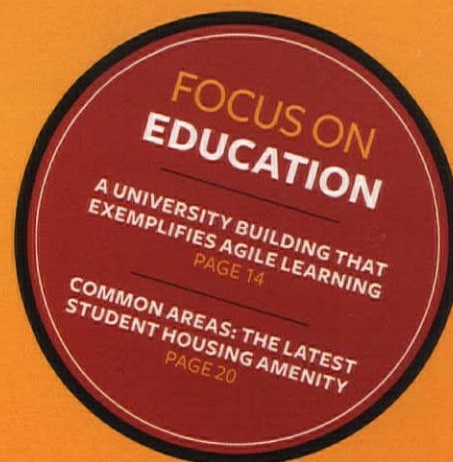


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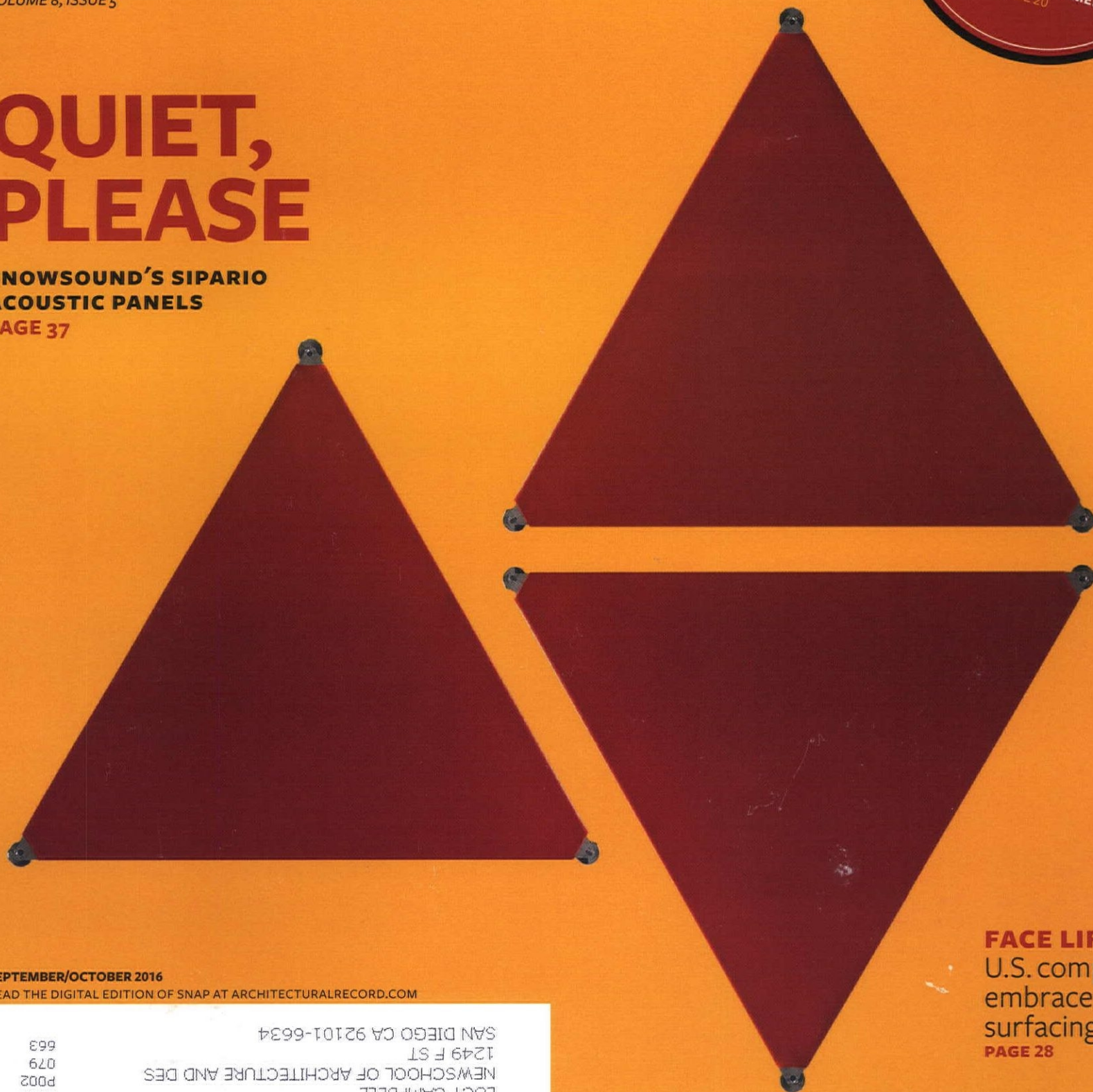
VOLUME 8, ISSUE 5



QUIET, PLEASE

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FACE LIFT

U.S. companies
embrace solid
surfacing facades.

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SAFE HAVEN

A health clinic
balances security
with an open
street presence.

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SEPTEMBER/OCTOBER 2016

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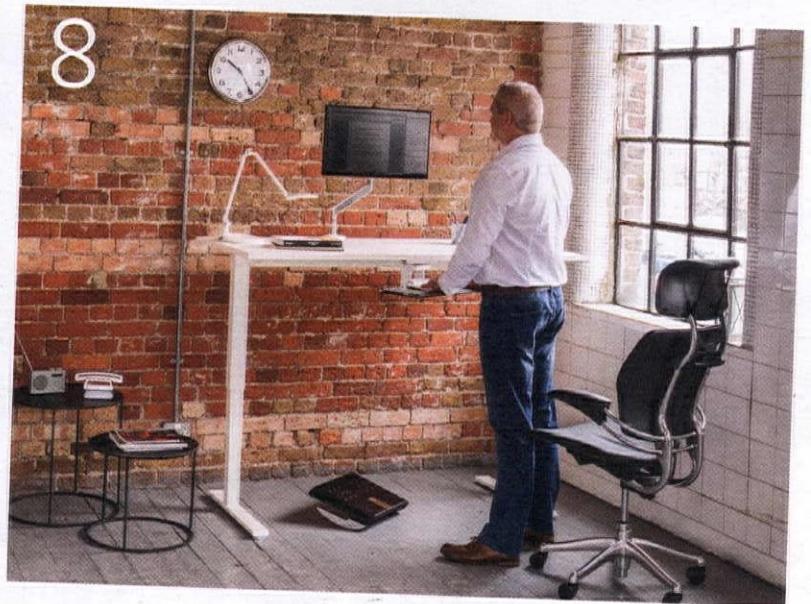


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Richard Welsh Library
New School of Architecture & Design
1249F St., San Diego, CA 92101

SEPTEMBER/OCTOBER 2016



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GET BUSY

Architect Richard Dattner worked with manufacturer Playworld to redesign his PlayCubes for a new generation (top left). Humanscale's sit-stand Float table (top right) has achieved full Living Product Challenge certification. Dero's laser-cut Veloport (left) can house two bikes.





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Take a fresh look at the diversity of ceiling design options that combine both sound absorption (NRC) and sound blocking (CAC) in one system. Learn about the benefits of Total Acoustics™ performance featuring total noise control and design flexibility at armstrongceilings.com/totalacoustics.



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Common Core



I'M OFTEN STRUCK by how much overlap there is in office and educational design. Each camp may have its own lingo, with one talking about collaboration and smart workplaces and the other referring to group work and maker spaces. But the goal is the same: to create flexible, tech-infused environments that allow users to work and learn in a variety of ways.

In this issue, we explore this aim from several angles. The case study on the University of Calgary's **Taylor Institute of Teaching and Learning** (page 14) exemplifies

the principles of agile learning, with its emphasis upon multipurpose spaces, movable furnishings, and integrated technology. The feature "All Together Now" (20) looks at common areas in student centers and residence halls, detailing some of the formats these important amenities take. The Product Specs on educational solutions (24) and acoustics (36) report on available furnishings and finishes that can help you execute your designs.

Turning the focus back to offices, we include a roundup of the best offerings from the **NeoCon** trade fair (74). We also delve into prefabrication of both buildings and their components (50), an approach that is becoming increasingly popular in the hospitality and residential sectors.

May you enjoy the issue—and learn a few things along the way!

Warm wishes,

Julie Taraska

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Mind the Gap

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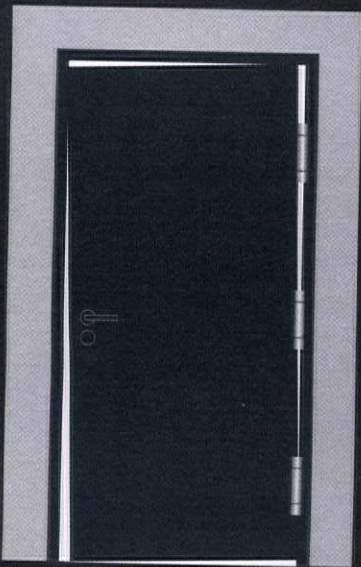
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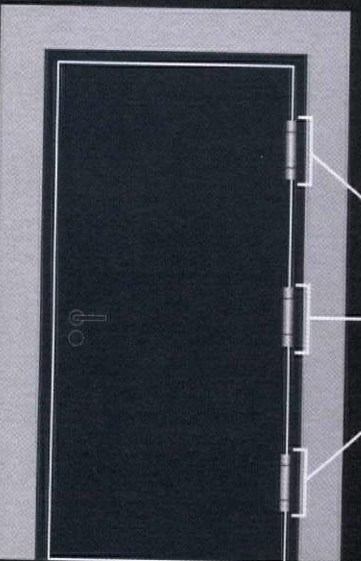
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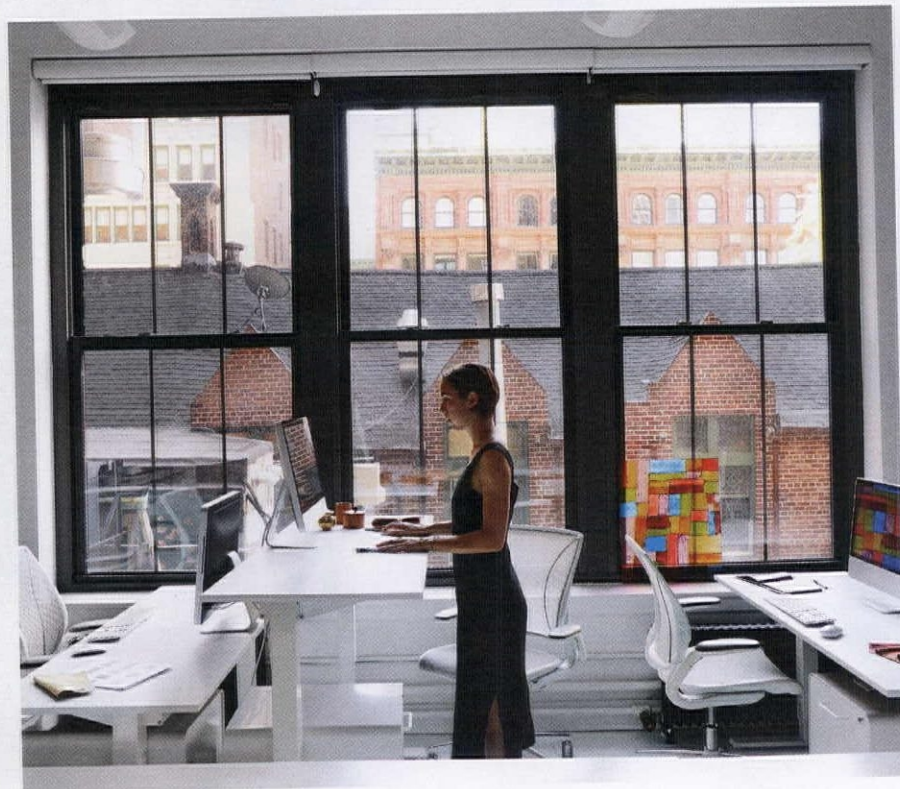


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SNAP 141

In brief



ILFI Names First Fully Certified Living Products

WHEN THE International Living Future Institute (ILFI) announced its Living Product Challenge in 2015, finding manufacturers to participate seemed a tall order. The LEED-like certification process for building materials and consumer products required companies to go beyond merely minimizing negative environmental impacts. Instead, they were to create items that, by meeting 20 imperatives, could actually improve global ecosystems. That challenge has been met, with **Humanscale** achieving the first two fully certified products.

The casegoods supplier earned certification by eliminating the PVC cable from its Float table, a manually powered sit-stand desk. The company also reformulated its Diffrient Smart chair, removing the perfluorinated compounds (a red-list material) from the textiles and switching production to a solar-powered facility outfitted with a rainwater collection system.

Jane Abernethy, Humanscale's sustainability officer, says the company had been independently incubating its environmental vision since January 2014, with the goal of working toward net-positive status. The Living Building Challenge "was a good fit, as it was looking at many of the things we already were," says Abernethy. The process took about a year, with Humanscale and the ILFI kicking it off in November 2015 with a charette.



NET-POSITIVE THINKING

Humanscale's sit-stand Float table (left) and Diffrient Smart chair (above) are the first two items to meet all 20 of the Living Product Challenge's materials, environmental, and social-justice imperatives.

ILFI shared Humanscale's news at the second annual Living Product Expo, held September 13 to 15 in Pittsburgh. At the event, the Institute also honored three other manufacturers, **Owens Corning** among them. The company achieved its second partial Living Product certification for EcoTouch PINK, a formaldehyde-free insulation with 65 percent recycled content. Two smaller firms also received partial certification. The Garden Tower 2, a composting small-space planter by **The Garden Project**, met the requirements in the water and materials categories; **Bureo** met them, too, for its recycled plastic resin and pellets sourced from Chilean fishing nets.

Of the 25 products currently participating in the Living Product Challenge pilot program, seven have achieved some level of certification. —Christine H. O'Toole and Julie Taraska

Uponor, Belkin Bring Metrics to Plumbing

PHYN, a joint venture between water-systems giant **Uponor** and electronics company **Belkin International**, wants to bring plumbing into the era of big data. To

that end it is planning a public beta-test program for Belkin's WeMo water sensor, hoping to advance the device from monitoring water use to also detecting leaks anywhere in a pipe.

Introduced last year, the sensor measures pressure waves in a plumbing system. It interprets each water-using device's signature wave to know what's on and how much water it is consuming. But the larger issue is leak detection, says Phyn CEO Ryan Kim, who developed the technology at Belkin. The products on the market that address the costly problem are "inelegant," according to Kim: nonintrusive sensors that infer flow or electronic pucks embedded in walls that await eventual contact with water. Kim's solution is to develop artificial intelligence that can precisely locate a leak as soon as it occurs.



Phyn's yearlong beta-test program will involve 500 domestic sensors in eight U.S. metropolitan areas. (The company is currently soliciting participants through phyn.com.) The goal, explains Kim, is to smarten the AI by gathering information about water dynamics "to account for seasonal changes, home types, and more."

Bringing this data to plumbing excites Uponor president Bill Gray. The industry, he notes, relies on broad estimates: "Once water enters a home, we don't really know what happens." Aside from alerting homeowners about leaks, Phyn's sensors could potentially provide information on, say, how much water is currently heated and how long it has been sitting in the system. Aggregating data from thousands of devices could revolutionize the plumbing industry and its product-design process. After all, says Gray, "You can only improve what you can measure." —Braulio Agnese

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CASE STUDY

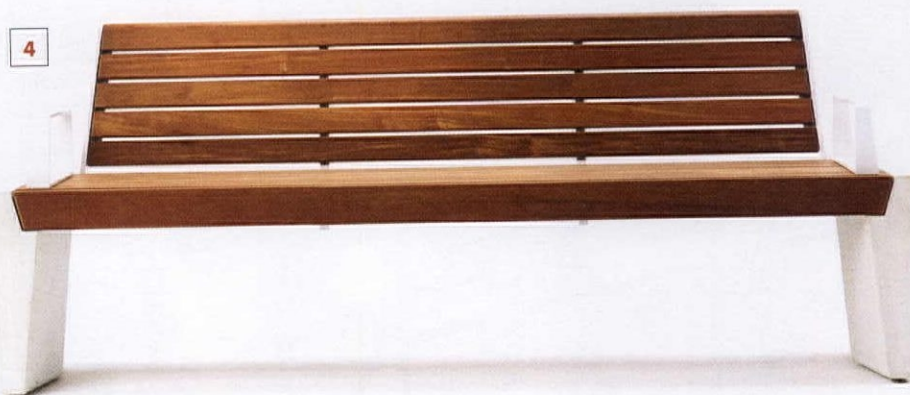


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SNAP 23



The latest finds for public places and residential spaces

1. SPOON SASH LOCK

MANUFACTURER: Kolbe

PERFORMANCE: The double-locking hardware with an Old World aesthetic not only secures windows but also allows sashes to be tilted in for cleaning.

PRICE RANGE: \$\$

APPLICATIONS: Available in eight finishes, the lock—an option on Kolbe's Heritage and Ultra Series windows—suits historic renovation projects.

KOLBE-KOLBE.COM
(SNAP #200)

2. SITELINE COASTAL WITH IMPACTGARD

MANUFACTURER: Jeld-Wen

PERFORMANCE: Able to withstand up to 130 mph winds, these wood-frame windows have a laminated glass option that traps shards, preventing them from falling into a room.

PRICE RANGE: \$\$\$

APPLICATIONS: The windows come in several building and patio-door designs.

JELD-WEN.COM
(SNAP #201)

3. FALLBROOK

MANUFACTURER: C.R. Laurence

PERFORMANCE: This front-load, dry-glazed glass partition system featuring an ultrathin aluminum doorframe has no exposed fasteners.

PRICE RANGE: \$\$-\$\$\$

APPLICATIONS: Suitable for minimalist office decors, the frame—made to hold $\frac{3}{8}$ " or $\frac{1}{2}$ " monolithic tempered glass—is offered in two finishes.

CRLAURENCE.COM
(SNAP #202)

4. STRATA BEAM BENCH

MANUFACTURER: Landscape Forms

PERFORMANCE: The bench's wood slats slot into faceted cast-end pieces made from ultra-high-performance concrete.

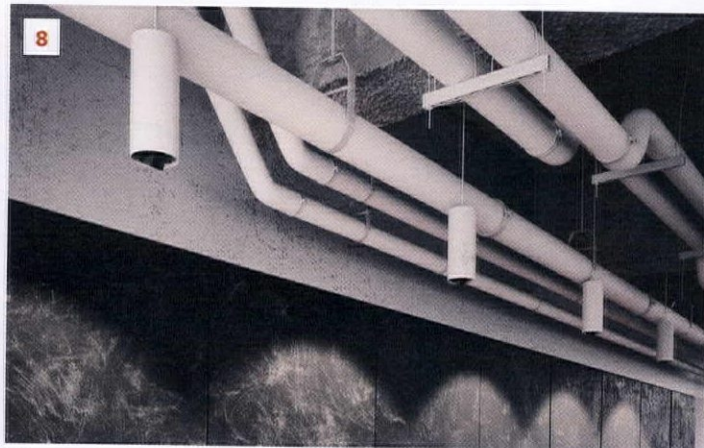
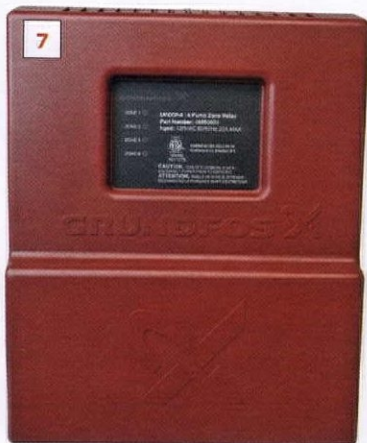
PRICE RANGE: \$\$-\$\$\$

APPLICATIONS: Designed for in- and outdoor public spaces, the Strata Beam bench comes in a backless version and with various arm options.

LANDSCAPEFORMS.COM
(SNAP #203)

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

 = ECO-FRIENDLY ATTRIBUTES



5. ZONES

MANUFACTURER: Teknion

PERFORMANCE: A PearsonLloyd design, this movable suite of beech-frame tables, seating, and screens creates islands of privacy in open-plan offices.

PRICE RANGE: \$\$\$

APPLICATIONS: The pieces—ranging from semi-enclosed meeting spaces to 15 sizes and shapes of chairs, benches, and sofas—can be configured in dozens of ways.

TEKNION.COM
(SNAP #204)

6. PANELIZED CEILINGS

MANUFACTURER: Smith & Fong

PERFORMANCE: The carved-design ceiling panels made of FSC-certified bamboo possess sound-absorbing properties up to 0.70 NRC.

PRICE RANGE: \$\$\$

APPLICATIONS: The panels, offered in two thicknesses and 40 texture options, fit both standard ceiling grids and up to 4' by 10' custom applications.

PLYBOO.COM
(SNAP #205)

7. UPZC SERIES

MANUFACTURER: Grundfos

PERFORMANCE: The non-networked control manages circulator and boiler functions in hydronic heating systems.

PRICE RANGE: \$\$

APPLICATIONS: The side-mount or forward-facing control, which connects to standard thermostats and operates from a cold-start configuration, can manage up to six zones.

US.GRUNDFOS.COM
(SNAP #206)

8. TILT

MANUFACTURER: V2 Lighting

PERFORMANCE: This family of LED pendant, scone, and surface-mount fixtures has field-adjustable 360° pan and 30° tilt optics.

PRICE RANGE: \$\$

APPLICATIONS: Providing up to 3000 lumens, the fixtures can be specified with an 83 or 98 CRI and 20°, 40°, or 60° reflectors. The 6"-diameter cylinder comes in a 7- or 15 1/2"-long shell.

V2LIGHTINGGROUP.COM
(SNAP #207)

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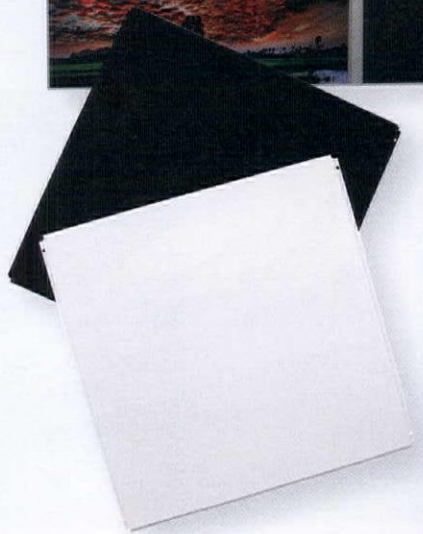
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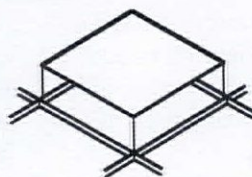
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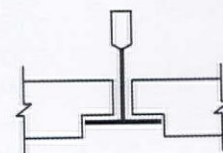
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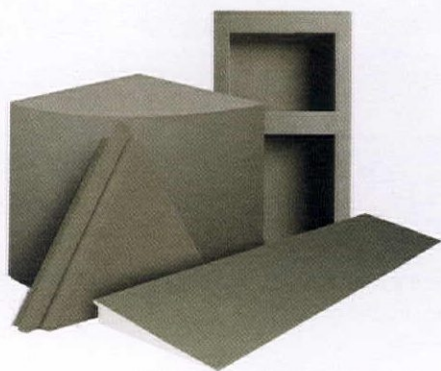
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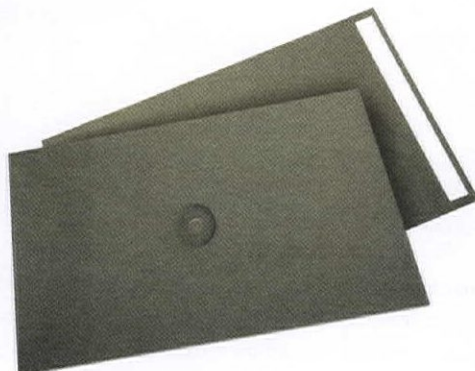


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CASE STUDY: EDUCATION

BY JANELLE ZARA



CALGARY, ALBERTA

Out of the Box

CHALLENGE: Create a facility where teachers can research and experiment with new ways of learning.

