HOME RULES
Mid-Atlantic manufacturers await possible U.S. policy changes.
PAGE 40

GREENSOURCE
An overarching canopy defines UC Davis's new art museum.
PAGE 43
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— Product Innovation Awards Judge
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An overarching canopy is the main attraction at a new art museum on UC Davis's campus.

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Biophilic design and the hospitality sector are a natural match.

STEP ON IT
ZGF Architects' South Clinic near Seattle provides healthcare for the whole family (left). Oona, by Keilhauer, is a heavy-duty wool-blend upholstery with stretch (top left). Gerflor USA's Creation Living LVT offers the look of wood without the attendant maintenance (top right).
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DESIGN: Michael Van Valkenburgh Associates
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When we're ill, doctors attend to what's injured—they reset the bone, treat the infection, remove the offending mass. But after that, how does a hospital or clinic support our recovery? Can its furnishings be fine-tuned to ease our pain? Can its physical environment be tweaked to improve our sleep? And how can its overall layout and design be rethought as to empower us when our most basic human functions have been transformed into exhausting ordeals?

In this issue, we examine those questions from several angles. Our case study (page 12) looks at ZGF Architects' latest children's clinic in Seattle, which was repurposed from a big-box store. Our feature on hospital acoustics (page 16) highlights interventions—by the likes of Perkins+Will and Duda|Paine Architects—that increase privacy while decreasing recovery time. Our Healthcare product spec (page 24) offers goods that make for more comfortable hospital stays, while Accessible Design Solutions (page 20) provides ideas for creating more holistic built environments for all.

Happy reading—and best hopes for a healthy 2017,

JULIE TARASKA Editor
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David Adjaye Knighted

YOU COULD SAY 2016 was a big year for David Adjaye. In addition to the opening of his Smithsonian National Museum of African American History and Culture in Washington, D.C., the British architect announced several new projects and celebrated his 50th birthday. Capping off the successful year, Adjaye earned a knighthood on December 30 from Queen Elizabeth II. The 2017 New Year Honours, which recognize the achievements of "extraordinary people across the United Kingdom," effectively make him Sir David Adjaye.

“I am truly honored and humbled to receive a knighthood by Her Majesty the Queen for my contribution to architecture,” said Adjaye in a statement. “I see this not as a personal celebration but as a celebration of the vast potential—and responsibility—of architecture to effect positive social change, that we as architects have to bring something positive to the world.”

Recent product launches from Adjaye include Ritual, a sculptural bronze tap for Axor, Double Zero, a series of chairs for Moroso, and the Adjaye Collection for KnollTextiles, a line of six upholsteries, two draperies, and a wallcovering inspired by the architect’s extensive travels throughout Africa.

Adjaye and the other winners—among them fashion designer Victoria Beckham and tennis star Andy Murray—will be officially presented with their awards at a ceremony later this year. —Alex Klmoski

FROM SIR, WITH LOVE

Architect and product designer David Adjaye (left) has been awarded an Order of the British Empire by Queen Elizabeth II. The royal honor is the latest in a run of achievements, which include a line of African-inspired fabrics for KnollTextiles (far left). A new show traces the effect of Isamu Noguchi’s voluntary internment on his work; Yellow Landscape (right), a mixed-media sculpture, was a response to the xenophobia the designer experienced during World War II. A new exhibit chronicles his initial optimism, his subsequent disillusionment, and the impact of the experience on his practice.

On display at the Noguchi Museum in Queens, New York, Self-Interned, 1942: Noguchi in Poston War Relocation Center shows objects and ephemera from his time at the latter. A 1942 camp blueprint, for example, depicts a meticulously planned site complete with an art center and amphitheater. Letters document Noguchi’s requests for cost estimates for kilns, clay, and art supplies. But Noguchi soon realized that the camp's administrators had no intention of implementing his ideas, leaving him deflated. To make matters worse, the Japanese American prisoners in the camp didn’t fully accept the designer, with some “viewing him as a tool of the government,” explains curator Dakin Hart. Noguchi asked to leave Poston after two months; his release ultimately took seven.

When he emerged from Poston in November 1942, Noguchi was a changed man. Rather than concentrating on figurative pieces as before, he vacillated between satirical jabs and abstract works. For example, My Arizona, a white fiberglass-and-Plexiglas sculpture from 1943, evokes a barren desert, while Yellow Landscape—also 1943—addresses the pervasive xenophobia of the time. Other projects hint at trauma: This Tortured Earth, a bronze relief scarred with gashes, is a 1942 proposal for a massive earthwork to be created by aerial bombardment.

It was only later, in the 1960s and ’70s, that Noguchi’s work grew more meditative, with metal and stone sculptures recalling voids and doorways. They suggest transcendence, a movement toward a better future. | —Anna Fixsen

RECORD Announces Traveling Fellowship

TO MARK ITS recent 125th anniversary, ARCHITECTURAL RECORD is launching a traveling fellowship competition for promising architecture students and young professionals. Applicants for the two $7,500 prizes should propose exploring significant architecture and/or urbanism outside the United States, either in pursuit of greater general knowledge or to study a single typology, historic period, or place.

One fellowship will be awarded to a candidate who will have completed a B.Arch. degree or at least the first year of an M.Arch. program by summer 2017; a second fellowship will be given to a candidate who has received a B.Arch. or M.Arch. within the last five years (since 2012).

U.S. citizens currently enrolled in or graduates of an accredited U.S. architecture program are eligible. Entry is free, with full details and submission requirements available at architecturalrecord.com/call4entries. Apply by March 15 to be considered. —Julie Taraska

Exhibit Examines Prison Camp’s Effect on Noguchi’s Art

IN EARLY 1942, shortly after the Japanese attacks on Pearl Harbor, President Franklin D. Roosevelt signed Executive Order 9066, a directive that sanctioned the deportation of thousands of Japanese Americans from the West Coast to internment camps across the nation. As an East Coast resident, the acclaimed sculptor and designer Isamu Noguchi was exempted from this fate. Nonetheless, he voluntarily entered Arizona’s Poston War Relocation Center, hoping that he could use art to ameliorate camp conditions.

In Early 1942, shortly after the Japanese attacks on Pearl Harbor, President Franklin D. Roosevelt signed Executive Order 9066, a directive that sanctioned the deportation of thousands of Japanese Americans from the West Coast to internment camps across the nation. As an East Coast resident, the acclaimed sculptor and designer Isamu Noguchi was exempted from this fate. Nonetheless, he voluntarily entered Arizona’s Poston War Relocation Center, hoping that he could use art to ameliorate camp conditions.
"We added the metal roof because of its durability. We selected the lighter PAC-CLAD color to help us go after LEED Silver Certification."

Breck Childers, project architect, Childers Architects
NEW PRODUCT ROUNDUP

Interiordetails that make a difference

1. ENGINEERED FLOORING
   MANUFACTURER: Viridian Reclaimed Wood
   PERFORMANCE: This American-grown hardwood flooring can be installed below, on, or above grade as well as nailed, stapled, glued, or floated.
   PRICE RANGE: $$
   APPLICATIONS: Suited to commercial environments, the ¾”-thick flooring comes in two widths and variable lengths.
   VIRIDIANWOOD.COM (SNAP #200)

2. SHANNON
   MANUFACTURER: Tesselle
   PERFORMANCE: The pattern on this hand-pressed cement floor and wall tile was inspired by natural linen textiles.
   PRICE RANGE: $–$$
   APPLICATIONS: Designed for indoor and outdoor commercial environments, Shannon can be ordered in two formats and two neutral color ways, with custom hues and sizes available.
   TESSELLE.COM (SNAP #201)

3. OONA
   MANUFACTURER: Keilhauer
   PERFORMANCE: This wool/nylon boucle upholstery has a stretch and resiliency that makes it ideal for curved furniture.
   PRICE RANGE: $$$
   APPLICATIONS: Suited to residential and commercial spaces, Oona comes in 18 colors and is ranked heavy duty for abrasion resistance, surpassing 275,000 double rubs.
   KEILHAUER.COM (SNAP #202)

4. TAVOLA LEVELS
   MANUFACTURER: Hunter Douglas Architectural
   PERFORMANCE: The sculptural aluminum acoustic baffles provide up to a NRC.
   PRICE RANGE: $$$
   APPLICATIONS: With six perforation patterns, the Greenguard Gold-certified beams work with industry-standard lighting.
   HUNTERDOUGLAS ARCHITECTURAL.COM (SNAP #203)

