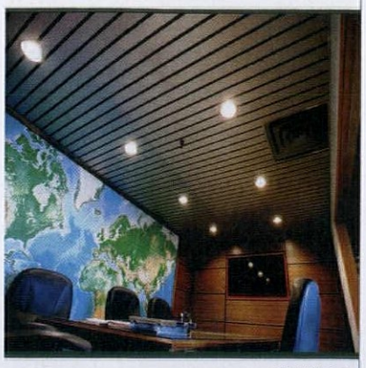
Acoustical Surfaces, Inc.

The Alumiline Linear System Panel is available in elegant 8', 10' or custom lengths. An excellent choice for external applications/high-humidity environments. Option: colors wrapped in wood laminate.

Product Application
- Schools, restaurants, residential, industrial
- Hospitals, hotels, offices, airports, rail stations
- Auditoriums, gymnasiums, swimming pools
- Arenas, retail, house of worship

Performance Data
- Class A fire rated
- Fast and easy installation

www.acousticalsurfaces.com
800.710.8792 | Jon Mestad



SNAP 135

MATERIALS

ACOUSTICAL CLOUDS

Armstrong Ceiling Systems
SoundScapes Shapes
Add quiet and make open space feel more intimate.

Performance Data
- Enhance acoustics in open space
- Aesthetically define spaces
- Standard flat panels in multiple sizes and shapes
- Variety of standard and custom colors

armstrong.com/shapes
877.276.7876

SNAP 136

MATERIALS

ADAIR® LIMESTONE

WR | GREEN

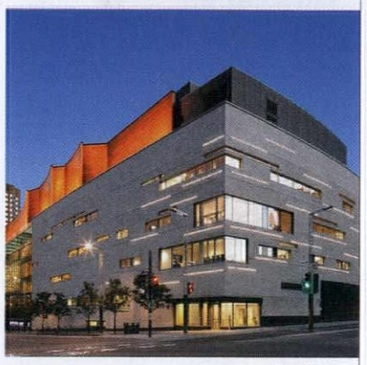
Arriscraft

Adair® Limestone is a quarried stone of exceptional versatility, value and beauty. From large dimension stone slabs to standard pre-cut smaller units, designers can create without limitations.

Product Application
- Commercial
- Interior and exterior applications

Performance Data
- Exceeds reqs of ASTM C568-03 Stand Spec for Limestone Dimension Stone; Class III High Density
- Avail. in Masonry Units (4"), Anchored Dimension Stone, Tiles, Landscaping

www.arriscraft.com



SNAP 137

Ballew's
ALUMINUM PRODUCTS INC

Protection and Aesthetic appeal all in one product

Ballew's Aluminum Products offers many colors and styles of overhead canopies that are fully engineered. On a storefront or loading dock, Ballew's has a cover for any application!

4 locations: **Greer, SC - Southaven, MS - Oklahoma, OK - Manheim, PA**

Phone: **800-231-6666** ▪ Website: **www.ballews.com**

MATERIALS

PERFECT PAVER PALETTE

$$$

Belden Clay Pavers

The Belden Brick Company offers you more options in clay pavers than anyone in the world. You can choose from the widest palette of colors, textures and sizes.

Product Application
- Carmel City Center
- Architect: Pedcor Design Group, LLC
- General contractor: Smock Fansler Corp.

Performance Data
- An ISO 9001:2008 Registered Quality Management System
- An ISO 14001:2004 Environmental Management System

www.beldenbrick.com
330.456.0031

SNAP 138

MATERIALS

DYNAMIC GLASS THAT TINTS ON DEMAND

WR | GREEN

SAGE Electrochromics, Inc.

SageGlass® is dynamic glass that electronically tints, enabling you to control sunlight and glare without blinds or shades.

Product Application
- Museum of Science, Boston, MA
- Frost School of Music, University of Miami, Miami, FL
- Landry Design Group, Los Angeles, CA

Performance Data
- Optimize daylight and increase energy savings
- Enhance occupant comfort
- Control glare and heat while maintaining a connection to the outdoors

www.sageglass.com
877.724.3321 | info@sageglass.com

SNAP 139

MORE BITS MORE IMPACT

DESIGNED FOR IMPACT, THE NEW IRWIN IMPACT PERFORMANCE SERIES™ BITS LET YOU DO MORE WITH YOUR DRIVER THAN EVER BEFORE.

With double-ended bits, Tapcon® installation system, extraction accessories, and the broadest range of tips and lengths, the Impact Performance Series is the most versatile on the market and has what it takes to get any job done. We even used it to make this ad.

www.irwin.com

IRWIN® TOOLS

SNAP 39

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PRODUCT SPOTLIGHTS

Doors, Windows	Pgs.	75-76
Electrical, Lighting	Pgs.	80
Equipment	Pgs.	82
Interior Finishes, Furnishings	Pgs.	84
Landscaping, Sitework	Pgs.	86
Materials	Pgs.	88
MECHANICAL SYSTEMS, HVAC, PLUMBING	**PGS.**	**90**
Roofing, Siding, Thermal & Moisture Protection	Pgs.	92-94
Specialty Products	Pgs.	96-98

MECHANICAL SYSTEMS, HVAC, PLUMBING

IN-SINK DRAIN SYSTEM

$$ | GREEN | NEW

Just Manufacturing

Integra Drain—seamlessly welded to sink, creates integral drain in-sink system, without additional parts or rings. Reduces leak potential. Includes basket strainer and tailpiece.

Product Application

- Commercial & residential applications
- Ideal for healthcare environments

Performance Data

- Integral seamless sanitary drain system
- Heavy-gauge stainless strainer
- Includes JSGN-8-6 self-adapting sensor operated mixing faucet with manual override

www.justmfg.com/Integra-Drain
847.678.5150 | custserv@justmfg.com

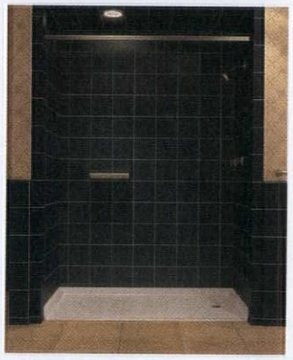
SNAP 140

MECHANICAL SYSTEMS, HVAC, PLUMBING

BARRIER-FREE TUB/SHOWER RECEPTORS

$$

Florestone Products Co., Inc.



Florestone one-piece molded fiberglass shower receptors. Slip-resistant floor with off-set drain. Standard and barrier-free threshold option.

Product Application

- Bathroom remodeling projects with a conversion from a standard bathtub to a shower floor
- No relocation of plumbing connection is required

Performance Data

- Cost-saving solution for bathroom remodels
- Easily replaces existing tub with no need to redo plumbing or move any walls

www.florestone.com
800.446.8827 | David Sotelo

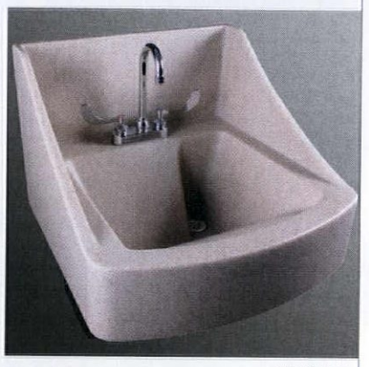
SNAP 141

MECHANICAL SYSTEMS, HVAC, PLUMBING

INFECTION-CONTROL SINK

NEW

Willoughby Industries



Designed to minimize splattering & reduce the spread of infectious disease, WICS Series infection-control sink keeps water from splashing directly into the drain & aerosolizing contents in trap.

Performance Data

- Seamless one-piece solid-surface lavatory deck
- Offset drain position w/ indirect path to drain
- Oversized backsplash
- Wrist blade or infrared faucet
- Stainless steel shroud

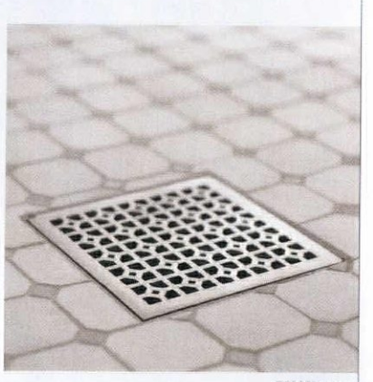
www.willoughby-ind.com
800.428.4065 | willoughby@willoughby-ind.com

SNAP 142

MECHANICAL SYSTEMS, HVAC, PLUMBING

SHOWER DRAIN SECURED WITH MAGNETS

Infinity Drain – Made in the USA



NEW from 5-in. square drain strainers for shower or outdoor applications. Four patterns available. Manufactured in Long Island, New York.