SOLUTION: Build a series of flexible spaces that can expand, contract, and be rearranged as needed.

INCREASINGLY, TEACHERS are abandoning the traditional method of lecturing in front of a class, replacing it with a more dynamic model of exchange with students. So for the University of Calgary's Taylor Institute for Teaching and Learning, architecture firm Diamond Schmitt designed a space that could be reconfigured to suit various education and learning styles.

In conjunction with partners Gibbs Gage Architects, the Toronto-based company constructed the 7,600-square-foot building on the foundation and main slab of the former Nickle Arts Museum (the structure had been vacant since 2013, when the university moved its holdings elsewhere on campus). "We would have liked to have rescued the steel," says Diamond Schmitt principal Matthew Lella, "but the demands of the new building

were so different from [those of] the old one that marrying the two would have been very inefficient."

The institute's layout emphasizes flexibility and mobility. At the building's heart is a light-filled atrium that the architects dubbed the spine, as corridors, classrooms, and breakout spaces branch off it. Up the stairs at one end of the atrium is a tiered seating area that can host talks and casual meetings, while in the mezzanine, open pods outfitted with desks and chairs offer more private places for conversation or study.

The multiuse mind-set is reflected throughout the building. The 400-seat auditorium, for example, can convert to half that capacity thanks to its retractable seats; in turn, floor space is freed up for a wider range of programs. The classrooms feature

MOVING ON UP

Designed to inspire educational innovation, the University of Calgary's Taylor Institute for Teaching and Learning features classrooms and public spaces that are simple to rearrange.

Inspiring Minds

When Entheos Academy announced a plan to build a new school, they invested not only in the building but also in the community it serves. The new structure utilizes an array of metal roof and wall panels to create a functional space designed to inspire the curiosity of young minds.

Learn more about this project at www.mbc.com/educate.



PROJECT: Entheos Academy

LOCATION: Magna, Utah

ARCHITECT: Architectural Nexus, Inc.

GENERAL CONTRACTOR: One West Construction

PANEL PROFILE: 7.2 Panel (Sandstone Metallic), Artisan® Series (Sandstone Metallic), FW-120 (Sandstone Metallic), PBD (Dove Metallic, Colonial Red)

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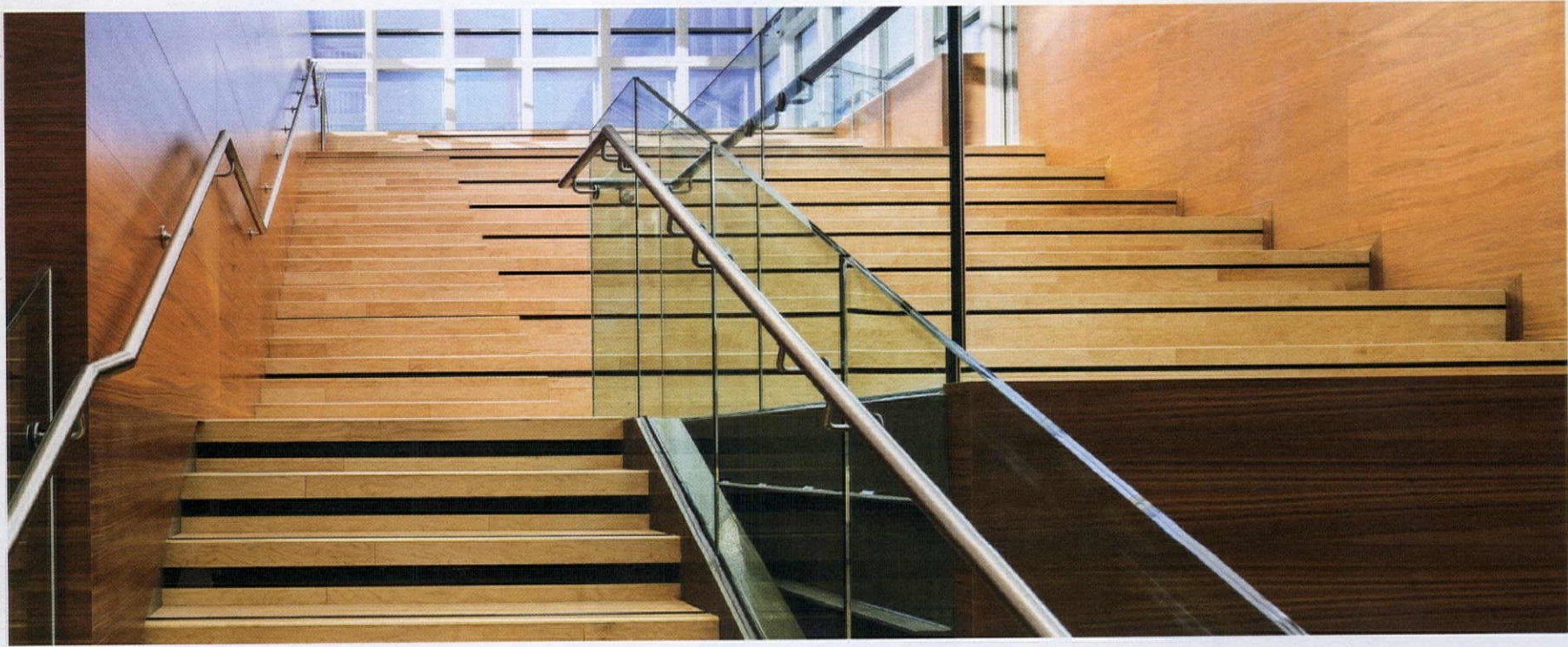
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CASE STUDY: EDUCATION



motorized partitions that double as two-sided acoustic panels, reducing sound while reconfiguring the square footage. Also, many of the furnishings—tables and chairs included—are on casters so can be easily moved. “It’s really up to each professor and their students to choose how to assemble the room for any given time period,” says Diamond Schmitt’s Lella.

The palette of white walls and blond wood unifies the space, as does the dark polished concrete floor. The result is a learning center with a continuous flow between place and purpose. “You’re delighted by the building,” says Lella, “but it helps you focus on the people that you’re with.” ■

STEP LIVELY

Many features of the Taylor Institute fulfill multiple functions; this staircase with stadium seating can serve as an event space or a place to enjoy a cup of coffee.



ARCHITECT

Diamond Schmitt Architects

PROJECT TYPE

Education

PRODUCT

Maple Hardwood Flooring

MANUFACTURER

Nydree Flooring

PERFORMANCE

Thanks to its acrylic-infused top layer, this

engineered wood flooring is more durable than solid wood; for one thing, it’s less susceptible to expansion and contraction.

APPLICATIONS

FSC-certified, the 7/16-inch-thick planks come in three standard widths and finishes, seven tree species, and eight infused colors.

PRICE RANGE \$

NYDREEFLOORING.COM

(SNAP #208)



= ECO-FRIENDLY ATTRIBUTES

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

IN THIS PROJECT



SYNC



MANUFACTURER: Ledalite

PERFORMANCE: Available as 65W fluorescents and 47W LEDs, these ultraslim fixtures cast a wide light and offer true direct and indirect performance without a louver.

PRICE RANGE: \$

APPLICATIONS: Offered in three standard finishes, Sync comes in suspended and wall-mount versions, with joinable 4- and 8-foot-long modules.

LEDALITE.COM

(SNAP #209)



CUSTOM 19MM VENEER SLATS



MANUFACTURER: Lambri Wood Paneling

PERFORMANCE: These fire-safe Douglas fir slats provide substantial acoustic absorption.

PRICE RANGE: \$\$

APPLICATIONS: The versatile panels—which achieve up to a 0.9 NRC—suit universities, hospitals, concert halls, and restaurants. Finish options include whitewash and stained or blank polish.

LAMBRI.COM

(SNAP #210)



CENTAUR MODEL 5000 PRESTIGE

MANUFACTURER: Irwin Seating Company

PERFORMANCE: When these telescoping seats retract, the entire decking and end-rail system supporting them does, too.

PRICE RANGE: \$\$

APPLICATIONS: Ideal for auditoriums and spectator venues, the seats come in an array of standard and custom upholstery; some models can be used outdoors.

IRWINSEATING.COM

(SNAP #211)



READY MIX COLORS

MANUFACTURER: Interstar

PERFORMANCE: This pure iron-oxide powdered pigment colors cement-based materials, such as floors, sidewalks, and poured-in-place construction.

PRICE RANGE: \$

APPLICATIONS: The sunfast, limeproof, and nonbleeding mix is available in 84 hues (four are for indoor use only).

INTERSTAR.CA

(SNAP #212)



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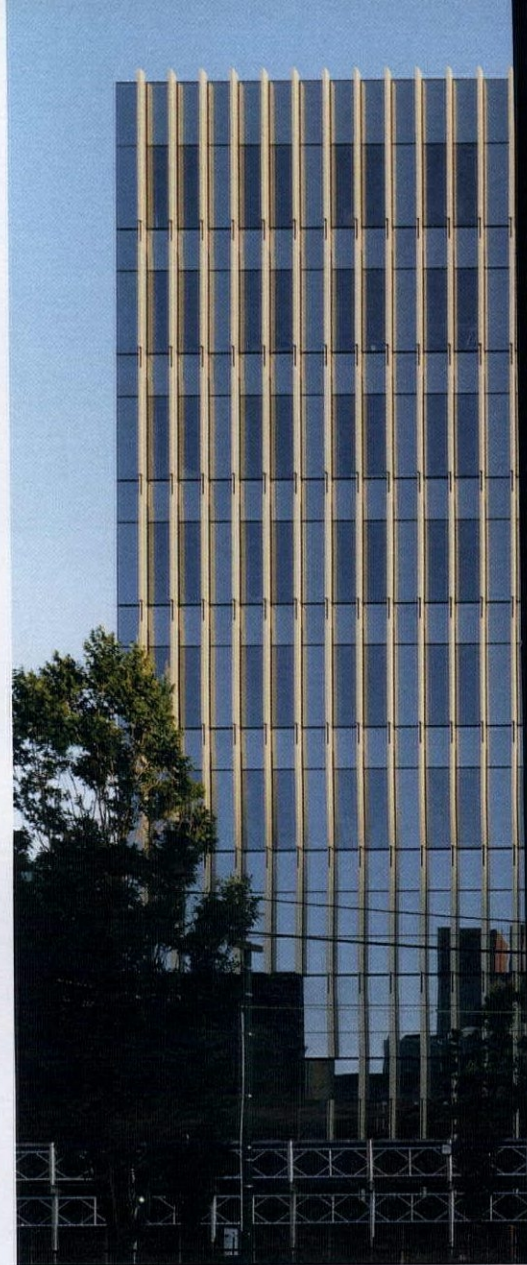
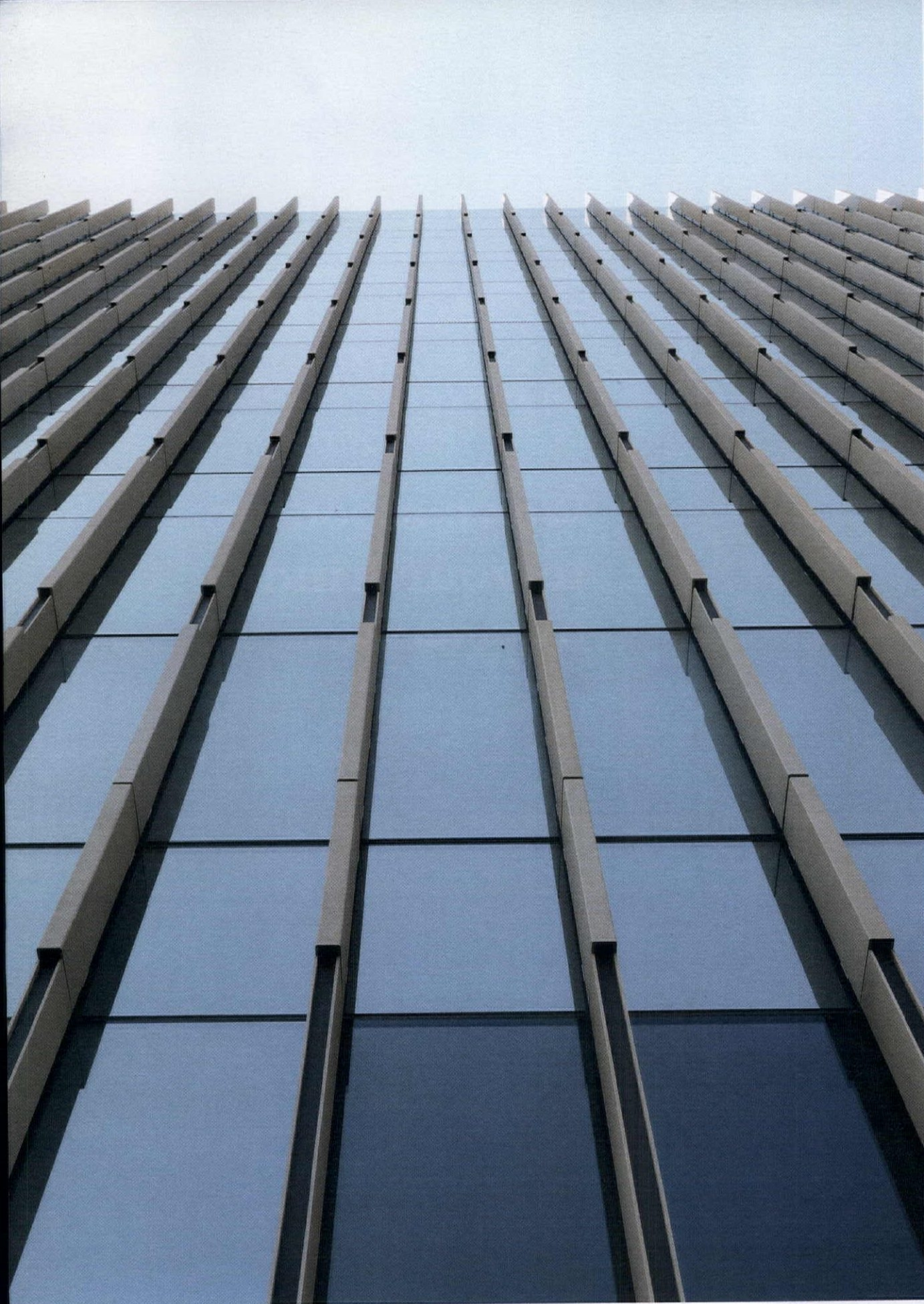


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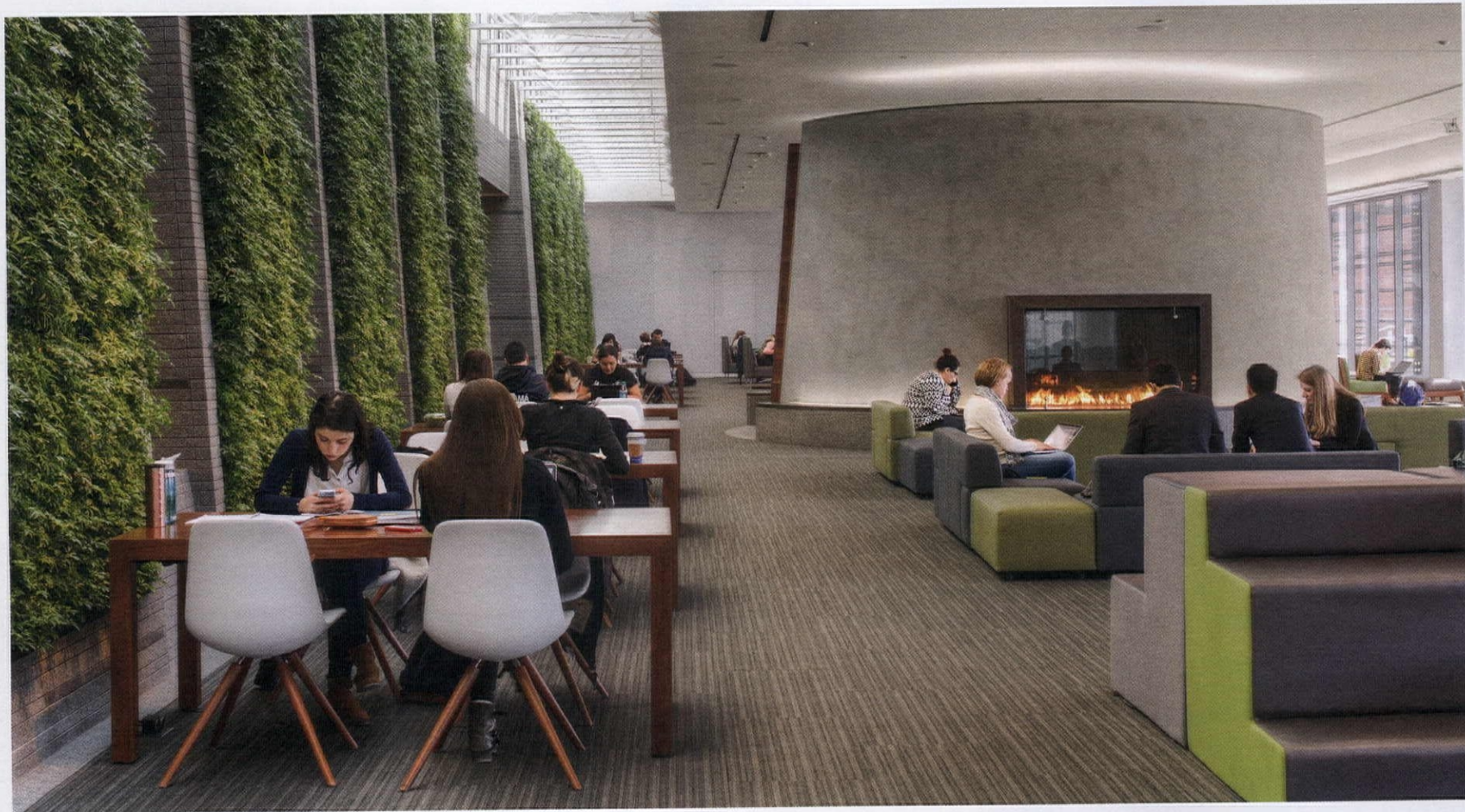
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SNAP 121

**LOUNGING AROUND**

Featuring a living wall and glass curtain wall, the great room at Georgetown's Healey Family Student Center offers spaces to study and socialize (above and center). The center is housed in the New South residence hall (bottom).

All Together Now

Common spaces—in their many iterations—are a critical element of today's residence halls.

BY BRAULIO AGNESE

WHEN COLLEGE STUDENTS aren't seated en masse in the lecture hall, they're congregating elsewhere. Sometimes the place and purpose are planned—a group study session, for instance—while at other times, the rendezvous are impromptu. Universities engender these face-to-face gatherings by including common spaces within their buildings, providing spots where paths will cross. This particularly holds true for student centers and residence halls. These structures are dotted with shared areas of all sizes and designs that are shaped as much by their location as by their function: to support and foster students' social and academic growth.

HEALEY FAMILY STUDENT CENTER, GEORGETOWN UNIVERSITY

When Georgetown University was looking for a firm to renovate the ground floor of its centrally located New South residence building, it had two major criteria: that the space be devoted to student life and worthy of LEED certification. Princeton, New Jersey-based

Ikon.5 Architects achieved both goals in the 45,000-square-foot Healey Family Student Center, which features a great room, a coffee shop, and a pub as well as meeting and performance spaces.

The airy 8,500-square-foot great room exemplifies Ikon.5's design direction. For it, the firm referenced the traditional Georgetown rallying cry *Hoya Saxa* (an ancient Greek/Latin phrase for "What rocks!"), installing a massive granite wall whose live flora is supported by **GSky Plant Systems**. A long, narrow **Acurlite Skylight Systems** window floods the room and its interior alcoves with light.

A massive double hearth with **Paloform** steel-and-concrete surrounds divides the space. To the east, where the Bulldog Tavern sits behind a movable wall, a communal wood table by **CCN** and two- and four-person booths offer rest spots for computers, food, and drink. To the west, bounded by a stage, sit upholstered versions of **Allsteel's** modular Rise stadium seating.





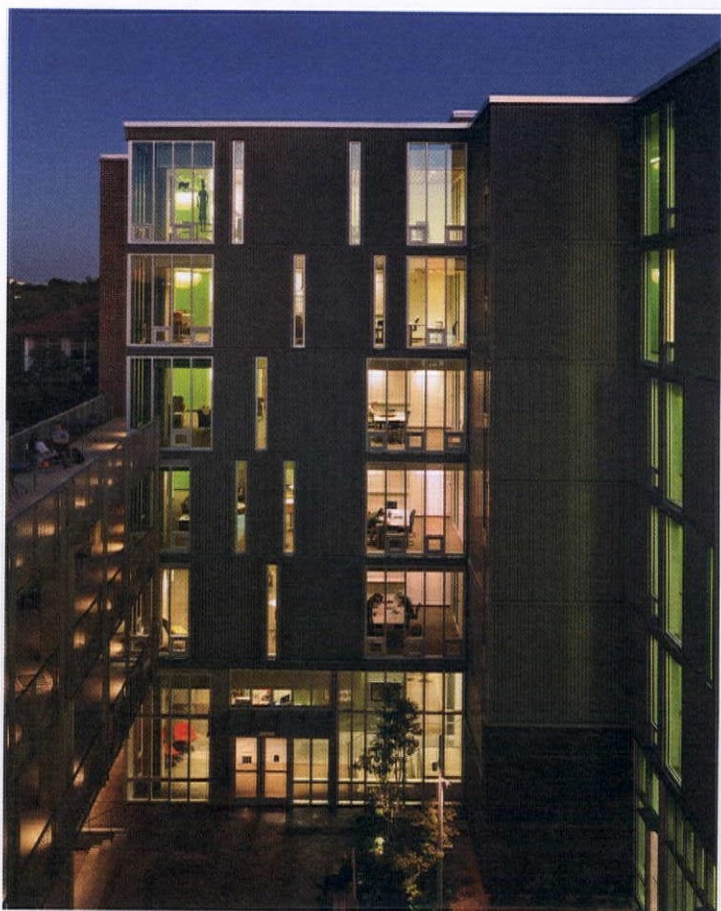
But despite the room's well-thought-out design and multipurpose uses, its most dramatic feature is not man-made. Instead, it's the stunning view of the Potomac River, visible just outside the glass curtain wall.

BARBARA GREENBAUM HOUSE, TULANE UNIVERSITY

Abutting New Orleans's residential Uptown and Carrollton neighborhoods, on the very edge of Tulane's campus, the Barbara Greenbaum House by **Architecture Research Office** (ARO) had to accomplish several things in a compact space. It needed to house as many students as possible yet be designed in a way that supported students' social lives. Plus it had to sit on an elevated ground floor with no basement for mechanicals, thanks to strict flood-safety codes.

