

Lightfair Preview    Huf Architektury Martin Rajniš  
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Union Carbide    Olson Kundig  
                                 Schaum/Shieh

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## Quiet Transformations

HGA and Inside Outside find power in modesty at Minneapolis' Walker Art Gallery

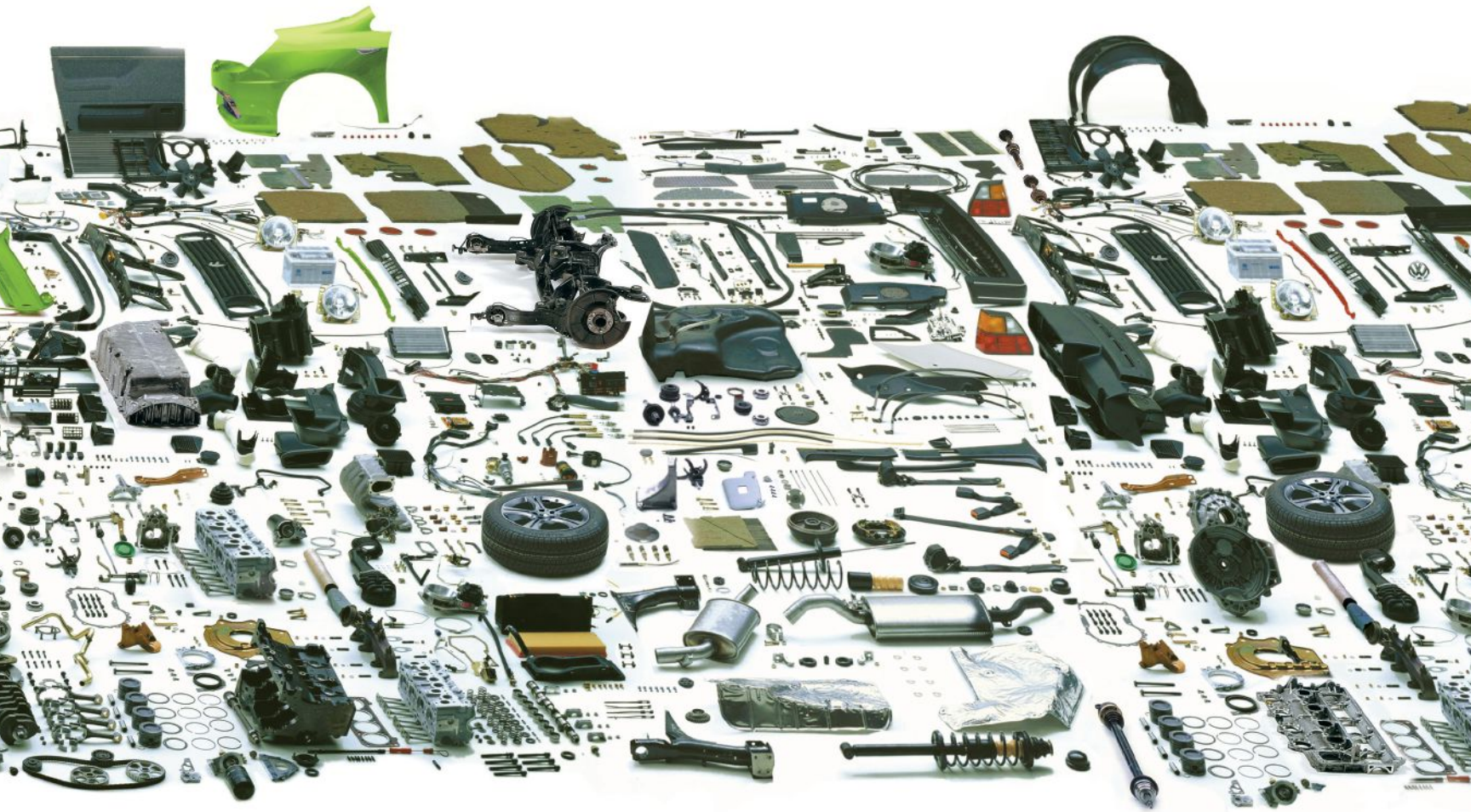
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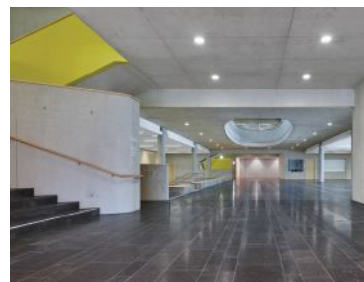
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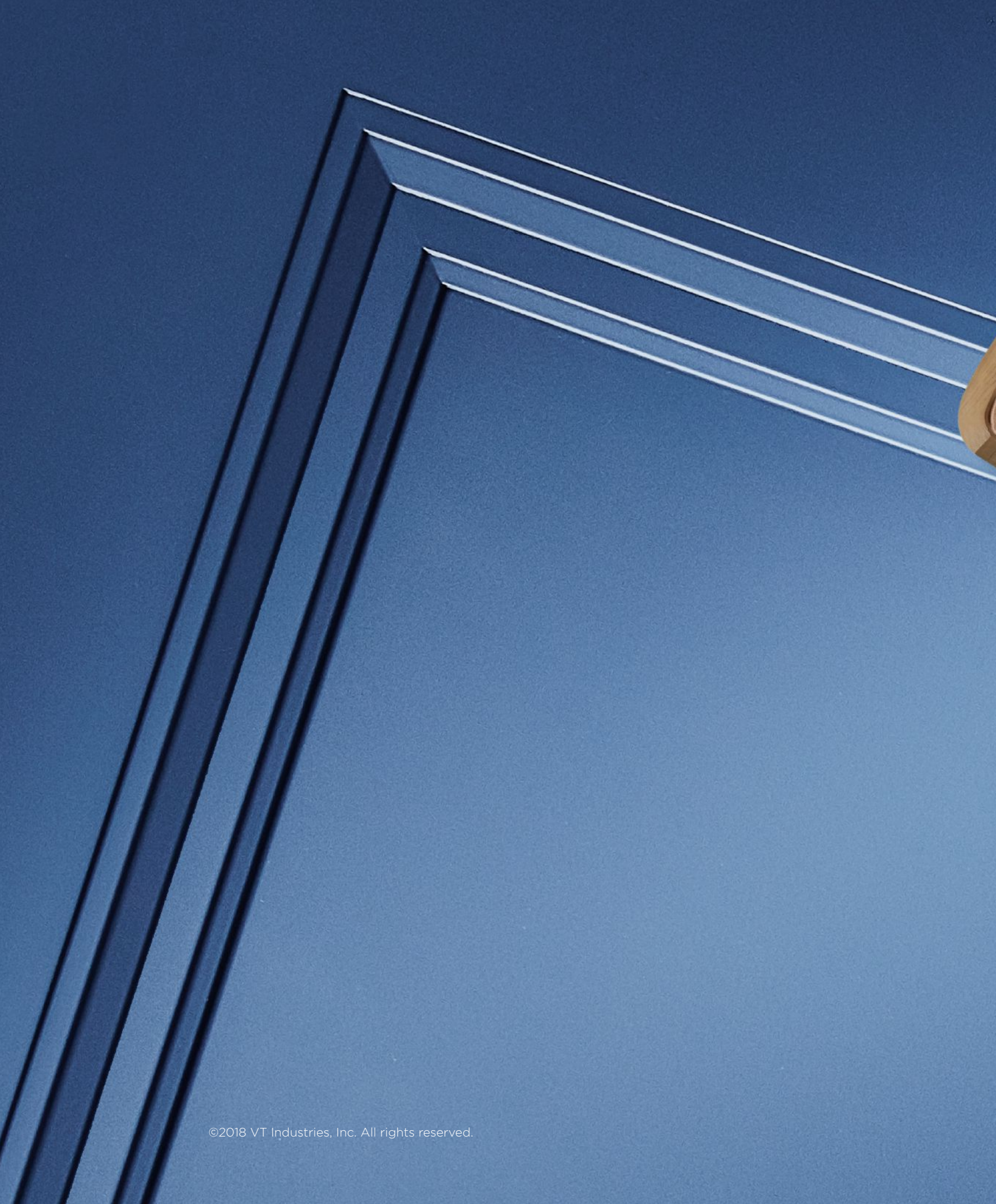
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# METALS IN CONSTRUCTION MAGAZINE 2018 DESIGN CHALLENGE

## *Designing the Next-Generation Facade*

### MEET THE WINNERS OF THE *METALS IN CONSTRUCTION* MAGAZINE 2018 DESIGN CHALLENGE TO DESIGN THE NEXT-GENERATION FACADE

*Metals in Construction* magazine and a jury of architects and engineers has announced the winner of its 2018 Design Challenge, a competition for architects, engineers, students, and others from around the world to submit their vision for a facade design that enhances employee health and well-being in the workplace.



#### GRAND-PRIZE WINNER: THE ECOTONE TEAM

##### **Eskew+Dumez+Ripple**

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Thomas Gibbons  
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To view finalists' entries and learn about next year's Design Challenge, visit [www.metalsinconstruction.org](http://www.metalsinconstruction.org).



Jurors Areta Pawlynsky, Heintges, Aulikki Sonntag, Drees & Sommer, Ilana Judah, FXCollaborative, Melissa Wong, Thornton Tomasetti, Tali Mejicovsky, Arup with moderator Phillip Anzalone and the winning teams.



Vivian Loftness, FAIA, University Professor and Paul Mellon Chair in Architecture, Carnegie Mellon University, presented the keynote, "Reinventing Facades for Resiliency, Health and Productivity," at the 2018 awards ceremony.

**FINALISTS:**



**THE ART OF HEALTH AND HAPPINESS TEAM**

**Weston Williamson + Partners**

- Andrew Weston
- Travis Walsh
- Chloe Lockhart
- Rowan O'Brien
- Daryl Tebug
- Filipe Santos
- Nayara de la Hoz
- Lucy Weston



**CIRCADIAN CURTAIN WALL TEAM**

- John Neary, *HOK Facade Architecture*
- Michael Miller, *HOK*
- Zhenhuan Xu, *HOK*
- Blake Kurasek, *HOK*
- Marie Achalabun, *HOK*
- Mario Claussnitzer, *HOK Facade Engineering*
- Matt Breidenthal, *HOK Structural Engineering*
- Matthew Payne, *WSP Built Ecology*
- Elliot Glassman, *WSP Built Ecology*



**LIVING IN THE WALL TEAM**

- Little**
- Michael Coates
- Eric Hawkins
- Frank DeBolt
- Jason Slatinsky
- Garrett Herbst
- Jim Thompson
- Carol Rickard



**PIXEL FACADE TEAM**

- Oliver Thomas
- Keyan Rahimzadeh

Architect: Marpillero Pollak Architects  
Photograph: Courtesy Marpillero Pollak Architects



# Page Turner

Queens' new **Elmhurst Community Library** serves one of the most diverse and vibrant communities in New York. Designed by **Marpillero Pollak Architects**, the LEED Silver-rated facility features two structural glass-encased reading rooms that allow light to flood in during the day and offer glimpses of the state-of-the-art library setting at night. Erected by **W&W Glass**, its glazed features have become beacons for the community, drawing its knowledge-hungry members to the wealth of information within. Read more about it in **Metals in Construction** online.

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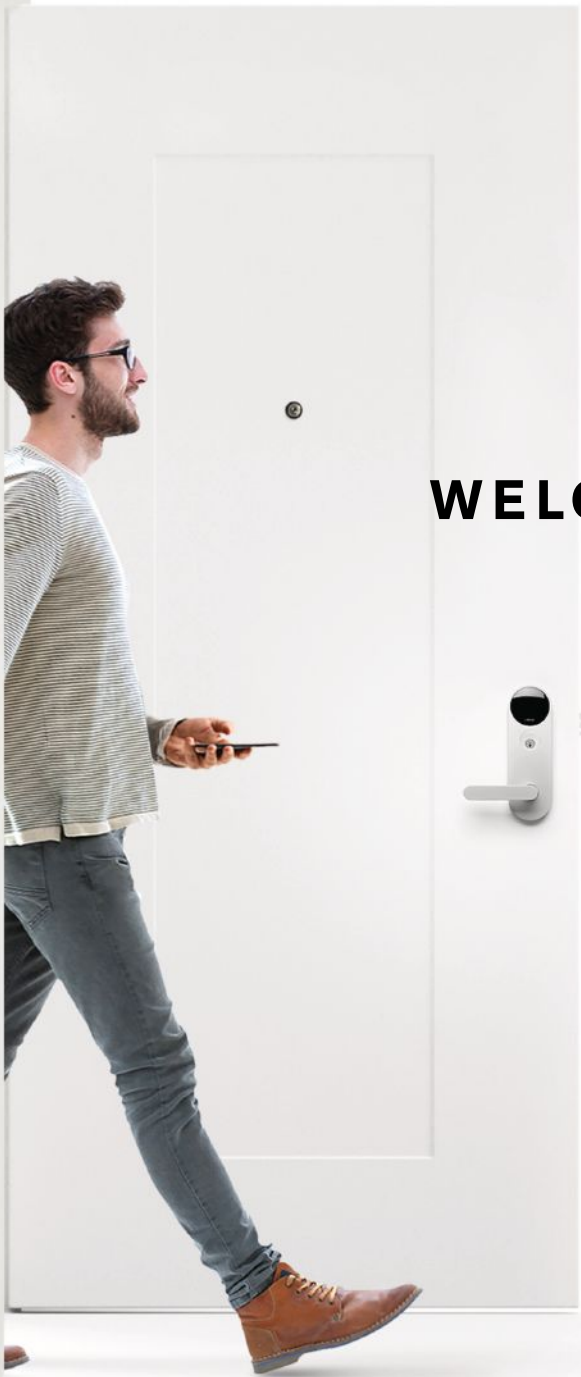
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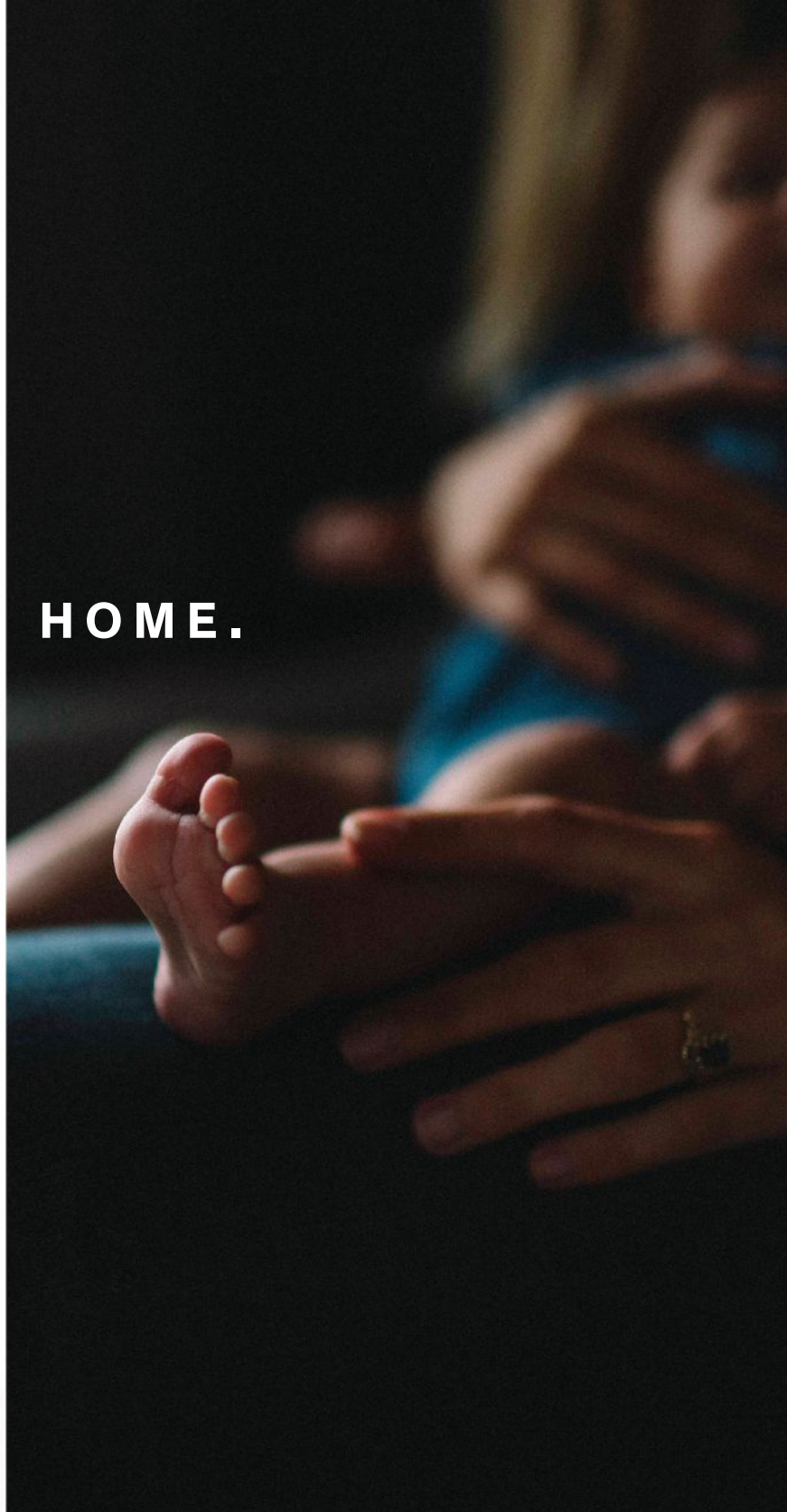
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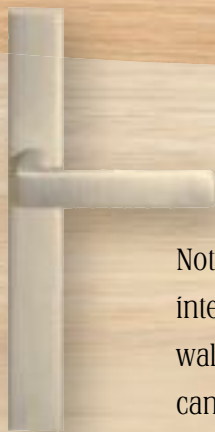


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The Studio Prize is an annual design awards program that recognizes innovative, thoughtful, and ethical studio courses at NAAB- and CACB-accredited architecture schools. The prize is designed to celebrate the creativity of studio course curricula as well as the sophistication of the work students produce in response. The exclusive sponsor, Sloan, has generously made \$20,000 available for student prizes. The jury will also confer the \$5,000 Sloan Award to students in a winning studio or studios that address sustainability, specifically water conservation.