Product Application

- Strainer secured with magnets
- Finish options: satin stainless steel, polished stainless steel, oil rubbed bronze
- Residential and high flow capacity available

- Buildings NY – Booth #226
- HD Expo – Booth #5470
- Dwell on Design – Booth #1859

InfinityDrain.com/Products-G-Series
516.767.6786 | Info@InfinityDrain.com

SNAP 143

Clear Seas
RESEARCH
Making the complex clear

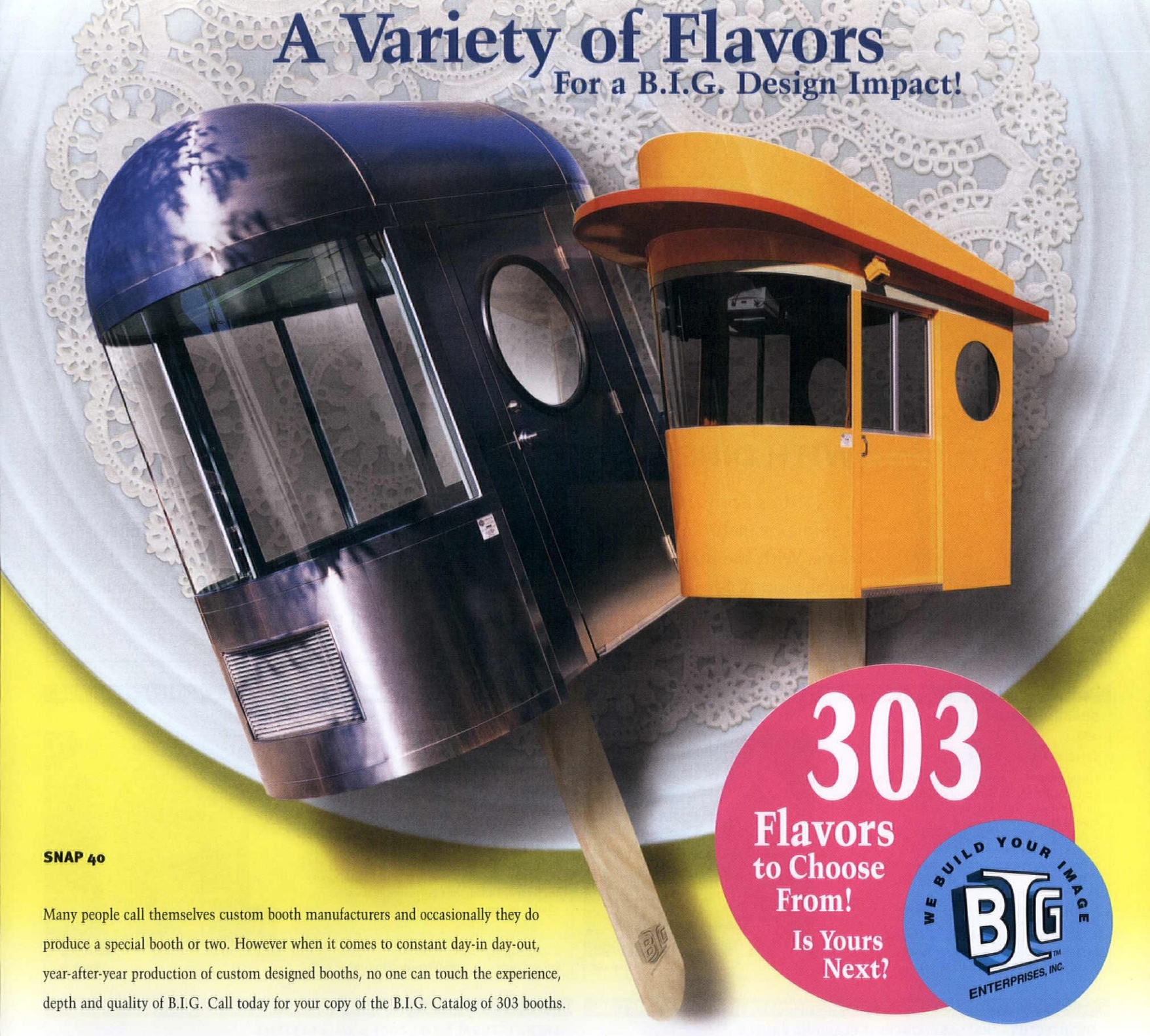
MAKING THE COMPLEX CLEAR

Clear Seas Research is an industry-focused market research company dedicated to providing clear insights to complex business questions. Capturing feedback via quantitative surveys (online, phone, mail or in-person) OR qualitative experiences (one-on-ones, focus groups or bulletin boards), we present results that are easily understood, insightful and actionable.

www.clearseasresearch.com

A Variety of Flavors

For a B.I.G. Design Impact!



303 Flavors to Choose From! Is Yours Next?

WE BUILD YOUR IMAGE
BIG™
ENTERPRISES, INC.

SNAP 40

Many people call themselves custom booth manufacturers and occasionally they do produce a special booth or two. However when it comes to constant day-in day-out, year-after-year production of custom designed booths, no one can touch the experience, depth and quality of B.I.G. Call today for your copy of the B.I.G. Catalog of 303 booths.

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PRODUCT SPOTLIGHTS

Doors, Windows	Pgs.	75-76
Electrical, Lighting	Pgs.	80
Equipment	Pgs.	82
Interior Finishes, Furnishings	Pgs.	84
Landscaping, Sitework	Pgs.	86
Materials	Pgs.	88
Mechanical Systems, HVAC, Plumbing	Pgs.	90
ROOFING, SIDING, THERMAL & MOISTURE PROTECTION	**PGS.**	**92-94**
Specialty Products	Pgs.	96-98

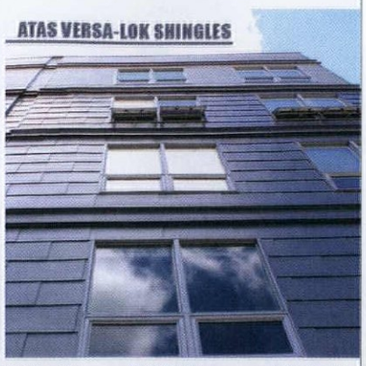
ROOFING, SIDING, THERMAL & MOISTURE PROTECTION

FLAT SHINGLE STYLE WALL PANEL

ATAS International, Inc.
ATAS Versa-Lok Shingles

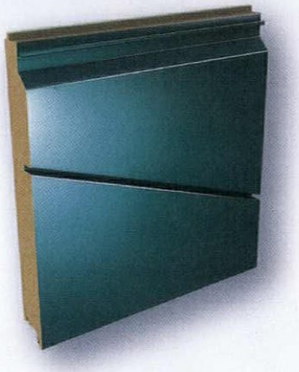
Versa-Lok, a flat shingle style wall panel, creates classic rectangular shapes with its versatile mix-and-match sizes.

Product Application
- Ideal for commercial and residential wall applications
- Can be applied directly to solid decking
- Concealed fastener system
- Available in various sizes



www.atas.com
800.468.1441 | info@atas.com

Booth: 919 METALCON **SNAP 144**



FORMAWALL® GRAPHIX™ SERIES WITH DIRECTIONAL REVEALS

CENTRIA's Formawall® Graphix™ Series now improved with Directional Reveals is a single insulated metal panel that can be customized to look like up to 24 smaller ones. With the ability to combine horizontal, vertical and even diagonal reveals, the unique, complex patterns you can create are limited only by where you draw the line.

To learn more visit CENTRIAperformance.com or call 800.250.8675

SNAP 145

ROOFING, SIDING, THERMAL & MOISTURE PROTECTION

SHAKE SHINGLE

$$$

CertainTeed Roofing

Presidential™ asphalt shingles that replicate the sculpted dimensional form of cedar shakes, with the performance of fiberglass construction.

Product Application
- Patented cut allows combination of two colors to create dozens of color patterns
- Two-piece laminated fiberglass base construction
- 355 lb per square

Performance Data
- UL Class A fire resistance; certified to meet ASTM D3462, ASTM 3018 Type I
- ASTM D3161, Class F, 110 mph wind resistance

www.certainteed.com/products/roofing
800.233.8990 | Alexandre Pecora

SNAP 146

ROOFING, SIDING, THERMAL & MOISTURE PROTECTION

DRI-DESIGN TAPERED PANELS ON HEALTH CLINIC

Dri-Design Inc.

Dri-Design is an advanced and sophisticated metal wall panel system...made simple.

Product Application
- Chickasaw Nation Health Clinic in Tishomingo, OK
- Tapered Series panels can be angled in any direction with varying depths and degree of slope

Performance Data
- Create a dynamic , one-of-a-kind surface on nearly any façade, without the need to modify the substrate or weather barrier.

www.dri-design.com
616.355.2970 | sales@dri-design.com

SNAP 147

ROOFING, SIDING, THERMAL & MOISTURE PROTECTION

ARCHITECTURAL PRECAST CONCRETE CLADDING PANELS

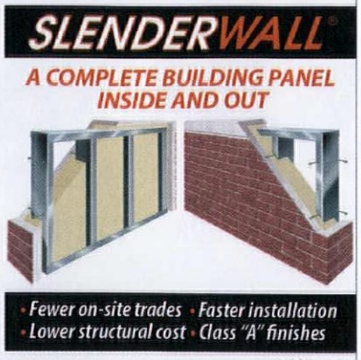
GREEN | WR

Easi-Set Worldwide

Ultra Hi-Performance Slenderwall is a 28 lb/sf award-winning architectural precast concrete and steel-stud exterior panel system wind-load tested to 226 mph.

Product Application
- BioInnovation Center, New Orleans, LA
- Johns Hopkins Hospital, Baltimore, MD
- Westin Luxury Hotel, Virginia Beach, VA
- US Army Legal Headquarters, Ft Belvoir, VA

Performance Data
- Factory-installed continuous closed-cell foam insulation – ASTM C-1363 hot box tested and compliant with all IECC/ASHRAE energy conservation codes



www.SlenderWall.com
800.547.4045 | info@easiset.com

SNAP 148

ROOFING, SIDING, THERMAL & MOISTURE PROTECTION

ARCHITECTURAL METAL ROOF & WALL SYSTEMS

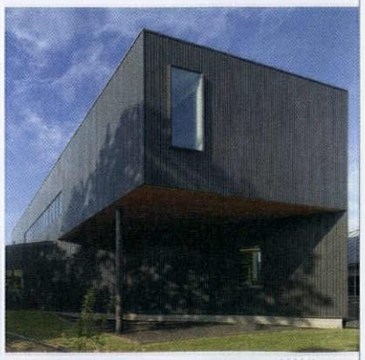
WR | GREEN

Metal Sales Manufacturing Corporation

Durable, recyclable metal panels designed for versatility, expression and high performance.