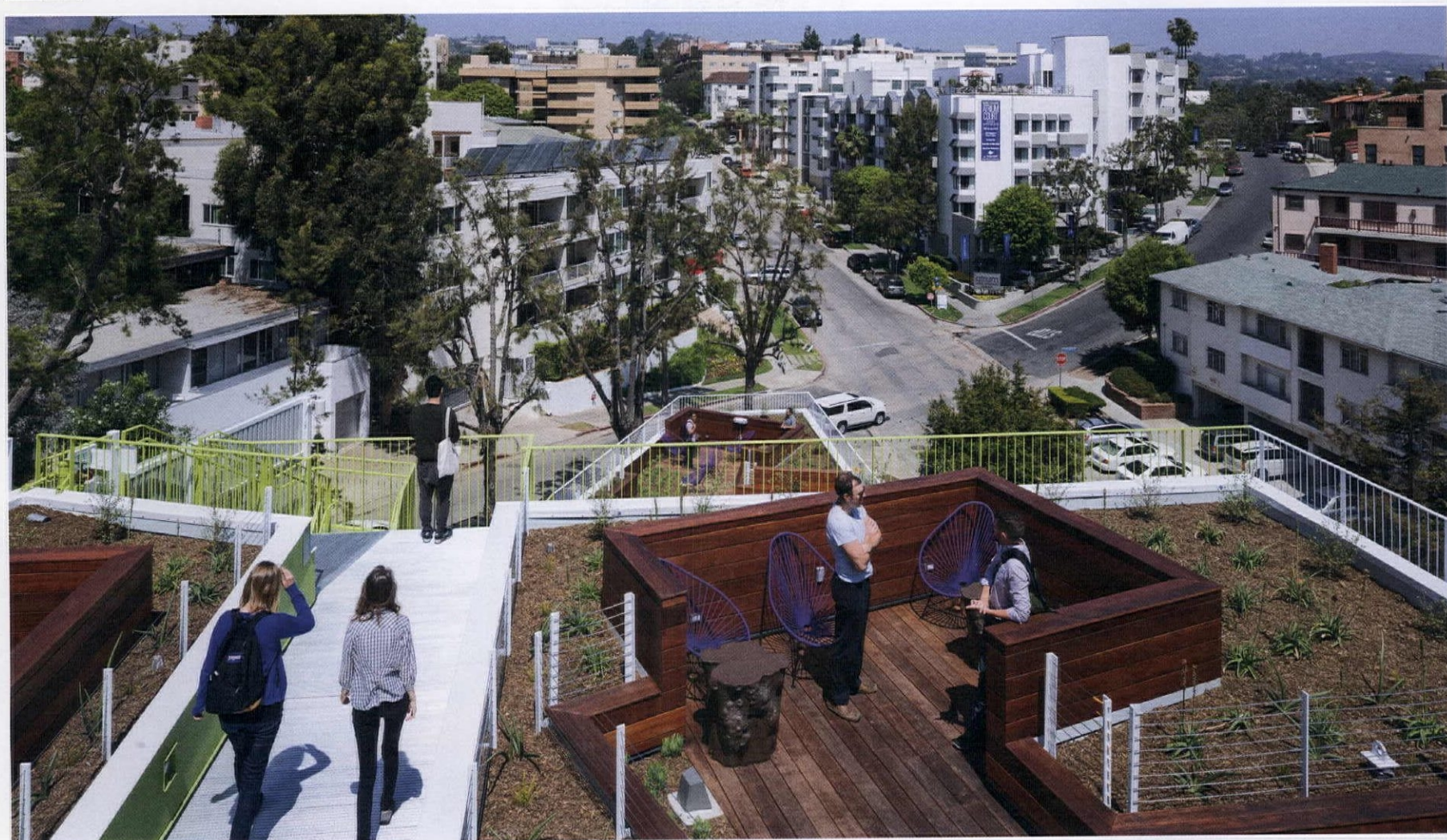
"We did a lot of test fits" to make sure the various pieces worked together, says ARO principal Adam Yarinsky. The answer revealed itself as a two-part box: One half of the building has four stories, with the structure's orientation forging a link to other nearby dorms, while the other has six stories, with the placement—and large opening on one corner—tying the section to the greater campus. A large interior courtyard unites the halves, as does a series of elevated outdoor walkways that connect them.

Inside the structure, the common areas cascade from smaller and more private to larger and fully public. The 256 student bedrooms on the upper floors are clustered into eight groups, with each cluster enjoying its own lounge area and study room (outfitted with **Enworks's** Impression tables). The courtyard-length common space on the ground floor, in contrast, serves all students. One end contains an event room, complete with demonstration kitchen; the other, next to the laundry facilities, serves as a lounge and features colorful seating, such as **Bernhardt Design's** upholstered Gaia lounge chairs.



SUM OF ITS PARTS

A shared lounge (above) and exterior courtyard (left) unite the halves of the Barbara Greenbaum House, a student residence located on the edge of Tulane University's campus.



GOLDEN STATE
All four of SL11024's shared spaces are outdoors, capitalizing on the sunny Los Angeles climate (above). The private residential building (left) houses numerous students from nearby UCLA.

Outside, the courtyard offers a shielded place in addition to spill-over space for the event room. Through the courtyard opening, the 4-foot drop to campus level is mitigated by a series of ramps and steps that, says ARO's Yarinsky, create a natural sense of flow "from building to campus and back again."

SL11024, UCLA

Part of a new wave of developer-driven, off-campus housing that targets college students, SL11024, located in a largely residential area just off the UCLA campus, has all its common areas outside. This is Los Angeles, after all.

Lorcan O'Herlihy Architects' solution for the triangular site—which has one end 50 feet lower than the other—is a building that proceeds terracelike down the slope. Thus the residence's four rooftop spaces span three levels. These shared spots also come in several shapes and sizes, from 471 to 1,429 square feet, and total almost 3,600 square feet.

In a nod to the Midcentury architecture that defines the complex's residential neighborhood (especially the **Richard Neutra**-designed apartments across the street), the architects created a calm exterior presence with white corrugated-metal siding from **Metal Sales**. But they updated the profile with apple-green cement board from **James Hardie** in all the common outdoor spaces. The choice provides a vibrant backdrop and pleasing contrast with the warm brown **Mangaris** wood decking and **Tata Enterprises** siding.

"The project was a perfect storm of criteria," says the firm's founding principal, Lorcan O'Herlihy. "Sometimes architecture is that way: When you embrace the challenge, it makes for better design." And when the challenge is accommodating the fluidity of college students' lives—whether in the heart of the campus, on its outskirts, or just beyond—the results can be as thoughtful and dynamic as the people who populate the spaces. ■

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Playtime Resumes

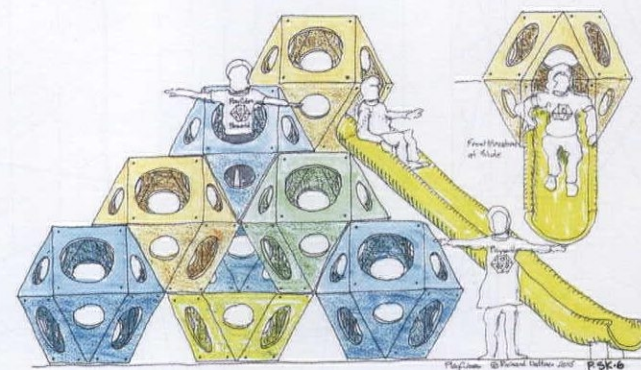
EARLY IN HIS CAREER, New York architect **Richard Dattner** turned his attention to playgrounds, envisioning more adventurous spaces for children to climb and explore. One of his boldest designs, a set of colorful geometric structures called PlayCubes, became a common sight in the late 1960s in urban parks. However, after falling out of use because of cost and safety concerns, the cubes are back, with an updated design and **Playworld** as their manufacturer.

Now made of rotomolded LLDPE plastic (the originals were glass fiber), PlayCubes come in single modules and preset configurations, with a slide option available for some models. Each roughly 16-foot cube has 13 circular cutouts children can play in or on—or crawl through. The roomier

design also offers onlookers increased visibility, ensuring that caregivers can always keep their charges in sight.

Michael Laris, vice president of global innovation for **PlayPower**, Playworld's parent company, explains that the use of rotomolded plastic allows for more efficient and affordable construction than the original model did. It also doesn't compromise the pieces' signature geometry and texture. Customers can select two-color combinations for the units, choosing from more than a dozen hues.

This spring, **Chinatown Park** on Boston's Rose Kennedy Greenway became the first location to install the redesigned PlayCubes. Dattner, whose books and projects changed how a generation played,



FUN CUBED Kids in Boston's Chinatown Park clamber over the redesigned PlayCubes (top), a playscape that architect Richard Dattner introduced in the late 1960s and updated for manufacturer Playworld. Dattner drew the sketch of the new preset eight-cube configuration (above), which comes with a slide.

is pleased with the result. "These structures provide children with the opportunity to use their senses to explore the environment and learn how their bodies work," he says, "and they do it free from parental micro-management." —*Rebecca Seidel*



ALIGN LOCKERS

MANUFACTURER: Allsteel

PERFORMANCE: These steel-frame lockers—available with one to six storage compartments—come with arch, square, straight, or integral pulls.

PRICE RANGE: \$\$

APPLICATIONS: Ideal for education and work settings, the lockers can double as room dividers. Footed and nonfooted versions are offered with a choice of laminate or metal fronts.

ALLSTEELOFFICE.COM

(SNAP #213)



EXCLAVE

MANUFACTURER: Herman Miller

PERFORMANCE: This suite of products includes stacking boards, movable carts, tables, and rail-hung storage in a variety of styles and materials.

PRICE RANGE: \$\$

APPLICATIONS: Intended for collaborative work in offices and higher-education classrooms, the pieces feature a range of finishes, including colorful textiles and solid and patterned laminates.

HERMANMILLER.COM

(SNAP #214)



TRUA

MANUFACTURER: Keilhauer

PERFORMANCE: With its single-piece shell, this lightweight stacking chair comes in a choice of plastic (12 colors) or wood (in two hues).

PRICE RANGE: \$\$\$

APPLICATIONS: Suitable for gathering rooms and cafeterias, Trua is offered in arm and armless versions and as a barstool. Two bases and five finishes are also available.

KEILHAUER.COM

(SNAP #215)



VELOPORT

MANUFACTURER: Dero

PERFORMANCE: The laser-cut perforations in this modular, galvanized-steel bike storage shed assist in temperature control and visibility.

PRICE RANGE: \$\$

APPLICATIONS: A secure long-term parking option for one or two bikes, the shed is ideal for college campuses and transit hubs. Each bike is secured to the door via a U-lock, padlock, or keyed option.

DERO.COM

(SNAP #216)

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

Totally Wired

HOMAGO (short for “hanging out, messing around, geeking out”) is more than an energetic acronym. It’s the guiding philosophy behind the Digital Ateliers, two maker spaces that the **Convergence Design Lab at Columbia College Chicago** built at a pair of local, high-risk public schools.

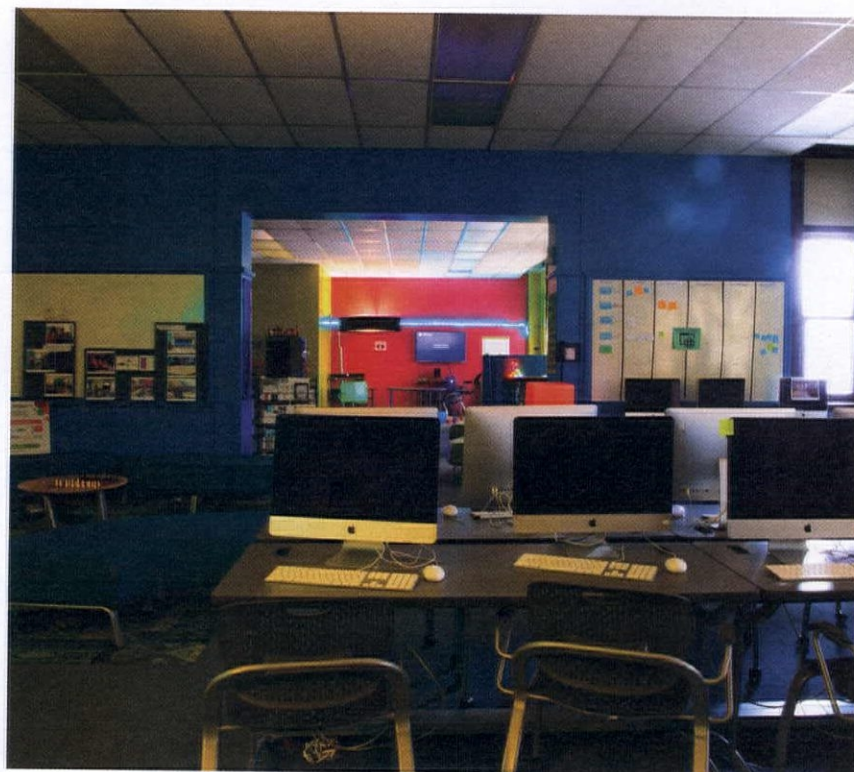
Stocked with robotics kits, 3-D printers, and multimedia production equipment, the spaces at **Morrill** elementary and **Tilden** high schools feature a computer lab with soft seating and workshop tables on one side; on the other is an informal lounge. Furnishings manufacturer **Bretford** supplied the movable furniture, from modular chairs to mobile boards, which maximizes flexibility for hands-on projects.

Convergence recently released the results from a two-and-a-half-year study of the Digital Ateliers in action, conducted with Bretford and Chicago think tank **Archeworks**. Researchers gathered striking evidence of how agile learning

spaces can boost students’ performance. For example, 74 percent of Tilden students used the Atelier during the 2014–15 school year, and 91 percent said that it makes them more excited about coming to school. That sentiment has played out in the school’s overall attendance, with the daily average jumping five points—from 76 percent to 81 percent—since the Atelier opened.

Mindy Faber, codirector of Design Lab overseer **Convergence Academies**, says the Ateliers can serve as a model for educators interested in a flexible, tech-driven approach. “Curricula and instruction are vital,” she says, “but it is the space and layout of resources that really make learning come alive.” —RS

HOOKE UP The Digital Atelier at Chicago’s Tilden high school exemplifies the principles of agile learning. It pairs multimedia equipment with flexible furnishings that can be rearranged to support solo work and collaborations.



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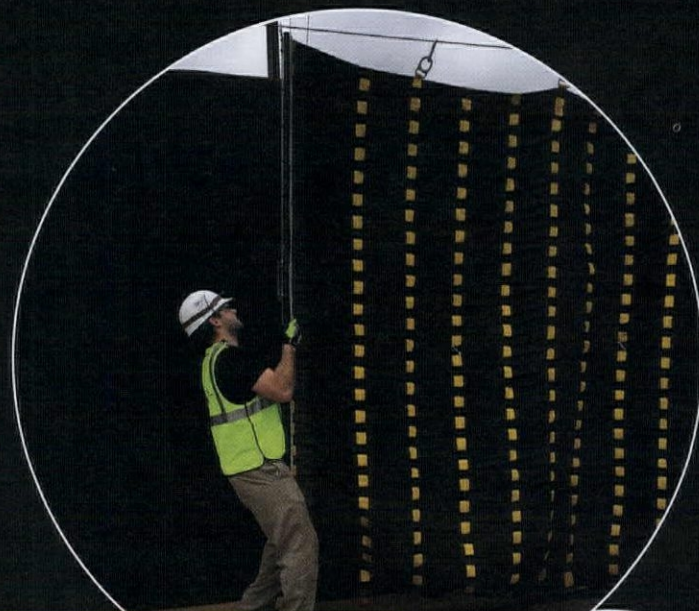


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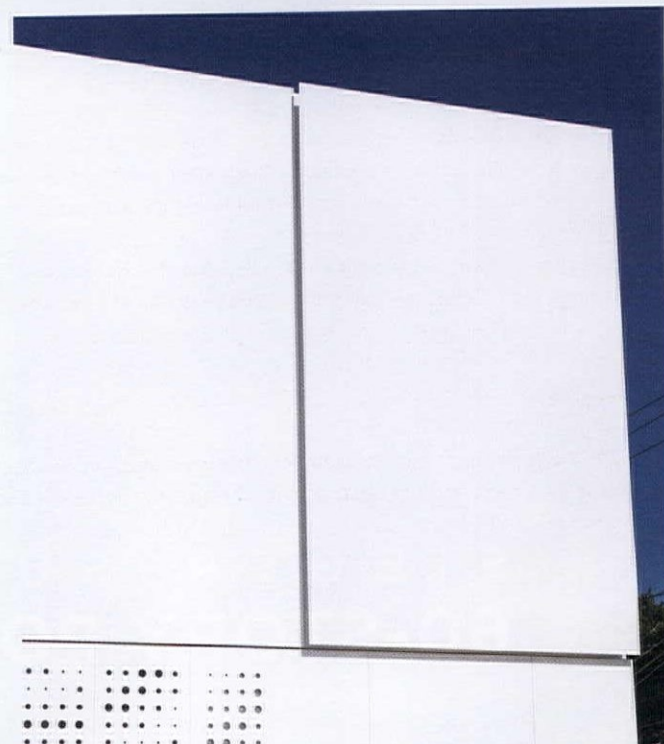
Taking It Outside

IN THE UNITED STATES, solid surfacing is probably best known for its interior applications. But Spanish manufacturer **Porcelanosa** is highlighting the material's exterior possibilities with the first North American installation of its Krion VF system on the company's 3,000-square-foot Houston showroom.

Designed by architect **Ignacio Vidal Traver**, who also serves as Porcelanosa's facade national sales and technical director, the system features a hundred 12-by-2½-foot Krion Lux solid-surface slabs; each is vertically hung using a mounting system specially developed by **Butech**, the company's engineering arm. Fabricated with tongue-and-groove joints, the slabs were assembled on site, glued, and hand finished to eliminate seams.

The absence of visible joints is an advantage of solid surfacing, notes Traver, pointing out that "there's no other cladding material that can achieve large surfaces without seams." Another advantage is its versatility, which the facade demonstrates with custom details such as a cutout motif on the ground floor, a thermoformed canopy over the entrance, and a backlit raised panel.

Because fabrication of the facades requires accuracy and precision, each Krion VF installation is made to order. However, the nonporous material, which is highly durable and performs well in all climates, offers a lot of possibilities. A second U.S. project, a T-Mobile store in New York City, has already been completed, with other buildings on the boards. —*Alice Liao*



ABOUT-FACE To demonstrate the durability of its Krion VF solid surfacing, Porcelanosa clad its Houston showroom with the material (top). The durable ventilated facade features custom cutout details (above).



STONEFACADE

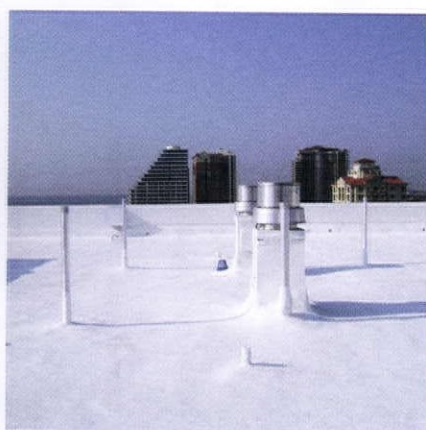
MANUFACTURER: CertainTeed

PERFORMANCE: This manufactured stone veneer incorporates a $\frac{3}{8}$ -inch-thick stainless-steel rainscreen to mitigate the potential for mold and mildew.

PRICE RANGE: \$\$\$

APPLICATIONS: Ideal for residential use, the 8-inch-high panels—offered in three widths and four colors—can clad 110 square feet without repeat.

CERTAINTEED.COM
(SNAP #217)



FOAM-LOK 2800-4G



MANUFACTURER: Lapolla Industries

PERFORMANCE: This close-cell spray polyurethane foam creates a monolithic roofing seal that prevents heat transfer into and out of the building envelope.

PRICE RANGE: \$\$

APPLICATIONS: Suitable for use on most new or retrofit substrates, the foam reduces building energy costs by up to 45 percent. It also resists wind uplift and acts as a water-proofing solution.

LAPOLLA.COM
(SNAP #218)



ECOBLEND



MANUFACTURER: DaVinci

Roofscapes

PERFORMANCE: Approved by the Cool Roof Rating Council, these polymer roof tiles—available in four new colors—reflect sunlight and heat away from a building.

PRICE RANGE: \$\$\$

APPLICATIONS: Suitable for residential and commercial applications, the shake- and slate-style roof tiles comply with California's 2016 Building Energy Standards.

DAVINCIROOFSCAPES.COM
(SNAP #219)



PAINTABLE GRAYNE

MANUFACTURER: Tapco Group

PERFORMANCE: While these paintable composite shingles mimic the look of plain-sawn white cedar, they're surface-treated to retain color better than wood or hardboard siding do.

PRICE RANGE: \$\$

APPLICATIONS: Ideal for home exteriors requiring a custom color, the 5-inch shingles won't curl, warp, or fade over time.

THETAPCOGROUP.COM
(SNAP #220)

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



= ECO-FRIENDLY ATTRIBUTES

All Wound Up

THE ELYTRA FILAMENT PAVILION at London's **Victoria and Albert Museum** offers a glimpse of how stadium roofs could be built in the future. The temporary installation, whose design was inspired by the protective forewings of flying beetles, features a 2,100-square-foot canopy composed of 40 webbed hexagonal modules, each woven with carbon and glass fibers by a robot. That use of biomimicry and lightweight construction principles hold promise, as both could lead to the creation of lighter and longer roofs.

Architects **Achim Menges** and **Moritz Dörstelmann** worked with structural and climate engineers **Jan Knippers** and **Thomas Auer** to create the pavilion, which weighs less than 2 pounds per square foot. The architects chose carbon fiber over conventional materials such as concrete and steel because of its comparative lightness. The fiber "drastically reduced the dead load of the structure," according to Dörstelmann. Its high-tensile strength, extreme temperature tolerance, and low thermal expansion—the very qualities that make the material popular in the aerospace and high-end auto industries—also proved attractive.

Although identical in size and shape, each of the pavilion's hexagonal modules has a unique fiber arrangement determined by the structural and aesthetic requirements of its location. Sensors integrated into the pavilion collect data on visitor behavior and performance in relation to wind, shading, and radiation; the architects are using that data to decide where to extend the canopy during the pavilion's residence. The Elytra Filament Pavilion—and its explorations into material efficiency and lightweight construction—will be on view through November 6 in the V&A's John Madejski Garden. —AL



NICE WEAVE

A robot wove the hexagonal modules in the Elytra Filament Pavilion from a mix of carbon and glass fibers. The outdoor exhibit is part of the engineering season programming at the Victoria and Albert Museum in London.



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SNAP 13



Safe Haven

GIVEN THE SECURITY issues a Planned Parenthood facility faces these days, from silent protests to outright violence, the organization's new **Diane L. Max Health Center** easily could have resembled a bunker. Instead, the two-story building is a bright, open presence on the street. "That was the central challenge: to make the Max Center feel welcoming" but also secure, says Manhattan architect Stephen Yablon, whose namesake firm designed the 14,000-square-foot facility, located in Long Island City, a formerly industrial neighborhood in Queens, New York.

On the building's front, where most of the public spaces are situated, sunlight streams through large expanses of **SaftyFirst** GPX Ballistic Resistant glass that is housed in blast-mitigating **Kawneer** 451T framing; both provide protection from gunfire and explosions. An L-shaped entry vestibule beyond the front door offers a second layer of safety. Here, visitors must sign in with a security person (seated behind ballistic safety

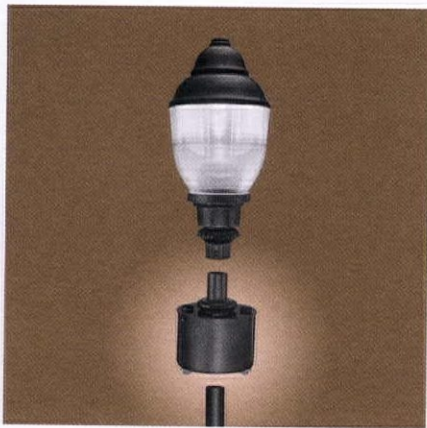
glass) and pass through screening equipment before being buzzed into the general reception area.

Inside, a color-based system—painted walls, dyed floors, and calm LED cove lighting—helps visitors navigate the building. There are also some multilingual signs pointing the way, but as few words as possible are employed. "People from more than 120 countries use this place," explains Yablon. "We are in one of the most diverse zip codes in Queens."

Last spring, at the Max center's opening, Planned Parenthood Federation of America president Cecile Richards praised the facility, saying, "This was built with the community, for the community, and by the community—and that is the spirit of Planned Parenthood in the next century." Since then, says architect Yablon, Planned Parenthood of New York City has hired his firm to review all its sites, bringing the Max center's patient experience, unified look, and secure environment to more service locations. —*Braulio Agnese*



NOTHING TO HIDE The Diane L. Max Health Center's bright interior (top) uses a color-coded system to help its multilingual clientele traverse the space. The Planned Parenthood facility has large, ballistic-resistant glass windows that facilitate a connection to the street (above).