3<sup>rd</sup> ANNUAL

# THE STUDIO PRIZE

#### ELIGIBILITY

All full-time, part-time, and visiting faculty and administrators at schools accredited by the National Architectural Accrediting Board or the Canadian Architectural Certification Board may submit studio course curricula, and the resulting student work, for consideration. All studio courses must have occurred in the context of a professional Bachelor of Architecture or Master of Architecture program, or their equivalents, and all must have been concluded within the 2017–2018 academic year. Summer 2017 studios are also eligible.

#### RECOGNITION

Winners will be featured in the September issue of ARCHITECT with expanded coverage online at [architectmagazine.com](http://architectmagazine.com).

#### HOW TO ENTER

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#### DEADLINES

**REGULAR** June 15, 2018  
**LATE** June 29, 2018

#### FEES

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Design Architect: Renzo Piano Building Workshop  
 Architect of Record: Davis Brody Bond LLP  
 Structural Engineer: WSP/Parsons Brinckerhoff  
 Photograph: Frank Oudeman



# Shaking Bad

In New York, passing subways can shake entire buildings, but that wasn't an option for Columbia University's new **Jerome L. Greene Science Center**. Home to sensitive laboratory and imaging equipment requiring exceptional stability, the design by **Renzo Piano Building Workshop** relies on a steel structure to reduce floor vibrations to a miniscule 2,000 mips. Even as the elevated No. 1 train roars past, this helps ensure that nothing distracts from the scientific advances being made within the center's unshakable walls. Read more about it in **Metals in Construction** online.

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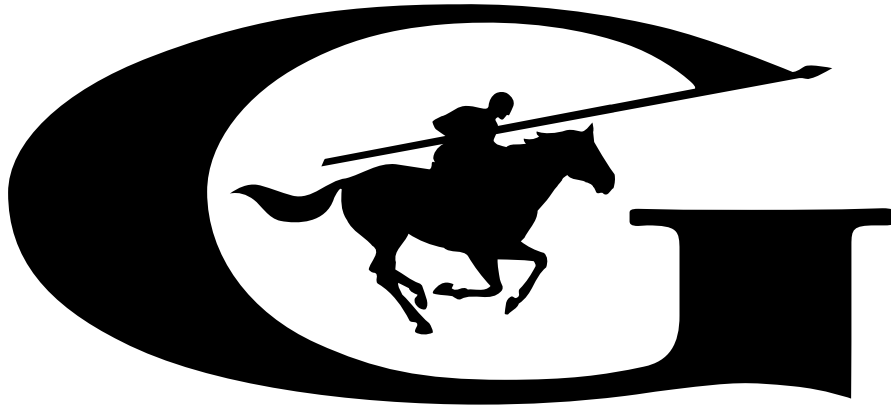
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### Evictions, Exhibited

On April 14, the National Building Museum in Washington, D.C., opens a yearlong exhibition stemming from the research of Matthew Desmond, the author of the Pulitzer Prize–winning *Evicted: Poverty and Profit in the American City* (Crown, 2016) and the principal investigator of Princeton University’s Eviction Lab, which plans to launch an eviction mapping website this year. In the exhibition, audio interviews and photographs married with infographics and statistics are designed to highlight the roughly 2.4 million evictions that occur in the United States each year. “Evicted” runs through May 19 of next year. —SARA JOHNSON

> Read more about the National Building Museum’s “Evicted” exhibition at [bit.ly/EvictedNBM](http://bit.ly/EvictedNBM).



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### **Lego Debuts Plant-Based Plastic Plants**

This year, Danish toy company Lego Group will release an update of its plant-based plastic landscaping elements, including leaves, bushes, and trees. The new horticultural elements are virtually indistinguishable from the previous versions, but are made of a plant-based polyethylene derived from sugarcane. Creating the miniature building toys out of responsibly sourced materials is in alignment with Lego's sustainability goals, which aim for zero-waste production by 2030, and it is the company's first step in its commitment to produce all of its modular toys through more sustainable methods. —SELIN ASHABOGLU

> Read more about Lego's plant-based toys at [bit.ly/PlantLegos](https://bit.ly/PlantLegos).





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### **Mexico's Lanza Atelier Showcased Stateside**

The latest exhibition in the San Francisco Museum of Modern Art's "New Work" series highlights Mexico City–based Lanza Atelier, established in 2015 by architects Isabel Martínez Abascal and Alessandro Arienzo. (The studio won a 2017 Architectural League Prize for Young Architects + Designers.) On view through July 29, the show features three works: "Steps Table," a hierarchical table and chairs (shown, installed in Mexico City's Labor gallery); "Shared Structures," prints based on axonometric drawings of multifamily projects in Mexico; and "Without Number," a reimagining of Mexico City police stations into community facilities. —SARA JOHNSON

> Check out more images of the work in the exhibition at [bit.ly/LanzaSFMOMA](https://bit.ly/LanzaSFMOMA).

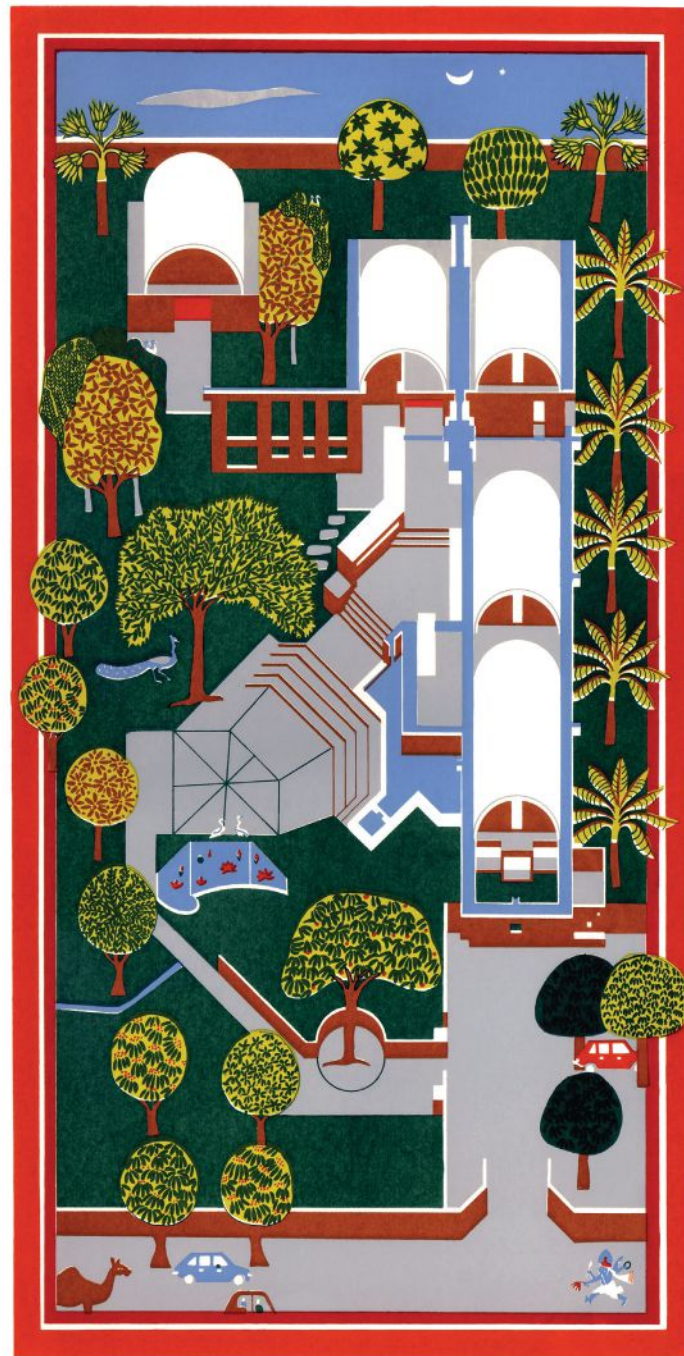


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### Indian Architect Balkrishna Doshi Wins the 2018 Pritzker Prize

This year's Pritzker Architecture Prize has been awarded to Balkrishna Doshi, HON. FAIA—the first Indian architect to receive the prize. “When you practice for 70 years and you get such news, it’s beyond surprise, and a joyous moment,” Doshi told ARCHITECT contributor Edward Keegan, AIA, in an interview following the announcement. “It’s very significant for us, for our country, and also for creating a new generation to imagine what India can do, in terms of planning, and urbanization, housing, quality of life, etc.,” he says. Doshi’s portfolio includes his office, Sangath Architect’s Studio (shown), in Ahmedabad, India. —SARA JOHNSON

> To read Edward Keegan’s interview with Doshi, visit [bit.ly/PritzkerDoshi](http://bit.ly/PritzkerDoshi).



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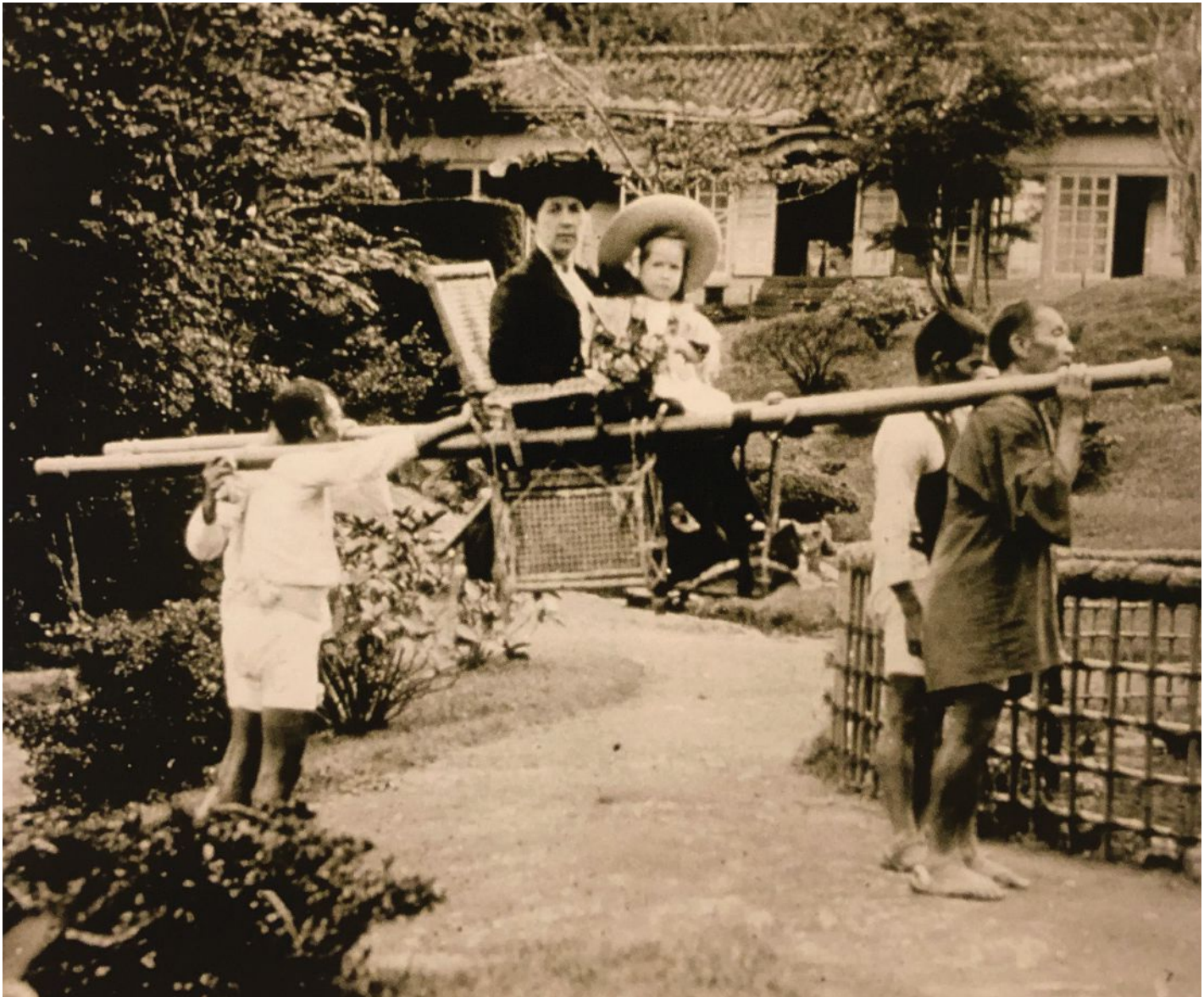


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### Japanese-American Relations

Following the opening of Japan to trade with the United States in the mid-1800s, a new building typology sprung up in the Asian nation: Western-inspired hotels. Andrea P. Leers, FAIA, a principal at Boston firm Leers Weinzapfel Associates, surveys six of these hotel projects in her new book *Welcoming the West: Japan's Grand Resort Hotels* (Jovis, 2018): the Fuji View, the Nikko Kanaya, the Nara, the Biwako, the Gamagori, and the Fujiya (shown). "The story of Japan's grand resort hotels is the story of the first exuberant contact between a broad spectrum of Western travelers and their Japanese hosts," Leers writes. —SARA JOHNSON

> Read more about Japan's grand resort hotels at [bit.ly/JapanHotelBook](https://bit.ly/JapanHotelBook).

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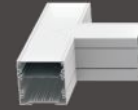
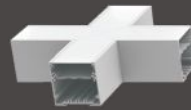
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Featured image: 2013 AIA Colorado Honor Award Winner, South Metro Fire Rescue Joint Public Safety Facility (Roth Sheppard Architects), Cherry Hills Village, Colorado



# Best Practices: Are You Ready to Teach?

TEXT BY NATE BERG

Academia and architects have a close relationship. Never mind the nearly decade-long curriculum a designer must complete before attaining licensure: The formal approach of studying a problem to identify and then evaluate potential solutions is also key to architectural practice. That architects would want to teach is no surprise. *Whether* they should is a more nuanced question. Here are a few considerations to make before heading for a classroom.