Product Application
- Commercial, institutional and residential buildings
- Integrates with renewable energy strategies
- Long life cycle, low maintenance

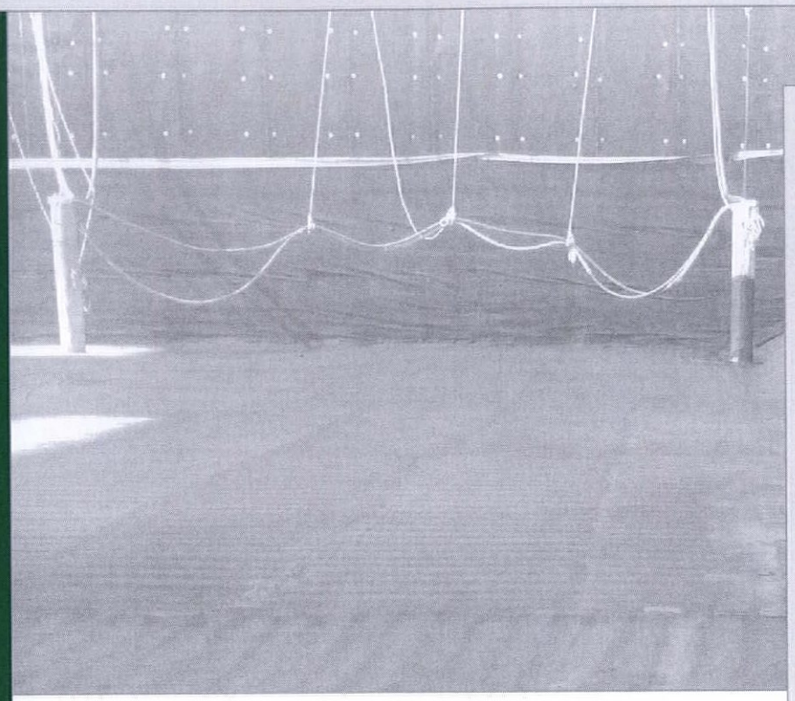
Performance Data
- ENERGY STAR, LEED, CRRC and CA Title 24
- ASTM E-1592 compliant
- Miami-Dade County approved

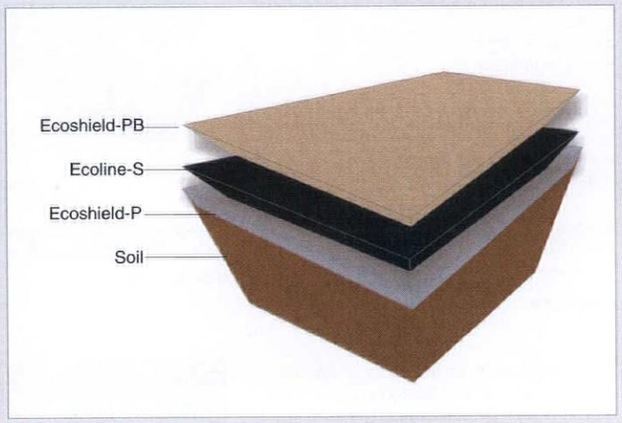


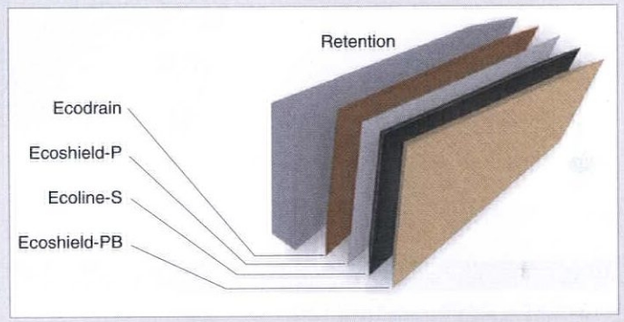
metalsales.us.com
800.406.7387 | inspired@metalsales.us.com

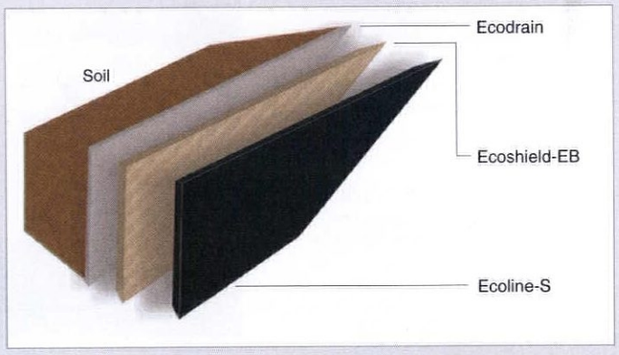
SNAP 149

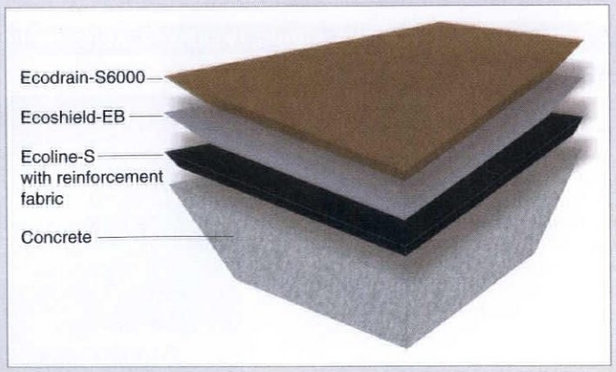
Epro's Fully Integrated Field Installed Composite Waterproofing System Provides the Most Protection, Fastest Installation, Lowest Cost and Best Warranty in the Industry Today!











Four New Field Installed Systems Available ...

- **System III CWB Concrete / CMU Wall Waterproofing**
- **System III RDB Roof / Deck Waterproofing**
- **System III MBB Waterproofing / Gas Barrier**
- **System III LWB Blindside Waterproofing / Gas Barrier**

Excellent Strength and Chemical Resistance - the result of the unique field installed composite system design utilizing HDPE.

Seamless - The highly flexible spray or fluid applied membrane forms a monolithic barrier.

Exceptional Adhesion - The sprayed or fluid applied membrane bonds tenaciously to almost any substrate in almost any condition including green concrete or a damp substrate.

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SNAP 38

ROOFING, SIDING, THERMAL & MOISTURE PROTECTION

LATH & DRAINAGE IN ONE SYSTEM

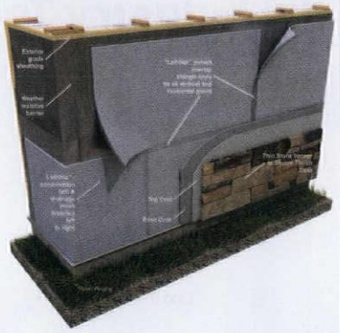
$ | NEW

Mortar Net Solutions

LathNet is the first factory-assembled drainage plane and metal lath system for adhered masonry veneer walls in residential and commercial buildings.

Performance Data

- Continuous drainage plane allows fast, complete drainage and drying.
- Installs like regular lath.
- Prevents mortar bridging.



www.mortarnet.com
800.664.6638 | Art Fox

SNAP 150

ROOFING, SIDING, THERMAL & MOISTURE PROTECTION

METAL ROOFING

GREEN | $$

Petersen Aluminum Corporation

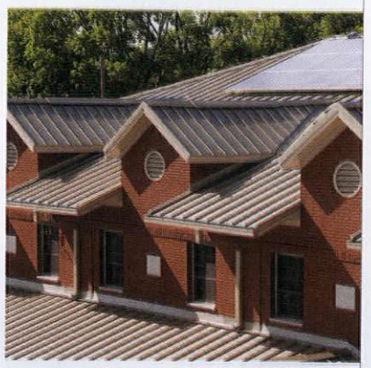
SNAP-CLAD Metal Roofing Panels feature architectural aesthetics and structural performance. They are corrective leveled for superior flatness.

Product Application

- Madison, TN fire station
- LEED Gold certification

Performance Data

- Available in 38 colors on steel and 37 on aluminum
- 20-year non-prorated finish warranty
- Labor-saving one-piece design



www.PAC-CLAD.com
800.722.2523

SNAP 151

ROOFING, SIDING, THERMAL & MOISTURE PROTECTION

12' SPAN ROOF DECK WITH TECTUM V -- NEW IN 2015

WR | GREEN | NEW

Tectum Inc.

A composite roof deck with an NRC of up to .60, the environmental credentials and abuse resistance you expect from all Tectum products, a 12' span and an R-value of 33. It's Tectum V.

Performance Data

- Spans of up to 12 feet
- NRC of up to .60
- R-value of 33

Tectum.com
888.977.9691 | info@Tectum.com

SNAP 152

ROOFING, SIDING, THERMAL & MOISTURE PROTECTION

SUSTAINABLE GREEN ROOF SYSTEMS

$ | GREEN

Sika Sarnafil

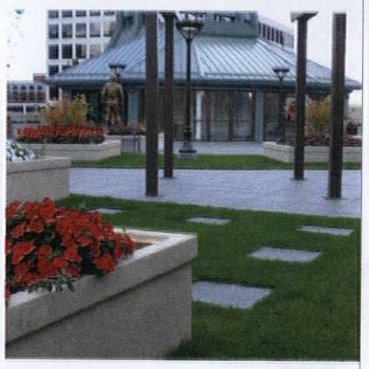
Protects structures from water infiltration while hosting sustainable, regenerative roof landscapes.