TERES



MANUFACTURER: PennSMART

PERFORMANCE: This kit converts any lamppost fixture into a smart, energy-efficient surveillance system.

PRICE RANGE: \$\$

APPLICATIONS: The standard DIY package consists of a wireless communication system, cameras, speakers, and LED controls. Custom packages feature sensors for motion and sound detection as well as environmental monitoring.

PENNSMARTLIGHTING.COM

(SNAP #221)



BEST SHELTER

MANUFACTURER: Stanley Security Solutions

PERFORMANCE: This scalable emergency-lockdown setup offers remote-control door locks, activation fobs, and a wireless communications system.

PRICE RANGE: \$\$

APPLICATIONS: Created for settings where a quick security response is essential, the system includes internal and external alerts and phased locked-door protocols.

STANLEYSECURITYSOLUTIONS.COM

(SNAP #222)



SAFETY GATE

MANUFACTURER: Kee Safety

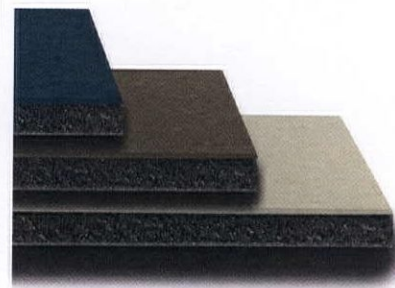
PERFORMANCE: OSHA-, ANSI-, and IBC- compliant, this self-closing safety gate is a retrofit solution for fixed roof hatches, restricted areas, and stair-access points.

PRICE RANGE: \$\$

APPLICATIONS: Suitable for commercial, institutional, and industrial uses, the tubular steel gate comes in nine standard widths, from 18 to 48 inches, and in galvanized or RAL-listed powdercoat finishes.

KEESAFETY.COM

(SNAP #223)



GALAXY RX



MANUFACTURER: Ecore

PERFORMANCE: With its 1/8-inch-thick rubber surface on a 1/2-inch-thick recycled-rubber backing, this slip-resistant flooring cushions falls and mitigates structure-borne sound.

PRICE RANGE: \$\$

APPLICATIONS: Suitable for high-traffic healthcare and education spaces, Galaxy rx comes on a 6-by-30-foot roll and is offered in 12 earth tones.

ECORECOMMERCIALFLOORING.COM

(SNAP #224)

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



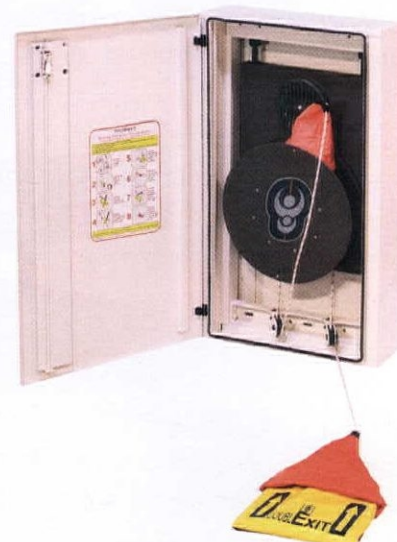
= ECO-FRIENDLY ATTRIBUTES

The Great Escape

DESPITE THEIR MYRIAD FORMS, all buildings over 10 stories share a weakness: When emergencies render elevators unusable and stairs impassable, occupants have trouble reaching ground quickly and safely. The September 11 attacks crystalized the problem for many and galvanized some to action, including Yoav Barzilay, CEO/CTO of Israeli safety and security company **Bar-1**. The mechanical, harness-based evacuation system DoubleExit was his solution.

Bar-1 has a 25-plus-year track record of making rappelling equipment for military operations. But where the company's earlier products required expert training, DoubleExit is intuitive and easy for civilians to use. Packaged in a cabinet that attaches to a floor, a concrete column, or any interior spot with the necessary structural integrity, the system consists of two 330-pound-rated harnesses, 492 feet of cable, and a mechanism that provides a steady descent rate of three feet per second, regardless of the user's weight. When one person reaches safety, another dons the second harness and goes down; the action returns the first harness to the top for the next evacuee.

ASTM International-certified, DoubleExit, which costs \$3,500 per unit, is not the first rappelling evacuation system; there's also Rescue Reel, invented by physician Kevin Stone. But according to Bar-1's Barzilay, DoubleExit offers solutions that portable, single-use products like Rescue Reel do not: continuous operation, controlled descent, and no need to find a proper anchor point. "In emergency situations, people stop thinking," he says, adding that DoubleExit closes the circle by "adapting the operating environment to the operator." —BA



COME ON DOWN Prompted by the events of September 11, Bar-1's CEO Yoav Barzilay created DoubleExit (above), a civilian evacuation device for tall buildings. Included in the kit are two reusable harnesses, 492 feet of cable, and a mechanism that provides a steady rate of descent: precisely 3 feet per second (demonstration at left).

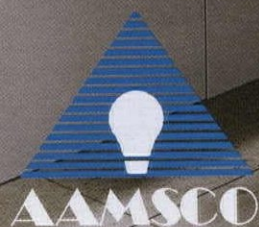
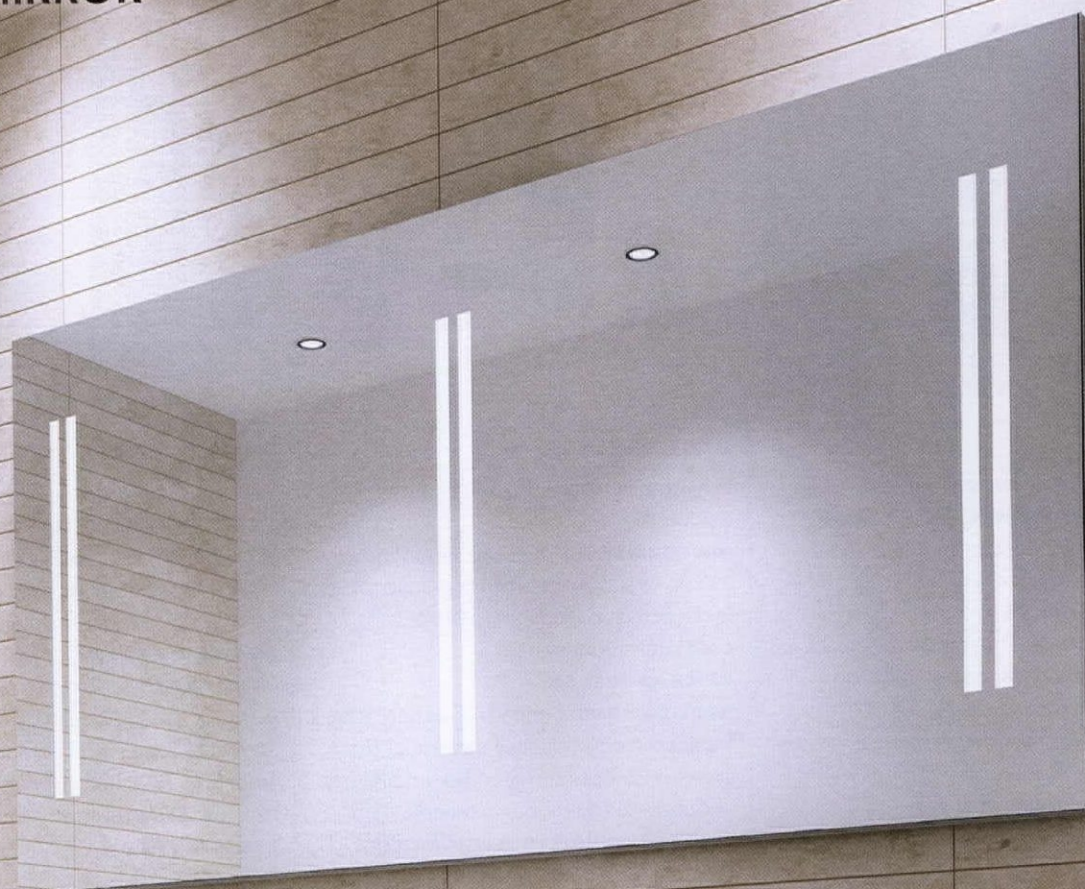
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SNAP

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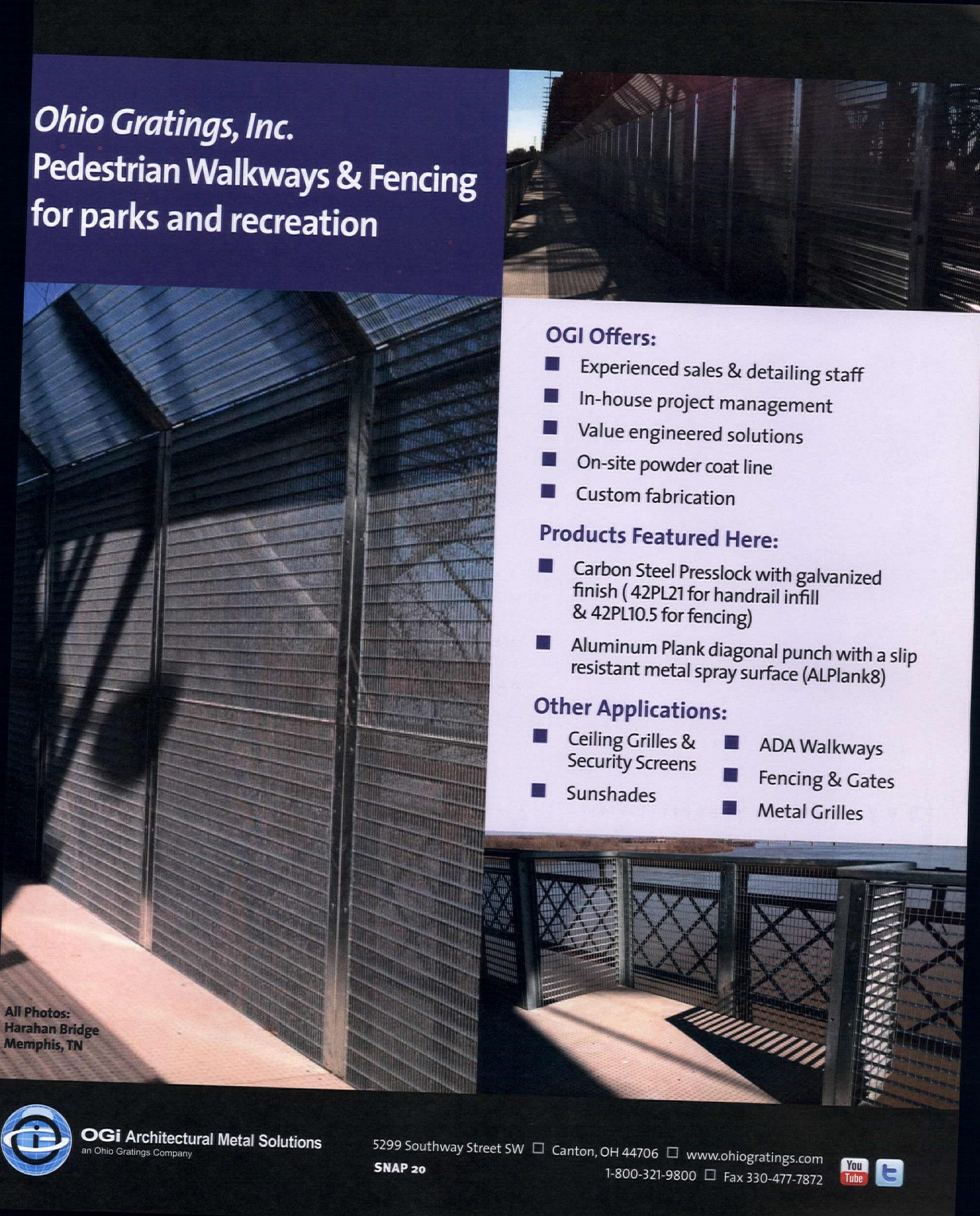


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All Photos:
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Reaching New Heights

NATATORIUMS POSE a plethora of acoustic challenges, from sounds ricocheting off the hard surfaces to the cavernous space's tendency to amplify noise. Acoustic treatments are also susceptible to water damage, so they are generally avoided on these buildings' interior walls.

Bing Thom Architects (BTA) faced these dilemmas and more when charged with adding a 112,000-square-foot aquatic facility to the **Guilford Recreation Centre** in Surrey, British Columbia. Reduced surface space and a desire to retain the center's distinctive ceiling elements led the Vancouver-based firm to look up: to the rafters, that is.

BTA, working with **StructureCraft Builders** and acousticians at **BKL Consultants**, directly mounted custom-cut, water-repellant **Rockfon** Sonar Activity panels on the facility's 100-foot-long ceiling trusses; in addition, the team installed Sonar CDX concealed panels above the spectator seating and mezzanine lobby area. Providing a 0.9 NRC and 22 CAC rating, the stone-wool panels resist humidity so won't sag. Plus, their smooth white surfaces reduce the need for artificial illumination by reflecting up to 85 percent of the center's indirect light—including that which streams through the pool-deck windows. The result is a serene aquatic facility that serves the growing community both healthwise and aesthetically. —Alex Klimoski



IN THE SWIM Faced with a dearth of usable space for acoustic treatments, the team behind the Guilford Recreation Centre's aquatic facility mounted panels from Rockfon's Sonar collection on the building's rafters (above) and over the viewing area (right).



SIPARIO

MANUFACTURER: Snowsound
PERFORMANCE: The lightweight triangular panels contain layers of tightly woven polyester fiber that absorb mid- and low-range frequencies.

PRICE RANGE: \$\$\$

APPLICATIONS: The frameless, two-sided design may be freestanding or mounted to the wall or ceiling. Fire-resistant and 100 percent recyclable, Sipario achieves up to a 1.0 NRC and is Greenguard Gold-certified.

SNOWSOUNDUSA.COM

(SNAP #225)



ECOUSTIC VENEER

MANUFACTURER: Unika Vaev
PERFORMANCE: These FSC-certified wood veneers mounted to a polyester core absorb sound, offering a 0.8 NRC.

PRICE RANGE: \$\$

APPLICATIONS: Suiting walls and ceilings, the 11-by-106-inch panels come in 11 woods and interlock for easy installation. Both perforated and nonperforated options are available.

UNIKAVAEV.COM

(SNAP #226)



BUZZIBLINDS

MANUFACTURER: BuzziSpace
PERFORMANCE: The aluminum-frame room divider features five telescoping acoustic blinds that can be opened to varying degrees to reduce ambient noise and create visual privacy.

PRICE RANGE: \$\$

APPLICATIONS: Made with 100 percent upcycled plastic-bottle waste, the blinds come in four new shapes, two standard heights, and 12 colors.

BUZZI-SPACE.COM

(SNAP #227)



CITY PROPER

MANUFACTURER: Milliken
PERFORMANCE: The three designs in this contract carpet collection draw their inspiration from the urban landscape, such as sidewalks and power cables.

PRICE RANGE: \$\$

APPLICATIONS: Made with solution-dyed nylon type 6,6, the 19 3/4-inch-square tiles for office and hospitality use are stain- and soil-resistant; they also have a cushioned, PVC-free backing.

MILLIKEN.COM

(SNAP #228)

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

= ECO-FRIENDLY ATTRIBUTES

Striking the Right Chord

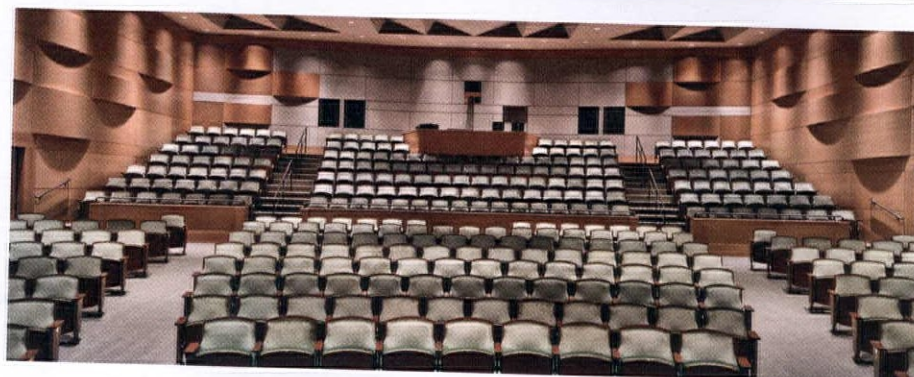
ROTHERNBERG HALL—a 388-seat auditorium at the **Huntington Library, Art Collections, and Botanical Gardens** in San Marino, California—hosts programming ranging from guest lectures to chamber-music recitals. To manage these varied acoustic needs, San Francisco-based **Architectural Resources Group** worked with acousticians from nearby **Charles M. Salter Associates** to create a changeable balance of sound reflection, diffusion, and absorption.

“We wanted to have a good reverberation time that was long enough for music but short enough for clear speech,” said Salter Associates vice president Philip N. Sanders. To do so, the team employed an elegantly curved surround with a white-oak veneer. The piece, which combines flush and protruding panels, wraps the stage and seating area, modifying and scattering sound.

Scalloped panels on the stage can be rotated to reveal a wood surface that reflects and amplifies sound or a fiberglass-and-acoustic fabric option that absorbs it. An additional acoustic drape can be drawn across the upstage wall to quiet loud films and instruments. The venue’s thick drywall ceiling also absorbs other noise frequencies ricocheting around the room.

With these interventions, the intimate venue, located in the Huntington’s **Steven S. Koblik Education and Visitor Center**, helps welcome visitors with acoustically tailored performances. Now, *that* sounds good.—AK

TUNED IN Interventions such as a white-oak surround, an acoustic drape, and rotating panels that reflect or absorb sound allow the Rothernberg Hall in San Marino, California, to stage varied live events.



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SNAP 138

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Ronald McDonald House, Toledo, OH

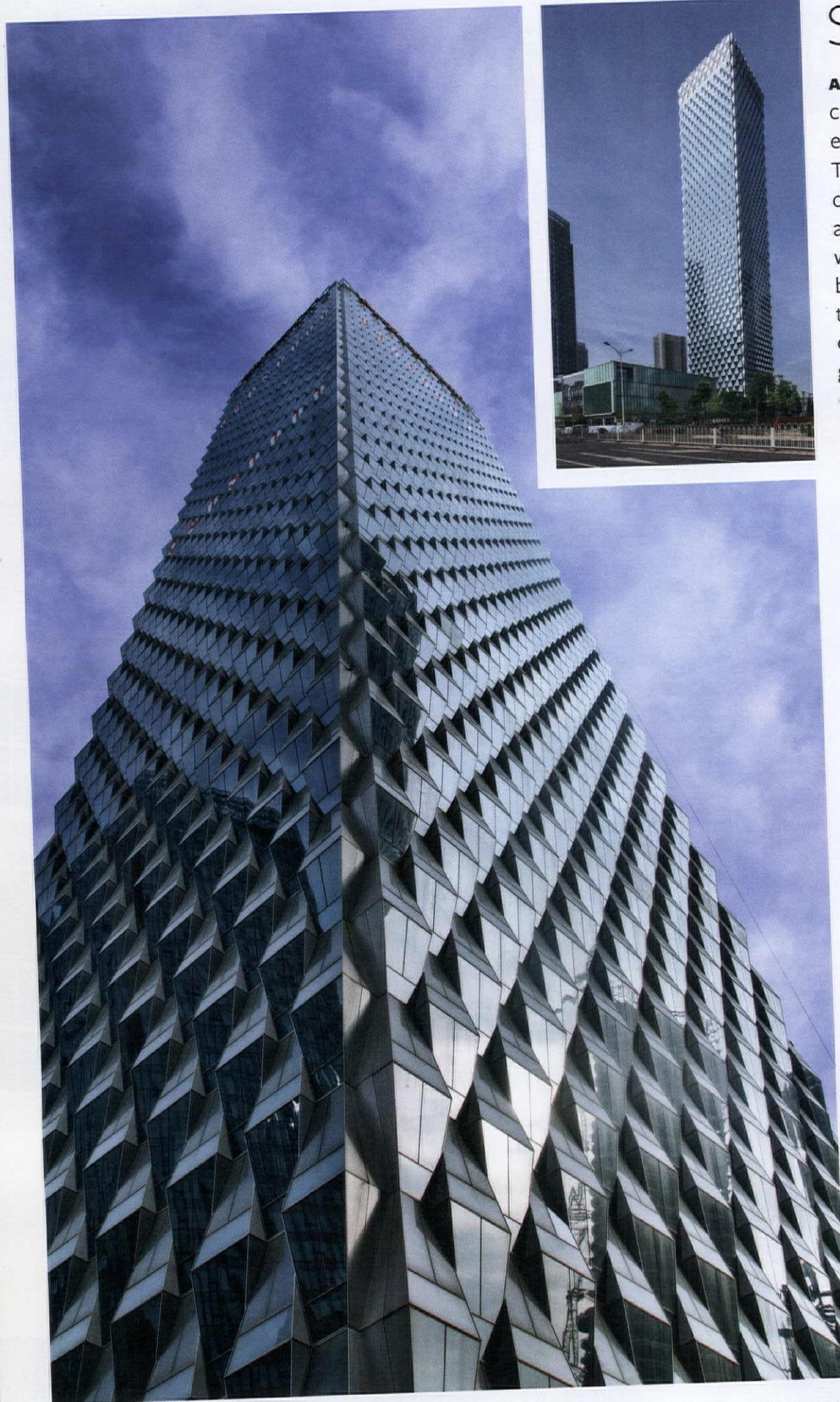
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#GREATMINDSTHINKPINK



Shady Business

AGAINST THE OVERCAST skies of the Chinese capital, the **Beijing Greenland Center** sparkles, an effect multiplied by its complex faceted facade. Trapezoidal glass panels in the 55-story tower, designed by **Skidmore, Owings & Merrill**, meet at alternating concave and convex angles, creating a weave-like pattern on all 478,000 square feet of the building's surface. As the sun shifts location throughout the day and year, the texture "creates an ever-transforming pattern of shade and shadow, giving the impression that the tower itself is always changing," says SOM associate architect Neil Katz.

Besides creating a dynamic spectacle on the city skyline, the tower's undulating surface boosts the building's energy performance. Using environmental analysis software including **Autodesk's** Ecotect and **GNU Group's** DIVA, the architects determined the optimal angles for the 1¼-inch-thick, low-E-coated glass panels to meet so that they would cast the most possible shadow on the structure—with the self-shading helping slash the building's solar heat gain.

Although geometric facades such as this were once cost-prohibitive, new parametric modeling tools streamline the design process. "Many of the analytic tasks traditionally done by engineers are being done by architects," Katz says. "Form can be optimized early in the process, giving you the confidence that the structure will perform as intended."

—Janelle Zara



MULTIFACETED The completed Beijing Greenland Center, with its intersecting units and undulating facade, is located in the capital city's Dawangjing business district (above and inset). Parametric modeling helped the team at Skidmore, Owings & Merrill determine the most energy-efficient angles at which to place the building's trapezoidal glass panels in order to maximize self-shading (right).



FLATWRAP UV HOUSEWRAP

MANUFACTURER: Benjamin Obdyke

PERFORMANCE: When used in conjunction with a rainscreen, this tri-laminate barrier for open-joint claddings provides bulk water drainage, vapor permeability, and UV protection.

PRICE RANGE: \$\$

APPLICATIONS: Suitable for commercial and residential projects, the black wrap comes in 500-foot rolls; its seams do not need to be taped.

BENJAMINOBDYKE.COM

(SNAP #229)



THERMALSAFE PANELS WITH NONEXPOSED FASTENING

MANUFACTURER: Metl-Span

PERFORMANCE: Unlike other fire-resistant wall technologies, these mineral-wool panels have a flush appearance and one-step installation thanks to interlocking side joints.