## Teaching Is Not for Everyone

One way to find out if your personality is suited for pedagogy is to participate in studio juries and critiques. "Start to embed yourself," says Jennifer Park, AIA, a lecturer at the School of the Art Institute of Chicago (SAIC) and founding principal of architecture and design firm Jurassic Studio. After graduate school, Park wanted to stay involved in architecture education. She began offering crits in a former employer's classes. "Go to reviews and see if you even like the conversation that's going on, if you're engaged and feel like you can contribute," she says. The midterm design review can be a sort of gateway drug to teaching—or a quick turn-off.

"You also need to consider if you are in a supportive environment where teaching is something that will be accepted while you're still employed," Park says. That is, being in the classroom means not being in the office. Park recommends having a discussion

with firm leaders before accepting a teaching role to ensure any class-related absence won't be a problem.

## It Will Impact Your Practice

To teach and practice simultaneously can be a logistical and mental challenge. "It is a commitment to try to do both," says Nonya Grenader, FAIA, who runs her two-person eponymous practice in Houston and has taught at Rice University's School of Architecture since 1994. "You can't do both 100 percent all the time. If you're really passionate about it, you need to find a way of practicing that accounts for the balance."

Grenader has purposely kept her firm small and has been selective about the work she takes on—primarily residential and adaptive reuse projects—to ensure enough time for both work and teaching. Over the years, she has learned when the teaching load will be light enough to take on new projects and how to avoid project deadlines that coincide with the final crunch at the end of semester. "If you're really committed," she says, "find a professional way of working that allows for the mix."

For Megan Panzano, founder of Boston-based StudioPM and a full-time assistant professor at the Harvard Graduate School of Design, finding an overlap between design work and course work has been crucial to her success. "My practice has grown from the teaching," Panzano says. "We are small by design and the types of projects that I take on are those that still have

a real rootedness in what I've been working on in the academic setting."

Teaching can also offer an opportunity to step away from a project and clear your head. "It's not like things stop," Panzano says. "But I can think about the project in the background and not be forced to actively make decisions on it."

## Don't Bank On It

Even at the most prestigious universities, part-time teaching will only provide a modest supplement to an architect's income. And, after accounting for the time and effort spent on course preparation and instruction, it may not be the best fiscal choice. Park, who teaches two days a week at SAIC in addition to running her firm, says prospective academics should have

**"Go to reviews and see if you even like the conversation that's going on."**

—Jennifer Park, AIA, founder, Jurassic Studio

realistic expectations. She warns that teaching likely won't offer the side income that would allow someone to quit their day job or launch their own firm.

"It's hard," Park says. "It's even more time than you think, and/or it's less money than you think." But, she notes, teaching offers a way to balance the stressful, business-driven parts of day-to-day practice. "It's a reprieve from some of the chaos."

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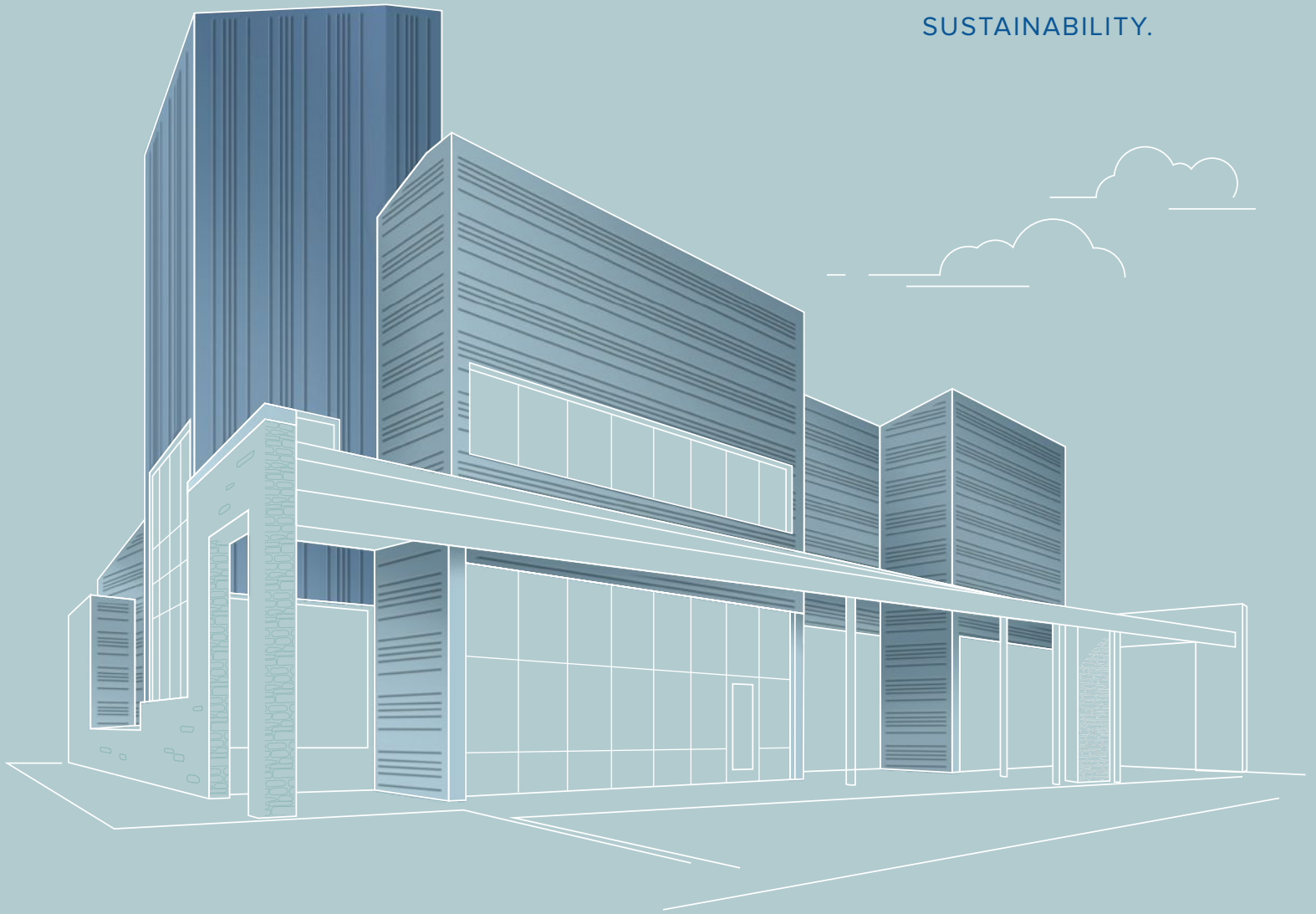
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# Detail: The DOX Centre's Gulliver Shell

TEXT BY TIMOTHY A. SCHULER

A wooden zeppelin looms over the stark white roofs of the DOX Centre for Contemporary Art, in Prague, cantilevering more than 50 feet beyond one of the cultural center's warehouse-like buildings. But the 130-foot-long, 30-foot-diameter structure known as Gulliver is in fact not an airship, but an event space and pedestrian bridge that incorporates stadium seating and a stage for literary events and lectures.

Gulliver is the brainchild of DOX Centre founder and director Leoš Válka, who, in 2013, asked Martin Rajniš, co-founder of local firm Huť Architektury Martin Rajniš (HAMR), to help him create "an absurdly fascinating organic shape" to contrast the center's architecture. "I didn't hesitate," Rajniš says. Válka drew a long blimp form spanning from one building to the other, and angled slightly, as if about to land. "I was amazed," Rajniš says. "[W]hen I feel that someone else's idea is great, I gladly join."

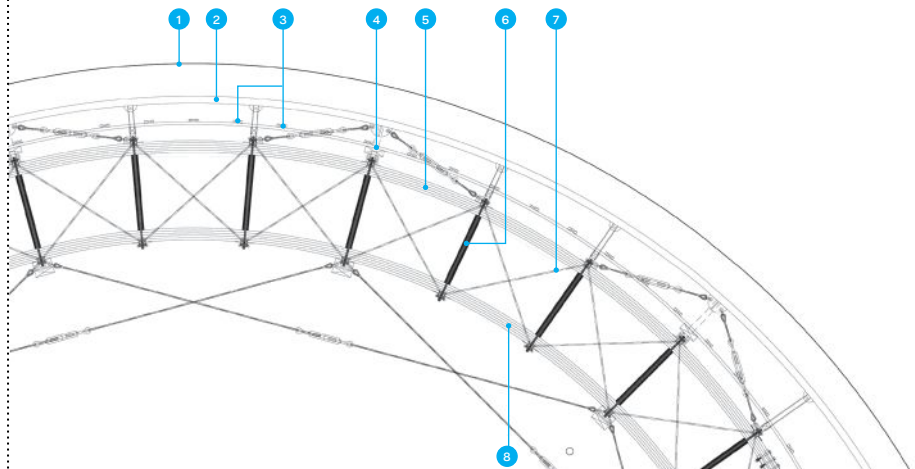
Local structural engineering firm Timber Design created a freestanding steel structure that also ties into a building to resist wind loads. Using Dlubal Software's RFEM, structural engineer Zbyněk Šrůtek worked with Rajniš to ensure the supports would not detract from the "illusion of flight." Thus, Gulliver's two white-painted steel truss columns, rising 65 feet and 54 feet from the concrete foundation, tuck against the buildings connected by the zeppelin.

Fourteen glulam larch truss rings form the zeppelin's skeleton. In the longitudinal direction, wood truss beams

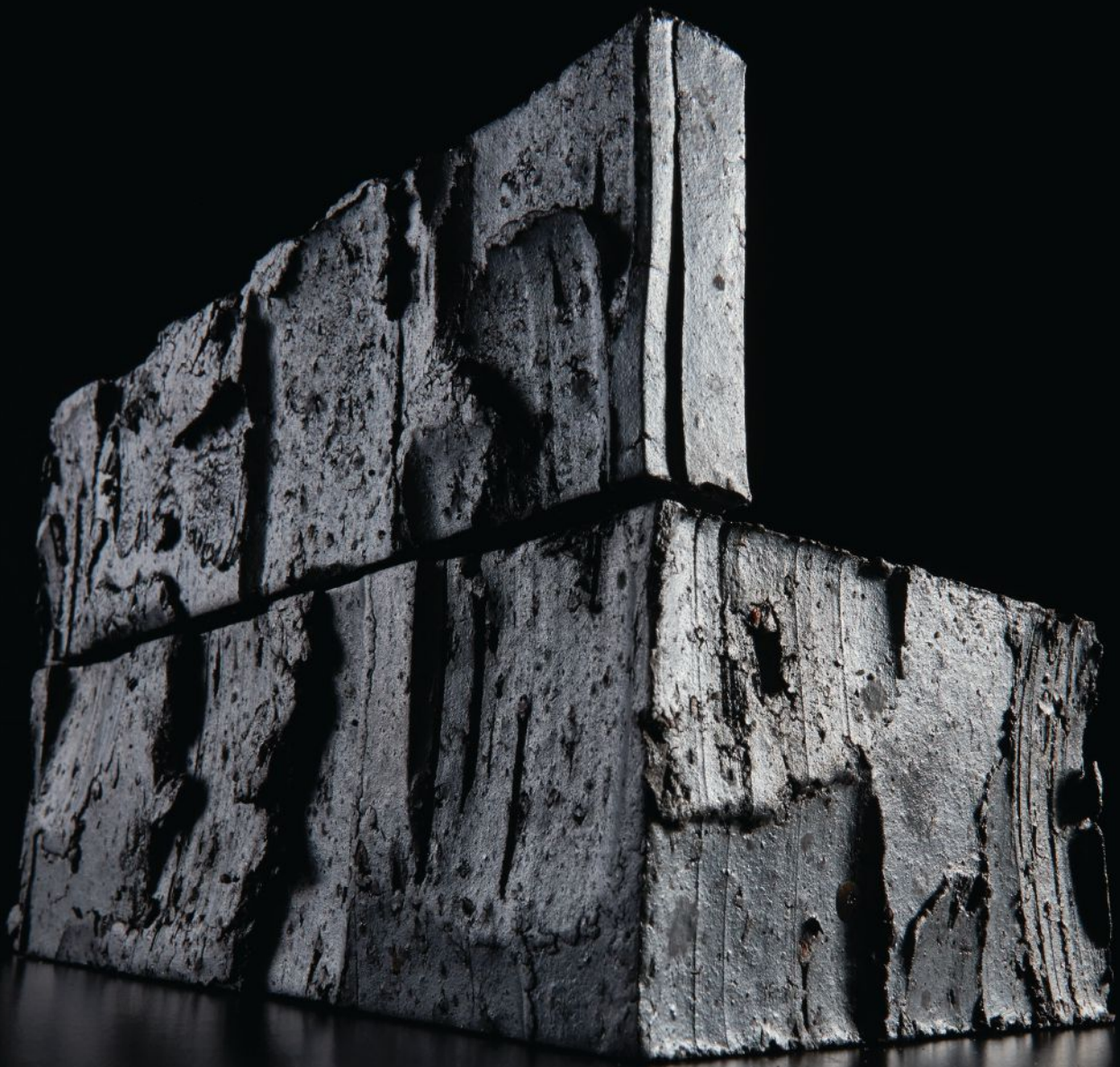


also stiffen the structure with the help of steel cables, and provide the base for a wood lath shell, to which the airship's exterior lamellae fasten. A curved roof of transparent, mechanically stretched ETFE (ethylene tetrafluoroethylene) helps protect the cladding.

Completed in late 2016, Gulliver is a testament to the power of collaboration. "I work with the stars and rising stars of the youngest generation," Rajniš says. "I would recommend it to anyone."



1. Transparent ETFE roof
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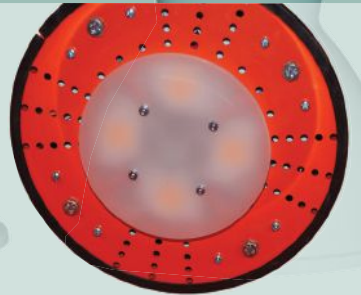
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# Next Progressives: Schaum/Shieh

EDITED BY KATHARINE KEANE

**Location:**

New York and Houston

**Year founded:**

2010

**Firm leadership:**

Troy Schaum and Rosalyn Shieh, AIA

**Education:**

*Schaum:* B.Arch., Virginia Tech College of Architecture and Urban Studies; M.Arch., Princeton University School of Architecture; *Shieh:* B.A., University of California, Berkeley; MSc., Bartlett School of Architecture at University College London; M.Arch., Princeton University School of Architecture

**Experience:**

*Schaum:* OMA, Studio Libeskind, Jim Jennings Architecture; *Shieh:* Ábalos & Herreros, Stan Allen Architect, Architecture Research Office

**Firm size:**

Four to six



Troy Schaum and Rosalyn Shieh

**Mission:**

We pursue the production of culture through the process and fact of building. We are interested in the city at the scale of a single structure.

**Memorable learning experience:**

The moments when something shifts, like learning how to learn or realizing that a boundary or obstacle is internal. To quote a mentor, these are the points in a process where you experience a “demystification by close association.”

**Favorite project:**

All of our projects are important to us in different ways, so it doesn't really feel right to choose just one. That said, our building for the Transart Foundation, in Houston, is about to open and we are very excited about it. It is the home of a small arts institution that will support experimental work and conversations between art and anthropology. We were able to try out some ideas in the overall shape and the internal organization to support a range of activities, while also giving the foundation a strong visual identity. It has a physical presence that is embedded within the urban form of Houston, but is still surprising.

**Second favorite project:**

An earlier important project for us is a collection of ideas, drawings, and installations based on Detroit called Sponge Urbanism. We constructed a way of seeing the emptiness of Detroit as full of qualities, despite narratives

of decline. A significant aspect of this project was considering the material for different audiences. We built an installation in a single-family house in northeast Detroit to test how a domestic space might become more public, and later reconceived that as an installation for the Venice Biennale.

As an extended study of a city—its activities, objects, and spaces—it still informs our way of thinking and working.

**Design tool of choice:**

No favorites, but we have habits. We draft and model digitally, and make physical models using paper, wood, plaster, paint, knives, and rulers, but also laser cutters, CNC machines, and 3D printers. In our process, we move between drawings and models and digital and handmade. We use it all.

Individually, Troy likes thick, felt tip pens and fat lead holders, and Rosalyn prefers pencils and collecting images.