Product Application

- Walmart, Chicago, IL
- Janelia Farm Research Campus, Howard Hughes Medical Institute, Ashburn, VA
- US Postal Service, New York, NY

Performance Data

- More than 25 years' experience in US
- Single-source warranty for vinyl roof and vegetated landscaped cover



usa.sarnafil.sika.com
800.451.2504 | Jay Thomas

SNAP 153

ROOFING, SIDING, THERMAL & MOISTURE PROTECTION

ADVANCED HEAT & UV PROTECTION TPO

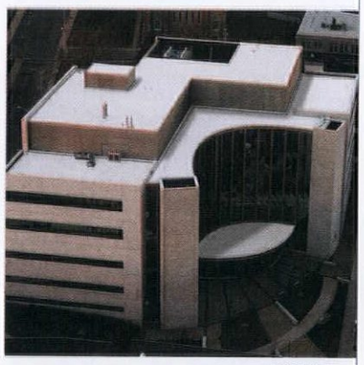
$$$ | GREEN

GAF

EverGuard® Extreme™ TPO is GAF's premium TPO product, formulated with proprietary stabilizers and UV absorbers that result in weathering performance far beyond current standards.

Performance Data

- Outperformed all other manufacturers' TPO products in the largest-ever independent TPO study, proving it to be the longest-lasting TPO available on the market



www.gaf.com
973.628.3000

SNAP 154

ROOFING, SIDING, THERMAL & MOISTURE PROTECTION

METAL ROOFING

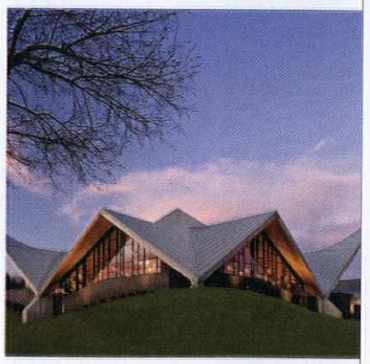
GREEN

Englert, Inc.

Englert, Inc.'s ULTRA-Cool™ low-gloss coatings are standard on all Englert metal and aluminum products and help reduce energy bills up to 50%.

- Englert's own coil coating line provides a spectrum of ULTRA-Cool coatings that meet ENERGY STAR® and LEED requirements for reflectivity and emissivity

- ULTRA-Cool coatings come with a 35-year Kynar paint finish warranty



www.englertinc.com
800.Englert

SNAP 155

ROOFING, SIDING, THERMAL & MOISTURE PROTECTION

ROOF MEMBRANE OFFERS AESTHETIC APPEAL & PROTECTION

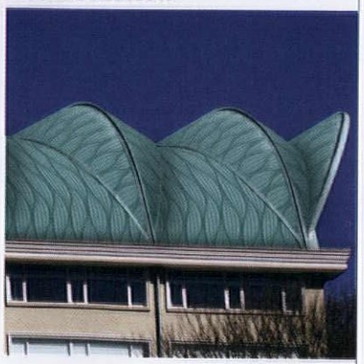
NEW

FiberTite Roofing Systems

FiberTite® Brite™ with Kynar® is engineered for projects that require aesthetic appeal & long-term protection. Custom color options & a flexible membrane allow for infinite design possibilities.

Product Application

- Libraries, schools and universities
- Commercial buildings
- Sports and hospitality venues
- Museums and theaters
- Healthcare facilities
- Financial institutions



www.FiberTite.com/Brite
800.927.8578

SNAP 156

ROOFING, SIDING, THERMAL & MOISTURE PROTECTION

DOUBLE UP ON DURABILITY

$$ | GREEN | NEW

Alcoa Architectural Products

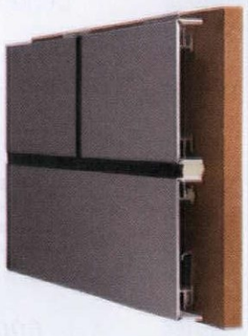
Reynobond NC panels enable you to marry the flatness and stiffness of ACM with the dent resistance and recyclability of sheet metal.

Product Application

- Ideal for enhanced stability and use in large cassette and panel applications
- Suitable for façades with high technical, visual and environmentally friendly requirements

Performance Data

- Consistent coil-coated finish with a 30-year warranty
- Available in sheet sizes up to 62 in. wide and 20 ft in length, with superior dent resistance



reynobond.com/nc
800.841.7774 | Customer Service Department Booth: 2237 AIA Expo

SNAP 157

EFFICIENT
SUSTAINABLE
QUIET

UltraTouch™ Denim Insulation

When you choose **UltraTouch® Denim Insulation**, you are making a Sound decision. With excellent acoustic control properties and thermally efficient performance, UltraTouch® is the natural choice. And because it's from Bonded Logic, UltraTouch® is safe for you and our environment!

visit us online at **www.BondedLogic.com**

Bonded Logic INC.

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SPECIALTY PRODUCTS

ENHANCED SOFT-CLOSE SLIDE

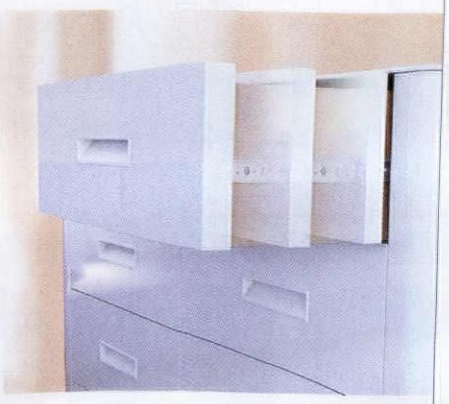
$$ I NEW

Accuride International

The enhanced 3832EC provides flawless movement, reliable performance and features to speed installation. The Easy-Close action helps prevent slamming.

Product Application
- School and laboratory casework
- Medical or commercial casework
- Residential cabinetry or casework

Performance Data
- 100-lb load capacity
- Lengths 14 in. to 28 in.; zinc or black finish



www.accuride.com
562.903.0200 | Claudia Tuttle

SNAP 158

SPECIALTY PRODUCTS

VERTICAL FINS

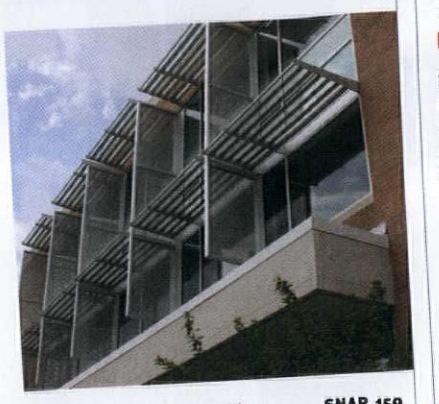
$$ I GREEN

Architectural Grilles & Sunshades, Inc.

AGS, Inc. provides many different designs of vertical aluminum fins that include single airfoils, perforated aluminum and solid panel sunshades.

Product Application
- Lincoln Lancaster County HD, Lincoln, NE
- Northeastern Illinois University, Chicago, IL
- UCCS Lane Center, Colorado Springs, CO

Performance Data
- Maximize reduced exposure from sun on east & west side of the building
- Contributes towards LEED points



www.agsshade.com
708.479.9458 | Zach Grunert

Booth: 2815 Greenbuild

SNAP 159

SPECIALTY PRODUCTS

CLASSIC GUARD SHELTER OR INFO KIOSK

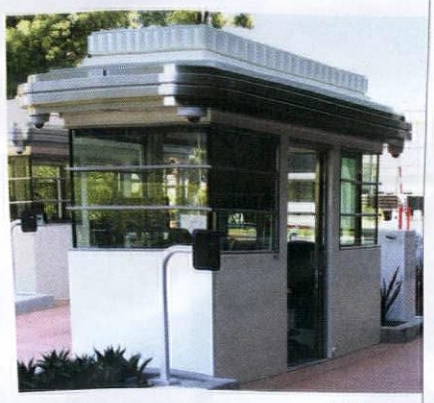
$$$

B.I.G. Enterprises, Inc.

Stainless steel fascia w/ radius corners, detailed reveals, stainless steel window muntins, butt-glazed Solarban-60 insulated glass, scalloped upper fascia details and stainless steel sliding doors.

Product Application
- Perimeter-security protection
- Access control or Information station
- Parking entrance

Performance Data
- Bullet & Blast resistant protection available
- CBRN protection available



bigbooth.com
626.448.1449 | Dave King dking@bigbooth.com

SNAP 160

SPECIALTY PRODUCTS

BIRD-PROOF YOUR BUILDING

$ I GREEN

Bird Barrier America, Inc.

The Eagle Eye system incorporates an optical scare device that rotates and reflects sunlight as well as Flash Flags, that flutter in the breeze and reflect light. The reflected light disorients birds.

Product Application
- New Flash Flags are wind-powered
- 12v and wind-powered Eagle Eye models
- 12v models can be powered by solar panel

Performance Data
- Reflected light spectrum disorients birds and causes them to deviate in flight and go to another location

www.birdbarrier.com
800.503.5444 | customercare@birdbarrier.com

SNAP 161

SPECIALTY PRODUCTS

UNBREAKABLE HOOKS

$ I NEW

EMCO Specialty Products Inc.

Add some color and durability to your project. This unbreakable nylon hook is an affordable and attractive way to make your classroom, office or hospitality project smarter, safer and more colorful.

Performance Data
- The Hardy Hook will easily hold 32 lb with enough flex to ensure it never breaks
- Available in 11 colors

emcospi.com
913.281.4555 | info@emcospi.com

SNAP 162

SPECIALTY PRODUCTS

ROOF & FLOOR DECK CEILING SYSTEMS

WR I GREEN

EPIC Metals

EPIC's architectural roof and floor deck ceiling systems are specified for long spans and superior acoustical performance.