PRICE RANGE: \$\$

APPLICATIONS: Ideal for exterior separation walls or interior demising walls, the panels are 4 to 8 inches thick and offer one to three hours of fire protection.

METLSPAN.COM

(SNAP #230)



METALWRAP INTEGRATED SERIES

MANUFACTURER: Centria

PERFORMANCE: These insulated composite backup panels—made of two steel skins permanently bonded to a foam core—serve as an air, vapor, and moisture barrier.

PRICE RANGE: \$\$\$

APPLICATIONS: Ideal for mixed-media exteriors, the panels—available in two thicknesses and widths—may be installed horizontally in up to 24-inch spans.

CENTRIAPERFORMANCE.COM

(SNAP #231)



WALKER TEXTURES

MANUFACTURER: Walker Glass and PPG

PERFORMANCE: This 1/4-inch-thick glass now comes with the option to use a full-surface or patterned acid-etched finish on one side and a choice of three Solarban low-E coatings on the other.

PRICE RANGE: \$\$

APPLICATIONS: The 96-by-130-inch panels are available with standard, decorative, and bird-friendly patterns as well as clear and colored glass.

WALKERGLASS.COM

(SNAP #232)

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



= ECO-FRIENDLY ATTRIBUTES

Modern History

THE TERRA-COTTA FACADE of Howard University's **Interdisciplinary Research Building**, designed by international architecture firm **HDR**, uses materials to tell the story of the institution's past, present, and future. The earthy **Shildan** rainscreen that wraps the 81,000-square-foot building nods to and yet updates the Georgian-style masonry seen on older structures on the school's Washington, D.C., campus. The screen's alternating ribbed and smooth textures also recall traditional African textiles and arts, honoring Howard's legacy as the country's premier historically black college.

Aesthetic symbolism aside, the rainscreen improves the building's environmental performance. It allows air to circulate behind the panels, preventing water absorption and mildew growth, while its structurally glazed, unitized curtain-wall system—manufactured by **Oldcastle BuildingEnvelope**—features an integrated exterior fin that shades the structure, decreasing solar gain.

The glass facade “creates an aesthetic connection between the university and its neighbors,” says HDR senior associate Michael Vinkler. It also permits passersby a glimpse at research activities taking place within the facility, which includes a cleanroom and wet and dry labs. The net effect, continues Vinkler, is “a highly visible presence for the university along Georgia Avenue, one of the major boulevards leading into our nation's capital.” —JZ

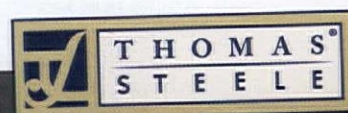


WOVEN IN PLACE

Referencing Howard University's cultural and architectural history, the rainscreen on the college's Interdisciplinary Research Building (right) features smooth and woven clay-colored panels (above) reminiscent of African textiles.



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SNAP 9

Rarefied Air

Manufacturers scale the economic heights in Idaho, Oregon, and Washington State.

BY J. MICHAEL WELTON



THE FORESTRY sector may not dominate the Pacific Northwest the way it once did, but the region's wood products are still in demand.

D.R. Johnson Wood

Innovations, based in Riddle, Oregon, is the first U.S.-certified firm to manufacture cross-laminated timber (CLT), a new category of building material. Two local structures will feature the company's goods: the Richard Woodcock Education Center at Western Oregon University, located in Monmouth, and the Albina Yard mixed-use building, in North Portland.

Companies in Washington State also utilized the recession to experiment with new products, including CLT. Others, such as custom-railing maker **AGS Stainless** on Bainbridge Island, took the time to retool. Five years ago, the 15-employee company began reaching out to architects through advertising, sponsorships, and programmed events. The approach paid off. "Today we have 50 employees and state-of-the-art laser machines," says Kevin Harris, AGS's director of sales and marketing.

Idaho is seeing expansion as well. "Big companies that manufacture here, like **Woodgrain Millwork**, make wooden doors, molding, and flooring that is being sold in Home Depot and high-end stores," says Steve Hatten, executive director of **TechHelp**, the state's Manufacturing Extension Partnership center.

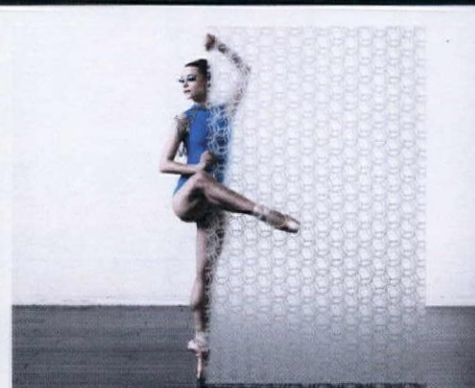
In Boise, where **Smoke Guard** manufactures smoke- and fire-rated curtains for elevator lobbies, on-floor staff grew from 15 to 20 over the last five years. By adding product and quality engineers, the company embraced lean manufacturing processes. And it introduced a new product portfolio. "Our products are spec'd and designed by architects," says Curtis Gonzales, Smoke Guard's president. In addition, he notes that the firm aims to maintain short lead times by working with its supply chain.

Timber may no longer be king of the Pacific Northwest, but innovation is alive and kicking.

Idaho, Oregon, and Washington



1 MANUFACTURER: AGS Stainless
LOCATION: Bainbridge Island, Washington
PRODUCTS: Prefabricated and custom-designed glass and stainless-steel railing systems for residential and commercial use.
FOUNDED: 1988
EMPLOYEES: 50
PRICE RANGE: \$\$\$
AGSSTAINLESS.COM



2 MANUFACTURER: Lumicor
LOCATION: Renton, Washington
PRODUCTS: Recycled-resin architectural panels for walls, ceilings, and furniture.
FOUNDED: 1977 **EMPLOYEES:** 100
PRICE RANGE: \$\$-\$\$\$ **LUMICOR.COM**



3 MANUFACTURER: Insulfoam
LOCATION: Puyallup, Washington
PRODUCTS: Roof, structural, wall, and below-grade insulation made with expanded polystyrene (EPS), graphite polystyrene (GPS), and geofoam lightweight fill.
FOUNDED: 1959 **EMPLOYEES:** 57
PRICE RANGE: \$ **INSULFOAM.COM**



4 MANUFACTURER: Simpson Door Company
LOCATION: McCleary, Washington
PRODUCTS: Interior, exterior, and fire-rated wood doors for all applications.
FOUNDED: 1912
EMPLOYEES: 225
PRICE RANGE: \$\$
SIMPSONDOOR.COM

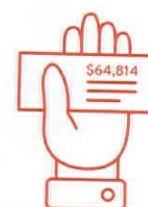
SNAPSHOTS

IDAHO

In 2015,
62,200

people worked at Gem State
manufacturing companies.

Idaho's manufacturing
industry produced
\$8.14 billion worth of
goods in 2014, with sector
employees earning an
average of **\$64,814** a year.



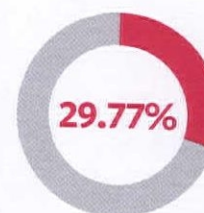
SOURCE: NATIONAL ASSOCIATION OF MANUFACTURERS

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The Beaver State exported

\$17.8 BILLION

in manufactured goods in 2014.



That same year,
Oregon manufacturers
accounted for
29.77 percent of
the state's total output
and employed
10.43 percent of
its workforce.

SOURCES: UNITED STATES BUREAU OF ECONOMIC
ANALYSIS; U.S. CENSUS BUREAU

WASHINGTON

The Evergreen State's 1,700+ forest-products
businesses employ some

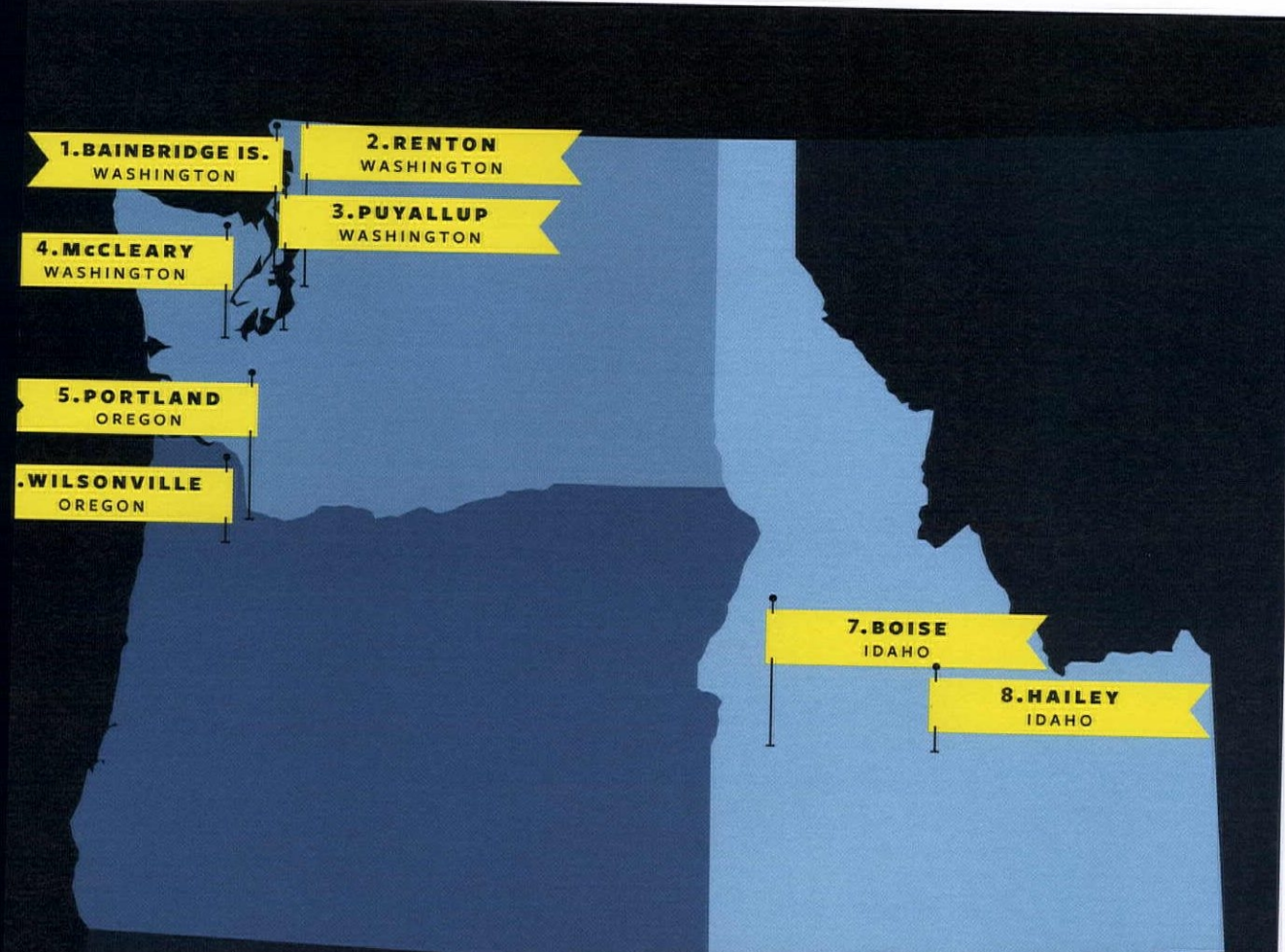
105,000

workers who earn nearly **\$5 billion**
in annual wages.



More than
10 percent of
Washington's
forestry-related
jobs are green.

SOURCE: CHOOSEWASHINGTONSTATE.COM



1. BAINBRIDGE IS.
WASHINGTON

2. RENTON
WASHINGTON

3. PUYALLUP
WASHINGTON

4. MCCLEARY
WASHINGTON

5. PORTLAND
OREGON

6. WILSONVILLE
OREGON

7. BOISE
IDAHO

8. HAILEY
IDAHO



5 MANUFACTURER:

Huntco Site
Furnishings
LOCATION: Portland,
Oregon
PRODUCTS: Benches,
bollards, receptacles,
and bike lockers
and racks.
FOUNDED: 1980
EMPLOYEES: 3
PRICE RANGE: \$\$
HUNTCO.COM



6 MANUFACTURER:

Collins
LOCATION: Wilsonville, Oregon
PRODUCTS: Hardwood, softwood, pine particleboard, and
engineered wood siding and trim.
FOUNDED: 1855 **EMPLOYEES:** 772
PRICE RANGE: \$-\$\$\$ **COLLINSWOOD.COM**

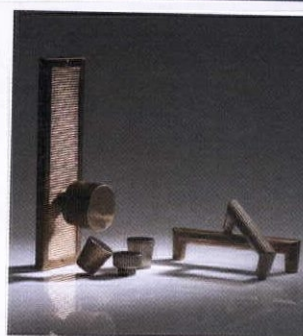


7 MANUFACTURER:

Smoke Guard
LOCATION: Boise, Idaho
PRODUCTS: Fire and
smoke containment
systems for elevators
and buildings.
FOUNDED: 1991
EMPLOYEES: 35
PRICE RANGE: \$\$
SMOKEGUARD.COM

8 MANUFACTURER:

Rocky Mountain
Hardware
LOCATION: Hailey, Idaho
PRODUCTS: Bronze tile;
fittings; lighting; cabinet
and door hardware;
indoor and outdoor
accessories.
FOUNDED: 1994
EMPLOYEES: 150
PRICE RANGE: \$\$\$
ROCKYMOUNTAINHARDWARE.COM





BACK TO NATURE

Working with various municipal agencies and the Pittsburgh Parks Conservancy, Patricia Culley of Bohlin Cywinski Jackson (above) helped make the Frick Environmental Center a paradigm of eco-friendly building.

No Walk in the Park

Bohlin Cywinski Jackson associate Patricia Culley describes the rigors of designing Pittsburgh's Frick Environmental Center to meet the highest green-building standards.

BY LAURA RASKIN

WHEN IT OPENED on September 10, the **Frick Environmental Center (FEC)** brought a new educational and community resource to the residents of Pittsburgh. The two-story building, a joint venture between the city and the Pittsburgh Parks Conservancy, features classroom, gallery, and office spaces; it also sits at the edge of the 644-acre Frick Park, linking the lush, undeveloped area with the residential Squirrel Hill neighborhood.

Yet the project, shepherded by local architects **Bohlin Cywinski Jackson (BCJ)**, is notable for another reason: It's the latest in Pittsburgh's lineage of cutting-edge green buildings. Following in the footsteps of other city projects, such as the **Center for Sustainable Landscapes at Phipps Conservatory**

and **Botanical Gardens** (2012) and Gensler's **Tower at PNC Plaza** (2015), the Frick is aiming to meet some of the most stringent environmental benchmarks and achieve not only LEED Platinum status but also full Living Building Challenge (LBC) certification.

The latter, a rating created by the International Living Future Institute, has seven rigorous performance categories, or Petals, which mandate everything from energy use to material sourcing. If the Frick does obtain its LBC rating, it will join the currently nine buildings worldwide (including the Phipps) to have done so. Project architect Patricia Culley walks **SNAP** through the process of developing the Frick's green credentials.

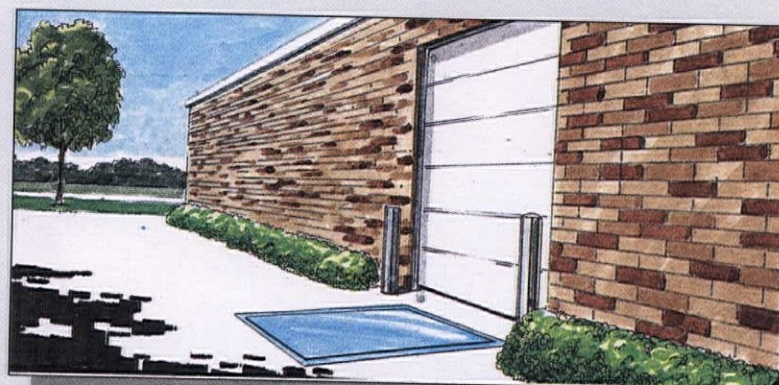


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Philadelphia's Green Genes

The city's stable of environmentally friendly buildings just keeps on growing. Here are three outstanding examples.

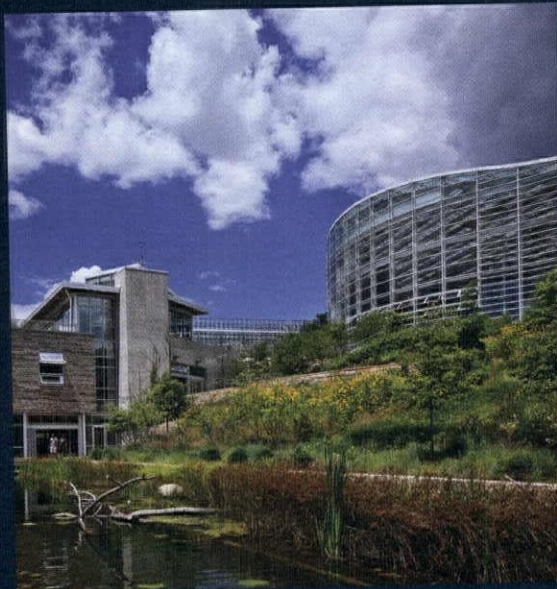
CENTER FOR SUSTAINABLE LANDSCAPES AT PHIPPS CONSERVATORY AND BOTANICAL GARDENS

ARCHITECT: The Design Alliance Architects

YEAR BUILT: 2012

DESCRIPTION: Besides being net positive for energy and net zero for water—meaning it creates more power than it consumes—this education and research facility captures and treats all rainwater falling on-site. Community involvement, bioclimatic design technology, and land use analysis were all essential components of the integrated design process.

CERTIFICATIONS: Living Building Challenge; WELL Building Platinum; LEED Platinum; Sustainable Sites Initiative (SITES) four-star rating



HOW DID PITTSBURGH'S REPUTATION FOR GREEN BUILDINGS INSPIRE THE FRICK CENTER?

I think Phipps Conservatory was key in making the Parks Conservancy aware of the Living Building Challenge [LBC] certification. The decision to aim for it was driven by the Parks Conservancy and our team, although the city was also supportive. It was still a question—even through the start of construction—whether or not we could fully achieve the certification. It is a time-consuming, exhausting, and relentless process, but a wonderful goal.

THE LBC'S WATER PETAL IS ESPECIALLY DEMANDING AS IT REQUIRES USING STORMWATER FOR INTERNAL BUILDING NEEDS, WHICH OFTEN CLASHES WITH MUNICIPAL WATER REGULATIONS. WAS THAT THE CASE HERE?

Yes. Our facility is designed to use city water, not reclaimed water, for potable; otherwise we would have had to become our own water authority, which we couldn't do. We tried to brainstorm ways that the city could change the rules, but Philly is trying to ensure the health and safety of the public and you have to respect that. However, we budgeted for adding filtration systems in the building if the municipal rules change. Demonstrating this allows us to still fulfill the Petal and potentially achieve full LBC certification.

WHAT OTHER CHALLENGES DID LBC FULFILLMENT POSE?

We found the Material Petal hardest to achieve. First you have to research each product, making sure no [harmful] red list chemicals are included. Then there's transparency: LBC wants ingredient labels on the materials, much like those for food. We got caught up in the research, lost sight of the transparency piece, and didn't bid on the project until 90 percent of the products were vetted. It was frustrating that as a designer, you had very little leverage to get manufacturers to open their books.

On the other hand, the Beauty Petal is interesting and unique as it requires projects to have elements of aesthetics, inspiration, and education. At Bohlin Cywinski Jackson, we believe that for a building to be truly sustainable, it needs to be beautiful, so users will want to serve as its stewards.

DID YOU LEARN ANYTHING DURING THE DESIGN AND CONSTRUCTION PROCESS THAT YOU CAN APPLY TO THE NEXT PROJECT?

The Living Building Challenge is very well named. I never assumed that it would be as rigorous and difficult as it was. But because of my experience with it, I'm learning about other green certifications, including the WELL Building Standard, which is primarily about operations and human health. So taken together, LEED, LBC, and WELL encompass the whole range of sustainable building. They are my new interest.

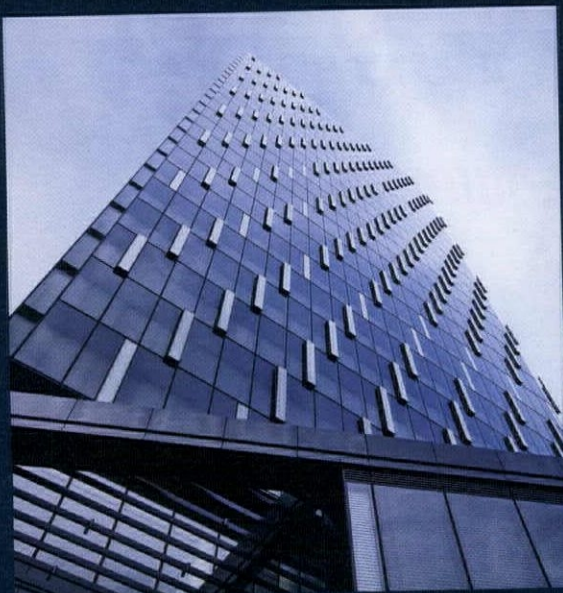
THE TOWER AT PNC PLAZA

ARCHITECT: Gensler

YEAR BUILT: 2015

DESCRIPTION: The 33-story building is one of the few naturally ventilated office towers in the country thanks to its double-skin facade, heat-capturing solar chimneys, and operable poppers (narrow windows) and floppers (interior vents at sill level) that let fresh air flow into and out of the structure.

CERTIFICATION: LEED Platinum



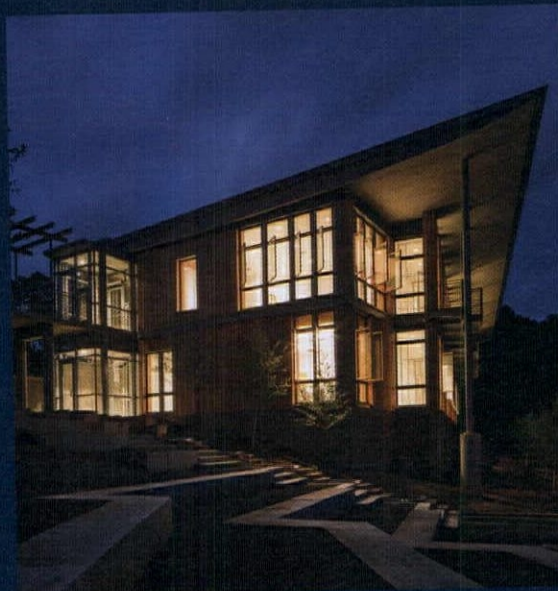
FRICK ENVIRONMENTAL CENTER


ARCHITECT: Bohlin Cywinski Jackson

YEAR BUILT: 2016

DESCRIPTION: Providing educational facilities for K-12 students—as well as hundreds of thousands of visitors each year—the building incorporates such sustainable features as ground-source heat pumps, radiant floors, a photovoltaic array, and a reclaimed water system that provides captured and filtered stormwater for irrigation and nonpotable building uses.

CERTIFICATIONS: LEED Platinum and Living Building Challenge, both targeted





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PREFAB PIONEER

Disney's Contemporary Resort hotel in Orlando (above), designed by Welton Becket, opened in 1971; its nearly 500 prefabricated guest rooms were built in a factory less than two miles away. The citizenM hospitality chain constructs all guest room modules in Poland (opposite).

Pushing Prefabrication

From entire structures to discrete components, the use of off-site construction is expanding across multiple building types.