KEY $= VALUE, $$$= MID-RANGE, $$$$= HIGH-END
* ECO-FRIENDLY ATTRIBUTES
5. **VINTAGE RANCH**

**MANUFACTURER:** Eldorado Stone  
**PERFORMANCE:** This concrete architectural stone veneer mimics the look of reclaimed wood planks.  
**PRICE RANGE:** $$$  
**APPLICATIONS:** Available in a panelized format, the indoor/outdoor veneer—offered in oak, Douglas fir, and pine versions—comes in four colors and 2-, 4-, and 6-inch heights.  
**Eldoradostone.com**  
(SNAP #204)

6. **WRITABLE SURFACES**

**MANUFACTURER:** Formica  
**PERFORMANCE:** The high-pressure, impact-resistant laminate surfaces are easily cleaned and can be mounted horizontally or vertically.  
**PRICE RANGE:** $$  
**APPLICATIONS:** Options for the chalkboard, suited to residential and commercial interiors, include gray and matte black; the markerboard is offered in three patterns.  
**Formica.com**  
(SNAP #205)

7. **CHANNEL**

**MANUFACTURER:** Belwith-Keeler  
**PERFORMANCE:** This Bauhaus-inspired hardware collection of nine knobs and pulls balances curves, lines, and negative space.  
**PRICE RANGE:** $$  
**APPLICATIONS:** Ideal for kitchen and bath areas, the collection comes in three colors and six finishes; mounting hardware is provided.  
**Belwith-keeler.com**  
(SNAP #206)

8. **PIXEL**

**MANUFACTURER:** Versa Wallcovering  
**PERFORMANCE:** Inspired by early video games, the textural wallcovering features a shimmery pixel motif.  
**PRICE RANGE:** $$$  
**APPLICATIONS:** The low-VOC type II textile for healthcare and hospitality use is NSF/ANSI 342-certified, has an Osnaburg backing, and can be specified in 15 graduated colors.  
**Versawallcovering.com**  
(SNAP #207)
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Architect: JLG Architects

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CASE STUDY: FAMILY HEALTHCARE
BY ALEX KLIMOSKI

SEATTLE CHILDREN’S HOSPITAL, SOUTH CLINIC, FEDERAL WAY, WASHINGTON

Convenient Care

CHALLENGE: Convert a big-box retail store into a children’s clinic.

SOLUTION: Open up the storefront to let in light, organize the care areas according to service, and update the infrastructure.

IN A RETAIL CENTER about 20 miles south of Seattle, just off the interstate, a former Circuit City has found new life as an outpatient clinic for Seattle Children's Hospital. Previously characterized by its archetypical concrete box exterior, the repurposed structure, designed by ZGF Architects, now greets visitors with a brightly colored entrance canopy, verdant resting areas, and a facade of perforated metal. Inside the single-floor building, the once windowless store for consumer electronics has been transformed into a light-filled medical facility serving the area’s large population of young people.

The South Clinic project—ZGF’s first conversion of a nonmedical building into a new healthcare facility—exemplifies a growing trend of healthcare providers opting to adaptively reuse big-box stores. As vendors such as Sears, Sports Authority, and Kmart continue to close doors across the country, their spacious, often open-plan interiors can offer viable solutions. Seattle Children's chose the Circuit City site because of its low rent, existing parking infrastructure, and easy access to public transportation and major roadways. Visibility has also emerged as an added benefit: "People who frequent Costco and the other adjacent establishments know there's an urgent-care facility there," says ZGF principal Victoria Nichols.

According to Nichols, distinguishing the clinic’s exterior from that of other properties within the shopping outlet was an important consideration. “We needed to make it inviting and also not to appear as just another retailer,” she points out. So the design team created a strong identity through signage and the use of color and texture. It also included a Japanese rain garden to capture rainwater runoff from the canopy.

To update the 37,000-square-foot space for use as a healthcare facility, the team stripped and replaced the existing mechanical system and installed medical gas pipes and IT infrastructure. Programmatically, the
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SNAP 80

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vast floor plate of the existing building proved beneficial. “We had a lot of freedom—there weren’t a lot of monuments to work around from the planning standpoint,” says Nichols. Because the windowless space was extremely deep, it lacked proper daylight, so the design team opened up windows to add storefront space and get sunlight into the interior.

Working with Seattle Children’s to identify opportunities for minimizing waste and improving efficiency, the architects chose to organize the clinic around three back-of-house pods, respectively dedicated to urgent care, cardiology, and more general use. In each pod, a series of exam rooms line the perimeter of a central workspace where caregivers can collaborate while also having direct access to patients. Additional patient care rooms sit in the front of house, as well as a rehabilitation gym, conference room, and play and waiting spaces.

Throughout the pods and the front-of-house area, interior design elements such as wall graphics and wood paneling express a natural theme, reflecting the prominent role of parks in the area. The natural motifs also help soothe the visitors of all ages.

Creating an efficient patient flow was top priority for the architects. Unlike with hospitals, clinic design “doesn’t necessarily need to replicate the home environment,” Nichols explains. Patients and families are moving through the facility much more quickly, so wayfinding becomes critical.” To facilitate this, the design team made use of color coding: Cabinets, paneling, and exam room floors and walls correspond to the specific hue of the pod.

“Because of the layout and wayfinding techniques, the caregiving process was really streamlined,” says Nichols. The maximization of dual-purpose exam rooms, team spaces, and shared equipment have led to more orderly scheduling practices, as well as a reduction in duplicate information gathering. The design has also achieved reduced storage space and a 75 percent decrease in the total number of specialty treatment rooms required.

As a result, ZGF’s dramatic transformation provided the clinic with a cost-effective solution that offers convenient and enhanced patient-centered care.

### IN THIS PROJECT

<table>
<thead>
<tr>
<th>ARCHITECTS</th>
<th>PERFORMANCE</th>
<th>PRICE RANGE</th>
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<td>ZGF Architects</td>
<td>Easy to clean and maintain, this durable high-pressure laminate is impact-resistant and has a subtle wood-grain look.</td>
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<td>APPLICATIONS: Suitable for mounting horizontally or vertically in interior spaces, the</td>
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<td>Greenguard Gold-certified laminate comes in standard and matte finishes. Offered in five thicknesses, it’s ideal for use on doors, counters, and all manner of surfaces.</td>
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<td>MANUFACTURER: Interface</td>
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#### HOUSE CALLS

To improve circulation through the clinic, the space is divided into three color-coded areas. All exam rooms within those areas reflect that section’s assigned hue (above).

**Mattress Selection**

**ARCHITECTS**

ZGF Architects

**TYPE**

Healthcare

**PRODUCT**

Earthen Twill

**MANUFACTURER**

Formica

**Solutions**

**APPLICATIONS**

Suitable for mounting horizontally or vertically in interior spaces, the

**PERFORMANCE**

Greenguard Gold-certified laminate comes in standard and matte finishes. Offered in five thicknesses, it’s ideal for use on doors, counters, and all manner of surfaces.

**PRICE RANGE** $ | (SNAP #208)

**KEY**

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

**ULTIMA HEALTH ZONE**

**MANUFACTURER:** Armstrong Ceiling Solutions

**PERFORMANCE:** These water-repellent, scratch-resistant acoustic ceiling panels offer a 0.7 NRC and up to 36 CAC.

**PRICE RANGE:** $$$

**APPLICATIONS:** Available in two sizes and seven colors, the panels meet USDA/FSIS guidelines for use in kitchens, hospitals, and clean-room assemblies.

**FORJUUCA.COM**

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<td>Armstrong Ceiling Solutions</td>
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**ZOLA**

**MANUFACTURER:** Krug

**PERFORMANCE:** This collection of soft, modular seating, benches, and tables can be disassembled for cleaning, repair, and replacement of individual components.

**PRICE RANGE:** $$

**APPLICATIONS:** Ideal for high-traffic spaces, the Greenguard-certified pieces with an antimicrobial finish are made from recycled and recyclable materials.