Product Application
- Schools, universities, airports
- Libraries, natatoriums, transit stations
- Canopies, museums, office buildings

Performance Data
- Architectural, spans to 55 ft, green qualities, hanging feature, superior acoustics

www.epicmetals.com
877.696.3742 | Ed Thomas

SNAP 163

SPECIALTY PRODUCTS

ALUMINUM CANTILEVER BOX GATES

WR

Jamieson Manufacturing Co.

Jamieson's PowerTrac™ aluminum cantilever box frame sliding gates for large gate openings.

Product Application
- Gulfstream Aerospace, Savannah, GA
- Texas Christian University (TCU), Fort Worth, TX
- Space Shuttle Taxiway, Kennedy Space Center, FL

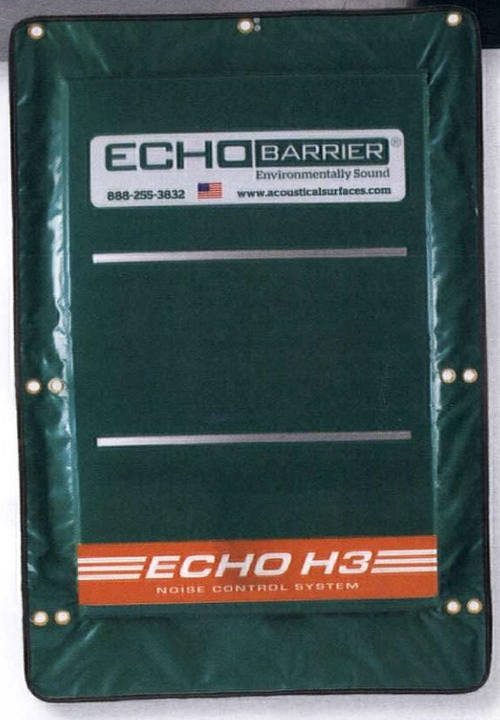
Performance Data
- Industrial, commercial and enhanced security applications
- Up to 120-ft double drive gate openings (cantilever), 500 ft (ground track)

www.jamiesonfence.com
888.286.3362 | jketterer@jamiesonfence.com

Booth: 917 FENCETECH

SNAP 164

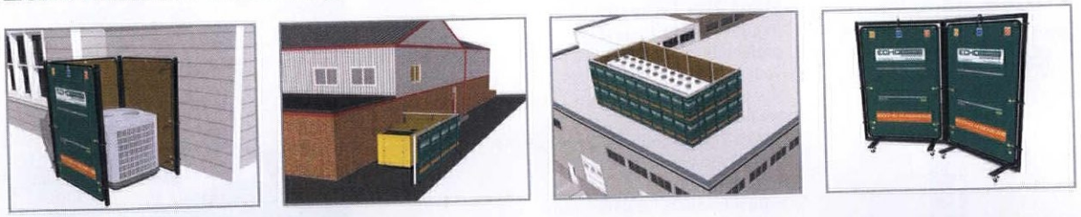
The Industry's FIRST Reusable, Indoor/Outdoor Noise Barrier/Absorber



Echo Barrier is a temporary, reusable outdoor noise barrier. It is designed to fit on all types of temporary or permanent fencing. Echo Barrier absorbs sound while remaining quick to install, light to carry, and tough to last. Echo Barrier can enhance your company's reputation, extend site operating hours and improve working conditions.

Echo Barrier offers high-performance noise reduction for construction & demolition sites, rail maintenance & replacement, music, sports and other public events, road construction, utility/maintenance sites, loading and unloading areas, outdoor gun ranges, and many other applications.

Echo Barrier's Amazing Versatility



PRODUCT FEATURES:

- Superior acoustic performance
- Reusable
- Industrial durability
- Simple and quick installation system
- Lightweight for easy handling
- Unique roll-up design for compact storage and transportation
- Alternate colors available
- Ability to add branding or messages
- Weatherproof – does not absorb water
- Fire resistant

The Future is Quieter...

Quiet Sites
Fewer Complaints
More Construction Completed

SNAP 1

Acoustical Surfaces, Inc.
We Identify and
S.T.O.P
Your Noise Problems
Sound Transmission Obscuring Products
Soundproofing, Acoustics, Noise & Vibration Control Specialists

DISTRIBUTED BY ACOUSTICAL SURFACES, INC. | 888.255.3832 | www.acousticalsurfaces.com | sales@acousticalsurfaces.com

SPECIALTY PRODUCTS

LINEAR SHOWER DRAIN

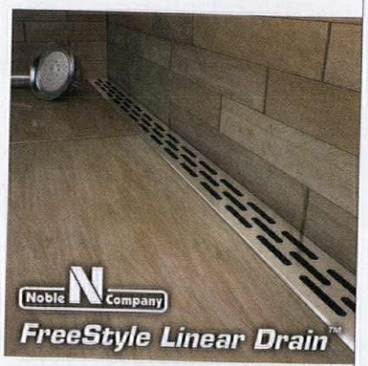
Noble Company

FreeStyle Linear Drain's clamping collar ensures a watertight installation. Single-piece construction, low profile and a flat bottom simplify installation.

Product Application
- Showers of all types including barrier-free and ADA
- Use w/ large-format tile for contemporary designs
- New construction, renovation

Performance Data
- U.S. Patent # 8,474,068. Patents Pending Canada & EP Pub. # 2354339
- High capacity, 36 GPM drainage
- Waterproof w/ NobleSeal® TS

www.noblecompany.com
800.878.5788



SNAP 165

SPECIALTY PRODUCTS

VENT GRILLES

$$

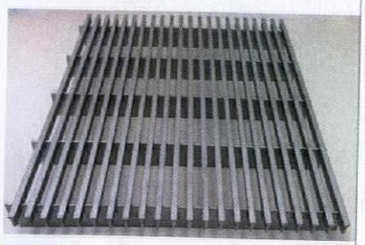
OGi Architectural Metal Solutions – an Ohio Gratings Company

The Vent Grille (VG Series) is a superior architectural close mesh grating product for interior or exterior applications and can meet ADA requirements.

Product Application
- HVAC ventilation grilles & entrance mats
- Tree grates & decorative grilles
- Trenches & fountains

Performance Data
- Manufactured from stainless steel (304 or 316 alloy)
- Clear openings can be as narrow as 1/4 in.
- Finish is a #4 Mechanical

www.ohiogratings.com
800.321.9800 | Jason Richter



SNAP 166

SPECIALTY PRODUCTS

FOLDING STAIRWAY

$$ | NEW

Precision Ladders, LLC

Automatic Super Simplex Folding Stairway opens and unfolds at the press of a button. New patent-pending stair can be operated from above or below for ceiling heights up to 16 ft.

Product Application
- University of Memphis Clock Tower, Memphis, TN
- I-78 Toll Plaza, Blackwood, NJ
- Fort Saskatchewan Hospital, Edmonton, Alberta

Performance Data
- 500-lb load rating with actual shear of rivets tested to 1,175 lb; steel frame, extruded aluminum treads

www.precisionladders.com
800.225.7814 | Steve Fugate

SNAP 167

SPECIALTY PRODUCTS

CLEAR ROLLING SECURITY SHUTTERS

QMI Security Solutions

The new LX6 clear polycarbonate slat shutter is clear protection that still rolls into a small box housing—motorized or manual.

Product Application
- Outdoor restaurants for wind & security
- Storefront protection for high-end retailers
- Room divider partitions for sound & security

Performance Data
- Manual spring assist operation up to 100 sq ft
- Motorized operation up to 280 sq ft

www.qmiusa.com
800.446.2500 | Tom Miller

SNAP 168

SPECIALTY PRODUCTS

COUNTER SUPPORT BRACKET

GREEN | NEW

Rangine Corporation/Rakks

Rakks Eclipse Brackets can support counters or shelves up to 18 in. deep. This attractive low-profile design is easy to install with no visible hardware.

Product Application
- Commercial
- Residential

Performance Data
- Eclipse Brackets can support loads up to 300 lb per pair sold in clear and black anodized finishes
- Machined aluminum ends provide a smooth and near seamless termination

www.rakks.com
800.826.6006 | David Greenberg

SNAP 169

SPECIALTY PRODUCTS

ICC-ES CERTIFIED FOUNDATION FLOOD VENTS

NEW | WR | GREEN

Smart Vent® Products, Inc. Flood Risk Evaluator (FRE)™

Request an FRE Project Form to send in your project details and receive compliance checks on your elevations, floor levels, enclosure heights, flood openings, flood zone determination and more.

Product Application
- HSW Floodproofing courses/CAD files avail. in Arch. Record and sweets.com

Performance Data
- Dual-function, insulated models
- Models for residential and commercial applications
- Made in the USA from Marine Grade 316 stainless steel

www.smartvent.com
877.441.8368 | info@smartvent.com

Booth: 1109 CONSTRUCT

SNAP 170

SPECIALTY PRODUCTS

STADIUMS, GRANDSTANDS, BLEACHERS

WR

Sturdisteel

Sturdisteel offers a wide array of finish options such as powder coating on all custom seating systems. Powder coated finishes are resistant to chipping, scratching, fading and wear.

Product Application
- I-Beam Grandstands
- Leg Truss Grandstands
- Angle Frame Bleachers

Performance Data
- Backrest, vertical risers
- Long lasting and color durable
- Unlimited colors

www.sturdisteel.com
1.800.433.3116

SNAP 171

SPECIALTY PRODUCTS

STADIUM SEATING

WR | NEW

Sturdisteel

Cardinal 3000 stadium chairs are an economical choice for all sporting venues requiring reserved or individual seating sections.