**Design aggravation:**

When something almost works, but just doesn't.

**The best advice you have ever gotten:**

Always count your chickens.

**Biggest challenge in running a successful practice:**

Controlling the pace of the work.

**Special item in your studio space:**

A red rock from Marfa, Texas, that we got on one of our early site visits there.

# BEHOLD, THE BLOOMING WALL

HEALING STARTS WITH COLOR AT THE NEW \$360 MILLION UNIVERSITY OF IOWA STEAD FAMILY CHILDREN'S HOSPITAL



Can color heal?

Few doubt its power when helping lift the spirits of a child.

Just consider the Blooming Wall that greets visitors to the University of Iowa Stead Family Children's Hospital in Iowa City, Iowa.

The Blooming Wall is an artfully composed array of 2,780 triangle-shaped aluminum panels set into the lobby's undulating wall. Each 5-inch panel supports a gradient color pattern that enchants and gently distracts through architectural scale and coloration.

## Visual Wonder

For the family of a seriously ill or injured child, this two-story tall visual wonder signals hope is at hand: You've entered a realm of exceptional intelligence, care and beauty.

The Blooming Wall is an apt metaphor for this new \$360 million, 14-story world-class pediatric care center. The project team worked hard to create a

positive, comforting experience for patient family and visitors from the first impression.

The project team included representatives of the University of Iowa, lead architect Heery International, interior design architect ZGF Architects, glazing contractor Forman Ford, metal fabricator Industrial Louvers Inc. (ILI) and public works artist and designer Larry Kirkland. The collaboration yielded design magic.

## Iowa Quilt

Kari Thorsen, AIA, LEED AP, directed the work of ZGF on the hospital's interior design. "What I love about Iowa and the Midwest is how people rally together to make a difference in these kids' lives," she says. "They actually make quilts for patients that are here for a long period of time."

Thorsen and her team used color to knit together the hospital like an immense quilt. "We wanted to celebrate the idea of community like a quilt," Thorsen says.

The idea proved effective for the lobby design.

## 36 Custom Colors

The panel array concept emerged early in lobby design discussions. But, what colors? What pattern? ZGF recommended that Kirkland propose a solution. Kirkland devised a color scheme that blended 36 custom colors across a range of light blue, blue and green. To help dramatize his vision, Kirkland crafted a 30-foot-long scale model to assist University officials in their decision-making.

Today the realization of the Blooming Wall "creates this beautiful movement in this space. As you walk by you see it from one color and gradation. On the other side it gradates and blooms in a different color. The colors and movement reminds me of driving by farmland at dusk," Thorsen says.

## Enduring Bloom

Getting 36 colors to match Kirkland's specifications was a challenge. Panel coatings are expected to preserve the blooming effect for many years. ILI recommended Valspar, now Sherwin-Williams Coil Coatings, for their Fluropon® extrusion coating. They knew Fluropon, a high-performance 70 percent PVDF coating would meet the durability challenges posed by this high-traffic environment, especially from curious little hands.

For family members and visitors to the Stead Family Children's Hospital, color's power to heal now has a name ... the Blooming Wall.



**Owner** University of Iowa Healthcare

**Master Planner** Foster + Partners

**Lead Architect** Heery International

**Consulting Architect** ZGF Architects

**Glazing and Façade Contractor** FormanFord

**Metal Manufacturer** Industrial Louvers, Inc.

**Photography** Courtesy of Industrial Louvers, Inc.



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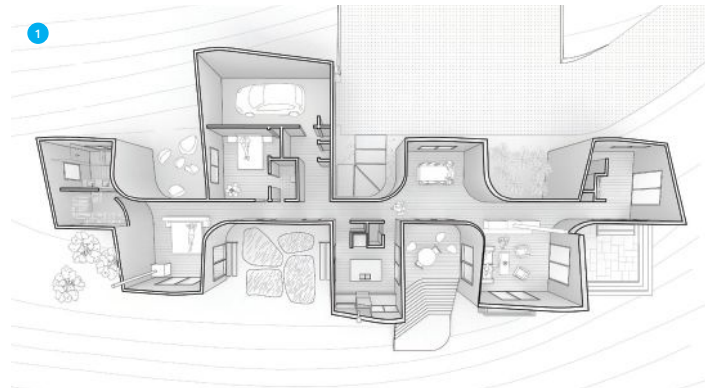
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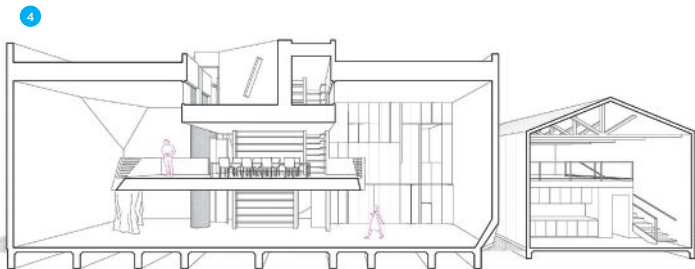
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**SHERWIN-WILLIAMS.**  
Coil Coatings

**Next Progressives:  
Schaum/Shieh**





**1.** This undulating vacation residence in the Blue Ridge Mountains of Virginia features rooms with alternating uphill and downhill orientations that allow for 360-degree views of the surrounding landscape. **2.** Exhibited at the 2012 Venice Architecture Biennale, the About Face installation is a proposal for residences in Detroit that reorients existing structures and makes use of vacant lots. The structure comprises 21 fiber-reinforced resin panels that act as both a room and a staircase. **3.** The duo's Sponge Urbanism research project—from which About Face was derived—proposes introducing various structural and infrastructural interventions in a Detroit neighborhood to create a “porous framework” for new and existing structures. **4.** The Transart Gallery in Houston, which opened earlier this month, is clad in irregularly shaped, white stucco façade panels, creating angular cutouts for windows and doors. A central stairwell directs circulation through a living room-like gallery, library salon, roof deck, and garden. **5.** Completed in 2016 and situated alongside Little White Oak Bayou, the White Oak Music Hall in Houston houses two performance halls and an outdoor amphitheater.

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# Architectural Lighting: Lightfair Products Preview

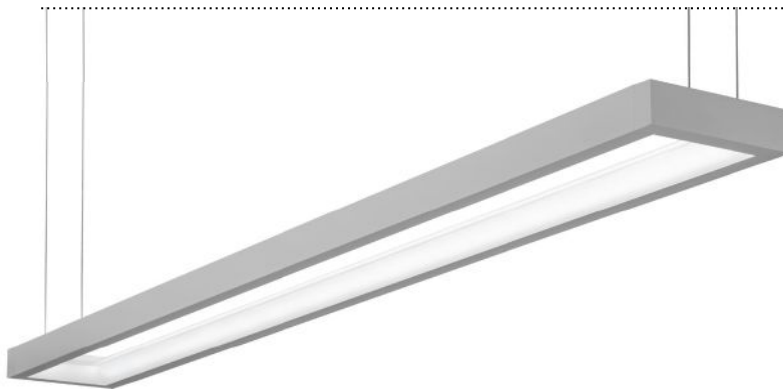
TEXT BY ELIZABETH DONOFF

With the introduction of LEDs, the lighting industry has witnessed monumental change over the past 15 years. This is particularly evident on the product front. Now into fifth- and sixth-generation LED products, manufacturers are integrating comprehensive lighting-control platforms that assist with a variety of functions, but especially color modulation. The following products showcase the latest luminaire offerings.



## BP "Mini" LED Image Projector, Lighting Services Inc

A compact LED image projector designed for medium-throw applications up to 20', the luminaire features a high-output LED module, 360-degree rotation, true "E"-size gobo projections, four cool-touch shutters on three planes, and easy-to-operate lockable zoom lenses (20 to 60 degrees). [lightingservicesinc.com](http://lightingservicesinc.com)



## Nera, Focal Point

"Illuminating the Void" is the design concept behind this indirect-direct suspended luminaire. Available in 4', 5', 6', and 8' lengths, the fixture has a frosted acrylic optical diffuser and can be specified with three different distributions: 40/60, 60/40, or 70/30. Power is supplied through the suspension cables. Mounting options include grid, drywall, and surface-mount/open ceilings. Output range varies from 2,000 to 4,000 lumens depending on the selected wattage, available from 18W to 38W. Color temperature options are 3000K, 3500K, and 4000K with a color rendering index (CRI) of 80-plus. Works with multiple wired and wireless building lighting control systems. Finish options are palladium silver (shown) or white. [focalpointlights.com](http://focalpointlights.com)



## Oseris, Erco

Created for retail, gallery, and residential applications, this new line of LED spotlights features Erco's Spherolit lens system and is available in seven beam spreads. The LED module comes in warm white (2700K) or neutral white (3000K) with a CRI of 90-plus; and 4000K at a CRI of 80-plus or 90-plus depending on wattage. [erco.com](http://erco.com)

> To see more luminaires from this year's Architectural Lighting Product Call, go to [archlighting.com/products](http://archlighting.com/products).

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### Architectural Lighting: Lightfair Products Preview



#### Tile Exterior, Cooledge

Suitable for outdoor applications and wet locations, all of the components in this fixture feature a minimum IP65 rating, and moisture-resistant snap connections provide toolless installation. Available in 600-lumen and 300-lumen packages per tile with a typical 2 SDCM (Standard Deviation Color Matching) color uniformity, the tiles are available in five correlated color temperatures—2700K, 3000K, 3500K, 4000K, and 5700K—with a CRI of 80. The field-configurable tiles snap together. [cooledgelighting.com](http://cooledgelighting.com)

#### M Series, Lumenpulse

This new family of LED spotlights features dynamic color control, ultra-narrow beam spreads, and a custom LED chip with a lifetime of 225,000 hours, according to the manufacturer. Available in three sizes—M2 (small), M3 (medium), and M4 (large)—the fixtures have a decorative color trim and are available in both single- and double-circuit track configurations with field-changeable accessories. Two new optical distributions—a 4-degree beam and a 10-degree beam—complement the standard optical offerings. The M4 version incorporates new color tuning functionality, including dim-to-warm, dynamic white, and dynamic white warm. Housing is available in 18 color options, in both matte and glossy finishes. Compatible with Lumentalk. [lumenpulse.com](http://lumenpulse.com)



#### Whitegoods Wand, Inter-Lux

Part of the company's 20 Linear family of luminaires under its Whitegoods brand, this slim-profile LED light bar can be used for many installation scenarios—everything from general lighting applications to cove lighting to wall grazing. The Whitegoods Wand measures 31" long by 0.7" square and comes with a 118"-long cable. Available in 3000K and 3500K with an output of 830 lumens and 835 lumens, respectively, the fixture uses mid-power LEDs and provides 6.4W per foot (this does not include drivers). [inter-lux.com](http://inter-lux.com)



#### Supersystem II, Zumtobel

This slim-profile LED spotlight track system for low-voltage lighting applications uses a 1"-wide H- or U-shape track to provide a full range of lighting options for general, accent, direct, indirect, and wallwashing applications in lumen packages up to 1,250 lumens. Trackheads come in mini, midi, and maxi sizes; beam spread options are superspot, spot, flood, wide flood, oval outline vertical, framing, wallwasher, and line. The LED modules are available in 2700K, 3000K, and 4000K. The die-cast aluminum trackheads are coated in either black or white. [zumbel.us](http://zumbel.us)

# CONTROLTrack

**CONTROLTrack** is a continuous slot track system for dynamically controlling fixtures through various wired protocols.

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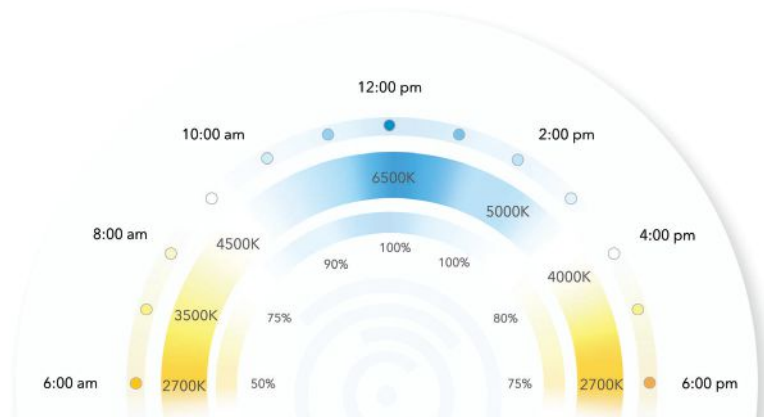
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## Architectural Lighting: Lightfair Products Preview



### Squilinder, Lucifer Lighting

The latest addition to the company's Cylinder family of luminaires, the Squilinder features a dimmable LED module from Citizen in three CRIs: 80, 90, or 97. Field adjustable, the fixture can be hot-aimed without tools up to a 90-degree tilt and with a 365-degree rotation. Proprietary optics can also be changed on site and include a beam spread range of 15 to 60 degrees. Squilinder delivers 47 to 73 lumens per watt. Its housing measures 4.8" tall by 3.1" wide. Mounting options include surface-mount fixed or adjustable; wall-mount up-down or downlight; and suspended-mount pendant or adjustable stem. [luciferlighting.com](http://luciferlighting.com)



### Torres Lighting, Landscape Forms

Designed by Rodrigo Torres, this family of outdoor LED luminaires features area, path, wall, and catenary models. The pole-mounted version is available in single, dual (shown), or staggered configurations, with pole heights of 12', 14', 16', 20', and 25'. Poles are 5" in diameter and made of cast aluminum. The fixtures use a four-die Cree XHP-50 LED module. Photo and motion sensors can be added to the fixture head. UL-listed and compliant with California's Title 24, RoHS, and Dark Sky. [landscapeforms.com](http://landscapeforms.com)

### SpectraSync, Hubbell Lighting

A color control solution for interior applications that works with existing or new third-party color control systems, SpectraSync is available in three color ranges: dim-to-warm (2200K–3000K); tunable white (2700K–5000K and 2700K–6500K); and scheduled white (2700K–5000K and 2700K–6500K). The system was designed with Hubbell Control Solutions' NX system in mind, but works with all standard zero-to-10V dimming protocols and coordinates with presets and scheduling for any lighting control system. [hubbell.com](http://hubbell.com)



### L143, Electrix

Part of the LumiLine family of low-profile fixtures with remote drivers, L143 is designed specifically for interior applications and is available with a 5-degree narrow beam or a 90-degree wide distribution with a blade louver. Color temperature options are 2700K, 3000K, 3500K, and 4000K. Fixture length is in 12" units, up to 72". L143 provides 135 lumens per watt; high output mode is 1,350 lumens per foot at 10W per foot, and standard output mode is 945 lumens per foot at 7W per foot. [electrix.com](http://electrix.com)

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## Architectural Lighting: Lightfair Products Preview



### Elliptipar S31x LED Cove Luminaire, The Lighting Quotient

This family of high-performance cove luminaires is available in five different body styles. Fixtures can be specified as single-, dual-, or triple-headed units in lengths of up to 9' for continuous row mounting. Standard color temperatures are 2700K, 3000K, 3500K, and 4000K at a CRI of 80-plus. Dimming options include ELV, zero-to-10V analog, DALI, Lutron 3-Wire, and Lutron EcoSystem. [thelightingquotient.com](http://thelightingquotient.com)



### Vintage Dim, Optic Arts

This color dimming system comprises the OpticArts GG100E-24-UNV driver, a zero-to-10V dimming module, and a Flex STP Variable White 1835 light strip. According to the manufacturer, Vintage Dim is the first fully programmable dim-to-warm flexible linear strip product on the market. Modules are shipped standard with an 1800K to 2700K color temperature curve, reminiscent of an incandescent lamp's color range. Custom dimming curves can be programmed at the factory prior to shipping. [opticarts.com](http://opticarts.com)

### Loop, Fluxwerx

Loop is a suite of linear suspended and recessed LED luminaires that features a proprietary radial anidolic optic technology. The suspended version provides 136 lumens per watt and the recessed version provides 149 lumens per watt. The axially symmetric light distributions allow for noncontiguous rows of fixtures and increase end-to-end spacing. The luminaire is made of anodized architectural-grade extruded aluminum components. Loop Suspended is available with two end-cap options and four standard finishes. Loop Recessed is available in 1x1, 1x2, 1x4, and 2x2 options. [fluxwerx.com](http://fluxwerx.com)