**FORJUUCA.COM**

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<th>MANUFACTURER</th>
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**NORAPLAN SENTICA**

**MANUFACTURER:** Nora

**PERFORMANCE:** The sound-absorbent, slip-resistant rubber tile for high-traffic healthcare environments is available with acoustic and electrostatic discharge (ESD) options.

**PRICE RANGE:** $$-$$$ 

**APPLICATIONS:** The Greenguard Gold-certified tile comes in 38 colors and in 2- or 3-millimeter-thick rolls and tiles.

**FORJUUCA.COM**

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<th>MANUFACTURER</th>
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**SHIVER ME TIMBERS**

**MANUFACTURER:** Interface

**PERFORMANCE:** This modular carpet tile made of 100 percent recycled content type 6 nylon can be matched even years after its initial installation.

**PRICE RANGE:** $$

**APPLICATIONS:** Available in 24 colorways, this tufted tip-sheared tile measures approximately 10 by 40 inches and is verified carbon neutral.

**FORJUUCA.COM**

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**ARCHITECTS**

ZGF Architects

**TYPE**

Healthcare

**PRODUCT**

Earthen Twill

**MANUFACTURER**

Formica

**Solutions**

**APPLICATIONS**

Suitable for mounting horizontally or vertically in interior spaces, the

**PERFORMANCE**

Greenguard Gold-certified laminate comes in standard and matte finishes. Offered in five thicknesses, it’s ideal for use on doors, counters, and all manner of surfaces.

**PRICE RANGE** $ | (SNAP #208)

**KEY**

$=VALUE, $$=MID-RANGE, $$$=HIGH-END
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The Sound of Silence

Designers demonstrate how noise—or its absence—can impact comfort and safety in healthcare spaces.

BY ASHLEIGH VANHOUTEN

PATIENT PRIVACY, comfort, and well-being are paramount in healthcare facilities. Increasingly, noise management is an important piece of the equation. Architecture and design firms are rising to the occasion, incorporating acoustic elements in unexpected ways to create the calmest atmosphere possible for guests and staff alike.

UNIVERSITY OF ARIZONA CANCER CENTER, PHOENIX

Portland, Oregon-based ZGF Architects used machinery and acoustic products to aggressively block noise at the 220,000-square-foot healthcare institute, which is part of St. Joseph's Hospital and Medical Center. Aside from using a sustainable HVAC system that decouples ventilation from heating and cooling, ZGF incorporated Price Industries' chilled beams. Each delivers air at lower velocities and eliminates drafts; an important consideration for infusion therapy patients spending long stretches of time in treatment. Though an inherently quiet system, the beams are purposely louder in select spaces, including waiting and circulation areas, to mask confidential conversations.

The team incorporated Modernfold demountable partitions, Flavor Paper and Forbo wallcoverings, and Forbo, Acrovyn, and Sequentia Structoglas paneling near treatment rooms to lessen vocal and equipment reverberation. High-performance acoustic ceiling tiles from USG and Decoustics in corridors and staff work areas absorb sound. Plus the walls enclosing the exam, treatment, and consultation...
rooms achieve a privacy-protecting Sound Transmission Class (STC) rating of 50 thanks to a unique solution. "We supplemented one side of a typical metal-stud and gypsum-board wall with an additional layer of gypsum board and fiberglass acoustic insulation in the stud cavity," says ZGF principal Brett Meyer, adding that this is not typically done in clinical situations.

1525, WASHINGTON, D.C.
Throughout this LEED-CI Gold health center specializing in HIV treatment and care are acoustic panels and wallcoverings that reduce noise. International design firm Perkins+Will used Kirei’s Echopanei ceiling blades over the pharmacy counter area to muffle patient discussions with staff. Custom backlit resin panels fabricated by 3form sit between stations, blocking sound and serving as privacy screens. "The baffles and panels offered a cost-effective, cleanable, and environmentally conscious solution to soundproofing these areas," explains David Cordell, the project’s lead designer.

In the client services area, more Kirei ceiling panels—from the Mura line—reduce noise. Their bright colors and distinctive forms also serve as wayfinding elements, demarcating reception areas. Walls between exam rooms are fully lined with acoustic fiberglass batt insulation. "We even staggered outlets and other wall device locations between rooms to prevent sound transmission," adds Cordell.

The facility’s dental operatory rooms, however, proved the greatest challenge. Located in the windowless lower level of the 42,000-square-foot building, the large, open suites maximize light—and amplify noise. The team opted for Armstrong Ceilings’ Optima high-NRC mineral-fiberglass tiles to absorb and block sound. They coupled those with Hyltex’s Virga-Eco-A.R.T wallcoverings—made of 100 percent recycled material imbued with antimicrobial properties—to lend additional style and acoustic support.

DUKE CANCER CENTER, DURHAM, NORTH CAROLINA
A self-contained space within Duke’s Comprehensive Cancer Center, the Quiet Room, designed by local firm Duda|Paine Architects, uses an integrated system of light and sound to produce a meditative place for up to 12 patients and their families.

Bright Ideas
Perkins+Will opted for colorful acoustic panels and upholstery in their pharmacy area (top). Insulation in stud cavities blocks sound transmission between exam rooms (above).
HOSPITAL ACOUSTICS

Created in conjunction with United Engineering Group and Cline Bettridge Bernstein Lighting Design, the circular room—measuring 30 feet across—features a Crestron controller and DMX acoustic and light system that allows users to choose from over a dozen calming musical scores. Coordinating illumination mimics the changing light over the day and seasons, while fabric-wrapped 3form acoustic panels and benches upholstered in Knoll Textiles help muffle outside distractions.

To increase the contemplative nature of the space, DudaPaine enlisted the Tallahassee, Florida–based Kaiser/von Roenn Studio Group to create a waterless fountain centerpiece. (For code reasons, an actual fountain was not possible.) Paired with carefully programmed LEDs and noise effects, the 60-inch-diameter sculpture offers the illusion of moving water, "engaging the space's occupants visually and acoustically," explains Turan Duda, cofounder of DudaPaine.

The Quiet Room was designed to enhance the mental health of hospital patients, staff, and visitors via sound curation: an approach far different from abatement. Designers know excessive noise in a healthcare environment can adversely affect patient and staff comfort and communication, so its use and control is the next frontier in creating places of true healing.
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Since its founding in 1851, the YMCA of the USA has overseen nationwide efforts to provide communities with health and educational resources. The YMCA of Greater Grand Rapids decided to amplify the Y’s inclusive mission by eliminating all physical barriers in its new facility, which also houses rehabilitation services for partner organization Mary Free Bed Hospital. The resulting 120,000-square-foot Mary Free Bed YMCA, designed by local architects Progressive A|E and which opened last year, is not just stunning in appearance. It also has earned the world’s first certification from the Global Universal Design Commission, a Syracuse University-based nonprofit that develops universal-design standards for buildings, products, and practices.

To ensure the Y would serve everyone, the architects brainstormed with disability advocates, wheelchair athletes, and other stakeholders, says Progressive A|E project principal Michael Perry. The group sessions revealed that taken alone, the federal American Disability Act (ADA) standards focus too heavily on wheelchair users. Perry cites thresholds as an example: “A quarter-inch threshold is ADA-compliant, but any differential is a tripping hazard for people using canes or walkers.” The firm’s solution was to eliminate thresholds altogether at Mary Free Bed YMCA by making floor changes flush.

This mindset reaches beyond ambulatory abilities. The Y’s one-fifth-mile track features high-contrast lane lines for visually impaired joggers. The family and lap pools employ UV sanitation to reduce chlorine use, as the chemical and its smell can trigger rashes and asthma attacks; an HVAC system also actively circulates the air to whisk away any odors. Plus widespread acoustical dampening removes background noise, reducing interference with assistive hearing and listening devices.

ADA remains an important benchmark, Perry notes. The 1990 law argued that separate treatment of people with disabilities amounts to discrimination, and that spirit of integration prompted the Y to decide to have just a ramp, without an additional staircase, leading into the heart of the building. “Everybody uses the same path,” he explains. And that equality seems to be working: Perry, who is also Mary Free Bed’s branch board chair, reports that current membership and program revenues at the Y are exceeding goals. —David Sokol
Happy Trails

BEFORE THE Watertown Riverfront Park and Braille Trail opened in July, the only pathway along the Boston suburb’s stretch of the Charles River was a thin line of dilapidated asphalt. “You had trouble riding a bike there, let alone getting a wheelchair down to the shore,” says Travis Mazerall, a senior associate at architecture firm Sasaki, which created the new 2.8-mile public space. But along with installing wide stabilized-aggregate paths and removing most of the invasive vegetation, the firm added features for persons with visual disabilities, including those who attend the nearby Perkins School for the Blind.