BY RUSSELL FORTMEYER

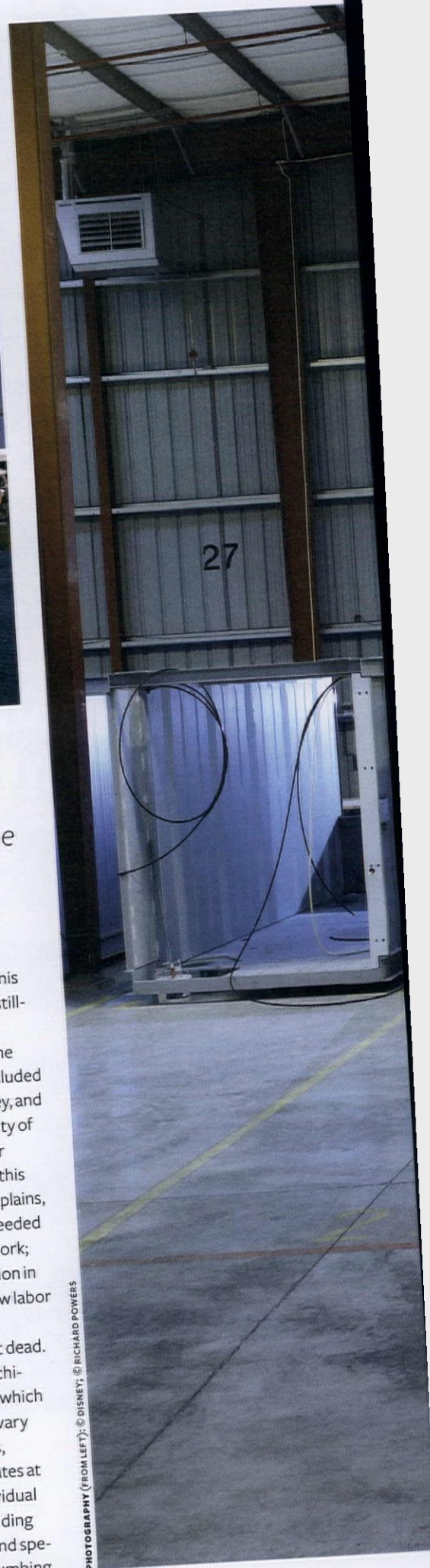
THE LOS ANGELES structural engineer Richard Bradshaw reflects on his first experience with large-scale prefabricated construction in terms that are less than affectionate: "It never really made sense to me," he says, more than 45 years later. Bradshaw worked with architect Welton Becket, who was collaborating with United States Steel and the Walt Disney Company to build a hotel, the Contemporary Resort, for Disney's theme park in Orlando.

The three collaborators conceived the hotel, which opened in 1971, to demonstrate the potential for prefabricated steel construction. U.S. Steel manufactured the nearly 500 rooms for the building's main trapezoidal tower in a purpose-built factory on Disney property a couple of miles from the site. There, workers not only constructed the individual room chassis—each approximately 9 feet high, 15 feet wide, and 30 feet long—but also installed interior finishes and furniture, including the television set. Once the modules arrived at the site, they were craned directly into the superstructure and

hung on cables from its top bracing. To this day, each room is suspended above the still-operating hotel's central atrium.

Like many prefabrication projects, the Disney hotel had several aims. These included accelerating construction, saving money, and illustrating Walt Disney's vision of the city of the future. But "this was the end of their experiment," says Bradshaw. Prefab at this scale did not immediately take off, he explains, because of the immense investment needed to establish a nationwide factory network; the lack of predictable, precise execution in the precomputer era; and relatively low labor costs for conventional construction.

However, the dream certainly isn't dead. For if the aims of prefabrication in architecture remain the same, the ways in which architects harness its potential now vary widely. In addition to entire buildings, contemporary prefabrication operates at several scales, including that of individual modular spaces like bathrooms, building components such as facade units, and specific systems like mechanical and plumbing



PHOTOGRAPHY (FROM LEFT): © DISNEY; © RICHARD POWERS





CONTINUING EDUCATION: PREFABRICATION

FROM ARCHITECTURAL RECORD



PACKING LIGHT

The citizenM hospitality chain has nine hotels worldwide, including a London location (above). The rooms, transported in shipping containers, arrive at the site with plumbing fixtures and furnishings already installed (right).



distribution. Prefabrication also represents a substantial share of new single-family residential construction.

Building typologies with significant programmatic repetition—hotels, multifamily housing, and student housing—still reap the greatest benefits from prefabrication. In 2004, the Dutch architecture firm Concrete conceived of its first prefabricated hotel project, for the citizenM hotel brand. The Amsterdam hotel comprised a concrete core of elevators, stairs, and service risers and a concrete superstructure plinth stacked with modular guest rooms built by the Polish manufacturer Polcom. The architects designed the rooms so that a single fully furnished module fit within a shipping container, for ease of transport.

The chain now has nine hotels. On a recently completed 370-room citizenM near the Tower of London, contractors stacked 30 units a week, shortening construction time by several months when compared to a conventionally built hotel. The brand's newest project, slated to open in 2017 on New York's Lower East Side, features 300 prefabricated guest rooms atop of a three-story concrete plinth. Concrete worked with local firm Stephen B. Jacobs Group to take its concept through construction. To save time, inspectors from New York City's buildings department are conducting their checks at Polcom's factory so that when each module arrives on-site, it is ready for installation.

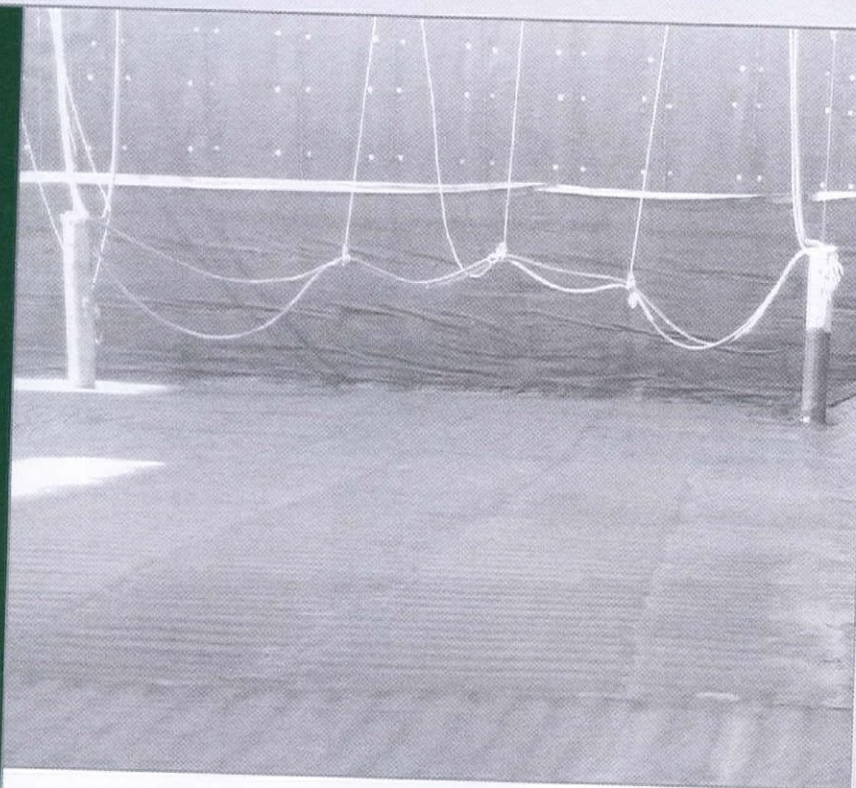
"We didn't start with the idea of making the hotel prefabricated," says Concrete's head of architecture Erikjan Vermeulen. "We started with the idea of creating a better experience with less money, designing smarter in a room of limited size, and giving that saved space back with a ground-floor living room where people could socialize."

The original citizenM concept featured conventionally built infill corridors, but Vermeulen says the design created too many unknowns that delayed construction. The new hotels incorporate the corridor into the room module. On-site, the contractors connect the plumbing, mechanical, and electrical services for each module; the highest floor of the concrete plinth—usually at level three—includes the building services equipment that feeds upward through the 15-story guest-room tower.

Prefabrication helped San Francisco-based architect David Baker reduce on-site construction time by nearly a year on a Union City, California, housing project called Union Flats. The client needed to accelerate the process to qualify for public money for transit-oriented development. So the architect took a modular approach for the 243 units, which included live-work lofts and one- and two-bedroom apartments.

Working with Guerdon, a manufactured-housing fabricator in Boise, Idaho, Baker utilized wood-frame modules measuring 15 feet, 4 inches wide, 11 feet high, and up to 74 feet long to maximize shipping efficiency.

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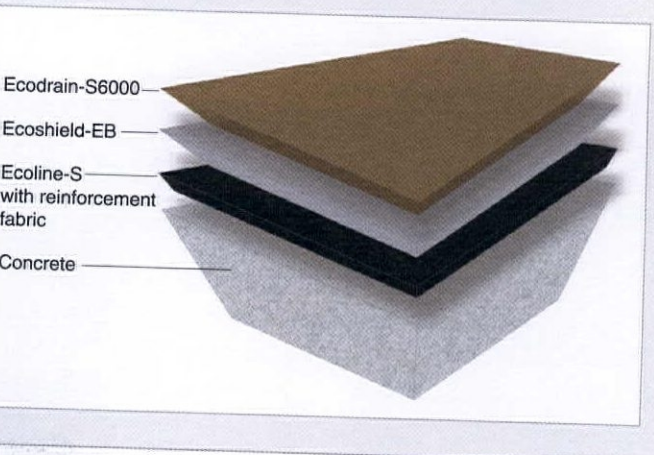
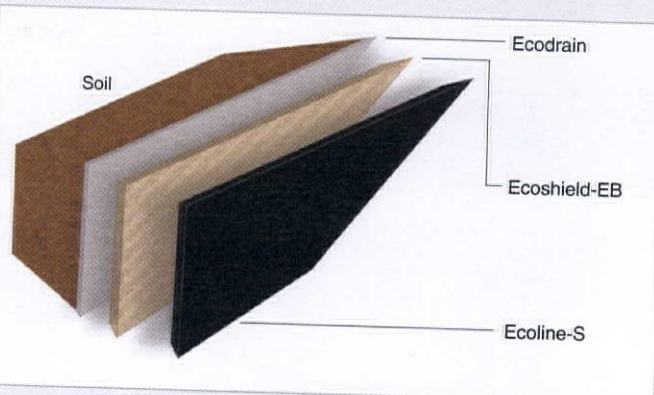
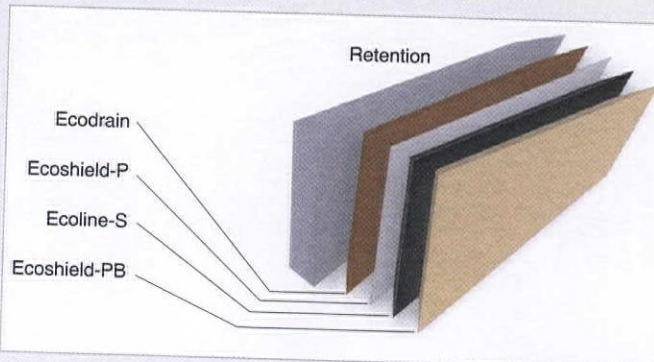
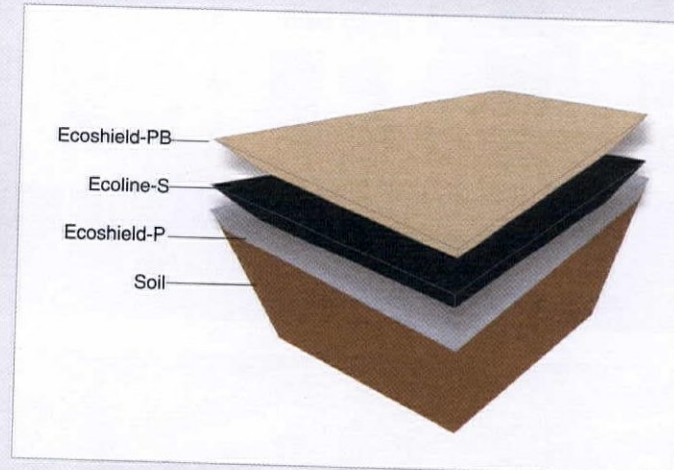
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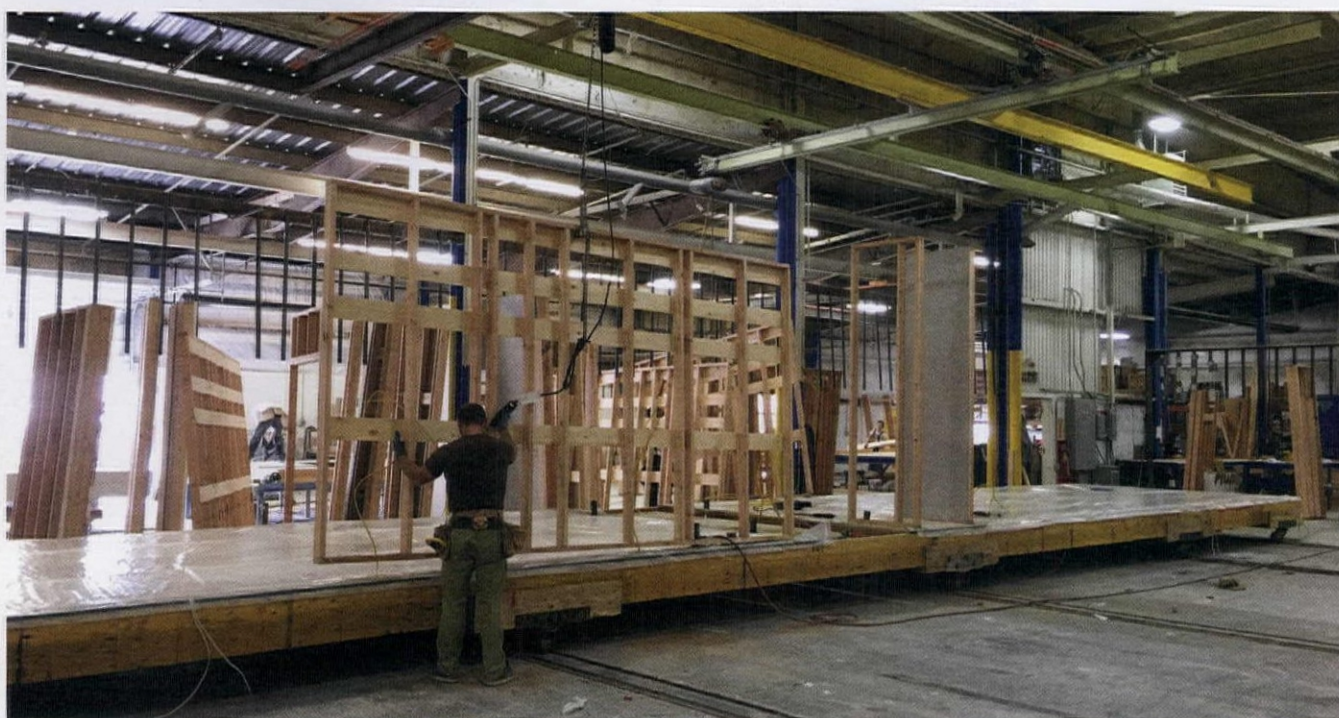


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CONTINUING EDUCATION: PREFABRICATION

FROM ARCHITECTURAL RECORD



STACKING THE DECK

David Baker's Union Flats, a 243-unit apartment building in Union City, California (above), is made of modules built in Idaho (left). Cladding is installed on-site after the modules are stacked (below).

Two modules create two one-bedroom apartments mirrored across a corridor through the middle, while three modules are needed for two-bedroom apartments in a similar configuration. To vary the floor plan, on-site contractors can cut the modules in half through the corridor.

As with the citizenM hotel rooms, inspections are conducted in Boise, so the units can remain locked throughout installation to avoid interior damage. Each module's framing sits within a steel chassis. Once this is set in place, structural tabs on the modules are fastened to adjacent modules, creating a consolidated structural system.

"Before the recession, we had a number of modular projects, but then framers needed jobs and costs came down for conventional construction," Baker says. "Now in many cities, modular wood-frame construction is competitive again with union-labor costs." In a factory, he adds, even union labor often costs less. The controlled conditions also lead to higher quality, simpler construction methods, and fewer hazards compared to on-site circumstances.

Despite his enthusiasm, Baker believes prefabrication sometimes has a negative impact on design. Shipping constraints prescribe dimensions, and connections for building services often dictate kitchen and bathroom placement. Prefabrication can also compromise the appearance of a modular housing project, especially if the design emphasizes the technology's inherent repetitiveness.

Baker notes that the Union Flats project looks indistinguishable from the conventionally constructed housing project his firm





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MADE TO ORDER

By using modular prefabrication, NBBJ was able to construct the OhioHealth Riverside Methodist Hospital at \$21 million under budget—despite significant changes made midway through the project.

designed across the street. Since the units arrive on-site as waterproof boxes wrapped in a single-ply membrane, a variety of cladding systems can be applied after they are stacked to conceal the joints between modules.

The biggest challenge to prefabrication is the irregularity of sites in dense urban environments, says Baker, since maximizing leasable living space often outweighs the construction-cost savings from standardization. In dense cities, he contends, prefabricated kitchen and bathroom modules make more sense than full dwelling units.

Baker also recommends that owners and architects weigh potential construction-cost savings against the expense of a large on-site crane, which often accounts for the single-most significant construction expense for multifamily housing. “If you’re good at it, you’re lifting four units a day, but if you’re really good, you can lift 12 units a day,” Baker says, noting that at Union Flats, they averaged 11 or 12 modules a day. He predicts that prefabricated multifamily housing could one day displace conventionally built apartment buildings in California, given the endemic housing shortages in the state.

Modular construction is also making inroads in healthcare facilities but not in the manner one might expect. Prefabrication has not been widely adopted for hospital

patient rooms. However, architects have found that some individual systems within these complex buildings lend themselves particularly well to prefabrication.

Designers from the Columbus, Ohio, office of architecture firm NBBJ initially developed a prefabrication approach to patient toilet rooms, head walls, casework, and building-services utility racks for Dayton’s Miami Valley Hospital, which opened in 2010. The client was interested in the idea of a universal patient room, where standardized systems and architecture could serve a variety of clinical situations, from intensive care to basic medical-surgery nursing units. But after studying the potential for a fully prefabricated room—akin to the citizenM hotel approach—the architects found scant possibility for savings. Instead, they worked with construction manager Skanska toward more discrete prefabricated components to realize savings in time and money.

“We learned a lot from Miami Valley,” says Tim Fishking, an NBBJ principal. The biggest lesson was minimizing the need for warehouses to temporarily store prefabricated components prior to on-site installation. So for its second prefabrication project, the OhioHealth Riverside Methodist Hospital, which opened in 2015 in Columbus, NBBJ worked with the contractor to streamline

the schedule to engender a “just in time” approach for the prefabricated systems. This allowed elements such as head walls and utility racks to be shipped to the site for the 224-bed, 437,000-square-foot neuroscience, vascular, and cardiac-care hospital as soon as they were ready.

At Riverside, whole mechanical and electrical distribution racks were laid out in the prefabrication shop based on the hospital’s corridor design and GPS coordinates established on the construction site. Joints in the racks aligned with the radius of the corridor’s curve, so each 20-foot-long by 8-foot-wide section could be transported to the site, hung from the ceiling, and attached to adjacent sections to create continuous runs of services such as chilled and hot water, oxygen, nitrogen, and fire sprinklers. “You didn’t have this scenario of ‘who got there first’ that forces trades to reroute their work around others,” says Fishking. “It also improves the owners’ ability to maintain the facility, because they know each rack is identical.”

Prefabricated systems and components at Riverside included single-stall toilet rooms, head walls in patient bays and exam rooms, utility racks above the operating rooms, plumbing zone valve boxes, and even entry canopies. The project was completed six months before the planned opening date,

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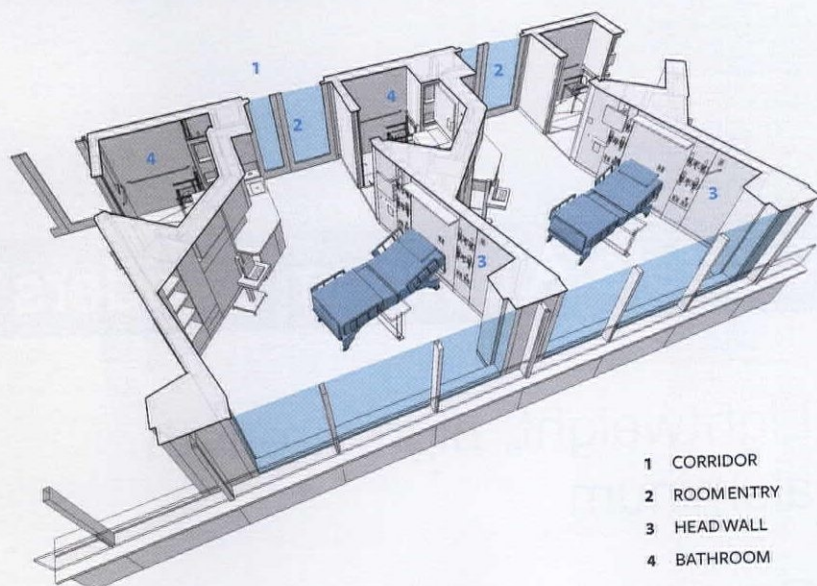
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- 2 ROOMENTRY
- 3 HEAD WALL
- 4 BATHROOM

HEALTHY APPROACH

NBBJ's OhioHealth Riverside Methodist Hospital incorporated prefabricated patient room head walls and toilets (top and middle) to shorten construction and simplify multi-trade coordination.

an accomplishment Fishking attributes in large part to prefabrication.

Ryan Hullinger, another principal in NBBJ's Columbus office, says successful prefabrication depends on getting it right in virtual design. "So much work has to go into testing patient rooms for dozens of clinical scenarios to ensure it works in those situations," says Hullinger, who also recommends extensive physical mock-ups.

Some of the firm's upcoming hospital projects include extensive renovation, and

Hullinger envisions even more benefits from a prefabrication approach. "A typical hospital-wing renovation includes demolition and significant downtime while you build new rooms," he says. "With prefabrication, you could build the patient rooms off-site during the demolition phase and vastly reduce that downtime." It's similar to the schedule savings on new construction projects, in which site preparation often occurs in parallel with the factory fabrication work.

With the renewed interest in prefabrication, it can be easy to overlook the fact that unitized facade systems remain the most common form the method takes in buildings. But some industry experts believe that prefabrication is also the answer for facades with complex geometries that would otherwise have to be achieved through time-consuming on-site labor. Technologies such as 3-D printing and robot-enabled construction could eventually pave the way for envelopes with even more exuberant shapes and a higher level of intricate detail. But regardless, the aims will be the same as they have always been—to build faster, better, and more cheaply. ■

RUSSELL FORTMEYER LEADS SUSTAINABLE DESIGN FOR THE LOS ANGELES OFFICE OF ARUP AND TEACHES AT THE SOUTHERN CALIFORNIA INSTITUTE OF ARCHITECTURE.

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- 2 Outline which building typologies and components are best suited for prefabrication.
- 3 Explain why off-site construction can result in better-performing buildings and safer construction sites.
- 4 Discuss the role of virtual construction and digital technology in prefabrication.