### Coral, Griven USA

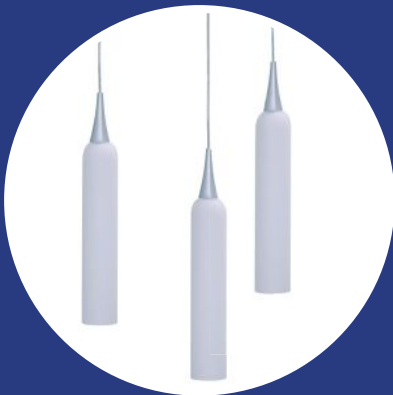
This LED surface-mount projector floodlight is designed to illuminate medium- to large-scale structures, such as multistory façades, bridges, and civic monuments. The luminaire uses 64 high-power LEDs in RGBW (6500K white), dynamic white (2700K to 6500K), warm white (3000K), or cool white (6300K) to provide high-end illumination performance. Seven different light distributions are available, ranging from a 7-degree spot to a 43-degree wide flood. CSA certified for wet locations and IP66 rated, control options include auto, DMX, wireless, and zero-to-10V. [griven-usa.com](http://griven-usa.com)





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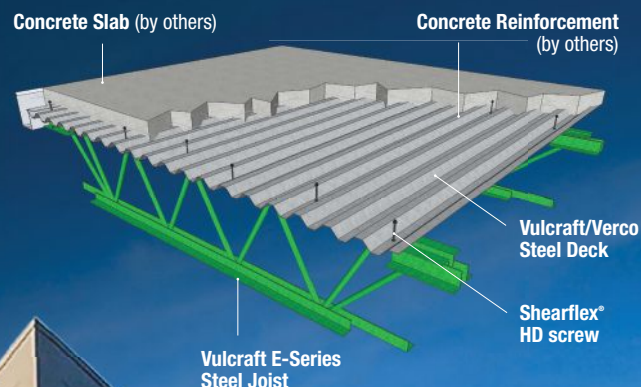
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CERTIFIED

# Residential: Olson Kundig

TEXT BY EDWARD KEEGAN, AIA

In some ways, the client for the compact, two-bedroom City Cabin in Seattle knew exactly what she wanted: an urban version of the rural house that Jim Olson, FAIA, the founding partner of local firm Olson Kundig, has been building and renovating on Puget Sound, Wash., since he was 18 years old. The client's targeted aspirations stem from the fact that she's known Olson for most of the six decades he's been working on it, and that her own vacation house is located next door. For her house in the city, she acquired the antithesis of that rural locale: an 80-foot by 100-foot lot in a relatively flat residential area that features 1950s and 1960s ranch homes, built cheek by jowl.

"Jim's first sketch was all green, like an oasis in the city," says project architect Renee Boone.

Olson and Boone walled the lot off from its neighbors and placed the single-story wood-and-glass house at its northwest corner, positioned to maximize the landscaped area and its morning sunlight. The simple 2,400-square-foot plan places the taller living/dining/kitchen area at the center, with low flanking wings that contain the garage and a guest suite to the north and the master suite to the south. A 14.5-foot-tall main space opens dramatically to the grounds with full-height glazing on the east and southeast façades. "We created an environment that feels wild," Olson says.

Glulam beams supported by paired galvanized steel columns form the roof plane that hovers above a clerestory



View of house's east façade, with the master bedroom at left and living room at right

## Project Credits

*Project:* City Cabin, Seattle  
*Client/Owner:* Melissa Haumerson  
*Architect/Interior Designer:* Olson Kundig, Seattle · Jim Olson, FAIA (design principal); Renee Boone (project manager/project architect); Christine Burkland (interior designer)  
*Mechanical Engineer:* WSP  
*Structural Engineer:* MCE Structural Consultants  
*Civil Engineer:* Coughlin Porter Lundeen  
*General Contractor:* Dovetail  
*Landscape Architect:* The Palm Room  
*Lighting Designer:* dePelecyn Studio  
*Envelope:* RDH Building Science  
*Size:* 2,400 square feet  
*Cost:* Withheld

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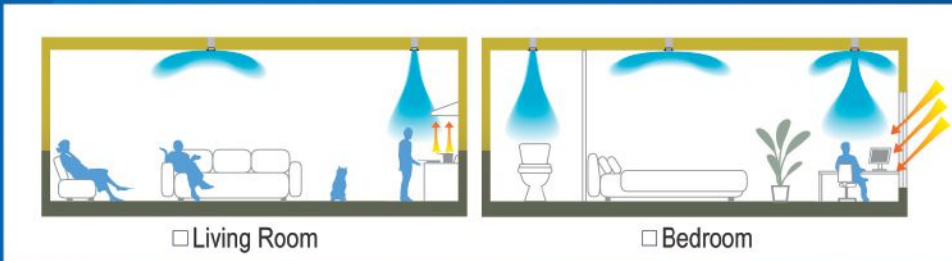
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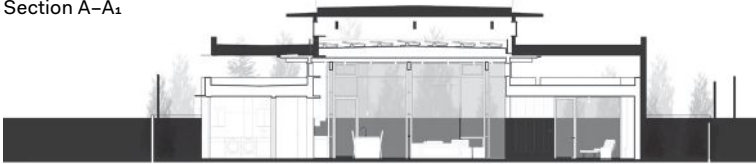


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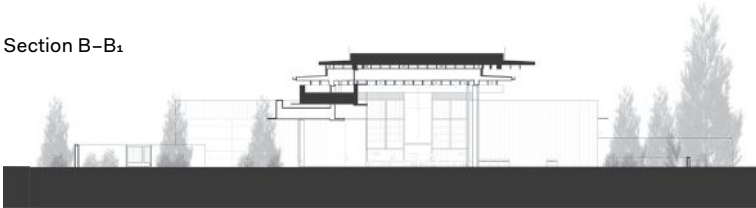
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**Residential:**  
**Olson Kundig**

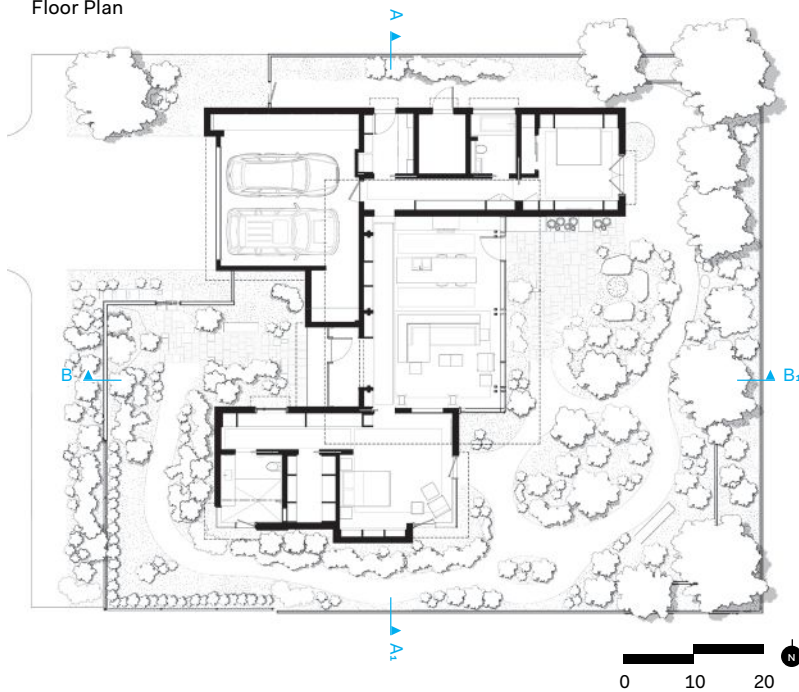
Section A-A<sub>1</sub>



Section B-B<sub>1</sub>



Floor Plan



that fills the space with natural light. Built-ins, including shelving along the north and west walls as well as under the countertop of the kitchen island, accommodate books and the client's collection of Native American artwork. Olson's experience designing spaces for art is apparent through the thoughtful placement of objects both inside the house and in the exterior garden spaces.

Net-zero energy was also a prerequisite: "The house is an example of how you can live in the city without using any resources," Olson says. The architects engaged the building team to achieve high energy performance, with features that include a well-insulated envelope with triple-pane laminated glazing, a green roof over the lower volumes, and a rooftop-mounted photovoltaics system above the main space.

While Olson's own cabin provided the project's precedent, Olson says that he and the client differed on some preferences. "I like weathered wood, she wanted raw wood," he says. "She likes warmer colors. I prefer cooler."

Material selection was influenced by celebrating natural materials. Exterior walls utilize reclaimed fir from a fruit storage warehouse in Kennewick, Wash. The unfinished vertical siding is rendered in varying widths and thicknesses. Interior walls and ceilings are also kept simple, sheathed in unfinished 4-foot by 8-foot plywood sheets. "When you look at raw plywood, it's like marble," Olson says, noting that it reflects a Japanese sensibility of seeing beauty in ordinary things. When the client asked for a red concrete floor, Olson asked her to go to the beach and find a red rock. The rock was given to the contractor, who was tasked with matching the hue.

The kitchen island, which doubles as the dining table, is topped by a counter fashioned from a 2,700-year-old fir tree that a farmer discovered in Skagit Valley to the north. The wood, preserved under the waters of a bog, became a focal point for the space and a natural summation of the aesthetic of City Cabin.

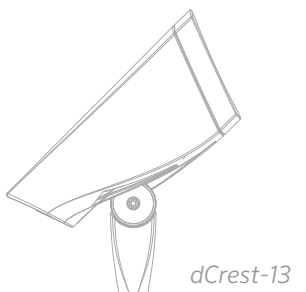
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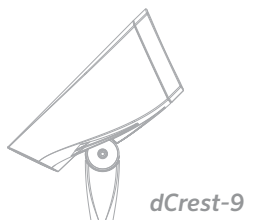
dCrest-9



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dCrest-13



dCrest-9

holm

**Residential:  
Olson Kundig**



**1.** A gated wall surrounds the infill site, creating the client's urban oasis. **2.** The house's entry on the west side, set inside the enclosed grounds, leads to the central living, dining, and kitchen area. **3.** A 2,700-year-old fir tree forms the kitchen island's countertop. **4.** The master bedroom overlooks the backyard to the south and east.

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# ADVANTAGES OF ROTARY WHITE MAPLE FOR ARCHITECTURAL WOOD DOOR FACES

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RWM door in commercial application.

## VENEER FACE HARDWOOD DOOR ASSEMBLY APPROACHES AND SPECIFICATIONS FOR COMMERCIAL PROJECTS

From schools and institutional environments, to office buildings and retail, to health-care facilities and multifamily housing, design choices and product specifications have a significant impact. Here, doors play a significant role because of their visibility role in safety, accessibility, aesthetic appeal and the overall successful outcome of a project.

For architects and designers seeking the look and feel of authentic wood within budget, the architectural door market offers a broad selection of hardwood veneer-face door products. However, not all door products are of the same level of quality or consistency. As a result, the installed product may fall short of expectations, even if it aligns with project specifications.

For example, the architectural spec may call for rotary natural birch. Yet when the selected doors are installed, the general contractor or owner may claim the doors are not what they asked for—that they are mismatched or unattractive. This leads to disappointment, lost time and potentially high cost overruns for the architect.

A number of factors contribute to the disparity between specifications and expectations. These factors include the following:

- Unexpected grain visuals, commonly found in rotary birch faces
- Barber pole effect, found in maple, birch and other book-matched species faces
- Splice lines and veneer defects, often found in book-matched and slip-matched faces
- Door-to-door visual inconsistency, resulting from veneers with pronounced grain patterns found in birch, oak or other species

## LEARNING OBJECTIVES

Upon completion of this course, the student will be able to:

1. Understand veneer face hardwood door assembly lay-ups and specification options for commercial projects.
2. Examine the advantages of rotary white maple (RWM) veneer options.
3. Discuss the sustainability benefits of RWM hardwood veneers.
4. Learn how to specify RWM veneer for commercial door applications.

## CONTINUING EDUCATION

AIA CREDIT: 1 LU/HSW  
 AIA COURSE NUMBER: AR042018-3

Use the learning objectives above to focus your study as you read this article. To earn credit and obtain a certificate of completion, visit <http://go.hw.net/AR042018-3> and complete the quiz for free as you read this article. If you are new to Hanley Wood University, create a free learner account; returning users log in as usual.



- “Machine gun” repeated defects, found in book-matched and slip-matched faces
- Striped appearance on door faces



Problem of mismatched veneer doors in commercial application.

These problems do not necessarily arise from negligence or mistakes in design, specification or manufacturing. They are simply an outgrowth of the veneer-face process and are easily avoidable.

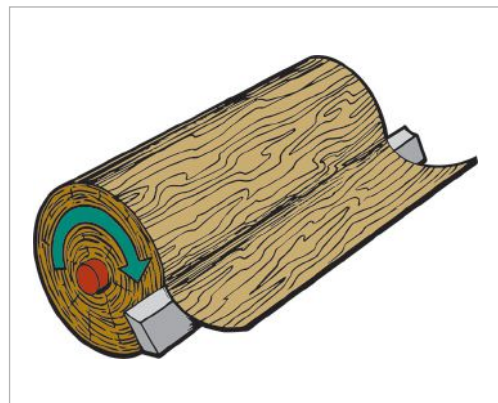
Rotary white maple (RWM) is a clean veneer that enables design versatility and function without the drawbacks common to other wood veneers. To see why RWM is an ideal solution to many of the common problems associated with wood veneer doors, it helps to understand the manufacturing process.

**MANUFACTURING**

Today, architectural flush hardwood veneer doors are made of two primary layered components: the core and the face. The face typically is composed of a spliced or whole piece veneer glued to a high-density fiberboard (HDF) cross band.

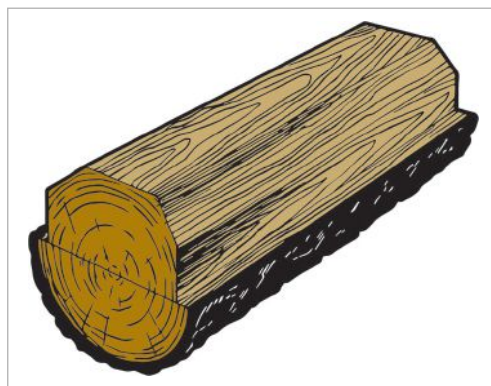
The architectural-grade door is assembled using either a hot-press or cold-press assembly method. With hot-press assembly, the face veneer, HDF cross band and core are sandwiched and pressed together under controlled pressure and heat. Cold-press assembly, on the other hand, involves either a preassembled two-ply or three-ply skin set on the core components that is then joined with glue and pressure at ambient temperature until all the adhesives are cured. Today, some door manufacturers use heated PUR glues and a pinch-roller method to adhere all the components.

Veneers are the key to how doors look when installed. ANSI/HPVA defines veneer as "... a thin sheet of wood, rotary cut, sliced, or sawed from a log, bolt, or flitch." There are a number of different veneer cutting methods that are selected depending on the desired effect or aesthetic.



Rotary cut.

**Rotary cut** is most commonly used for economy and commercial-grade application. This cut entails the peeling of the entire log, producing a continuous ribbon of veneer. Rotary cut results in wide sheets with a broad and varied grain pattern. Some hardwood veneers are cut this way and are the only cut in which whole-piece faces are available.



Flat cut.



Rift cut.

**Flat-cut (plain-sliced)** veneers are produced by cutting a log in half lengthwise. Each half is then sliced lengthwise, producing a veneer with a unique grain pattern. Leaf width depends on log size and placement in the flitch.

**Rift-sliced veneers** are produced by cutting a log into quarters lengthwise, then slicing at a 90-degree angle to the grain. This cut produces a pencil stripe effect. Both plain- and rift-sliced veneers are reserved for high-grade panels. However, rift-cut veneers are generally restricted to red or white oak.

Other slicing methods include half-round slice and quarter slice. Both are used infrequently on wood doors today.

Often, a successful outcome comes down to the way in which the veneer leaves are assembled or "matched." The term "match" is frequently used in discussing architectural wood veneer doors.