Chief among these amenities is a stainless-steel cable guide threaded with three types of indicator beads. The guide leads users along a quarter-mile trail with 10 stations, each highlighting local history and nature. Images of wildlife are engraved on the riverfront boulders, allowing both sighted and visually challenged visitors to learn more about the area. A bevy of fragrant native plants appeal to the sense of smell, while a marimba bench that passersby can play or sit on offers musical sounds and rest.

Perkins faculty and administrators participated in the trail’s design process, refining cable and signage heights along with proofreading the braille placards. The school is also stewarding the park’s continued maintenance. A second, 5-acre phase adjacent to the existing parcel is on the boards as well. —DS
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Light It Up

TRUE TO ITS NAME, Boxing Plus in Taipei, Taiwan, offers many ways to get fit. That range led local consultants Chubic Lighting Design to use luminaires in two ways in the 6,050-square-foot gym: to delineate its areas and support its members with functional and inspiring illumination.

Chubic chose Philips's fluorescent T5 lights for the main workout areas. In places with low ceilings, the team paired Soraa's PAR30 LEDs with the company's Snap system, as the added optical lens diffuses, redistributes, and softens the light. "This is important to minimize glare for floor-based exercises when guests are looking directly upward," says Chubic head designer Jimmy Chu. The lamp's high 80 to 95 CRI also provides more realistic color compared to conventional LEDs, a distinction critical to creating lighting contrasts that are easier on eyes.

The team lit specific machines and workout equipment with high-contrast MR16 Soraa lamps and visually indicated resting areas with Philips's 2700K LED wall-mounts, which create a "calm ambience," according to Chu.

Fittingly, the boxing ring has the most dramatic illumination, with floodlights changing from purple to red to blue during—respectively—the warm-up, sparring, and cool-down periods. The overall effect is upbeat and theatrical—and has even prompted Vogue, GQ, and Elle to hold photo shoots in the space.

—Ashleigh VanHouten
Leading the Way

LIKE MANY healing spaces, the Building for Transformative Medicine at Boston’s Brigham and Women’s Hospital is flooded with sunlight, which has been found to speed patient recovery. But architects NBBJ also utilized illumination as a way-finding device in the 620,000-square-foot facility.

“It’s a very large floor plate, so deep inside the building we used backlit graphic panels to bring patients back to a central corridor,” says NBBJ’s Katy Flammia, lead interior designer on the LEED Gold-certified project. In the hallways, custom VividGlass panels from Forms+Surfaces double as architectural artwork, with large-scale colorized photos of neurons and bone structures. In some areas lacking natural light, NBBJ also installed illuminated landscape designs from Forms+Surfaces and New York–based fabricator Novo Arts. The effect, says Flammia, is to create windowlike elements that brighten the space.—AVH

LIGHTING UP Architects NBBJ used illuminated panels to guide visitors through—and bring light into—stairways (right) and corridors (far right) at the Building for Transformative Medicine at Boston’s Brigham and Women’s Hospital.
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- 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
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SNAP 21
Crowning Glory

With its trio of inward-sloping tiers, the Smithsonian National Museum of African American History and Culture (NMAAHC) cuts a striking profile on the National Mall. Yet look closer at the 409,000-square-foot building, designed by Freelon Adjaye Bond/SmithGroup, and you'll discover that the seemingly monolithic tiers—which the team refers to as a corona—are actually composed of thousands of custom-designed filigreed panels.

Shiny bronze panels had been the architects' first choice, but the material proved too heavy for the structure's exterior armature. So the team turned to Portland, Oregon's Dura Industries, an applicator of architectural coatings, to replicate a glowing amber hue on lightweight aluminum.

This was no easy feat. Cast aluminum is "a rough, porous material," says Dura president and CEO Del Stephens, and to make it reflective, "it has to be really smooth." The company asked longtime partner Valspar Corp., based in Salem, New Hampshire, to help determine the best coating and process. After almost 18 months of color-mixing and application tests, the team arrived at a solution for the 3,600 panels: They spray-painted each 4-by-5-foot span by hand with five layers of Valspar's Fluropon exterior coating—gray primer, green primer, black, African Sunrise, and clear coat with 3 percent red—with each layer baked before the next was applied. That approach required another year-plus of effort.

In both its scope and complexity, the project was an outlier for Dura and Valspar. But as the near-universal accolades for the NMAAHC design have attested, exceptional measures often yield exceptional results.

—Braulio Agnese
Bolts of Blue

LEESER ARCHITECTURE’s conversion of a three-story factory into the Brooklyn outpost of Coworkers, a small chain of coworking spaces, was largely an exercise in restraint. The firm’s designers exposed the structure’s original brick walls and wooden rafters, specified minimalist lighting, and opted for movable white furniture. But to accent the new interior stairs—two enclosed flights that cut through the space like 9-16 lighting bolts—it chose a deep indigo that nods to both Internet browsers and Yves Klein’s signature hue.

To achieve the intense shade, which is featured on the stairs’ outer walls, the team turned to KT Color, a small Swiss company that creates rich hues “you just can’t find with the brand names,” according to Leeser project manager Christian Lehmkühl. For the interior of the stairs, the firm chose a bright teal from PPG Paints. Together the colors heighten the passageways’ geometries while minimizing their depth, giving them the appearance of flat digital drawings. The effect is a sharp contrast to the warmth of the structure’s rustic interior.

Leeser had originally specified hot pink for the stairs’ exterior. But the client didn’t like it, so the firm proposed the current combination. “Everybody can agree on blue,” Lehmkühl explains. Mood Indigo, indeed.—BA

ELECTRIC COLOR
Leeser Architecture used a pair of bold hues to accentuate the geometry of two staircases the firm built in a Brooklyn coworking space (left and above).
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Happy Feet

THE HAKKASAN GROUP owns more than 20 premier dining and nightlife brands. So when it came time to update one of its high-profile venues, Pure nightclub at Caesars Palace Las Vegas, the hospitality firm tapped a similarly prominent partner to lead the effort: Rockwell Group.

Named Omnia, the reconceived nightclub now encompasses the original Pure space as well as some of the casino's poker and World Series tournament rooms. Rockwell reimagined the 75,000-square-foot space as a series of opulent jewel boxes, each featuring ornate details, shiny baubles, and plush velvet linings. But to bring warmth and intimacy to the otherwise soaring bilevel space, Rockwell specified Floorworks' Oak Wood in gunsmoke through Mats Inc. The class III heterogeneous vinyl flooring has a grain pattern and dark tones that help mask wear and tear. It contains 28 percent preconsumer recycled content, which also made it attractive to the environmentally minded design team.

Available in various plank formats, the product sports a PVC wear layer (with an optional polyurethane coating) and a solid PVC backing, both of which help absorb sound and increase durability. In fact, says Rockwell interior designer Olivia Capuano, "It can't be easily scratched or dented, even by people dancing in high heels." Those with twinkle toes and those with two left feet are equally welcome.

—Sharon Katz
Full Steam Ahead

Hygiene is of the utmost importance in healthcare facilities, particularly for patients in recovery. Yet safely and effectively sanitizing spaces can be a tricky feat: Depending on the situation, the cleaning may require the temporary or semiregular removal of occupants. But rubber-flooring manufacturer Nora Systems has introduced what could be a game changer—the Nora Pro steamer.

The compact unit quietly produces a superheated dry steam delivered at more than 300 degrees Fahrenheit to loosen substances such as dirt and grease from resilient floors. Because the steamer uses distilled water as opposed to the usual harsh chemicals, it emits no VOCs, ensuring improved indoor air quality for patients and staff alike. Plus the machine’s nonsaturating microfiber pad grabs the released dirt, reducing drying times.

The result, says Tim Cole, vice president of marketing at Nora Systems North America, is “a sanitary, deep-cleaned floor that improves both infection control and the patient experience.”