Product Application
- Football, soccer or lacrosse stadiums
- Baseball or softball stadiums
- Gymnasiums, natatoriums or arenas

Performance Data
- Self-rising, gravity-tip and maintenance-free
- 13 standard colors – custom colors available
- 5 sizes and 3 frame finishes

www.sturdisteel.com
800.433.3116 | info@sturdisteel.com

SNAP 172

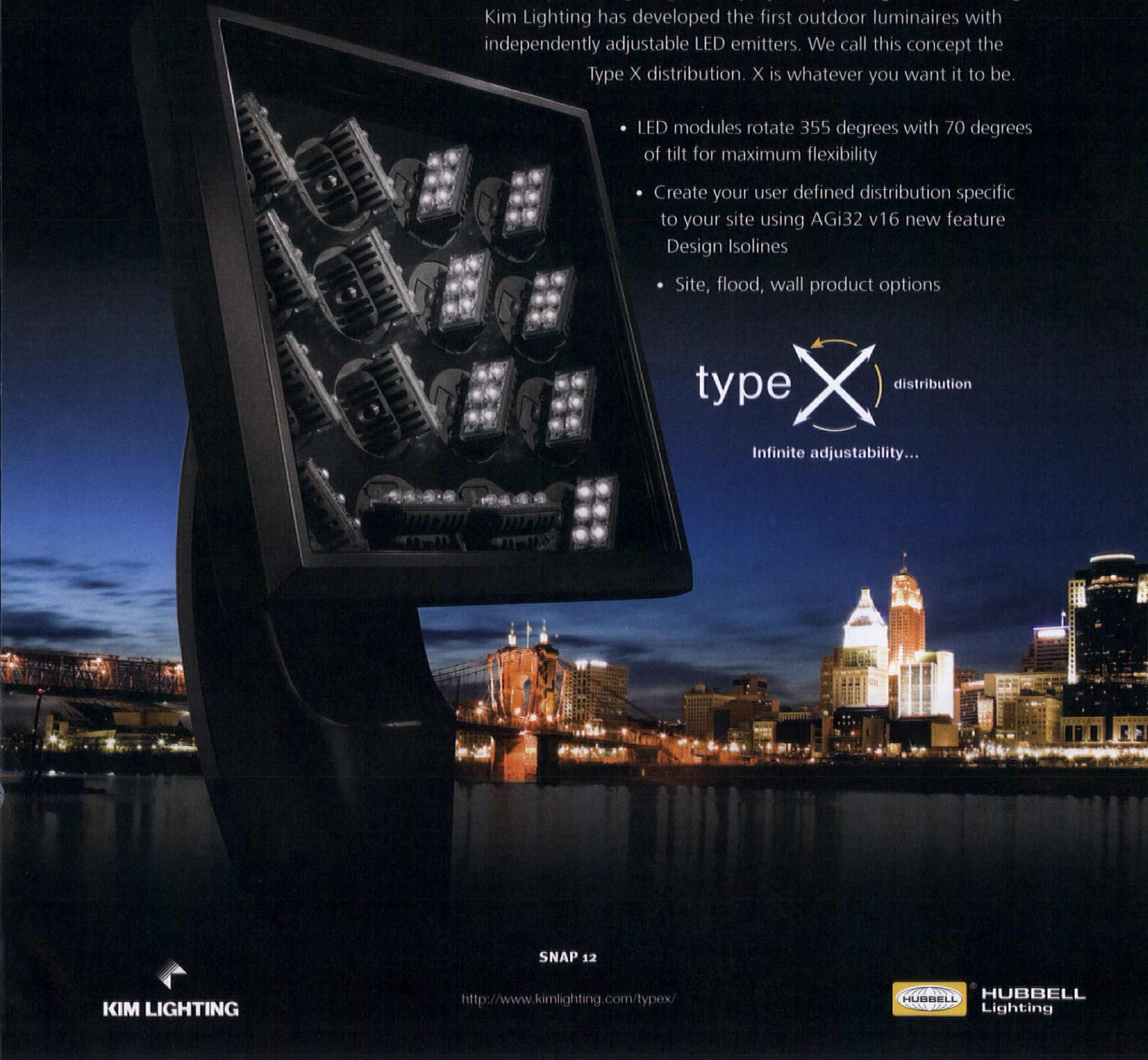
ArcheType X™

Kim Lighting is proud to announce the new LEAR™ (Light Engine Adjustable Ready) module, a concept that brings unparalleled flexibility to the lighting industry. By incorporating this latest design, Kim Lighting has developed the first outdoor luminaires with independently adjustable LED emitters. We call this concept the Type X distribution. X is whatever you want it to be.

- LED modules rotate 355 degrees with 70 degrees of tilt for maximum flexibility
- Create your user defined distribution specific to your site using AGi32 v16 new feature Design Isolines
- Site, flood, wall product options

type X distribution

Infinite adjustability...



SNAP 12

KIM LIGHTING

http://www.kimlighting.com/typex/

HUBBELL Lighting

SPECIALTY PRODUCTS

ANTI-SLIP STAIR TREADS & NOSINGS

$

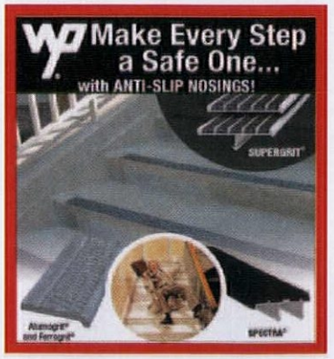
Wooster Products, Inc.

Anti-Slip Safety Stair and Walkway Products for new construction and renovation. Brand names include Supergrit, Spectra, Alumogrit, Stairmaster and NITEGLOW.

Product Application
- Commercial and residential buildings
- Transit systems
- Stadiums and ballparks

Performance Data
- Indoor and outdoor use
- ADA, New York MEA, IBC and IFC compliant
- Available in a variety of profiles and colors

www.wooster-products.com
800.321.4936



SNAP 173

SPECIALTY PRODUCTS

SAFETY STAIR TREADS

$$

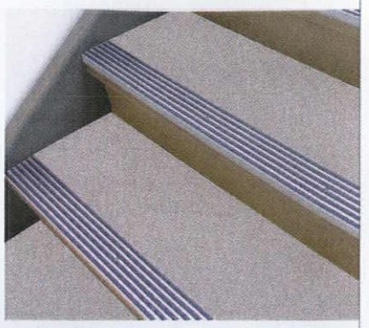
ZERO INTERNATIONAL, An ALLEGION Company

A full selection of nosings and thresholds with non-slip rubber, epoxy abrasive, or photoluminescent "glow" inserts for interior or exterior applications.

Product Application
- Many models to choose from
- Widths from 2 in. to 6 ft
- Lengths cut to order

Performance Data
- Safety, durability where needed
- Aluminum or bronze base available
- Egress stairway marking when power fails

www.zerointernational.com
718.585.3230



SNAP 174

SPECIALTY PRODUCTS

VERSATILE & BUILT TO LAST

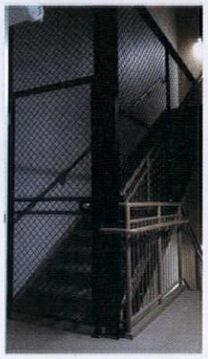
WR

Woven Wire Products Association

Wire mesh partitions and infill panels offer security and safety while allowing free airflow and visibility.

Product Application
- Woven wire partitions
- Railing infill panels
- Window guards
- Co-location cages
- Tenant storage cages
- Stairwell partitions

www.wovenwire.org



SNAP 175

SPECIALTY PRODUCTS

SUN & WEATHER PROTECTION

WR | GREEN

Victory Awning

Unique canvas as well as metal structures providing sun and weather protection for traditional or cutting-edge architecture.

Product Application
- School districts
- Theme/water parks
- Commercial/building management

Performance Data
- Standard and custom design applications
- Cost-effective sun and weather protection

www.victoryawning.net
817.759.1600 | Scott Luttrell

SNAP 176

SPECIALTY PRODUCTS

SLIDE GATE OPERATORS

DoorKing, Inc.

Maximum-security slide gate operators for a high degree of perimeter protection and traffic control.

Product Application
- O'Hare International Airport, Chicago, IL
- Cobb Performing Arts Centre, Atlanta, GA
- Abu Dhabi Airport, United Arab Emirates

Performance Data
- Vehicular slide gates up to 100 ft in length and up to 5,000 lb in weight

www.doorking.com
866.400.3600 | George Hendrix

SNAP 177

SPECIALTY PRODUCTS

EPS TRENCH DRAIN FORMING SYSTEMS

WR | GREEN

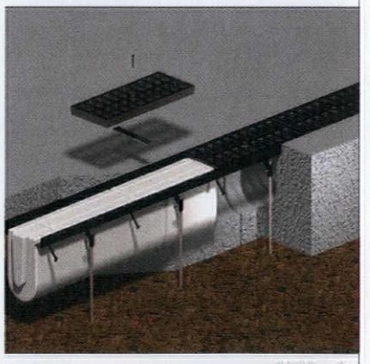
MultiDrain Systems, Inc.

EconoDrain is a pre-engineered trench drain forming system made from expanded polystyrene (EPS) foam forming sections and steel frames for supporting the various types of grates.

Product Application
- Austin-Bergstrom International Airport, Austin, TX
- Unmanned Aerial Vehicle Facility, Ft. Campbell Military Base

Performance Data
- Designed for maximum versatility, customization and easy installation; EconoDrain standard grate is H20 and/or HS25 capable in both slotted and ADA configurations

www.multidrainsystems.com
800.433.1119 | Steve Born



SNAP 178

SPECIALTY PRODUCTS

CUSTOM-MADE ROLLING LADDERS

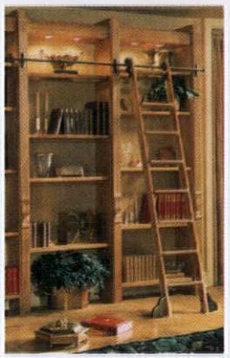
Putnam Rolling Ladder Co., Inc.