First, let's look at the different types of veneer matching along the joint line.

**Whole-piece veneers** are continuous pieces of veneer peeled from a log using a rotary process. The whole-piece is sufficiently wide to cover the entire door width. There are no splices.



RWM dark-stained whole-piece veneer door.

**Book-matched veneers** are made by turning over every other leaf of veneer to produce a grain pattern that is matched at the veneer joint. This creates a mirror image pattern at the joint line—like the pages of a book—and is the most commonly used match in wood door construction today. This method does create a "tight-side" and "loose-side" leaf alternating across the door.

**Slip-matched veneers** are where each leaf is laid out side by side to produce a repetitive pattern. Although this type of matching ensures a "tight side" out of all leaves, it sometimes results in an appearance of "leaning."

**Random or plank veneer** leaves are placed next to each other in a random order and orientation, producing a board-by-board effect in many species. Degrees of contrast and variations may change from panel to panel. In **plank match** the leaves are assembled with "tight side" out so the finish appearance is nicer.

The book-matched or slip-matched leaves are glued together to form a whole sheet. The way in which these pieces are laid out determines the final look of the veneer.

Then there is **assembly match**, which needs to be specified to get the desired appearance. Assembly match is matching within the panel face.

**Running match** is the industry standard, so panel faces are typically provided with a running match, unless otherwise specified. If a door is going to be cut to size, running match is ideal. It is nonsymmetrical on any individual door face.

In some higher-end projects, **balance matching** or center matching of the components within a face achieves this desired appearance. However, in either case it is a more expensive process that requires the producer to clip more material from the veneer bundles, which leads to greater waste and labor costs due to additional handling.

Finally, there's **matching from door to door**. Double doors usually are "pair matched" and multiple double doors in the same room are "set matched."

### RWM VENEER DOORS' ADVANTAGES

For consistency and quality veneer that meets the needs and challenges of modern commercial construction, rotary white maple (RWM) provides a multilayered solution that meets architects' four main selection criteria: aesthetic appearance in door final setting, sustainability, legal sourcing and cost control.

#### Visual Appeal

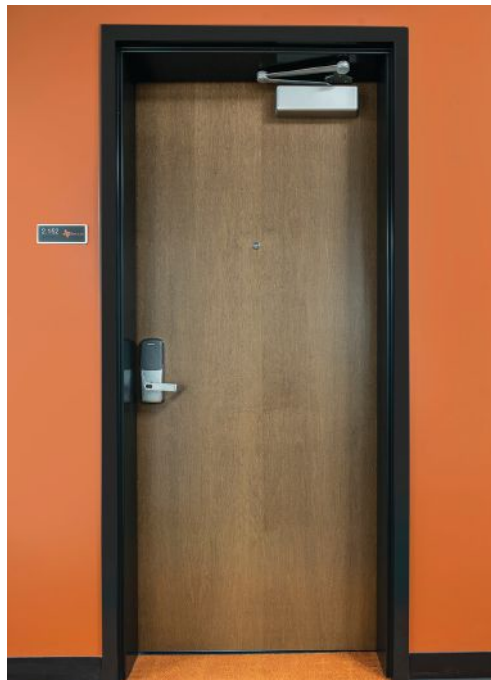
Aesthetics, including grain pattern and color, are important because doors may be the only exposed wood in the interior of a commercial building. RWM offers a tight color range and subtle grain pattern, which helps avoid the kind of color and visual variation that can arise with other rotary cut veneers. Because of this subtlety, "rotary" in RWM does not translate to a wild grain pattern.

RWM can come in whole-piece faces, without leaves and splice lines. This eliminates the potential of the barber pole striped effect typically found after finishing in plain-sliced and rift-cut veneers.



The Barber pole effect is common in book matched faces.

RWM can be laid up in a plank-match assembly. This eliminates the repetitive look of traditional book-matched veneers and the "machine gun" effect of burls and pin knots. Therefore, plank-match assembly is ideal for projects where sharp contrast between surfaces is an issue.



Hallway door in stained RWM veneer.

RWM can also be laid up in a traditional book and running pattern. Because of its subtle grain pattern and color, it blends well from door to door, including when it is center balance matched, pair matched and set matched.

#### Versatility

This veneer product is also extremely versatile and offers more control compared to other types of veneers. In other words, RWM can be "managed" in terms of visual output and provides control over the final effect.

Whole-piece face RWM is made by cutting the veneer in widths of up to 5 feet and lengths

of up to 10 feet, thus eliminating any splicing. The entire face is tight side out, so there is no chance of the barber pole look. In addition, whole-face veneers can be pair-matched and set-matched to ensure an attractive outcome.

Another aspect of the versatility of RWM veneer is its ability to be finished clear or with a stain (ranging from light to dark) to enhance the maple or stained to mimic more expensive veneer species like cherry, mahogany or walnut. This mimicry enables architects to design commercial spaces with a high-end look and feel without the high cost.

North American rotary cut white maple veneer is nearly 20 percent thicker than most plain sliced-face veneers, which allows for sanding to enhance finishing. It also makes for greater durability and has the potential for repairs in the field.

#### Legality / Sourcing

The proper sourcing of wood products has been a more prominent consideration since the issues with Gibson Guitar<sup>i</sup> and Lumber Liquidators, which have brought national attention to wood sourcing practices and compliance with the Lacey Act. Specifically, Lumber Liquidators faced a steep \$13.2 million fine for importing illegally harvested timber from areas such as forests in far eastern Russia and for other compliance issues.<sup>ii</sup>

Unlike imported veneers or door skins from places like China or Eastern Europe, domestically produced RWM is a very low-risk choice.

#### Cost

Cost is another key consideration for selecting RWM over other veneers—particularly in very high-end and commercial buildings. Exotic



RWM doors custom-stained to mimic more expensive veneers.

species veneers directly impact the overall cost of a door. Middle-tier veneers (cherry, walnut, mahogany and so forth) can be more affordable but may still stress project budgets. Architectural doors faced with RWM veneers are significantly less expensive than doors faced with plain sliced white maple, white birch, white oak, red oak or cherry. And they are only slightly higher in cost than rotary natural birch.

### RWM VENEER DOORS FOR GREEN CERTIFICATION AND SUSTAINABILITY

In today's global economy, where the building industry is pushed toward increasingly stringent cost efficiencies and material conservation, selecting sustainable and responsibly sourced materials is a growing imperative. This is another area in which RWM can contribute to a project's success while still giving architects design flexibility.

RWM is also a renewable and plentiful wood. Nearly 1 billion square feet of RWM are produced in North America each year. As a species, maple yields a higher percentage of visually pleasing (white) sap veneer than does birch or oak.

The rotary peeling process uses approximately 20 to 30 percent more of the original log than other slicing methods. Rotary cut is therefore a more efficient, responsible and eco-friendly use of the resource.

Rotary veneer techniques extend the maple hardwood resource compared with use of solid lumber. This gives project teams a responsibly grown and harvested resource from the U.S. and Canada.

To ensure the highest level of environmental responsibility, architects should also look to RWM veneer manufacturers that have attained Forest Stewardship Council® (FSC®) certification for their U.S. mills. A product with an FSC ecolabel is guaranteed to come from forests that are responsibly managed and audited for legitimacy.<sup>iii</sup> This certification ensures that all FSC-certified wood products are documented and maintain a chain of custody from the forest to the built environment.

Manufacturers that value environmental stewardship will also help lower a project's carbon footprint by focusing on local production and regionalized shipping.

## QUIZ

- Which of the following is not considered problematic for installed hardwood veneer doors?
  - Barber pole effect
  - Subtle grain pattern
  - Wild grain visuals
  - Splice lines
- Which of the following considerations factors into the specification of commercial door products?
  - Accessibility
  - Safety
  - Aesthetic appeal
  - All of the above
- True or false: The choice of veneer has little impact on a door's overall consistency of look and performance.
  - True
  - False
- Rotary cut is chosen for which of the following attributes?
  - Wide sheets with a broad and varied grain pattern
  - Pencil stripe effect
  - Unique grain pattern
  - Compatible with softwood veneers
- Which of the following is a common architectural-grade veneer door assembly method?
  - Glue and heat sandwich assembly
  - Hot-press assembly
  - Cold-wrap assembly
  - Pressure heating
- For matching along the joint line, which method is most common in wood door construction?
  - Plank match
  - Book match
  - Slip match
  - Random match
- True or false: Rotary White Maple veneer can be obtained in whole pieces.
  - True
  - False
- Of the following, which is **not** a common feature of RWM veneer?
  - Design versatility
  - Affordability
  - Smoothly consistent and uniform grain pattern
  - Sustainable sourcing
- RWM veneer is desirable for commercial door applications because of which of the following factors?
  - Helps projects get credits for LEED certification
  - Is made from renewable resources
  - Eliminates problems common to other hardwood veneers
  - All of the above
- Which of the following is not true of RWM veneer doors?
  - Are low-emitting and nontoxic
  - Have high sourcing and transportation costs
  - Provide value engineering benefits
  - Can be finished to mimic high-end species of wood

## SPONSOR INFORMATION



Founded in 1957, Columbia Forest Products is North America's largest manufacturer of hardwood plywood and hardwood veneer products. Columbia's decorative interior veneers and panels are used in high-end cabinetry, fine furniture, architectural millwork and commercial fixtures. Columbia's products are sold through a network of wholesale distributors, mass merchandisers and original equipment manufacturers from three distinct business units: plywood, veneer and global services.



This article continues on <http://go.hw.net/AR042018-3>.

Go online to read the rest of the article and complete the corresponding quiz for credit.

# OPTIMIZING OCCUPANT EXPERIENCE WITH WOOD

Presented by:

**THINK  
WOOD™**


WREN | Architect: Togawa Smith Martin, Inc. | Photo: Kevin C. Korczyk

## KEEP UP WITH TENANCY TRENDS

In recent years the building industry has focused on meeting the needs of millennial renters, homebuyers and corporate tenants as well as older generations with changing housing needs. A current perception is that millennials are making an exodus from where they grew up in the suburbs and moving into the city, fueling a trend toward urbanization. This is largely true but doesn't paint the bigger picture. The qualities that make a development desirable have been changing over the past 20 years and are adjusting as millennials mature. Millennials are now at the traditional "buy the first house, then buy a bigger house" stage of life, yet many do not want to buy a house or find homeownership financially out of reach. Millennials who

do choose home ownership often seek smaller homes in urban cores rather than larger homes in the suburbs, while a similar population of millennials is perfectly happy settling outside of the city in suburban towns. Whether in an urban center or a suburb, their demands are similar: communities where they can live, work and play in a safe and comfortable environment, with a minimal commute to work. There is even a growing trend to transform inner-ring suburbs with walkable, mixed-use development.

The National Association of Realtors (NAR) 2017 National Community and Transportation Preference Survey revealed, "62 percent of millennials prefer walkable communities and short commutes, even if it means living in an apartment or townhouse." Millennials

## LEARNING OBJECTIVES

1. Describe the benefits wood structures provide developers and tenants, including density, efficient construction, energy efficiency and other performance gains that help to maximize value and increase occupant comfort.
2. Review building types where wood is often used to optimize occupant experience.
3. Compare the different types of wood structural systems used in these building types and how each is sustainable and can improve occupant well-being.
4. Examine case studies where wood was used to maximize value and optimize occupant experience, including several LEED and affordable housing projects.

## CONTINUING EDUCATION

AIA CREDIT: 1 LU/HSW  
GBCI CREDIT: 1 CE HOUR

AIA COURSE NUMBER: AR042018-1  
GBCI COURSE NUMBER: 0920015332

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Whether in an urban center or a suburb, tenant demands are similar: communities where they can live, work and play in a safe and comfortable environment, with a minimal commute to work. There is even a growing trend to transform inner-ring suburbs with walkable, mixed-use development. Orchards at Orenco | Architect: Ankrom Moisan Architects, Inc. | Photo: CBPhotography & Designs



Tenants are seeking green space such as an atrium, courtyard, rooftop patio and/or pools; podium and wrap construction make this possible. WREN | Architect: Togawa Smith Martin, Inc. | Photo: Kevin C. Korczyk

are tech-savvy home seekers, making use of websites and apps such as WalkScore.com, which provides any address with a “walkability score” based on walkable proximity to transit and amenities. The study further concluded, “The more walkable the community, the more satisfied residents are with their quality of life.”

The NAR survey also found that members of the Greatest Generation (born 1925–1945) now seek smaller homes in neighborhoods where they can walk to shops and restaurants. However, Gen-Xers (born 1965–1984) and Baby Boomers (born 1946–1964) still show a strong preference for suburban living. Fifty-five percent of both groups placed having a single-family, detached home as a higher priority than the distance of their commute and walkable access to amenities. According to Stockton Williams, executive director of the Urban Land Institute’s Terwilliger Center for Housing, “Healthy regions and fully functioning housing markets require a range of housing choices for households of different backgrounds, means, desires and stages of life. In practical terms, this means a variety of city and suburban housing options.”

Overall, the demands of both residential and commercial tenants are fueling current tenancy trends: walkable communities, green space and mixed used developments, which allow for denser, more tightly knit communities in



Light frame wood construction has long been the go-to framing choice for low-rise and, increasingly, mid-rise residential and commercial buildings.

both urban and suburban cores. Most of these demands can be met or exceeded with smart design, which now includes constructing more densely and sustainably with wood buildings. In the following case studies, we’ll examine how developers are successfully working affordable housing into mid-rise multifamily developments. Wood infill development in both city centers and the suburbs can offer the opportunity to create relatively affordable new housing in dense, walkable environments.

#### WHY BUILD WITH LIGHT FRAME?

Light frame wood construction has long been the go-to framing choice for low-rise and, increasingly, mid-rise residential and

#### MEET THE DEMANDS OF RESIDENTIAL AND COMMERCIAL TENANTS WITH WOOD

Fortunately, wood buildings can help in meeting development and tenant-driven demands:

- Green space—podium and wrap construction make possible green spaces such as an atrium, courtyard, roof top patio and/or pool.
- Access to amenities in walkable communities—wood construction effectively achieves higher density housing at a lower cost, all while reducing the carbon footprint of their projects. The International Building Code (IBC) allows five stories of wood-frame construction in many residential building occupancies and six stories for business occupancies. Wood offers density for the lowest cost with full code compliance, so dense mixed-use developments are possible. More density equates to higher occupancy in midrise buildings, as well as a smaller footprint.
- Flexible office and retail spaces—the open concept of many mass timber designs allows for the space reconfiguration and modification as needs change.
- Sustainable, healthy buildings—environmentally friendly and safe buildings are increasingly expected by both code and occupants. Wood buildings improve aesthetics, thermal comfort, air quality, acoustics and life safety.

commercial buildings. Cost-effectiveness, material use efficiency, ease of assembly, minimal environmental impact and the ready availability of labor and materials make light frame construction the most common type of wood construction in North America. Typical light frame roof and floor systems consist of repetitive framing members such as rafters or trusses with wood structural panel decking. Framing components include solid sawn dimension lumber, I-joists, structural composite lumber and parallel chord and pitched trusses. OSB and plywood are used interchangeably as decking and sheathing material for floors, walls and roof decks. There are several approaches to light frame construction, each suited for a specific application and offering unique benefits.

There are several approaches to light frame wood construction and each is suited for a specific application, most often in the Type III (4–5 stories) and Type V (2–3 stories) categories. These approaches are distinguished by the wall-to-floor connection and include platform, balloon, semi-balloon, plank and beam and truss framing.

While mass timber structures are often built as components off site and assembled at the project site, light frame construction typically occurs entirely on site. Increasingly, however, elements of light frame buildings are



## THE FITZGERALD—URBAN DESIGN WOOD SOLUTION



The Fitzgerald capitalizes on the benefits of podium design to create sustainable mixed-use living. The podium maximizes versatility, transferring loads from four wood stories above to a 30-foot grid to achieve higher densities and allow a mix of commercial, residential and parking. The Fitzgerald | Architect: Design Collective | Photo: Richard Greenhouse

### The Fitzgerald—Urban Design Wood Solution Baltimore, Maryland

On a 4.6-acre site bordered by a light rail station, regional Penn Station and a six-lane interstate, “The Fitz” transformed a brownfield parking lot into a dynamic transit-oriented mixed-use community in Baltimore, Maryland. The development features four stories of wood over a concrete podium with 407,712 square feet (25,000 square feet of retail), 275 class A apartments and a campus/public parking garage. The building connects the community to local schools, cultural arts and the greater region. Informed by the collision of street grids and a web of kinetic infrastructure, The Fitz creates a link between adjacent campuses for the Maryland Institute College of Art and the University of Baltimore.