—SK
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Changing with the Times

TO MARK THE centennial of its founding, law firm Kaye Scholer wanted to update its look. So the international company, known for its progressive values, hired Gensler's New York branch to redo its Manhattan office. Bypassing the clichéd mahogany-panel walls and thick carpeting, the architects designed a light-filled space visually united by 10,000 square feet of Atlas Concorde's Calacatta Extra porcelain tile.

The marble-look flooring’s durability and versatility were key. The chosen material needed to suit “high-end reception and conference spaces as well as seating and food-service areas,” says Gensler studio director Linda Jacobs. It also had to be able to be mud-set and thin-set, as both installation methods were required at the Midtown West site.

The tile’s oversize 95-by-48-inch format, combined with its pale surface, allowed the design team to open up the floor plan and brighten the space—all while staying within budget. “We installed the tile in an ashlar pattern in an open expanse near the windows, amplifying the natural light,” says Jacobs. Paired with the matte ceiling that spans from core to window wall, the surfaces combine to create a sense of airiness and calm.—Leslie Clagett
**Hands-on Design**

**PAUL THRUSH** posits that to understand buildings, products, and materials, architects must be physically involved in their creation. Guided by this philosophy, the cofounder of London-based **STAC Architecture** developed **STACtile**, a modular system of concrete, stone, and wood cladding.

"It began with the concept of creating a modular tile that recalled the simplicity and playfulness of a child's building block," says Thrush. "I wanted each to embody pure geometries that, when grouped, would result in patterns that are both elegant and timeless." The 200-by-50-millimeter tiles can be shifted, rotated, and stacked.

The firm molds the concrete tiles; it mills the granite, marble, sandstone, and wood designs on a CNC machine. All pieces are installed without grout, which allows the composition to flow uninterrupted. The concrete and stone versions are suitable for both indoor and outdoor use; the wood units are still being tested to determine their weather resistance.

The tiles are available on demand from **STAC Architecture**. They can also be made in customized sizes and colors.—**LC**

**BLOCK BY BLOCK** The modular STACtile system, conceived and manufactured by London-based **STAC Architecture**, lends itself to innovative interior and exterior installations (top). Offered in concrete, stone, and wood, the 25-millimeter-thick tiles (above) can be shifted, rotated, and stacked.

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Brave New World

Policymakers influence manufacturers in the mid-Atlantic region.

BY J. MICHAEL WELTON

CHANGES IN Washington, D.C., and China are having an impact on manufacturers in Maryland, Pennsylvania, New Jersey, and New York.

“I expect 2017 to be guided by policy change and a fear of the unknown,” says Jeff Fuchs, executive director of Maryland World Class Consortium, a Baltimore-based economic nonprofit. “Both considerations drive business decisions that manufacturers will be making.”

To get businesses running, “we need healthcare revised,” says Gene Barr, president and CEO of the Harrisburg-based Pennsylvania Chamber of Business and Industry. “We also need policies that ensure the country can move toward greater domestic energy security.”

One positive sign is that fewer jobs are moving overseas. “Companies are returning from China,” claims Raymond Vaccari, director of Newark-based Manufacture New Jersey Talent Network. He maintains that manufacturing costs in the Asian country “have increased 200 percent in 10 years.”

Manufacturers like Studco Building Systems in Webster, New York, have been benefiting from an uptick in construction. “Things are looking strong in Philadelphia and New York City,” says Ben Stevens, the company’s vice president. Adds Mark Zaroogian, chief operating officer of Baltimore-based lighting supplier Inter-lux: “Our size and scale puts us in a very robust and stable position.” This, he says, “really gives us the confidence to grow our business.”

Not counting a brief slowdown during the recession, Lancaster, Pennsylvania–based Ecore has experienced double-digit growth for the past 20 years. “When you’re growing that fast, you continue to hire, invest in new equipment, and utilize space as best you can,” says Mitch Schreiber, vice president of operations at the recycled flooring manufacturer.

The outlook for 2017 “Very, very rosy,” he says.
There are 3,680 manufacturing businesses in the state, supporting a workforce of 103,630.

Maryland's manufacturing employees earn, on average, more than $80,000 per year, exceeding the average worker's salary in the state by more than $25,000.

The state is currently ranked third in the nation for solar power capacity.

New York is home to the Port of New York and New Jersey, the third-largest seaport in North America and the largest maritime cargo center on the East Coast.

Manufacturing employs about 460,000 people statewide, at more than 17,000 establishments.

Of New York's 17,000 manufacturing establishments, 76 percent have fewer than 20 employees and only 91 companies have more than 500.

The state's manufacturing output is the eighth largest in the United States.

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The Hangover
An overarching canopy is the main attraction at a new art museum on UC Davis's rural campus.

BY JOSEPHINE MINUTILLO

BEGINNING IN THE EARLY 1960s, the University of California at Davis became home to a thriving academic art scene, with influential figures such as Wayne Thiebaud, known for his colorful paintings of everyday objects, and Robert Arneson, father of the Funk movement, among its diverse faculty. In recent years, the university has sought to reignite the creative energy of that era. A 2013 competition for the school's first purpose-built art museum—previously, work was exhibited in a handful of galleries in existing buildings—called for a structure that would be a magnet on the sprawling campus. But the budget was extremely tight, and the client mandated a contractor-led design-build team.

Paired with contractor Whiting-Turner, architects SO-IL, based in New York, and the San Francisco office of Bohlin Cywinski Jackson (BCJ) offered an unconventional solution. Rather than create a presence with building height, as the other shortlisted entries did, they proposed a one-story structure with a dramatic canopy reaching far beyond the building's footprint.

The strategy—which also would save money on elevators and egress stairs—won SO-IL and BCJ the competition for what would become the Jan Shrem and Maria Manetti Shrem Museum of Art. But the design of that critical overhang had to be developed over the next couple of years. "The canopy is essentially Pole Dance made solid," says Florian Idenburg, who founded SO-IL with his wife, Jing Liu. Idenburg is referring to the duo's 2010 installation at MoMA PS1 in Queens, New York, where a large net supported by a series of pivoting poles covered that museum's courtyard—an exploration, according to the firm, of multisensory environments rather than finite forms.
At Davis, the inspiration for the canopy's simple construction and sensuous design came from the patchwork of cultivated plots of land in the surrounding fields. The architects beautifully re-created that tapestry in metal with the orthogonal sections of the canopy, interrupting it with sweeping curves, a reference to the Sacramento River that meanders across the farmlands.

Initial ideas for the canopy, which reaches as high as 34 feet and dips as low as 12, called for a steel frame and subframe connecting perforated sheets of aluminum. But the design team determined it would be more cost-effective, and indeed more interesting, to give dimension to the aluminum and allow it to span the main frame. This approach also eliminated the need for the secondary steel.

The resulting triangular infill beams are dense in some sections and sparse in others, casting an array of intriguing shadow patterns onto the walls and ground beneath. "We were able to dial it up or dial it down as we wanted," explains Michael Ra, principal in charge at Front, the project's canopy and glazing consultant. Idenburg and Ra have developed custom metal solutions together before: on SO-IL's Kukje Gallery in Seoul, which is draped in a blanket of stainless-steel rings, and on the expanded aluminum mesh that clads the New Museum in New York, completed when Idenburg was with SANAA.

While the aluminum at the New Museum was anodized, a corrosion-resistant, marine-grade alloy was used for the beams at the Davis site. This allowed them to be left uncoated, exposing the natural material. The three-dimensional treatment of the aluminum, coupled with its raw metallic finish, gives the canopy a visual softness. "There is the hard box with a more delicate veil," explains Idenburg.

The hard box, of course, is the building itself. More like a pavilion, the highly transparent 30,000-square-foot container, whose roof follows the arc of the canopy, features three main areas—for galleries, offices, and classrooms—which pinwheel around a central lobby and interior courtyard. Its exterior walls feature elegantly corrugated precast-concrete panels, some rising to 32 feet, and straight and curving glass, the biggest sheet of which measures 10 by 14 feet.

Like SANAA's Glass Pavilion at the Toledo Museum of Art, which Idenburg and Ra also worked on together, the glazing here is mullionless. Since the span is taller than at Toledo, the glass is also slightly thicker, with two lites of ¼-inch apiece separated by a clear interlayer. "Using a principle similar to a glass balustrade, we clamped the laminated panels at the bottom so they essentially cantilever off the ground," explains Ra.