Since 1905 Putnam Rolling Ladder Co. has been manufacturing custom-made rolling ladders.

Product Application
- Library rolling ladder
- Loft ladder
- Decorative office ladders and stools

Performance Data
- Numerous hardwood species, stains and hardware metal finishes

www.putnamrollingladder.com
212.226.5147 | Sales



SNAP 179

SPECIALTY PRODUCTS

HARDWOOD STAIRS

WR

Unique Spiral Stairs

All-hardwood construction. Highly customizable stairs in 17 standard designs. Custom diameter or straight run designs are available.

Product Application
- Residential applications
- Commercial applications
- Interior or exterior designs

Performance Data
- Engineered for weight capacities
- 10-year warranty

www.uniquespiralstairs.com
800.924.2985 | Darren Dumont

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Lightfair 2015 Surpasses Its All-Time Records

And you thought the last show was successful? This year's event showed that interest in the latest innovations is expanding rapidly.

TECHNOLOGY RULED at Lightfair International 2015, which was held May 3 to 7 at New York City's Jacob Javits Center. Billed as the world's largest annual architectural and commercial lighting trade show and conference, the event posted an all-time record for exhibit space—268,550 net square feet—and of the 599 exhibitors, 108 were first timers. Moreover, organizers reported that there were 29,900 attendees: a 15 percent gain over the previous record, set last year.

"The volume of product and design innovations recorded at LFI 2015 produced an unprecedented collective energy," says Paul Mercier, president of the **Illuminating Engineering Society** (IES), which cosponsors the event with the **International Association of Lighting Designers** (IALD). "The resonance of this event will be immediate and far-reaching."

The technological showstopper—and Innovation Awards' Most Innovative Product of the Year—was the **Osram** OmniPoint. The recessed, array-based luminaire consists of independently controllable LEDs that can be switched on or off and dimmed in any combi-

IT'S SHOWTIME! This year's Lightfair International (top), held at the Javits Center in New York City, drew nearly 30,000 attendees. The Fresco touchscreen lighting controller from Acuity Brands (above) puts the user in control, with built-in Bluetooth connectivity.

nation to produce both ambient and spot lighting. Different distribution options can also be produced from a single fixture. Light output and placement can be quickly reconfigured via a wireless device or mobile app.

Technology and form merged in **Architectural Area Lighting**'s KicK exterior LED luminaire series. Winner of the Design Excellence Award, the fixture features a sleek profile and a patent-pending shielded optical system that eliminates glare from most viewing angles, with zero percent uplight.

New solutions for controlling light were displayed throughout. Particularly noteworthy was the **Acuity** Fresco touchscreen controller, with its elegant design and user-friendly features. Mounted in a standard three-gang wall box, the stand-alone, 7-inch DMX512 device controls dimmers, relays, automated fixtures, white, tunable white, and multicolor LED luminaires.

The lines of light effect, enabled by flexible LED products, continues to be the biggest aesthetic trend. One standout, the Merge recessed linear system from **Tech Lighting**, features glare-free indirect LED illumination in a continuous 3-inch channel with a beveled aperture. Meanwhile, **Pure Lighting**'s Truline LED holds 24-volt commercial-grade LEDs inside a paintable aluminum extrusion that's slim enough to fit inside drywall ½ to 1 inch thick.

The dramatic Xterna linear suspension luminaire drew a crowd at the **LBL Lighting** booth. Inspired by early-1900s metal elevator gates, the luminaire gradually reveals upward- and downward-firing LEDs embedded within its unique accordian structure as it extends from 7 to 76 inches.

Besides the latest technology, LFI 2015 offered upwards of 78 courses spanning the lighting and design spectrum, from basics and daylighting to advanced control systems. The pre-conference institute keynote was presented by 2014 Nobel Prize-winner Shuji Nakamura, Ph.D. In his address, the University of California Santa Barbara professor and SORAA cofounder covered the history of LED technology starting with his early work, which led to his receiving the 2014 Nobel Prize in Physics as well as today's GaN technology. *—Allison Craig*

LIGHT UP YOUR LIFE Some of the most compelling new products included LBL Lighting's dramatic Xterna linear suspension system (top), the sleek KicK exterior LED series by Architectural Area Lighting (right), and OmniPoint, the wirelessly-controlled, array-based luminaire from Osram (left).

NEW AND UPCOMING EXHIBITIONS

HACLab Pittsburgh: Imagining the Modern

PITTSBURGH

September 12, 2015–May 2, 2016

The City of Pittsburgh underwent an ambitious program of urban revitalization in the 1950s and '60s. *HACLab Pittsburgh: Imagining the Modern* untangles the city's complicated relationship with modern architecture and urban planning at that time. In this experimental presentation at Carnegie Museum of Art's Heinz Architectural Center, architects in residence "over,under" unearth layers of history and a range of perspectives through abundant archival materials, an active on-site architecture studio, and a salon-style discussion space. For more information, visit *cmoa.org*.

Frank Gehry

LOS ANGELES

September 13, 2015–March 20, 2016

Frank Gehry's buildings have altered the relationship of architecture to the city, both socially and aesthetically, and his pioneering work in digital technologies set in motion the practices employed by the construction industry today. This Los Angeles County Museum of Art exhibition is a comprehensive overview of Gehry's extraordinary body of work. The show begins in the early 1960s—Gehry established his firm in Los Angeles in 1962—and runs to the present. Many of the 200 drawings have never been seen publicly, and 65 models illuminate the evolution of Gehry's thinking. For more information, visit *lacma.org*.

David Adjaye: Architecture for Social Change

CHICAGO

September 19, 2015–January 3, 2016

With more than 50 of his projects constructed across the world, David Adjaye is rapidly emerging as a major figure in architecture and design. This first-ever retrospective, at the Art Institute of Chicago, features drawings, sketches, models, and mock-ups of furniture, housing, public buildings, and more. The exhibition also immerses viewers in Adjaye's distinct approach through a dynamic installation conceived by his eponymous studio. For more information, visit *artic.edu*.

ONGOING EXHIBITIONS

Folly 2015: Torqueing Spheres

LONG ISLAND CITY, NEW YORK

Through August 30, 2015

The Architectural League and Socrates Sculpture Park present the winning proposal, now realized and on display at Socrates, for the 2015 Folly Program, an annual juried competition targeting early-career architects and designers. The Cambridge, Massachusetts– and Philadelphia–based firm IK Studio won this year's competition with its proposal for *Torqueing Spheres*, which transforms a series of intertwining sculpted forms into a meandering curved folly that encourages social interaction. *Torqueing Spheres* combines a simple concept—a straight line—with complex spherical pods that become deep, self-supporting chambers to create experiences for both the individual and the collective. For more information, visit *archleague.org*.

COSMO

LONG ISLAND CITY, NEW YORK

Through September 7, 2015

The Museum of Modern Art and MoMA PS1 have announced Andrés Jaque / Office for Political Innovation as the winner of their annual Young Architects Program in New York. The project, COSMO, is this year's unique construction on view at MoMA PS1 in Long Island City. A movable artifact made with customized irrigation components, COSMO makes visible and enjoyable the hidden urbanism of pipes surrounding us. Based on an advanced environmental design, the assemblage of ecosystems was engineered to filter and purify 3,000 gallons of water so as to eliminate suspended particles and nitrates, balance its pH, and increase the level of dissolved oxygen. For more information, visit *momaps1.org*.

Saving Place: 50 Years of New York City Landmarks

NEW YORK CITY

Through September 13, 2015

The Museum of the City of New York presents an exhibition exploring the roots and impact of the city's landmark preservation movement. Though it developed over the years, large historic losses in the early 1960s—most notably, the 1963 demolition of McKim, Mead & White's Beaux-Arts Pennsylvania Station—galvanized the public, resulting in the legislation and commission now in place. Through original documents, drawings, paintings, photographs, building pieces, and more, the exhibition surveys how landmarking has proved an engine of growth and success for New York. For more information, visit *mcny.org*.

Pathmakers: Women in Art, Craft and Design, Midcentury and Today

NEW YORK CITY

Through September 27, 2015

This Museum of Arts and Design exhibition explores the significant contributions women made to Modernism in postwar visual culture. In the 1950s and '60s—an era when men dominated painting, sculpture, and architecture—women had considerable impact in other creative disciplines, such as textiles, ceramics, and metals. Featuring more than 100 works, *Pathmakers: Women in Art, Craft and Design, Midcentury and Today* focuses on the achievements of a core cadre of women including Ruth Asawa, Edith Heath, Sheila Hicks, Karen Karnes, Dorothy Liebes, Alice Kagawa Parrott, Toshiko Takaezu, Lenore Tawney, and Eva Zeisel. For more information, visit *madmuseum.org*.

Snøhetta—World Architecture

COPENHAGEN

Through September 27, 2015

The subject of a show at the Danish Architecture Centre, Snøhetta is known primarily for building the Oslo Opera House. It was founded in the 1980s, when a group of building and landscape architects joined forces to form a community that embraced their two fields and created cohesion between buildings and landscapes. As is characteristic of their work, the structure connects with contextual landscape and natural features. It is also democratic in intent, with an accessible roof where all can relax and look at the adjacent fjord. Their holistic and social-democratic approach resonates in Seoul and New York; soon Copenhagen will get a Snøhetta building, too. For more information, visit *dac.dk*.