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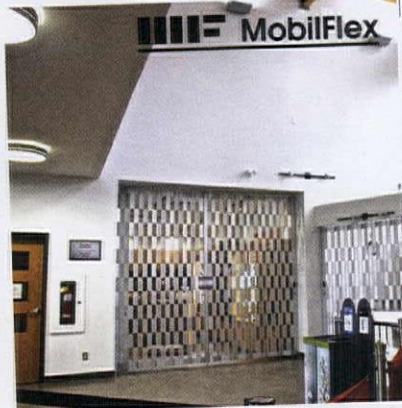
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Product Application

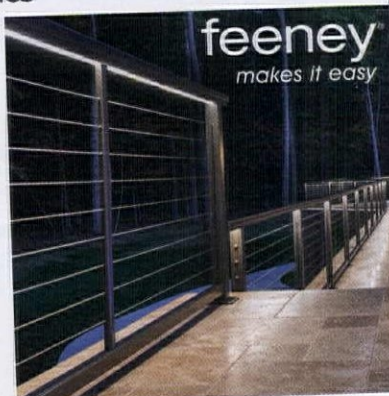
- Fits into top & bottom rails of all DesignRail® railings
- Residential, commercial, institutional settings
- Outdoor lighting accent & visual aid for low-light areas

Performance Data

- High CRI (80) LEDs for excellent color rendering, rated 50,000 hrs.
- 24 volt DC, fully weatherproof, plug & go components

www.feeney6.com

800.888.2418 | Trang Soriano, tsoriano@feeney-



Booth: 3300 AIA Expo

SNAP 240

DOORS, WINDOWS

CLIMA-TITE™ - ADVANCED TRANSLUCENT WALL SYSTEMS

WR | GREEN

Major Industries, Inc. -

Skylights, Canopies and Wall Systems

Clima-Tite™ translucent wall systems feature pultruded fiberglass framing for enhanced thermal performance and high corrosion resistance compared to traditional aluminum framed systems.

Product Application

- Corrosive environments - wastewater/coastal areas
- Cold-weather climates
- Office buildings / schools

Performance Data

- Great CRF and SHGC numbers mean more occupant comfort and smaller energy bills

www.majorskylights.com

888.759.2678 | sales@majorskylights.com

Booth: #815

Greenbuild

SNAP 235



MAJOR
INDUSTRIES

DOORS, WINDOWS

CLEAR SOLUTION FOR ALL 45-MIN. APPLICATIONS

NEW | S

SAFTI FIRST Fire Rated Glazing Solutions

There's nearly clear—then there's clear. SuperLite II-XL 45 offers the best clear solution for all 45-minute applications at a better price than ceramics. Proudly USA-made.

Product Application

- Doors
- Windows, sidelites, transoms

Performance Data

- ASTM E-119 with hose stream
- CPSC Cat. II safety
- 40 STC
- UL/WHI listed in large sizes

www.safti.com/best45

888.653.3333



SNAP 237

DOORS, WINDOWS

ONE-PIECE HYDRAULIC & LIFT-STRAP BIFOLD DOORS

WR

Schweiss Doors, Moving Walls

Schweiss Doors manufactures unique custom doors. One-piece hydraulic doors and patented Lift-Strap opening/closing bifold doors.

Product Application

- Moving doors and walls
- You think it, they build it
- Custom-designed storefronts and more

Performance Data

- Faster, safer operation
- Zero lost headroom
- Superior design that keeps working

www.schweissdoors.com

507.426.8273 | schweiss@schweissdoors.com

SNAP 239



EQUIPMENT

SERIES 3000 DOCK LIFT- UPDATED & EXPANDED

Advance Lifts, Inc

Advance Lifts Inc. The nation's #1 dock lift builder has recently updated and expanded their 3000 series of pit mounted dock lifts.

Product Application

- This newly expanded line brings lower lowered heights and a significant cost reduction to dock lifts with capacities between 8,000 and 20,000 pounds.

Performance Data

- With the industry's leading warranty and most complete lines of surface and pit mounted dock lifts, every dock needs and Advance Lift.

www.advancelifts.com

1.800.843.3525 | michaelr@advancelifts.com

SNAP 241



FAST-TRACK YOUR BEST IDEAS

MUROY

THE PREFABRICATED BUILDING ENVELOPE SYSTEM
THAT SETS YOUR IMAGINATION FREE

Take design-build to a whole new level with Murox, the fast-track construction solution that accelerates your projects without compromising your creative vision. Our prefabricated wall panels are factory-built to your exact specifications and delivered construction-ready to your worksite. Coupled with our **BuildMaster** approach, **Murox** reduces commercial, industrial, and institutional build times by up to 50%. So forget your prefab preconceptions and experience Murox. You'll never look back.



CANAM
BUILDINGS

SNAP 52

canam-construction.com

1-866-466-8769

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



SNAP 242

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

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Acoustical Surfaces, Inc.

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- Residential, Commercial, Restaurants, Classrooms
- Pro Audio/Studios, Swimming Pools, Conference Rooms
- Hospitals, Auditoriums, Airports, Train Stations, Concert Halls

Performance Data

- Excellent NRC Rating – 0.80 NRC (per ASTM C423) with a 4 inch Airspace, No Liner Needed

www.acousticalsurfaces.com

800.448.0121 | sales@acousticalsurfaces.com



SNAP 243

LANDSCAPING, SITEWORK

SHELTERS WITH A VIEW

ICON Shelter Systems Inc

Vista Series Shelters are the first of their kind. This two story shelter features a circular stair that leads to an upper level observation platform. Several sizes and styles are available.

Product Application

- Perfect for scenic overlooks
- Locate near amphitheaters for private party seating
- Excellent for scoring platforms in sports complexes

Performance Data

- Second story open or covered
- Can be built into a berm for catwalk access
- Structure designed for concrete 2nd floor deck

www.iconshelters.com

800.748.0985 | info@iconshelters.com



Booth: 1643

ASLA

SNAP 244

LANDSCAPING, SITEWORK

FUNCTIONAL & PHENOMENAL FLOOR

Stonhard, a brand of The Stonhard Group

Stontec, epoxy and urethane flake systems cleverly combine durability and long-life cycle with creative color palettes and fresh design. Stontec floors are long-term performers; stain, impact and slip resistant, and easy-to-clean. Flake palettes are unlimited, from bright and bold to earthy and soothing.

Product Applications

- Formulated for cafeterias, kitchens, multipurpose rooms, classrooms, locker rooms, restrooms & stadium concourses
- Large, small and micro-flake sizes available

Performance Data

- Easy to maintain, wear resistant against continuous foot and wheeled traffic
- Matte or gloss finish. No waxing required

stonhard.com 800.257.7953



SNAP 245

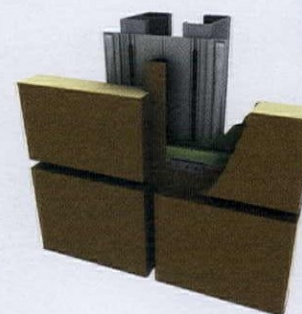
CENTRIA FORMAWALL PE SEAL PLATE

CENTRIA

CENTRIA's Formawall® insulated metal panel system now offers enhanced moisture and thermal control with Formawall Pressure-Equalized (PE) Seal Plate. PE Seal Plate equalizes pressure at the end joint of each panel forming a solid shield against air and moisture penetration. With an integral gasket, a vented drain channel and a non-curling butyl seal, PE Seal Plate provides multiple lines of defense against moisture and air infiltration. Any moisture that enters the panel system is expelled to the exterior by the vented, pressure-equalized drain channel. To ensure the highest performance, PE Seal Plate allows for the seal to be inspected for consistency along the vertical seal plate.

Performance Data

- Equalizes pressure at the end joint of each panel
- Forms a solid shield against air and water infiltration
- Minimizes the force that can drive water through the wall system
- Allows the seal to be inspected for consistency



Formawall PE Seal Plate

CENTRIperformance.com/PESealPlate
800.250.8675

SNAP 246

MATERIALS

TOTAL ACOUSTICS™ PERFORMANCE

WR | GREEN | NEW

Armstrong Ceiling Solutions

Ceiling design options that combine both sound absorption (NRC) and sound blocking (CAC) in one system for total noise control and design flexibility.

Product Application

- Office
- Healthcare
- Education

Performance Data

- Good: NRC 0.60-0.65 and CAC 35+
- Better: NRC 0.70-0.75 and CAC 35+
- Best: NRC 0.80+ and CAC 35+

armstrongceilings.com/totalacoustics
1.877.276.7876 | techline@armstrongceilings.com



SNAP 247

3135EC ECLIPSE SOFT-CLOSE UNDERMOUNT
NEW

Accuride International

Tough enough for commercial use, model 3135EC Eclipse Undermount Easy-Close slide delivers flawless movement, easy adjustment, and superior soft-close action for jobs up to 30" wide.

Performance Data

- Reliable soft-close action
- Multiple drawer front adjustment for easy installation
- Up to 100 lb. load rating
- ADA compliant with 4.8 lbs. of pull force
- Quiet operation

accuride.com/eclipse



SNAP 248



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Strategic, full-service market research solutions focused on measuring...

- BRAND POSITION — attitudes, awareness, usage, image
- CUSTOMER EXPERIENCES — satisfaction, wants/needs, likelihood to recommend, loyalty/advocacy
- MARKETING EFFECTIVENESS — target audience reach, message impact, ability to cause action
- PRODUCT DEVELOPMENT — concept testing, product needs identification, nomenclature, pricing, marketing

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STAINLESS STEEL 16-GAUGE INDUSTRIAL SINKS

\$\$\$ | GREEN | NEW

Just Manufacturing

ARMOR Series: 16-gauge type 304, seamlessly die drawn, true gauge industrial-grade stainless steel drop-in and under-mount sinks.

Product Application

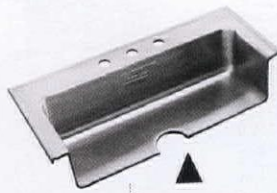
- Commercial and industrial applications
- Full range of sizes; available in ADA-compliant and standard depths
- Max capacity straight sided bowl configuration

Performance Data

- 25% thicker compared to standard 18 gauge
- Just Sinks are made in the USA from domestic stainless steel of 90% recycled content

www.justmfg.com

847.678.5150 | Customer Service

16
GAUGESeamlessly Die-Drawn,
Heavy Duty, 16 Gauge,
Type 304 Stainless Steel for
use in commercial applications.

SNAP 249

ROOFING, SIDING, THERMAL & MOISTURE PROTECTION

ARCHITECTURAL PRECAST CONCRETE CLADDING PANELS

GREEN | WR

Easi-Set Worldwide Licensed Precasters

SlenderWall is an Ultra Hi-Performance 28 lb/sf award winning architectural precast concrete with integral heavy-gauge steel-stud frame building envelope panel system. Wind-load tested to 226 mph.

Product Application

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

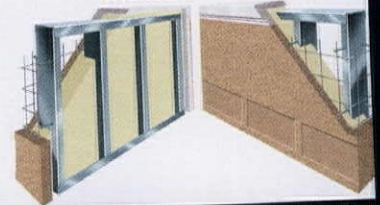
Performance Data

- Factory-installed continuous closed-cell foam insulation - compliant with all IECC/ASHRE energy codes

www.SlenderWall.com

800.547.4045 | info@easiset.com

SLENDERWALL®

A COMPLETE BUILDING PANEL
INSIDE AND OUT

- Fewer on-site trades • Faster installation
- Lower structural cost • Class "A" finishes

SNAP 250

ROOFING, SIDING, THERMAL & MOISTURE PROTECTION

THE ULTIMATE WATER TABLE WATERPROOFING SYSTEM

Epro Services, Inc., Wichita, KS 67211

Product Application

- Complete field-installed composite
- Cost effective, timely application
- Adaptable project design
- Flexible for unique construction conditions
- High productivity

Performance Data

- Seamless, self-sealing system
- Excellent strength and durability
- Exceptional chemical resistance
- Fully bonded to slab
- Redundant protection

www.eproserv.com

800.882.1896 | info@eproserv.com



SNAP 251

ROOFING, SIDING, THERMAL & MOISTURE PROTECTION

FROET CHAMELEON DOWNSPOUT NOZZLE

\$ | NEW

Froet Industries LLC

Industry first color coordinated downspout nozzle. Fifteen standard colors and many custom colors. Available optional color coordinated flapper cover.

Product Application

- Labor savings
- Fits all commonly used pipe materials
- Unique Attachment design
- Low profile to wall surface
- Architecturally pleasing

Performance Data

- Powder coated finish-Zero VOC's

www.froetindustries.com

815.626.7922 | info@froetindustries.com



SNAP 252

ROOFING, SIDING, THERMAL & MOISTURE PROTECTION

DECORATIVE GLASS RAINSCREEN SYSTEMS

WR

Bendheim Wall Systems Inc.

Elegant, budget-smart glass over-cladding systems refresh facades & offer durable protection against moisture damage. Glass can be replaced without deglazing surrounding panels, for easy maintenance.

Product Application

- 3001 Orchard Pkwy Facade, San Jose, CA
- 328 W Wisconsin St. Entrance, Chicago, IL

Performance Data

- Rigorously tested in accordance with ASTM & AAMA
- Non-combustible

www.BendheimRainscreens.com

800.221.7379 | rainscreens@bendheim.com



SNAP 253

ROOFING, SIDING, THERMAL & MOISTURE PROTECTION

PERFORATED IMAGING ON VA PARKING STRUCTURE

WR

Dri-Design

Dri-Design's Perforated Imaging technology can reproduce virtually any image by varying the size, density and location of the perforations.

Product Application

- Carl T. Hayden VA Medical Center parking garage
- Phoenix, AZ
- Perforated and Perforated Imaging Panels

Performance Data

- Available in a variety of materials and colors.
- Fully tested to exceed ASTM standards and the latest AMMA 508-07.
- Not laminated or a composite material.

www.dri-design.com

616.355.2970 | sales@dri-design.com



SNAP 254

ROOFING, SIDING, THERMAL & MOISTURE PROTECTION

WALL PANELS

\$\$\$ | GREEN | NEW

Petersen Aluminum Corporation

PAC 1/2" and 7/8" corrugated panels offer unmatched flexibility for both walls and roofing. Panels can be perforated for a variety of exterior projects, as well as interior acoustical applications.

Product Application

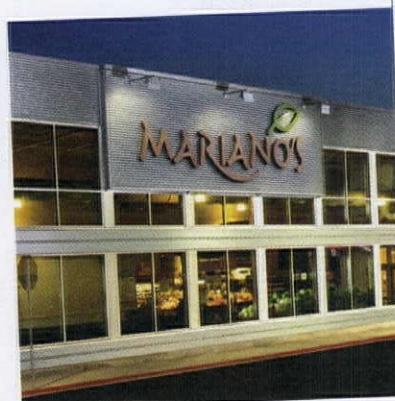
- Mariano's Fresh Market, Oak Lawn, IL

Performance Data

- 30-year non-prorated finish warranty
- 70% full PVDF-finished metal
- Available in 38 colors

PAC-CLAD.com

800.722.2523 | Rob Heselbarth



Booth: 2255 METALCON

SNAP 255

DRY AND WET FLOOD PROTECTION

NEW | WR | GREEN

Smart Vent Products, Inc. Flex-Wall™

Smart Vent has expanded its line of ICC-ES Certified Foundation Flood Vents to bring you the most advanced dry floodproofing solution on the market.

Product Application

- Commercial buildings in flood zones benefit from eliminating the need for off-site storage and fees.

Performance Data

- Rapid deployment in minutes
- Can be sized to fit any opening
- Layered Kevlar® structural webbing
- Coated water retention layer

smartvent.com

877.441.8368

SPECIALTY PRODUCTS



Booth: S1428 IBS

SNAP 256



"We conduct research about climate science and sustainable construction, so we need to lead by example. Manufacturers like Excel Dryer - who continue to innovate sustainable products like the high-speed, energy-efficient XLERATOReco® Hand Dryer - allow us to do that."

*- Dan Fernbank, Energy Manager
at the University of Reading*



XLERATOReco Uses 55% Less Energy Than UK Blade-Style Dryers

XLERATOReco uses innovative technology to dry hands fast while only using 500 watts, making it the most energy efficient and environmentally friendly hand dryer on the planet. When the University of Reading compared the independent research, they found that XLERATOReco used **55% less energy** than the blade-style hand dryer, representing an annual **savings of \$2,155.20**.

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SNAP 19

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sales@exceldryer.com



SPECIALTY PRODUCTS

ANTI-SLIP STAIR TREADS & NOSINGS

\$

Wooster Products, Inc.

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

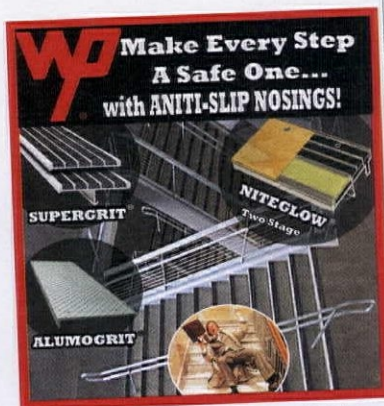
Product Application

- 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 257

EXTRUDED FENCE SERIES

\$\$ | GREEN | NEW

OGI Architectural Metal Solutions - an Ohio Gratings Company

Extruded Fence is manufactured from 6000 series aluminum and can be custom fabricated to meet privacy and security requirements by offering up to 100% visual block.

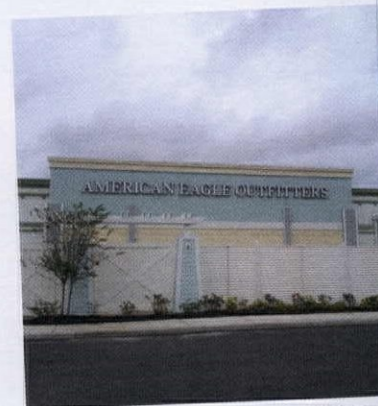
Product Application

- Multi-Family Complex - Boston, MA
- Tampa Premium Outlets - Tampa, FL

Performance Data

- Easily customized and most assemblies integrate channel or tube frames and mounted to posts
- Can be powder coated to match any color

www.ohiogratings.com
800.321.9800 | Alex Stuhldreher



SNAP 258

SPECIALTY PRODUCTS

STANDARD & CUSTOM METAL PRESS BOXES

WR

Sturdisteel

For new or existing facilities, Sturdisteel's modular design construction ensures a completed building in a fraction of the time.

Product Application

- High schools & colleges
- Arenas & rodeos
- Motorsports

Performance Data

- 26-gauge type R metal panels
- Non-combustible steel framing
- Pre-wired for local power connection

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



SNAP 259

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

SPECIALTY PRODUCTS



SNAP 260

The Best Pavements Are Invisible

Grasspave²

grass porous paving

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SNAP # 261



YOU **CREATE** IT.
WE **BUILD** IT.

Introducing new **BIMCreate™** and **CABCreate™** design tools from Otis

As the world's largest manufacturer and maintainer of people-moving products, Otis has long been the easy choice for millions of customers around the world. By placing new innovative design tools at your fingertips, we're making the decision that much easier.

Both tools are simple ways to see exactly why Otis makes sense in your building – even before it's built. [Check them out at Otis.com](http://Otis.com).

BIMCreate™

Enables architects to create customizable, configured 3D Revit® files for integration into overall building plans, rather than selecting from pre-existing files

CABCreate™

Allows architects, building owners and general contractors to design their own elevator aesthetic package and view highly sophisticated, realistic renderings

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Just when the competition *thought* they had caught up, C.R. Laurence again took dry glaze railing to the next level. Introducing the all-new **TAPER-LOC X®** Glass Railing System with patent-pending **Safety Seal Technology**.

FASTER

Our patented system allows one-person installation and reduces install time by 50%. The preset precision torque tool optimizes installation and ensures you'll never have to worry about over-tightening.

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An Architectural Record award winner, our base shoe features an engineered multiple hollow design that makes it 30% lighter for easier handling and lower costs.

TAPER-LOC X
DRY GLAZE RAILING SYSTEM
crlaurence.com/taper-loc

SMARTER

CRL partnered directly with the International Code Council to develop acceptance criteria to take the guesswork out of code compliancy—something no other railing manufacturer has done.

SAFER

New **Safety Seal Technology** means contractors no longer have to dangerously reach over glass to roll in the drop-side rubber seal. CRL also offers a complete selection of certified monolithic and laminated tempered systems that are 2015 IBC compliant.

SEE US AT **ABX2016** Architecture Boston, **BOOTH 437**

SNAP 6

CRL
US ALUMINUM



NEW AND UPCOMING EXHIBITIONS

Nick Cave: Until

NORTH ADAMS, MASSACHUSETTS

October 16, 2016–September 4, 2017

Conceived as a one-year concatenation of community events, music, theater, and art, *Until* will incorporate performances by dancers, singer-songwriters, pop artists, poets, and composers as well as panel discussions, community forums, and other forms of creative public debate and engagement. As part of the event Nick Cave will use MASS MoCA's signature football field-size space to create his largest installation to date, which will comprise millions of beads and thousands of found objects. For more information, visit massmoca.org.

Voukos: The Breakthrough Years

NEW YORK CITY

October 18, 2016–March 15, 2017

Trained as a traditional potter, Peter Voukos defied Midcentury craft dictums of proper technique and form to completely reinvent the medium. He combined wheel throwing with slab building, traditional glazes with epoxy paint, and figuration with abstraction; he also made huge ceramic structures with complex internal engineering. The exhibition—the first to focus on Voukos's early career—will feature approximately 31 examples of his work, most of which have not been exhibited on the East Coast in four decades. Also included will be three of the artist's rarely seen works in oil on canvas, which help demonstrate how Voukos concurrently developed his ideas in pottery, sculpture, and painting. For more information, visit madmuseum.org.

ONGOING EXHIBITIONS

Hippie Modernism: The Struggle for Utopia

BLOOMFIELD HILLS, MICHIGAN

Through October 9, 2016

Presenting a broad range of art forms and artifacts of the era, *Hippie Modernism: The Struggle for Utopia* features experimental furniture, alternative living structures, immersive and participatory media environments, alternative publications and ephemera, and experimental film. The exhibition, organized by Minneapolis's Walker Art Center, covers one of the most vibrant and inventive periods of the not-too-distant past: one that continues to resonate culturally today. For more information, visit cranbrookart.edu/museum/exhibition.

KieranTimberlake: Drawn + Quartered

PHILADELPHIA

Through October 14, 2016

On view at the Harvey and Irwin Kroiz Gallery and the subject's office, *KieranTimberlake: Drawn + Quartered* is an architecture exhibit that surveys the execution of line and prototype in the firm's design process. Presented by KieranTimberlake and the Architectural Archives of the University of Pennsylvania, the exhibit includes drawings, scale models, and mock-up experiments. For more information, visit kierantimberlake.com.

15th International Architecture Exhibition: Reporting from the Front

VENICE

Through November 27, 2016

Taking place in the Arsenale, the Giardini public park, and various other venues in Venice, this annual blockbuster show features success stories in which architecture helped expand the possible. Designed to attract a broad audience, *Reporting from the Front* explores what it's like to improve the quality of life while working within the margins, under tough circumstances, and facing pressing challenges. In a collective effort to better the built environment, the exhibition asks, What does it take to be on the cutting edge and to conquer new fields? For more information, visit labiennale.org.

Narcissus Garden at Johnson's Glass House

NEW CANAAN, CONNECTICUT

Through November 30, 2016

To celebrate the 110th anniversary of the great architect's birth and the 10th anniversary of his most famous residence's being opened to the public, Philip Johnson's Glass House hosts an installation by Japanese artist Yayoi Kusama. *Narcissus Garden*, created for the 33rd Venice Art Biennale, in 1966, is incorporated into the 49-acre site around the Glass House. The piece consists of 1,300 steel spheres floating on a newly restored pond, providing a dramatic view leading up to the house. For more information, visit theglasshouse.org.

Form/Unformed: Design from 1960 to the Present

DALLAS

Through December 31, 2016

Showcasing more than 30 works drawn largely from the Dallas Museum of Art's collection dating from the 1960s to the present, this exhibition reveals the transformation of ideology and forms that have shaped international design in the last half century. From the technological and formal ideals of modernism to the influence of the handmade object, the pieces reflect increasingly complex and vibrant relationships between concepts of function, aesthetics, and material expression. Featured are designs by Verner Panton, Frank Gehry, Aldo Rossi, Ettore Sottsass, Robert Venturi, Donald Judd, Zaha Hadid, Louise Campbell, and Fernando and Humberto Campana. For more information, visit dma.org.