The 8,000 square feet of galleries feature polished-concrete floors. With works on paper comprising nearly three-quarters of the pieces on show, the spaces are entirely lit by LEDs; occupancy sensors turn the lights on and off to preserve power. An off-site PV array satisfies some of the energy demand. The building is on track to achieve LEED Platinum certification and would be one of only a handful of U.S. museums to do so.

Whether one approaches the campus from the freeway or just strolls through it, the $30 million museum is a sight to behold. Architects often talk about how constraints can encourage creativity. This is a vivid example of a tight budget leading to truly innovative design. More than that, SO-IL and BCJ have designed a building appropriate for the size and scope of UC Davis's collection and audience, avoiding the costly mistake UC Berkeley made with its art museum and film archives, which opened last January. The latter spent nearly four times as much on what was primarily a renovation of an existing building. At UC Davis, the university certainly got its money's worth—and then some.
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Biophilic design and the hospitality sector are a natural fit.

BY KATHARINE LOGAN

IN DOWNTOWN SINGAPORE, where high-rises are built to their lot lines, Oasia, a 27-story hotel and office building, introduces a leafy green respite from the dense urban setting. Creeping plants of 21 species climb across the tower's red mesh facades. Hummingbirds and insects feed on the nectar on offer and the petals of spent flowers spin down into the streets.

Market research suggests that hotels making room for nature can reap significant advantages. “A hotel’s product is its environment,” says Richard Hassell, a principal at WOHA, the Singapore-based architects that created Oasia. Utilizing biophilic design—design that accounts for humankind’s innate need for a connection to nature—can add an extra level of comfort to that environment. It also can affect prospective guests’ choices. In the case of Oasia, management uses the hotel’s facade as a marketing tool. “It’s an easy sell,” says Hassell. In general, he adds, “Hospitality projects are advance soldiers in the fight to have more greenery on buildings.”

Oasia’s lush landscape is not difficult to achieve, especially in tropical Singapore. There have been plants on buildings for centuries, and there’s nothing really innovative about the technology used at Oasia, which opened in April. The hotel’s envelope consists of an outer layer of expanded aluminum mesh, powder-coated in five shades of red, orange, and pink. Behind the mesh, painted precast-concrete panels serve as the weather barrier. Between these two layers, the creepers that climb the facade grow in giant fiberglass tubs, with a passageway for maintenance access. There’s some additional expense, but according to WOHA, it isn’t prohibitive. The cost may even be offset by savings elsewhere, on aluminum mesh and painted concrete cladding, for example, of which the total outlay is less than that of a curtain wall.

What is different are greenery’s maintenance requirements. “As architects, we’re trained to think that you design a building, it’s made, and then it’s there,” says Hassell. But for a design that integrates living, growing nature

VERTICAL GARDEN Creeping plants cover WOHA’s Oasia, a 27-story hotel and office building in Singapore. The greeneries climb the high-rise’s outer envelope of expanded aluminum mesh, which is powder-coated in shades of red, orange, and pink.
to succeed in the long term, there must be
champions within the organization operating
the building that will sustain the effort. "It can
be more or less labor-intensive, depending on
how [the project] is designed," says Hassell of
the job, "but it does require that someone
consistently care about it."

The biophilic design that characterizes
Oasia—and WOHA's work in general—stems
from three complementary rationales. The
first is stewardship of nature as cities expand:
the need to create places for nature at the
same time we create floor area. With increas-
ing urbanization, we need to wrap nature into
our buildings if we are going to have any kind
of connection to it.

The second rationale is "just that selfish
delight that comes from living a more beauti-
ful, peaceful, centered, and calm life when
you're surrounded by nature," says Hassell.
Hundreds of studies have demonstrated the
positive impacts of biophilic environments,
including reduced stress, improved cognitive
performance, and enhanced creativity. The
research goes back decades and includes a
landmark 1984 study that found improved
recovery rates and reduced pain-medication
requests from hospital patients in rooms with
views of nature.

The third rationale is ecosystem services—
the multitude of ways natural systems support
humankind. Biophilic features can often help
manage stormwater, mitigate pollution, and
reduce the heat-island effect, for example.
Specific to the hospitality sector, a 2014 study
from the Cornell School of Hotel Administra-
tion (SHA) found that eco-certified hotels
LUSH LIFE Plant-covered balconies and terraces wrap around the facade of WOHA's Park Royal on Pickering hotel (left). Each guest room offers a view of greenery (above).

recorded higher resource efficiency for both customer and operational activities.

Another 2014 study from Cornell's SHA found that LEED-certified hotels achieved higher daily rates the first two years after certification than their noncertified competitors did. Although LEED doesn't explicitly require the inclusion of biophilic elements, data finding that customers will pay higher rates for a green hotel suggests economic benefits from an approach that integrates nature.

Building on the Cornell report, a forthcoming study from Terrapin Bright Green, a New York–based green building research and consulting practice, suggests that biophilia plays a role in customer preferences. Comparing guest comments across a sample of biophilic and conventional hotels, Terrapin's researchers found the most frequent point of praise from guests who had stayed at a biophilic hotel was its design (whereas praise from guests who had stayed at one of the conventional hotels pertained most frequently to maintenance and service). This matters, for according to "Winning the Race for Guest Loyalty," a recent report from global financial consultancy Deloitte, basics like cleanliness and comfort are no longer enough for hotels to differentiate themselves from their competitors. Instead customers—and in particular millennials, who will make up three-quarters of frequent business travelers by 2025—are looking for more memorable experiences.

The Park Royal on Pickering, another WOHA-designed building, which has achieved Singapore's highest environmental certification, provides an example of what the biophilic effect can mean from a marketing perspective. The 300,000-square-feet hotel and office building includes 160,000 square feet of sky gardens, so that an adjacent park appears to be stepping up and through the building. Since the Park Royal's 2013 opening, it has enjoyed close to 100 percent occupancy. Its room rates are double the original projections and its image has appeared on travel-related web pages as the personification of Asia's hospitality sector. Park Royal bookings have even spilled over to other Singapore hotels associated with the property.

Dramatic, exuberant greenery is not the only way to achieve biophilic effects, however. In a previous study, Terrapin identified three categories of biophilic design: nature in the space (the direct, physical presence of nature); nature of the space (spatial configurations that resemble conditions found in nature); and natural analogs (nonliving evocations of nature such as organic shapes in artwork, ornamentation, and furniture). Together, these categories comprise 14 types or patterns. To identify the strongest correlations to lowering stress, improving cognitive performance, and elevating emotion and mood, Terrapin crosschecked more than 500 reports and academic publications pertaining to biophilic response. The practice then ranked the patterns by the strength of research supporting their effects on health and well-being.

In a postoccupancy case study of the Park Royal on Pickering, Terrapin's researchers found examples of all 14 biophilic patterns, with four identified as predominant: "Visual Connection with Nature."
CONTINUING EDUCATION: BIOPHILIA
FROM ARCHITECTURAL RECORD

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nonbiophilic lobbies, about 25 percent of
users made extended use of the lobby—
buying food or drink, meeting people, working,
or relaxing in the biophilic lobbies, the pro-
portion of extended users rose to 36 percent
In one biophilic hotel, which had been designed
deliberately to encourage extended lobby
activities, the researchers found that among
the users were residents from the surrounding
neighborhood. This provided additional reve-
gn
One of the hotel brands in the lobby study,
Starwood Capital Group’s 1 Hotel, has put
biophilic design at the center of its identity.
The hotel’s first ground-up new building,
1 Hotel Brooklyn Bridge, is scheduled to
open in February at the edge of the East
River, across from Lower Manhattan.

greenery, both outside and in) correlates
strongly to lowered blood pressure and heart
rate, and to improved mental attentiveness
and engagement; it also positively affected
attitude and overall happiness. “Biomorphic
Forms and Patterns” (the building’s
abstracted landscape contours of layered pre-
cast concrete and interior curvilinear wood
forms) are the preferred design of many.
When coupled with reliable safeguards, “Risk/
Peril” spaces (the cantilevered human-scale
birdcages, perched at the end of narrow
bridges and that provide views of the city) cre-
ate strong dopamine and pleasure responses.
“Complexity and Order” (intricate geometric
patterns that mimic those encountered in
nature, such as the complex wood-and-metal
lattice that encloses the building’s spiral
staircase) have been linked with improved per-
cptual and physiological stress responses.