A four-story glass pedestrian bridge at the entry plaza sets the stage for a dialogue between public and private spaces. Lighter metal panel planes float above fully glazed retail areas, while heavier, grounded masonry planes reflect the privacy of residential areas. Fronting the adjacent Mount Royal Light Rail station, the building’s form steps back and opens up to manifest an arts plaza with a secondary

entry. The main entry plaza on Mount Royal Avenue and streetscape along Oliver Street encourage socializing, walking and cycling to the adjacent colleges, Penn Station and nearby subway stop.

Recognizing the imperative for sustainable design, The Fitzgerald achieved LEED® Silver certification through strategic siting, material selection, energy/water conservation and construction waste management, among other strategies. Once a rail yard, a tire re-treading company and then an impervious parking lot, this brownfield site is now a didactic tool exemplifying responsible urban living through form and function. The Fitzgerald capitalizes on the benefits of podium design to create sustainable mixed-use living. The podium maximizes versatility, transferring loads from four wood stories above to a 30-foot grid to achieve higher densities and allow a mix of commercial, residential and parking. The wood frame allowed for more dramatic spaces, cantilevers and details above the podium, opening the ground floor facade for retail and pedestrian activity. The use of renewable wood was a cost-effective, fully code-compliant solution to achieve the density and urban vibrancy developers sought.

efficiency, fire and life safety, and occupant well-being. The primary types of mass timber construction are glulam, nail-laminated timber (NLT), cross-laminated timber (CLT) and dowel-laminated timber (DLT).

Because of its strength and dimensional stability, mass timber offers a low-carbon alternative to steel, concrete and masonry for many applications. Because CLT is prescriptively recognized for Type IV Construction, there is a common misperception that exposed mass timber elements can’t be used in other construction types. This isn’t the case.

In addition to Type IV buildings, mass timber elements—including CLT, glulam, nail-laminated timber (NLT), structural composite lumber (SCL), and tongue-and-groove (T&G) decking—are permitted as exposed structural elements, whether or not a fire-resistance rating is required, as follows:

- Type III—Floors, roofs and interior walls may be exposed timber in fire resistance-rated construction; exterior walls are required to be noncombustible or fire retardant-treated wood.
- Type V—Floors, roofs, interior walls, and exterior walls (entire structure) may be exposed timber in fire resistance-rated construction.
- Types I and II—Exposed wood may be used in select circumstances (e.g., roof construction of Type IB, IIA or IIB buildings when a 1-hour fire-resistance rating or less is required or when 20 feet or more of horizontal separation from the building is provided).

Section 703.3 of the 2015 IBC lists several acceptable methods of demonstrating fire resistance, one of which is calculations done in accordance with IBC Section 722.



Because of its strength and dimensional stability, mass timber offers a low-carbon alternative to steel, concrete and masonry for many applications. The Hudson | Architect: Mackenzie Architects | Photo: Christian Columbres Photography

fabricated off site and assembled on the job. Off-site construction offers greater control over construction conditions and improved safety oversight for all material types while requiring less skilled labor on site and contributing to faster construction timelines.

### WHY BUILD WITH MASS TIMBER?

Mass timber is a category of framing styles typically characterized by the use of large solid wood panels for wall, floor and roof construction. Building with mass timber offers a reduced carbon footprint, construction



Urban infill projects typically have construction site constraints due to existing surrounding buildings. In these projects, wood construction provides significant benefits over concrete and steel. WREN | Architect: Togawa Smith Martin, Inc. | Photo: Kevin C. Korczyk

## WOOD BENEFITS THE DESIGN AND CONSTRUCTION TEAM

Designing with wood provides numerous benefits to architects, developers, owners and occupants. In fact, wood can be a suitable alternative in applications that use concrete, masonry and steel in many building types including midrise, urban infill, industrial, educational, civic and tall wood projects. The speed of light frame and mass timber construction correlates to revenue in all building types.

### Construction Efficiency

Wood provides several benefits that equate to efficiency and maximum value for the project. Consistent structural material use throughout wood buildings reduces the need for different trades on site and fewer workers on the active deck, thereby streamlining the scheduling process and construction timelines and reducing costs.

Urban infill projects typically have construction site constraints due to existing surrounding buildings. In these projects, wood construction provides significant benefits over concrete and steel. The inherent light weight of wood also provides several efficiencies. Wood allows for

- On-site staging (if prefabrication is involved) and a smaller construction footprint, rather than the site being spread out over several parcels.
- Reduced construction traffic (trucks delivering materials).
- Smaller crews and a much quieter job site.
- Faster erection of mass timber buildings than a comparable concrete and steel building. Earlier project completion and occupancy equates to more money for the owner.
- Greater efficiency. Mass timber construction incorporates large, prefabricated, precise structural members with no cure time.
- Smaller foundation requirements and lower forces for seismic resistance reduce costs.
- A good solution where poor soil is an issue.

### Sustainability

The construction industry is currently one of the largest contributors to carbon emissions. However, the industry can have a positive effect on the environment, with efficient practices and sustainable building materials. Construction practices can affect indoor air quality, materials recycling, energy use, vegetation and habitat

## QUIZ

- Which of the following is a current tenancy trend?
  - Walkable communities
  - Mixed-use developments
  - Short commutes
  - Green space
  - All of the above
- True or False: Podium and wrap construction make green space such as an atrium, courtyard, roof top patio and/or pool more difficult to incorporate into building designs.
- True or False: Wood offers density for the lowest cost with full code compliance, so dense mixed-use developments are possible. More density equates to higher occupancy in midrise buildings, as well as a smaller footprint.
- \_\_\_\_\_ roof and floor systems consist of repetitive framing members such as rafters or trusses with wood structural panel decking.
  - Light frame
  - Mass timber
- \_\_\_\_\_ is a category of framing styles typically characterized by the use of large solid wood panels for wall, floor and roof construction.
  - Light frame
  - Mass timber
- Which of the following is a benefit of wood construction in urban infill projects?
  - Smaller construction footprint
  - Reduced construction traffic
  - Smaller crews and quieter job site
  - Faster erection
  - All of the above
- True or False: Using wood from sustainably managed forests can reduce a building's carbon footprint, as fossil fuel consumption and potential contributions to the greenhouse effect tend to be minor for wood products compared with competing products.
- Which case study is LEED Silver certified?
  - Albina Yard
  - 77H
  - Promega
  - The Fitzgerald
  - Both B and D
- Which of the following is a benefit of wood buildings to occupants?
  - Exposed wood
  - Thermal comfort
  - Indoor air quality
  - Improved acoustics
  - Life safety
  - All of the above
- True or False: Design and engineering analysis and supporting research show that structurally, wood meets and often surpasses prescriptive building code requirements for fire, seismic performance and wind resistance, allowing wood's use in taller buildings.

quality. Architects, and the construction industry as a whole, can minimize the impacts of construction activities on the environment through materials selection, recycling and reuse and designing sustainable, energy-efficient buildings. Because of the longevity of building products, the construction industry is in a unique position to support environmental benefits.



This article continues on <http://go.hw.net/AR042018-1>. Go online to read the rest of the article and complete the corresponding quiz for credit.

## SPONSOR INFORMATION

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# SPECIFYING PLUMBING FIXTURES FOR K-12 AND HIGHER EDUCATION FACILITIES

Presented by:



More water can be saved when sensor faucets automatically switch off as soon as users remove their hands from the wash area to prevent faucets from being left running. Photo courtesy of Sloan Valve Company

## DESIGN CONSIDERATIONS FOR K-12 RESTROOMS

All schools, whether K-12 or higher education, are considered high-traffic commercial restroom environments. School restrooms will experience hundreds of visits a day from students, faculty, staff and visitors, and many of those users are not particularly concerned about properly caring for the space. Vandalism is a common concern, especially in middle schools. Students leave water running, clog toilets by flushing improper items, neglect to throw trash away and graffiti the walls. We all know from our bathrooms at home how quickly they can go from spotless to dirty, which is magnified tenfold in education environments.

There's a saying among school administrators that if you want to feel the pulse of a particular building, one of the first things you should do is

to stick your head into the restroom. Find clean floors and walls, along with adequate soap and paper towel supplies, and there's probably a high degree of school pride, as well as a general feeling among students that they're safe. But if you discover neglect, such as years-old graffiti scribbled on the walls, litter in the urinals or dilapidated fixtures, chances are students feel unsafe or even threatened.

There is indeed a strong correlation between students' academic performance and a school's physical condition. Distractions and even health issues arise due to poor indoor conditions, but improving environmental factors enhances learning, results in higher test scores and increases daily attendance. Due to the significant amount of time students and teachers spend inside schools during their educational career, combined with children's

## LEARNING OBJECTIVES

At the end of this program, participants will be able to:

1. Examine the factors that influence commercial restroom design for K-12 education facilities, the specification process, product preference for new construction vs. retrofits, water conservation and sustainability efforts.
2. Review the factors that influence commercial restroom design for higher education facilities, the specification process, product preference for new construction vs. retrofits, water conservation and sustainability efforts.
3. Identify how product selection of electronic sensors, low-flow and dual-flush toilets, retrofits for faucets and flushometers, as well as solar and turbine power, contribute to water conservation for energy and cost savings.
4. Understand how compliance with ADA affects commercial restroom product selection for education facilities.

## CONTINUING EDUCATION

AIA CREDIT: 1 LU/HSW  
COURSE NUMBER: AR042018-02

GBCI CREDIT: 1 CE  
GBCI #: 920015486

IDCEC CREDIT: 1 HSW  
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increased susceptibility to germs and illness, the importance of proper hygiene to minimize the spread of germs cannot be emphasized enough. Healthier students and teachers have better attendance and performance, making proper and easy maintenance of restrooms—where germs are often spread—a chief concern in this sector. High-performance design, which includes hygienic and water-conserving plumbing fixtures, should be incorporated into educational buildings, either



Using wall-hung vitreous china lavatories is a cost-saving option that allows some schools to utilize higher-tech sensor faucets and flushometers to still achieve improved hygiene and convenience. Photo courtesy of Sloan Valve Company

when retrofits are needed or at the time of new construction. When designing high-performance schools, the highest priorities should be the health and safety of students, faculty and staff, as well as reducing costs for school districts.

**Budget and Maintenance Considerations**

Many school districts have very limited budgets and resources, so any measure that can lighten this burden as well as improve operations and maintenance is of utmost importance. Energy efficiency and water efficiency are both measures that benefit communities, teachers and school districts through reduced operating costs, reduced liability exposure and reduced environmental impacts. When a new public school is being built, there are usually three bids, with the lowest-cost bid typically having the advantage. School districts often have district-wide specifications that project teams must follow, particularly if the school being built is a prototype that needs to remain consistent across the district. A manufacturer may be listed in the specifications along with “or equal” language. Private schools usually have a larger construction budget due to endowments and other private sources of funding, and do not have to adhere to school district standards, so they may be more willing to consider newer plumbing technologies throughout their campus.

Although there are numerous high-tech electronic plumbing products on the market, the most common restroom products in schools are manual flushometers, manual metering faucets and standard/ADA fixtures and accessories. Public

K-12 facilities that rely on taxpayer money under very tight budgets are particularly reluctant to step outside the boundaries of traditional, manual fixtures, but there may be an opening for upgrades once the performance benefits of sensor-activated flushometers, faucets, soap dispensers and hand dryers are explained and understood.

Beyond a school district’s mandates, facility managers have a key voice in decisions about plumbing fixtures. Often only a few plumbers will handle multiple schools, so they are very busy and favor products they know and have maintained in the past. These generally



Wall-hung water closets are ideal for schools since they enable easier cleaning of the floor underneath the fixture compared with floor-mounted fixtures. Photo courtesy of Sloan Valve Company

include manual diaphragm flushometers, manual faucets, wall-hung toilets, wash-down urinals and vitreous china or molded sinks. The goal of facility managers is reliability and keeping bathrooms up and running, so water conservation at the K-12 level is often not as much of a priority. Facility managers tend to reject new products with the latest bells and whistles, as parts are often already stocked for traditional fixtures and the imperative is fast turnaround of plumbing issues for these hardworking spaces. Nevertheless, high-efficiency plumbing fixtures and electronic products are increasingly appearing throughout the commercial sector, so now is the time to try to introduce them into education environments, particularly with new construction. New construction is also a good time to consider water conservation, since the facility is not locked into existing fixtures. New high-efficiency fixtures, flushometers and faucets have improved performance over traditional products and should be specified when possible.

There are many opportunities to bring more hygienic, durable, water-saving plumbing products into the school environment, including in student restrooms, teacher lounge restrooms, locker rooms, athletic facilities and the food service kitchen. Sinks with integrated faucets, soap dispensers and even hand dryers are appearing in classrooms, cafeterias and more public areas outside of the student restroom where hand hygiene is important. These new integrated sinks are more visible to the larger population, and while they still need to be vandal resistant, it is also essential that they feature attractive designs.



Sinks with integrated faucets, soap dispensers and hand dryers are appearing in classrooms, cafeterias, public areas and restrooms. Photo courtesy of Sloan Valve Company



Corning Painted Post school district installed battery-operated sensor flushometers and turbine-powered faucets for a high-quality, easily serviceable and touchless environment. Photo courtesy of Sloan Valve Company



Corning Painted Post school district installed turbine-powered sensor faucets for a unique look, in addition to hygienic and water-conserving benefits. Photo courtesy of Sloan Valve Company

## K-12 CASE STUDY

### Corning-Painted Post Area School District

Schools and other high-traffic restrooms often benefit greatly from hands-free updates or retrofits. The Corning-Painted Post Area School District, located in the scenic Southern Tier of New York state was undergoing a nearly \$100 million renovation to combine two district high schools and two middle schools. The restrooms in the dated buildings had been untouched since the late 1990s. The consolidation would double the student population of the high school and add almost 30 percent more students to the middle school, for a total of approximately 4,800 students in grades K through 12.

For a modern look and feel, water closets, urinals and sinks were refurbished throughout the building. To provide a more hygienic, convenient restroom, it was important that Hunt Engineers, Architects & Land Surveyors, P.C., the consulting and design firm behind the Corning-Painted Post Central School District renovation project, was able to persuade facility owners to retrofit restrooms equipped with over-20-year-old parts.

"The buildings were last updated right before sensor-operated equipment became popular," says Greg Barr, PE, principal, director of ME/P, at Hunt. "At first, the building owner didn't see the value in automatic. They had the manual flushometers installed in other buildings for years. We showed the client the history of reliability they had with sensor products." The building owner ultimately followed Hunt's recommendation to install battery-operated sensor flushometers. "Thanks to these updates, the owner is satisfied with the high-quality, serviceable products and the new touchless environment."

Also, turbine-powered, automatic-sensor faucets "added to the unique look, in addition to hygienic and water-conserving benefits." The automatic-sensor faucets provide stainless steel wetted components along with an integral water supply shutoff for a sleek look and better water control. They can also be configured to add a LCD display that guides users through the handwashing process to ensure proper hygiene.

"A two-station gradient basin sink was selected for a couple reasons," says Nick Shaban, mechanical designer at Hunt. "One being aesthetics, since these are the first restrooms near the school entrance, a visual and welcoming statement wanted to be made. Another reason is convenience, as two, two-station sinks were installed side by side, allowing for multi-person use. They were first installed at Corning Painted Post High School and now have been specified in bid documents for use at Corning Painted Post Elementary School."