Model Behavior: Snøhetta at SFMOMA

SAN FRANCISCO

Through January 14, 2017

This exhibition at the San Francisco Museum of Modern Art explores the design process behind Snøhetta's expansion of the storied art institute. Architectural models, sketches, an interactive app, and a narrated walk-through of the building reveal how Snøhetta responded to the built environment and cultural context of the expansion-to-be, chronicling how the firm arrived at the space that opened its doors on May 14. For more information, visit sfmoma.org.

Tracing Displacement and Shelter

NEW YORK CITY

Through January 22, 2017

This MoMA exhibit explores how architects and designers have considered the meaning of shelter in light of global refugee emergencies. Works on

display examine such trends as the strengthening of national borders in response to influxes of migrants and the growing need for affordable, adaptable, and mobile housing for transient populations (currently estimated at more than 60 million worldwide). For more information, visit moma.org.

FESTIVALS, CONFERENCES, AND COLLOQUIA

Archtober 2016

NEW YORK CITY

October 1–31, 2016

Archtober is New York City's monthlong festival of activities, programs, films, lectures, and exhibitions that focus on the importance of architecture and design in everyday life. The many participating organizations aim to inform, entertain, and build a lasting civic and international recognition of the richness of New York's built environment. For more information, visit archtober.org.

International Bauhaus Colloquium

WEIMAR, GERMANY

October 26–29, 2016

The 13th International Bauhaus Colloquium at the Bauhaus-Universität Weimar is entitled *Dust and Data*. It will reflect on the almost 100-year history of the Bauhaus at its original sites—Weimar, Dessau, and Berlin—as well as the history of its international reception and migration. Because the conference is a historiographical laboratory of sorts and a barometer of shifting political landscapes, the 2016 iteration will celebrate this legacy by examining both architectural history and methods in order to address contemporary political transformations. For more information, visit bauhaus-kolloquium.de.

ARCHITECTURAL RECORD

Women in Architecture Forum & Awards

NEW YORK CITY

November 2, 2016

ARCHITECTURAL RECORD will present the magazine's third annual awards program to recognize and promote women's accomplishments in the fields of design and architecture. The afternoon symposium will be followed by a reception honoring this year's awardees in five categories: design leader, new-generation leader, innovator, activist, and educator or mentor. For more information, visit arwomeninarchitecture.com.

ARCHITECTURAL RECORD Innovation Conference East

NEW YORK CITY

November 3, 2016

Join ARCHITECTURAL RECORD for a one-day conference on architecture and making in the postdigital age. Innovation East—the East Coast counterpart to the summer conference in San Francisco—will bring together imaginative and forward-looking figures to exchange ideas about the built world of today and the future. Speakers and participants will range from principals of large firms to materials experts to architects practicing outside the discipline. Attendees will leave the conference inspired by brave and original approaches to some of the most relevant problems in the industry. For more information, visit ariceast.com.

NeoCon East

PHILADELPHIA

November 9–10, 2016

The 14th edition of this annual design expo and conference for contact, healthcare, and office interiors will feature talks and special events created with a host of regional design organizations. It also will highlight the latest products and services across a spectrum of vertical markets. For more information, visit neconeast.com.

World Architecture Festival 2016

BERLIN

November 16–18, 2016

In addition to awarding prizes for building projects both completed and proposed, this year's World Architecture Festival will feature a robust roster of seminar speakers—Richard Rogers and Moshe Safdie included—who will touch on large-scale topics such as housing in dense cities, housing for refugees, housing and luxury, and housing and energy efficiency. There will also be panels focused specifically on the revitalization of post-Wall Berlin as well as architecture tours of the area. Additionally, attending architects and designers will be able to participate in on-site crits at which they will receive real-time feedback on their projects. For more information, visit worldarchitecturefestival.com.

COMPETITIONS

Laka Competition '16: Architecture that Reacts

Submission deadline: November 1, 2016

The architecture organization Laka invites designers from around the world to submit ideas for architecture that can dynamically respond to current needs. Proposals should demonstrate community engagement; take into account social and economic circumstances; and be capable of reacting to unpredictable conditions and environmental, natural, and social risks. They also should promote social revitalization and increased safety and freedom for their users. For more information, visit lakareacts.com.

eVolo 2017 Skyscraper Competition

Registration deadline: January 24, 2017

Established in 2006, the annual Skyscraper Competition recognizes outstanding ideas that redefine skyscraper design through the implementation of novel technologies, materials, programs, aesthetics, and spatial organizations. Entrants should seek to investigate the role of public and private space—as well as that of the individual and the collective—in creating dynamic vertical communities. There are no restrictions in regard to site, program, or size. For more information, visit evolo.us.

Nikon Photo Contest

Submission deadline: January 27, 2017

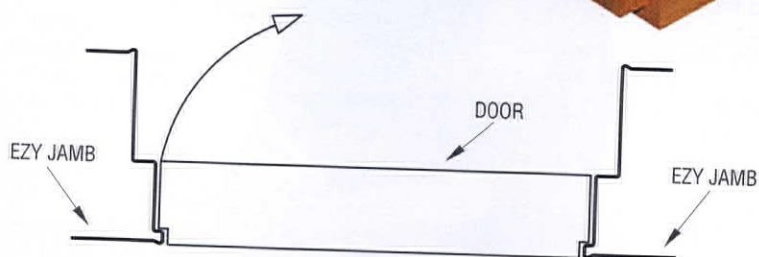
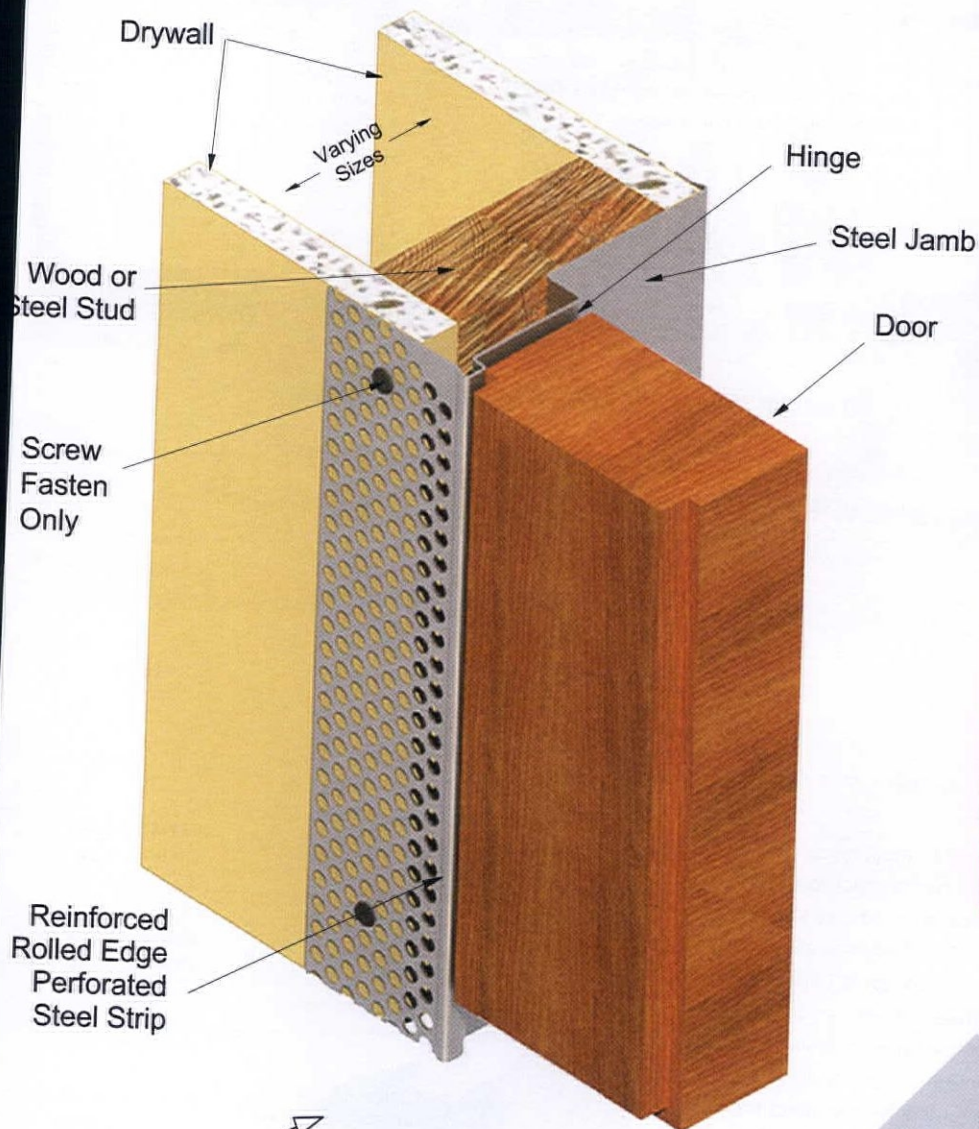
The Nikon Photo Contest supports filmmakers and photographers who wish to use images to share stories and influence how people think. This 36th edition of the contest will include two new categories: the Nikon 100th Anniversary Award, which celebrates the company's centennial in 2017, and the Next Generation Award, for anyone under the age of 30. World-renowned graphic designer and art director Neville Brody will serve as lead judge. For more information, visit nikon-photocontest.com.

CLEAN LINES! ... The Flush Finish Door Jamb System

Trimless door frames... Make a statement, clean lines, flush finish... Give your project a clean cut edge!

The **EzyJamb InSwing ISD Trimless door frame** is simple to install, and requires no special maintenance. InSwing is designed to be flush to the wall on the exterior side of the opening, but allows the door to swing into the room. The system is complemented by a range of hardware to suit different applications.

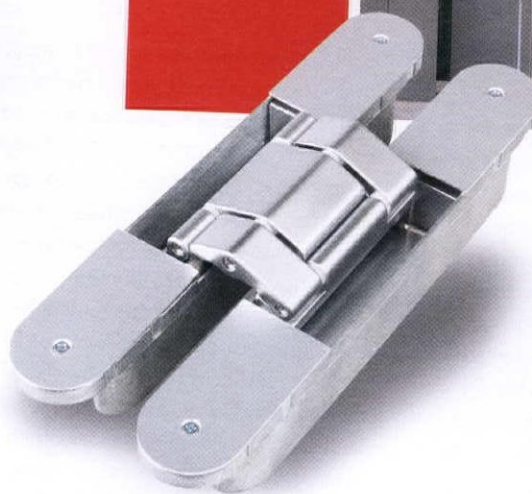
The completed jamb is flush finished and can be painted in with the whole wall area to fully conceal any fixing, achieving simple clean lines around the door face. The incorporation of reinforced edges overcomes the continual damage door jambs are subjected to by normal everyday use.



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SNAP 60

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NeoCon 2016

Designers and manufacturers continue to support flexible, open-plan workspaces with high-tech furniture, finishes, and flooring.

EACH YEAR, NeoCon introduces a host of fresh ideas for improving the comfort and functionality of office, hospital, and healthcare spaces. For the 2016 edition of the trade fair, held June 13 to 15 at Chicago's Merchandise Mart, flexible furnishings with multiple functions remained the rage.

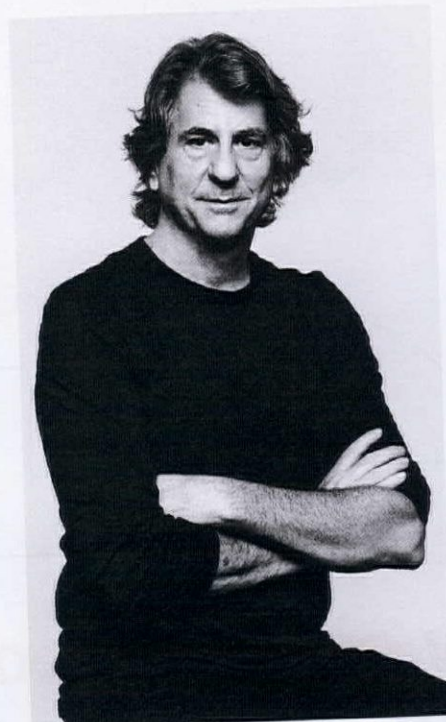
Few collections epitomized that direction more than Rockwell Unscripted, a line of tables, steps, storage, screens, and seating created for **Knoll** by **Rockwell Group** (RG). During his Tuesday keynote address, Group founder and principal **David Rockwell**—who had won a Tony Award for scenic design two nights earlier, for *She Loves Me*—likened a work environment to a theater stage. The suite of movable furniture, he said, “can be arranged in endless configurations [to] craft the scenes for what you are doing that day.” Supporting play and productivity, the 30-plus-piece collection appeared in the showroom alongside another recent Rockwell launch: a line of light fixtures that the firm developed with Brooklyn-based lighting trio **Rich Brilliant Willing**.

Technology played a dominant role at the fair, with sensors being integrated into everything from carpets to case goods. **Shaw**, working in conjunction with analytics

company **Scanalytics**, shared its latest research project: pressure sensors laid beneath rugs to track foot traffic and retail interaction. **Steelcase** introduced a tech-enhanced version of its Brody WorkLounge, with heat sensors that convey if the unit is occupied. Based on this information, employees can reserve empty workstations via Steelcase's Personal Assistant app; facilities managers also can use the data to monitor unit demand.

Elsewhere, space-management issues played into the continued popularity of structures that mitigate the noise and lack of privacy in open-plan offices. The freestanding LineaCube, courtesy of **Maars Living Walls**, is a self-contained environment with its own LED lighting, ventilation, acoustic insulation, and power sources. Similarly, **Allsteel's** Clubhouse, created by **BMW Group Designworks** in collaboration with **HOK**, offers a semiprivate meeting space with soft seating and translucent screens. Add-ons include work surfaces, media walls, and storage units.

Permanent and semipermanent walls also provided solutions to office woes. **Carvart's** Contract initiative features more than a dozen tempered-glass products—



OFFICE PINUP

The Rockwell Unscripted collection for Knoll (top) includes a wealth of furnishings, screens, and surfaces that support various work styles and environments. The line's creator, the architect and designer David Rockwell, delivered a keynote address at NeoCon about theater and play.



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including writable boards, desk dividers, and fixed and movable partitions—which create varying degrees of visual and acoustic seclusion. In the same vein, **West Elm**'s second Workspace collection with **Inscape** features screens in two heights and three widths. Clients have the choice of finishing screens in whiteboard or upholstering them in custom **DesignTex** fabrics.

Speaking of finishes, **Teknion** launched its **Luum** division (formerly known as **Teknion Textiles**) with the Starting Point collection. Designed by **Suzanne Tick**, the nine lines of contract upholstery come in a mix of textures and scales; three designs are bleach-cleanable and three exceed 100,000 double rubs. **Wolf-Gordon**'s Rampart wallcoverings also suit heavy-traffic areas, with the five colorful patterns able to withstand surface abrasion and hard-body impact. Plus **Stinson** debuted its antimicrobial Effervescence, a non-PVC-coated fabric patterned with a mixture of fine lines and bubbly waves. The fade- and stain-resistant textile is available in 12 saturated colorways.

As for flooring, **Tarkett** tapped five textile, graphic, and interior designers—**Tick**, **2x4** cofounder Georgianna Stout, and **K & Co.**'s Krista Ninivaggi included—for Collections Infinities, a digitally printed line of luxury vinyl tile. Users can customize the various patterns, adding color layers and transitions to suit their taste. **CBC Flooring** introduced a no-wax resilient sheet flooring for healthcare facilities, **TOLI**'s Mature Select, which offers a two-tier antibacterial wear layer for increased durability.



ON MY OWN

Fixed and movable structures that allow employees to focus and enjoy a bit of quiet continue to appeal. Among the options are, clockwise from top left, the updated Brody WorkLounge (Steelcase), LineaCube (Maars Living Walls), glassSCREENS (Carvart), Frame screen system (West Elm Workspace), and Clubhouse (Allsteel),





BEFORE & AFTER
transformation

Opening up Possibilities

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TRADE SHOW NEWS



THE FINISH LINE

Clockwise from top left: Stinson's antimicrobial Effervescence adds whimsy to hospitality projects, while Starting Point marks the debut of Teknion's Luum textile division. TOLI Mature Select by CBC Flooring has no visible seams; Tarkett's Collections Infinies includes the first-ever digitally printed LVT options. Wolf-Gordon's Rampart wallcovering is ideal for heavily trafficked areas.

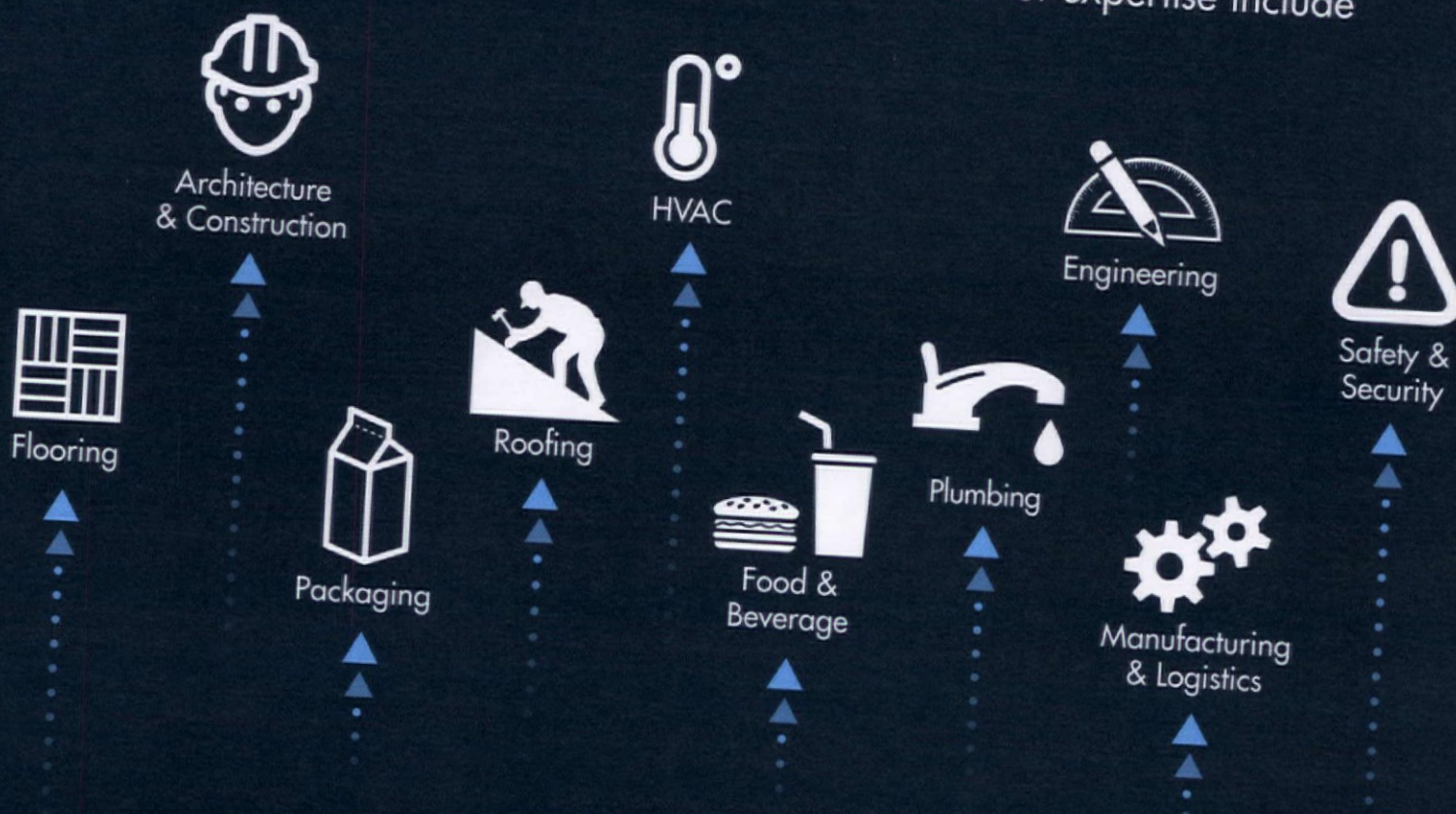
While plenty was displayed within the Merchandise Mart's halls, much was on view outside them, too: NeoCon marked the unveiling of the building's three-year refurbishment. Overseen by New York design firm **A+I**, the \$40 million project renovated the Mart's first and second floors, including the grand staircase, food hall, and lounge. The latter,

furnished with products from permanent residents **Allermuir**, **Bernhardt Design**, **Davis**, **HBF**, **Herman Miller**, **Masland Carpets**, and **Stylex**, provided a primer on recent innovations and a respite from the action. The upshot? Even if you missed the riches of June's NeoCon, you can sample its offerings anytime. —Julie Taraska



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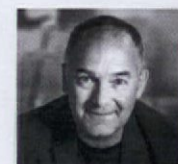
BY ARLENE HIRST



KIBISI

Founded in 2009, the Danish product-design firm—consisting of designer Lars Larsen, entrepreneur Jens Martin Skibsted, and architect Bjarke Ingels—creates everything from watches to bikes.

kibisi.com



CHRISTIAN ANDRESEN

Fritz Hansen's design director recently joined the furniture company after serving in the same role at Henning Larsen Architects.

fritzhanzen.com

ARCHITECT BJARKE INGELS and his partners in KiBiSi, an ad hoc Danish product-design firm, had long discussed teaming up to create furniture for a specific building. The precedents were there: Think Mies van der Rohe's Barcelona chair (designed for the German Pavilion at Barcelona's 1929 International Exposition) and Arne Jacobsen's iconic Egg and Swan chairs (made for the SAS Hotel in Copenhagen). So when Ingels and his firm, BIG, began drawing up plans for Via 57 West, an apartment complex on Manhattan's far West Side, the time felt right. And who better to work with than Fritz Hansen, the Danish manufacturer of Jacobsen's classics?

Thus began a five-year collaboration on the Via 57 chair. "We were constantly making changes," says Fritz Hansen design director Christian Andresen, explaining that the alterations often impacted the fabrication process. According to Ingels, "It took as long to design the chair as it did the building."

The result, an upholstered lounge with a curved steel frame and round wooden legs, pleased all involved. "The design grew out of an existing typology: the corner chair," says KiBiSi's Lars Larsen, who led the development team. And better still, two Via 57s can be pushed together to form a small sofa. "In the contract world," Larsen notes, "it's like Lego for architects." (SNAP #270)



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.

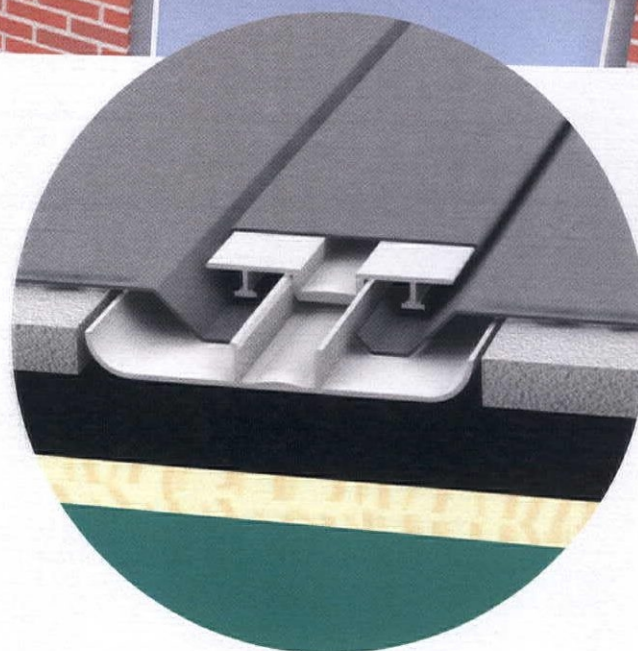
Applications

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"
- Minimum/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)

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SNAP 41

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