Another way of saying all this, of course, is
that these patterns make the hotel’s guests
feel better. And when guests feel better, they
stay longer and visit again.

Although “selling beds” provides most
of hotels’ income, there are other streams. “It
used to be that the hotel lobby was the living
room of a community,” says Bill Browning,
a partner at Terrapin. “Many of the brands are
now rediscovering that lobbies can be fantas-
tic social spaces and sources of additional
revenue.” To investigate the role of biophilic
design in that trend, Terrapin’s researchers
monitored occupancy patterns in the lobbies
of six Manhattan hotels, three of which had
biophilic features. They found that in the

One of the hotel brands in the lobby study,
Starwood Capital Group’s 1 Hotel, has put
biophilic design at the center of its identity.
The hotel’s first ground-up new building,
1 Hotel Brooklyn Bridge, is scheduled to
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River, across from Lower Manhattan.

greenery that covers
terraces and vertical
fins on the facade of
Marvel Architects’ 1
Hotel Brooklyn Bridge
merges the building
with the adjacent park.

SOFTENING THE
CITY Extensive
greenery that covers
terraces and vertical
fins on the facade of
Marvel Architects’ 1
Hotel Brooklyn Bridge
merges the building
with the adjacent park.
Designed by New York–based Marvel Architects, the 194-key hotel/16-unit condominium building connects literally and figuratively with its surroundings. Extensive greenery on roofs and terraces integrates the structure with Brooklyn Bridge Park. The terraces, together with building-height vertical fins, evoke eroded geological formations, a reference to the bluffs in this part of Brooklyn. Four public passageways cut through the structure, linking the neighborhood and park. These portals include boulders, trees, plantings, and art; they also are lined with yellow pine recycled from the warehouses that formerly occupied the site.

Inside the building, interior architects incorporated used highly tactile materials inspired by Brooklyn’s waterfront. “People want an authentic experience that connects them to the place culturally, visually, and physically,” says Incorporated partner Adam Rolston of the approach. Salvaged and weathered woods appear throughout 1 Hotel: as a ceiling treatment, as a lining for elevator cabs, and as millwork in guest rooms. Stone for the lobby’s massive white granite stairway came from the same quarry as did the granite of the Brooklyn Bridge. Photos of rusted ship hulls even served as the basis for the hotel’s carpet patterns. “Almost every material used has some effect of weathering, oxidation, or being somehow wrought,” continues Rolston. To further entwine nature and place, the New York–based firm also collaborated with local fabricators, inviting them to suggest materials and methods.

Starwood Capital had experience incorporating natural materials into 1 Hotel’s two other properties, located near New York’s Central Park and in Miami’s South Beach. Waad El Hadidy, a designer with the company, predicts people will connect with the highly textured and narratively rich finishes of the 1 Hotel Brooklyn Bridge. “We get asked, ‘What does this come from?’” she says of the decor. “Not only are guests genuinely interested, but hotel staff are, too. People are drawn to touch things that have a story.”

Katharine Logan is an architectural designer and a writer focusing on sustainability and well-being.
Look to these pages for products brought to you directly from manufacturers. You'll find price, application, performance data, and contact information—the facts needed to make the right decisions. Use the reader service card in the issue or go online at architecturalrecord.com to request further details.

Weathered materials inspired Tandus Centiva's Indigenous Materials line of luxury vinyl tile, which is digitally printed and fully recyclable. (SNAP #233)

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**NEW AND UPCOMING EXHIBITIONS**

**Archive of Creative Culture**
SAN FRANCISCO  
February 11–June 4, 2017  
A nomination-based, participatory project, Archive of Creative Culture documents the histories of respected creative thinkers. The result is a collection of books from selected visual, performing, and literary artists, musicians, curators, and cultural figures. Each book, displayed at San Francisco’s Museum of Craft and Design, is intended to be aogo-to reference and source of inspiration. For more information, visit sfmcd.org.

**Bureau Spectacular: insideoutsidetweenbeyond**
SAN FRANCISCO  
February 11–August 13, 2017  
For its first museum presentation on the West Coast, architecture studio Bureau Spectacular has designed a large-scale installation that further develops the studio’s ideas on past, current, and future architecture as seen in the drawing INSIDEOUTSIDEBEYOND, acquired by SFMOMA in 2015. Led by Jimenez Lai, the Los Angeles–based studio views architecture as a medium capable of rewriting cultural narratives. Reconsidering urban architecture inside, outside, between, and beyond the monotonous rectangular buildings seen in most city skylines, the exhibition offers an urban landscape littered with surrealistic architectural forms and jarring environments. For more information, visit sfmoma.org.

**Moholy-Nagy: Future Present**
LOS ANGELES  
February 12–June 18, 2017  
This exhibit, the United States’ first László Moholy-Nagy retrospective in nearly 50 years, reveals a utopian artist who believed that art could work hand in hand with technology for the betterment of humanity. Moholy-Nagy: Future Present, taking place at the Los Angeles County Museum of Art (LACMA), examines the career of this pioneering painter, photographer, sculptor, and filmmaker and includes more than 250 multimedia works from public and private collections across Europe and the United States. For more information, visit lacma.org.

**Architecture of Independence—African Modernism**
NEW YORK CITY  
February 16–May 27, 2017  
The exhibition Architecture of Independence—African Modernism explores the complex legacy of modern architecture and nation-building in 1960s and 1970s postcolonial Africa, when many sub-Saharan countries gained their independence and turned to experimental and futuristic architecture to express their national identities. Held at New York’s Center for Architecture, the show features original photography by Iwan Baan and Alexia Webster. For more information, visit alany.org.

**Yayoi Kusama: Infinity Mirrors**
WASHINGTON, D.C.  
February 23–May 14, 2017  
A celebration of the Japanese artist’s 85-year career, Yayoi Kusama: Infinity Mirrors is taking place at the Hirshhorn Museum. Visitors will have the opportunity to discover six of Kusama’s Infinity Mirror Rooms alongside a selection of other key works—including paintings from her most recent series, “My Eternal Soul,” which have never been shown in the United States. For more information, visit hirshhorn.si.edu.

**Building Optimism: Public Space in South America**
PITTSBURGH  
Through February 13, 2017  
This exhibition at the Carnegie Museum of Art, which spans projects in Argentina, Brazil, Chile, Colombia, Peru, and Venezuela, Building Optimism: Public Space in South America investigates ways that emerging architects and designers instigate change through the design of public space. Via photography, video, drawings, and models, it immerses visitors in the inventive ways that public spaces can become social spaces as the sites respond to the circumstances and pressures of their communities. For more information, visit cmoa.org.

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The ongoing conceptual installation project City of
Françoise Grossen Selects: A MAD Collection POV
NEW YORK CITY
Through March 19, 2017
In the 1960s, Françoise Grossen rejected the rectilinear loom that constrained contemporary weaving for an intuitive approach to fiber and ended up creating large-scale, suspended rope forms constructed of knots, loops, braids, and twists. As part of the POV series at the Museum of Arts and Design (MAD), Grossen mined the museum’s permanent collection—choosing work from its unusual array of baskets, as well as other work in fiber, wood, and metal—and displayed those selections alongside her own rope sculptures. For more information, visit madmuseum.org.

Pierre Chareau: Modern Architecture and Design
NEW YORK CITY
Through March 25, 2017
The Jewish Museum presents the first U.S. exhibition to focus on French designer and architect Pierre Chareau. Showcasing rare furniture, lighting fixtures, and interiors—along with designs for Maison de Verre, the glass house completed in Paris in 1926—the show brings together more than 180 rarely seen works from major public and private collections in Europe and the United States. For more information, visit thejewishmuseum.org.

Irving J. Gill: New Architecture for a Great Country
SAN DIEGO
Through March 31, 2017
During the late 19th and early 20th centuries, Chicago-born architect Irving J. Gill viewed the city of San Diego as a blank slate, with great potential. Inspired by the coast and canyons, sunshine and shadows, Gill created a new design language: what is now called modern architecture. This exhibition at the San Diego History Center offers visitors a chance to learn more about the twin legacies of this sometimes misunderstood individual who helped create a new style of architecture admired throughout the world. For more information, visit sandiegohistory.org.