COLLABORATORY

NEW YORK CITY

Through December 31, 2015

Visitors to COLLABORATORY, the 3,200-square-foot pop-up space in SoHo, will find examples of the newest developments in LED lighting technology. This "lighting science museum" features interactive displays that allow guests to explore how interior lighting impacts human productivity and wellbeing. A project of USAI Lighting in partnership with Francis Murphy of FPM Design and VP+C Partners, COLLABORATORY is open to the public Monday afternoons by appointment through the end of the year. The space will also host LED education sessions, tours, workshops, and meetings. For more information, visit *usailighting.com/usai-lighting-collaboratory*.

LECTURES, CONFERENCES, AND SYMPOSIA

2015: The Inaugural Chicago Architecture Biennial

CHICAGO

October 3, 2015–January 3, 2016

The Chicago Architecture Biennial provides a platform for groundbreaking architectural projects and spatial experiments that demonstrate how creativity and innovation can radically transform our lived experience. Through its constellation of exhibitions, full-scale installations, and program of events, it will invite the public to engage with and think about architecture in new and unexpected ways, and to take part in a global discussion about the future of the field. At five different locations in Chicago. For more information, visit *chicagoarchitecturebiennial.org*.

Architectural Record Innovation Conference

NEW YORK CITY

October 7, 2015

Innovative architecture requires expanding the boundaries of the discipline by spurring creativity through design and technology. At this year's conference, ARCHITECTURAL RECORD brings together key figures who have generated a range of imaginative solutions for the built world of today and tomorrow. From architects practicing outside the discipline to principals of large firms to materials experts and graphic designers, the event's participants represent different approaches to original problem-solving in a rapidly changing world. At the Time-Life Building. For more information, visit *construction.com/events/2015*.

DesignPhiladelphia Festival 2015

PHILADELPHIA

October 8–16, 2015

This annual festival showcases the work of more than 400 practicing architects, designers, and creative professionals to demonstrate Philadelphia's reemergence as a 21st-century city shaped by design, technology, and collaborative business practices. Over the course of nine days, universities, cultural institutions, civic associations, city agencies, retailers, manufacturers, and startups across the city will participate in more than 130 events. For more information, visit *2015.designphiladelphia.org*.

2015 Bi-City Biennale of Urbanism\Architecture

SHENZHEN, CHINA

December 4, 2015

Co-organized by the neighboring cities of Shenzen and Hong Kong, the biennial exhibition focuses on urbanism and urbanization. This year, more than 75 exhibitors from six continents will explore how reimagining and repurposing existing urban spaces can improve people's experience living in cities. Aaron Betsky, Alfredo Brillembourg, Hubert Klumpner, and Doreen Heng Liu will curate this year's event. For more information, visit *en.szhkbiennale.org*.

COMPETITIONS

ChiDesign

Registration Deadline: August 7, 2015

ChiDesign is an open international ideas competition, adjudicated by a distinguished jury of designers and education professionals. Competitors will propose a facility that includes the new headquarters, visitor center and exhibition spaces of the Chicago Architecture Foundation; a new headquarters for the Council on Tall Buildings and Urban Habitat (CTBUH); a design and allied arts high school; and flexible learning spaces for out-of-school-time youth programs. For more information, visit *architecture.org/chidesign*.

2015 Burnham Prize Competition

Submission Deadline: August 24, 2015

Drawing inspiration from the inaugural Chicago Architecture Biennial, "The State of the Art of Architecture," the Chicago Architectural Club's 2015 Burnham Prize invites entries that make use of a single image that will open up inquiry into the current state of architecture. Through this competition, the CAC aims to encourage the next generation in the field and to spark debate on basic issues of the state of the art of architecture.

Eleven Magazine Competition: Cambodia's Tonle Sap Lake

Submission deadline: September 11, 2015

The aim of this competition is to design a structure, or series of structures, within Cambodia's Tonle Sap Lake, located just south of the Angkor temples and the city of Siem Reap. It is the largest freshwater basin in Southeast Asia, and has had UNESCO Biosphere Reserve status since 1997. The designed structures must be mobile so that they can service floating villages. Each participant is free to interpret what this might mean. For more information, visit *eleven-magazine.com*.

The Negro Building Remembrance Competition

Submission deadline: November 1, 2015

The Negro Building Remembrance Competition aims to bring the Negro Building, a forgotten landmark of the 1895 Cotton States and International Exposition in Atlanta, Georgia, into public memory. The competition invites architects, landscape architects, artists, playwrights, poets, musicians, and writers from every discipline, as individuals, teams, students, or professionals, to propose imaginative, bold, and provocative ways to honor the Negro Building. For more information, visit *negrobuildingcompetition.com*.

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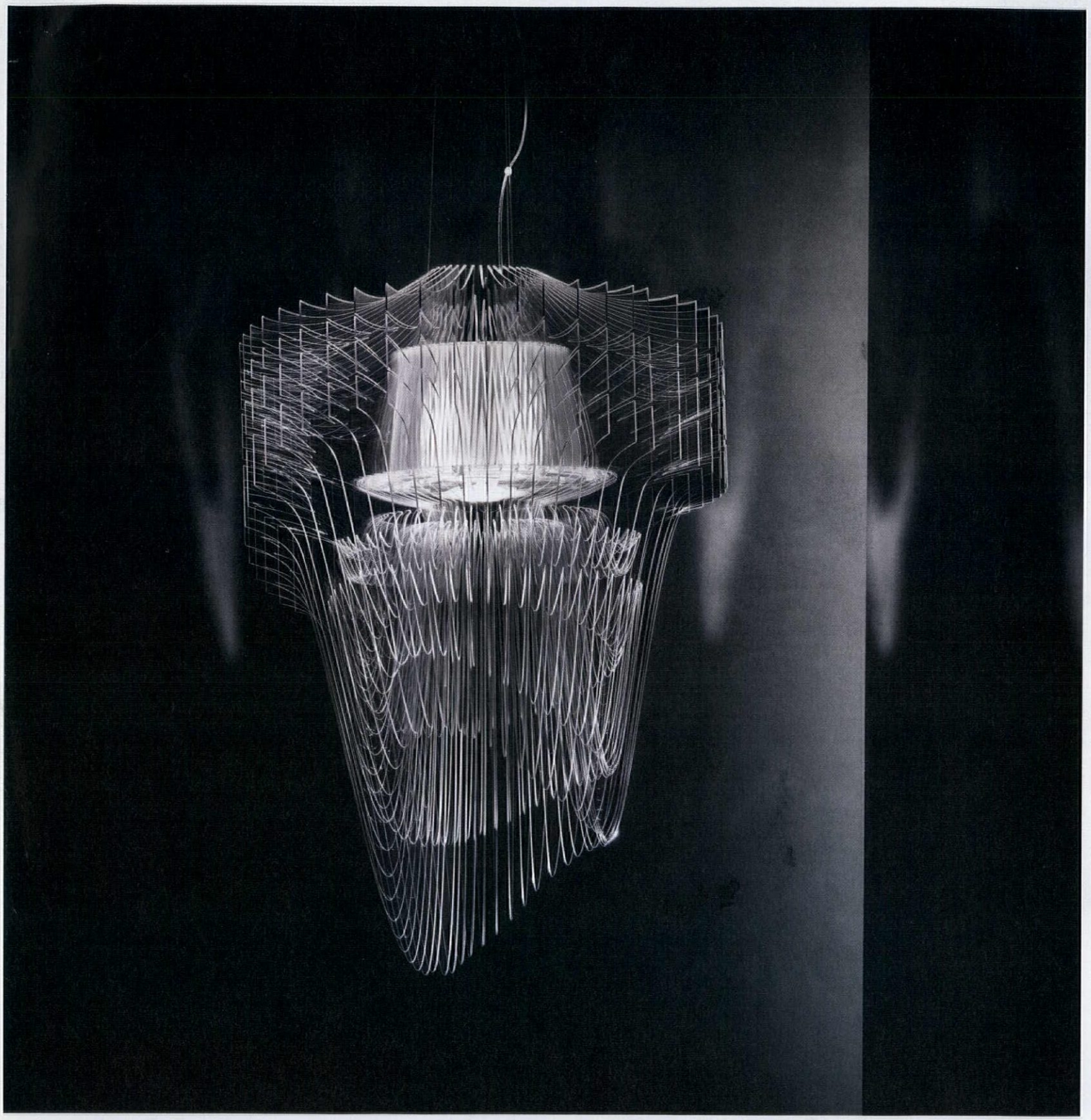

ZAHA HADID
Hadid was awarded the Pritzker Architecture Prize in 2004. She won the Stirling Prize in 2010 and 2011.

zaha-hadid.com

NIGEL COATES
Slamp artistic director Coates is a British architect, designer, educator, and author as well as a professor emeritus at the Royal College of Art.

slamp.com

DESIGNED FOR lighting manufacturer Slamp by Zaha Hadid with Patrik Schumacher in 2013, the Aria chandelier blends illumination with architecture. The result is a parametric volume that explores the nature of form and light. Of the collaboration, Slamp's artistic director Nigel Coates notes, "Intuition told me Zaha would create a very special lamp for us, and I was right. Aria came out of an extremely effective design process; Zaha's signature flowing digital language adapted well to our vocabulary. Working with her teams in London and Rome, we interpreted her vision into one of the most successful and iconic lamps in our catalogue."

Two years later, the chandelier has been refreshed in a new transparent version. The fluid lines of the fixture, with its 50 free-form fins of graduated sizes, recalls the flow of water. LEDs illuminate the edges of the blades and the chandelier's interior structure. The luminaire is fabricated in a proprietary polycarbonate called Cristalflex.

"Clustering the lights is beautiful because they come in different sizes," says Schumacher, partner and director at Zaha Hadid Architects. "They have a filigreed, lacy sensibility that lends an airy, fragile feeling." (SNAP #35)

PHOTOGRAPHY: SIMONE CECCHETTI (TOP RIGHT)