One and One Is Four: The Bauhaus Photocollages of Josef Albers
NEW YORK CITY
Through April 29, 2017
Josef Albers was a central figure in 20th-century art, both as a practitioner and as a teacher at the Bauhaus, Black Mountain College, and Yale University. In 2015, the Museum of Modern Art (MoMA) acquired 10 photocollages by Albers, which joined the pair donated by the Josef and Anni Albers Foundation almost three decades ago. This exhibition at the Cooper Hewitt, Smithsonian Design Museum is a 1934 battle mural by Arthur Gordon Smith celebrating the career of soprano and radio star Jessica Dragonette, which will be displayed alongside radios, drawings, and photographs of the era. The mural contains multiple vignettes that illustrate milestones in radio’s history and familiar Jazz Age icons, such as a wall of Art Deco skyscrapers crisscrossed by airplanes and musical notes. For more information, visit cooperhewitt.org.

How Should We Live? Propositions for the Modern Interior
NEW YORK CITY
Through April 23, 2017
How Should We Live? explores the complex collaborations, materials, and processes that have shaped the modernist interior, with a focus on specific environments—domestic interiors, re-created exhibition displays, and retail spaces—from the 1910s to the 1960s. Held at the Museum of Modern Art (MoMA), it brings together more than 200 works drawn from the museum’s Architecture and Design collection as well as the Library, Drawings and Prints, Painting and Sculpture, Film, and Photography collections. Rather than concentrating on isolated masterworks, the show gives attention to the synthesis of design elements within each environment and to the connection of internal factors and attitudes. For more information, visit moma.org.

Question the Wall Itself
MINNEAPOLIS
Through May 21, 2017
Question the Wall Itself explores ways that interior spaces and decor can be fundamental to the understanding of cultural identity. This multimedia exhibition at the Walker Art Center showcases work by 39 international, multigenerational artists who explore the political and social dimensions of interior architecture as well as its complicated relationship to history and their own backgrounds. The show presents a breadth of pieces conceived as rooms, from the anteroom, prison cell, and living room to the library, showroom, and garden. Through the artists’ examinations of such spaces—both public and private—the contexts of these environments are revealed. For more information, visit walkerart.org.

Timber City
WASHINGTON, D.C.
Through May 21, 2017
This exhibition at the National Building Museum challenges the notion that wood is an antiquated building material by demonstrating the wide range of benefits offered by cutting-edge methods of timber construction, among them surprising strength, fire resistance, sustainability, and beauty. Curated and designed by Yugen Kim and Tomomi Itakura, founding partners of the Boston-based architectural design firm ikd, the exhibit will examine the recent boom in timber construction worldwide and highlight U.S.-based projects, including the two competition winners of the recent Tall Wood Building Prize, sponsored by the U.S. Department of Agriculture. For more information, visit nbm.org.

The World of Radio
NEW YORK CITY
Through September 14, 2017
The centerpiece of this exhibition at the Cooper Hewitt, Smithsonian Design Museum is a 1934 battle mural by Arthur Gordon Smith celebrating the career of soprano and radio star Jessica Dragonette, which will be displayed alongside radios, drawings, and photographs of the era. The mural contains multiple vignettes that illustrate milestones in radio’s history and familiar Jazz Age icons, such as a wall of Art Deco skyscrapers crisscrossed by airplanes and musical notes. For more information, visit cooperhewitt.org.
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Collectible pieces may be the focus of Design Miami, but this time it was the architectural installations that got people talking.

ARCHITECTS AT THE LATEST edition of Design Miami, which ran from November 30 to December 4 in the city's Design District, were all about getting up close and personal, creating spaces where 40,000 fairgoers could interact with—or react to—one another.

These exchanges began even before visitors entered the exhibition. By the doorway, New York-based SHoP Architects, winner of the 2016 Panerai Visionary Award for innovative fabrication and delivery techniques, constructed a public plaza anchored by two 13-foot-tall pavilions. Called Flotsam & Jetsam, the structures resembled jellyfish and were fabricated by robots from 47 miles of carbon-fiber-reinforced plastic. The impetus was both artistic and practical. "We want to make a mesh strong enough—and we hope eventually cheap enough—to replace a stud wall," explained Philip Nobel, SHoP's editorial director. Added SHoP principal Greg Pasquarelli: "There's something magical about making a pavilion that is technological and beautiful but took only five months from start to finish." (Postfair, Flotsam & Jetsam moved to the city's Jungle Plaza, where it will serve as a cultural event space for the next two years.)

Inside the Design Miami tent, architects explored the relationship between hosts and guests. Berlin-based firm Büro Ole Scheeren unveiled Stage, a chef-led fast-food concept for gourmet grocer Dean & Deluca. The freestanding food theater featured two polished stainless-steel rectangles, one floating above the other. The lower p...

Flotsam & Jetsam, a pair of 3-D printed pavilions created by SHoP Architects, sat outside the entrance to Design Miami (top). Robots built the jellyfish-like structures, which were set among toys on a small beach (above).
Offering a different take on the concept, Pedro&Juana’s Sobremesa celebrated the Mexican tradition of lingering around the table after dinner. Working with sponsor Airbnb, the Mexico City-based architects Mecky Reuss and Ana Paula Ruiz Galindo created an indoor courtyard with perforated metal walls; there they mingled with fairgoers, inviting them to share in free snacks, cocktails, and conversation at communal tables.

For the fair’s VIP collectors, the Istanbul-based firm Tabanlioglu Architects offered the pink resin-clad Flamingo Lounge. “Because Design Miami is so crowded and visually chaotic, we wanted to make the space one color and one type of material to isolate you from the fair.”
CODED

Tabanliogiu Architects made the Flamingo Lounge one color and material—pink resin—to give VIP collectors a respite from the fair’s bustle (above from left). Atelier Biagetti designed NO SEX in Miami (below) to encourage discussion about what is alluring nowadays.

said Tabanlioglu spokeswoman Gonca Ark Caliska. She added that the choice of the pastel material reflected Miami and the nature of the firm’s practice, “which ranges from the colorful, surreal liquidity of Gaetano Pesce to the rigid utilitarian minimalism of Mies van der Rohe.”

Exhibitors also contributed to the wealth of installations. As part of the fair’s new Design Curio platform, six galleries presented experimental environments by cutting-edge designers. One booth, commissioned by the New York–based Patricia Findlay, offered a winking take on Miami’s Zika scare. Created by Milanese duo Atelier Biagetti, NO SEX in Miami pushed the boundary between desire and revulsion, presenting a surreal therapist’s office with a rubber-wrapped massage table, a floor lamp with a phallic bulb, and twin nurses in translucent pink lab coats. The idea, according to cofounder Alberto Biagetti, was to spur dialogue about what is and isn’t sexy. It was a spectacle that stopped foot traffic. It also forced fairgoers to engage with Biagetti and partner Laura Baldassari to grasp their intentions.

And ultimately that was the point. Such conversations are what made Design Miami even more compelling this year. By challenging familiar design narratives, the fair’s exhibitors prompted attendees to have a discussion with them—and with one another—about culture, technology, and craftsmanship. —Wendy Moonan
AYBARS ASCI is fascinated by concrete's shape-shifting nature. "When I see a concrete surface," the Brooklyn architect says, "I always imagine its liquid state, its movement as it was poured." So when it came time to design a concrete tile for a competition held by manufacturer Walker Zanger in partnership with Architectural Digest, he chose to marry the material's two phases. His winning entry, Liquid Forms, features a fluid articulate surface that highlights concrete's nature and plasticity. And although a single design, the 3 ¾-by-19 ½-inch tiles can be combined in multiple orientations to generate 10 patterns.

"Liquid Forms is aesthetically versatile," says Jared Becker, vice president of design and marketing for Los Angeles-based Walker Zanger. "Its unique visual qualities give architects and interior designers a rich palette to work with." He adds that the design's seeming movement makes the tile a perfect complement to the company's existing Kaza collection, a line of three-dimensional concrete tiles designed and manufactured in Hungary.

The tile, which is available in four colors, is suitable for interior and exterior applications alike. Asci recommends it for feature walls in particular, where there's enough space to exploit the myriad configurations. "Tiling is about repetition," he says. "But just as in the minimalist music of Steve Reich and Philip Glass, repetition is more powerful when there is complexity and variation in the pattern."
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