Concealed sensor flushometers and integrated sinks with sensor faucets, soap dispensers and hand dryers deliver durability, cleanliness and low-maintenance options to stand the test of time in high-traffic areas. Photo courtesy of Sloan Valve Company

## DESIGNING RESTROOMS FOR HIGHER EDUCATION

Higher education restroom design may have many of the same maintenance and design considerations as K-12 schools, but there are also significantly more opportunities to step outside of the traditional boundaries of restroom design, and there are more applications throughout an entire university campus. Plumbing applications in higher education include the student center, lecture halls, dormitories, cafeterias, exercise facilities and stadiums. Universities tend to have larger budgets, particularly private schools that can charge much higher tuition than state schools. Many schools have departments that manage smaller renovations internally, but outside architecture firms are typically hired for larger new-construction projects. Universities also generally have a director of sustainability, who advocates for the sustainability of campus construction projects and promotes a positive school image through green design. This person is more likely to be concerned with water conservation when it comes to planning for retrofits or new construction than leaders in the K-12 market. Because of this increased focus on being a "green school," many universities are also more likely to consider sensor technology in faucets and flushometers, as well as power-harvesting products such as solar-powered flushometers and faucets, along with turbine-powered faucets.

In addition, universities are often more concerned than K-12 facilities about the aesthetics of products specified, as they have a more prominent public face and donors to pursue. Alumni tend to have great pride in their alma maters, often donating money to the institution, and expect to return to a school that retains its beauty and upkeep. Therefore, designers care first and foremost about how something looks; smaller fixtures are better, and concealed operational parts are also desired. College students are still quite rough on the plumbing, particularly with what is flushed (or attempted to be flushed) down the toilets, so maintenance is still a large concern.

Like K-12 schools, facility managers are also stretched thin, often covering an entire campus with a small maintenance crew. They are sometimes stuck in old habits, rejecting the new and different. In fact, they've been known to install completely new fixtures and if they encounter problems, they replace materials with the previously used product. When a



Dual-Flush manual flushometers provide schools with two efficient flush options helping reduce water volume by up to 30 percent.

building is undergoing renovation, there are several opportunities for flushometer retrofits that will help conserve water and step up the technology but still appease facility managers. Manual dual-flush handles provide two options for flushing either liquids or solids. These are very effective in conserving water but require the user to lift or push the handle in the proper direction. Dual-flush battery-powered side-mount sensors are the least costly and have the same internal parts as manual flushometers that allow for a quick and easy retrofit for water savings and increased hygiene. They use the amount of time the user is in range to determine the proper flush volume. Another option, dual-flush battery-powered top-mount sensor flushometers, work similarly but are more expensive and more repairable than side-mount sensors.

### PRODUCT PREFERENCES FOR THE EDUCATION SECTOR

Now that you're aware of the general design, budget and maintenance considerations for K-12 and university projects, let's move into specific restroom products that can help to meet these needs.

#### Junior Toilets

At the elementary level, junior toilets should be specified in student restrooms. The 10  $\frac{3}{4}$ -inch rim height is ideal for grammar schools. Also consider specifying vitreous china with a glaze that imparts permanent hydrophobic (water-repellent) and oleophobic (oil-repellent) properties that physically change the surface of vitreous china at a nanoscale level. A junior toilet with a glaze not only repels liquids, but also inhibits the growth of germs and bacteria,

## QUIZ

- True or false: There is a strong correlation between students' academic performance and a school's physical condition.
  - True
  - False
- In which education sector is vandalism most prevalent?
  - K-12
  - Higher education
- True or false: At the higher education level, junior toilets should be specified in student restrooms.
  - True
  - False
- True or false: Although concealed flushometers are generally preferred, exposed flushometers are more vandal proof and should likely be considered for the heavily vandalized middle school sector.
  - True
  - False
- Which valve technology has a greater variety of flushometer options and performs better in high-traffic, poor water conditions with high back pressure?
  - Diaphragm
  - Piston
- True or false: Although users often believe that flush handles are the dirtiest touch point in the restroom, sink areas are usually more germ-laden, as this is where bacteria are shed from hands during washing.
  - True
  - False
- \_\_\_\_\_ faucets are more common, particularly in educational applications where vandal resistance and ease of service are desired.
  - Wall-mounted
  - Deck-mounted
- Toilet fixtures using \_\_\_\_\_ gpf or less are now referred to as high-efficiency toilets (HETs) and high-efficiency urinals (HEUs) use \_\_\_\_\_ gpf or less.
  - 1.6, 0.5
  - 1.28, 0.5
  - 1.28, 0.10
- True or false: A touchless faucet uses approximately 3.8 L (1 gal.) less water than a manual faucet that, in a public restroom, continues to flow while a person lathers and dries his or her hands.
  - True
  - False
- True or false: According to ADA, for children the distance between the top of the toilet seat and the finished floor must be between 11 and 17 inches.
  - True
  - False

making the fixture easier to clean and keeping it clean longer. The flush volume is determined by the flushometer specified, and will work with flushometers at 1.28, 1.6 and dual-flush 1.6/1.1 gpf, and can even meet the requirements for a high-efficiency toilet (HET) when used with a high-efficiency flushometer (1.28 gpf/4.8 Lpf or 1.6/1.1 gpf-6.0/4.2 Lpf dual-flush).



This article continues on <http://go.hw.net/AR042018-2>. Go online to read the rest of the article and complete the corresponding quiz for credit.

## SPONSOR INFORMATION



Sloan is the world's leading manufacturer of commercial plumbing systems. Sloan has been at the forefront of the green building movement since 1906 and provides sustainable restroom solutions by manufacturing water-efficient products such as flushometers, electronic faucets and soap dispensers, sink systems and vitreous china fixtures for commercial, industrial and institutional markets worldwide.

# DESIGNING WITH SURFACE MATERIALS TO REINFORCE KEY TRENDS SHAPING HOSPITALITY INTERIORS

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## LEARNING OBJECTIVES

1. Examine the unique demands of hospitality interiors
2. Identify trends impacting the hospitality industry and factors moving the hospitality industry forward
3. Explore how using different design materials can reinforce high-trend spaces
4. Describe how the capabilities and performance benefits of various surface materials can improve hospitality design

## CONTINUING EDUCATION

AIA CREDIT: 1 LU/HSW  
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AIA COURSE NUMBER: AR042018-5  
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Use the learning objectives above to focus your study as you read this article. To earn credit and obtain a certificate of completion, visit <http://go.hw.net/AR042018-5> and complete the quiz for free as you read this article. If you are new to Hanley Wood University, create a free learner account; returning users log in as usual.

## THE DEMANDS OF A HOSPITALITY SETTING

Hotels are a very demanding environment where guests have high expectations but sometimes don't treat the space as well as they would their own homes. At the end of the day, materials matter. Hospitality designers must, therefore, specify products that will stand the test of time, while also meeting the aesthetics that discerning customers now seek in hotels. There are several trends making waves in the hospitality sector that are important to note because they are driving the overall aesthetics of projects, as well as a deeper connection with customers. Surface materials help designers respond to and reinforce hospitality trends through design, durability, and availability. From guest rooms to public areas such as the lobby, lounges, and restrooms, there are many design opportunities for using surface materials.

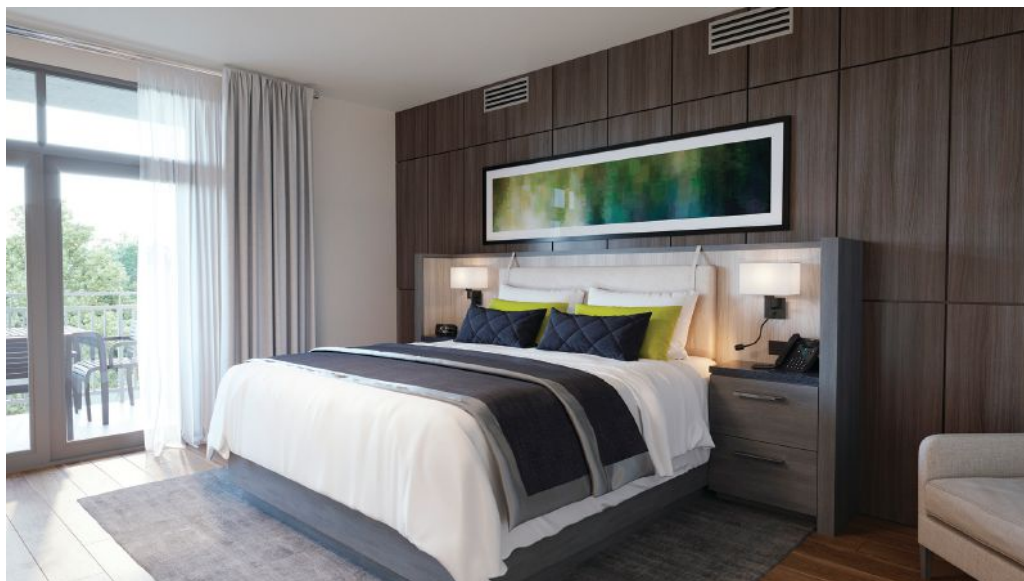
The hotel experience begins right as you step into the lobby attracting local neighbors

as well as guests. Many brands now want unique designs (rather than prototypes) for hotel lobbies, while the guestrooms tend to lean toward a standard room design, which is very simple, streamlined, and sophisticated. As rooms become smaller and the idea of "losing the desk" is gaining attention, it is even more important to make the public areas conducive to a wide range of activities changing throughout the day. There must be something for everyone, including guests who need to work, meet with colleagues or customers, dine with family, or couples planning their day. The surfaces in these spaces should welcome, support, and endure the variety of activities that these areas see on a daily basis.

When asked what spaces warrant the most attention when specifying surface materials, Melynda Mannix of Emme Design says, "It depends on the job. Economy hotels look for smartly designed rooms with attractive public

areas because both are used. But, rooms tend to be occupied more often because public areas are of limited service and therefore less populated for long periods of time. Upper scale hotels look for a big wow factor in public areas, giving guests a reason to get out of their room and into communal spaces. But they still expect standard elegance in rooms because guests do work and rest in their rooms for considerable periods of time."

Designers tend to focus on the guest experience first and foremost, but they also must consider how a property's housekeeping and maintenance personnel will keep the space looking fresh and new. Durability and ease of repair are essential characteristics of surfaces and finishes throughout a hotel, and the lobby is certainly an area that receives its fair share of use by hotel guests. That being said, cleanliness is always a concern for guest rooms, especially with the uptick in severe flu seasons. Surfaces



Hospitality designers must specify surface materials that will stand the test of time, while also meeting the aesthetics that discerning customers now seek in hotels. Guestroom design tends to lean toward a very simple, streamlined, and sophisticated aesthetic.

that inhibit the spread or growth of germs and bacteria, and that are tough enough to handle harsh chemicals, are essential in guest rooms where people sleep, bathe, eat, and drink.

Hoteliers want to bring a sense of place to hotel and hospitality-related environments and are seeking ways to differentiate and brand their spaces in order to make a visual impact and connect guests to their brand. The ability to customize finishes and messaging is key to accomplishing this task. Where designers do sacrifice durability for aesthetics, it must be an area that poses a smaller risk to damage with a material that can be readily repaired without looking obvious in the repair. According to Deirdre Schwartz, Director of Design and Sustainability at American Hotel Register Company, "The vast majority of materials we specify in terms of these surfaces and finishes are stock materials. The main reason for this is the ease of replacing the material over time. The caveat is where the material is out of harm's way such as a ceiling treatment, as the probability of getting damaged in short order is quite low. Another area where a custom feature is desirable is behind the front desk. This could be something that is branded for the hotel or another detail that reflects the region or attitude of the hotel to make a lasting impression on guests. If we go to the effort of creating something custom that might cost more or take longer to fabricate, we tend to make certain it can be protected or is situated where it receives limited exposure to potential damage."

Jonathan Fu is Director of Marketing and Product Development at C F Kent, a contract furniture manufacturer serving the hospitality industry. Fu concurs, saying, "We rarely see true custom materials specified unless it is a project that has a large budget or flexible schedule to account for the extra time it takes to develop a custom surface material." That being said, a lot of designs require some small customization from a standard, whether through fabric, finishes, furniture, or lighting.

#### FOUR KEY MOVEMENTS DRIVING HOSPITALITY DESIGN

Today, there are many hospitality interpretations and translations of design that can occur within a space. Often, it may seem difficult to pinpoint the direction trends are heading. However, there are four key movements currently shaping hospitality interiors: Experience, Sharing Economy, Curation-Customization, and Hospitality-Retail Hybrid. Within those four trends, there are sub-trends based on the idea as a whole.

##### Experience—Lifestyle

Experience encompasses the ideas of lifestyle, social consciousness, mind, body, and spirit, and active wellness. Well-known home decor brands are unabashedly entering into the hotel industry, creating opportunities for brand devotees to live the lifestyles their companies espouse. West Elm, a modern furniture and home decor company, is branching out to open eight boutique hotels across the country.

Each location was thoughtfully chosen to fit within unique, up and coming, and small to mid-sized cities across the country. A West Elm boutique hotel stay will include an interactive app that allows the guest to customize their experience in the community, as well as shop for furniture while lounging in the room. Room furnishings are also expected to be more durable than as seen in standard stores, in order to accommodate the frequent cleaning and maintenance that occurs between guests' arrivals and departures. These unique hospitality experiences allow consumers to live the brands they shop, creating an even stronger loyalty to the brand.

##### Experience—Social Consciousness

Social consciousness allows businesses to be financially successful while committing to social causes. While social consciousness is a relevant and important theme within the Millennial and Z generations, it resonates well with all demographics and travelers. Several cruise companies (Carnival, Holland America, and Crystal Cruise) offer Volunteer Cruise packages, referred to as social impact travel. These packages offer standard traditional amenities, as well as training for volunteer opportunities. Upon the ship docking, guests can participate in a half or full day of volunteer activities in lieu of the standard tourist outings. Social impact travel is bringing new guests to the cruise industry and creating growth in tourism capital.

Much like cruise companies, hotels are becoming more socially conscious as well. For example, Magdas Hotel in Vienna hires refugees and hotel professionals to run the hotel driven by a passionate social message to "Stay Open Minded," and has a supporting staff that speaks over 28 different languages. This type of model gives the guest the opportunity to learn, hear stories, interact, and know that what they spend is supporting a worthwhile social cause.

Social consciousness also has an environmental impact. Many hotels present the offer to save water by offering guests an option to forgo washing their towels and sheets on a daily basis. Starwood Suites 1 Hotel is a luxury property that focuses on offering guests a socially-conscious green environment. This is done by reusing and recycling materials, transforming existing buildings, and creating green roofs that guests can enjoy. Materials are a key part of ensuring that spaces are socially conscious, good for the environment, and the community around them, so be sure to specify



materials that have third-party certifications for indoor air quality, responsible forestry, and recycled content while also offering beautiful, unique surface options that support socially responsible projects.

### Experience—Mind, Body & Spirit

Wellness and rest in peaceful locations were commonly prescribed in the 19th century. Today, we see a resurgence of this type of travel with a focus on escaping the modern day frenzy and finding time to disconnect from technology. Travelers and dreamers alike are fascinated with tiny homes, tucked away cabins, creative tree-houses, and other unique travel accommodations. This fascination is seen in a wave of social media postings, travel magazines, and personal blogs.

Forest bathing, or the Japanese practice of Shinrin-Yoku, are guided meditative walks in the woods proven to have restorative qualities as referenced in recent studies. This practice is said to lower blood pressure, reduce stress, and boost immunity. Guided forest bathing experiences are offered across the country in wellness-focused resorts, spas, and hotels, offering the traveler a mind, body, and soul package through a predetermined regimen of yoga, diet, and meditation.

### Experience—Active Wellness

No longer does an active fitness lifestyle need to be put on hold when vacationing. The wellness trend now includes active wellness as part of a

travel experience. Today, travelers can stay at a hotel with fellow climbers or Spartan Warriors. These hotels are not offering a one-size-fits-all service but instead may offer customized fitness programs and diet plans. During the visit, a traveler is in complete control of a customized wellness experience.

Located in Reno, NV, Whitney Peak Hotel, an aptly named accommodation provider, focuses on attracting climbing enthusiasts and beginners alike by boasting the tallest climbing wall in the United States. Luxury Miami hotel, 1 Hotel South Beach, opened the first of its kind 14,000 square foot Spartan Gym. Designed as an obstacle course gym, guests can book a week-long training experience with their stay, customized to improve their health. During the visit, a traveler is in complete control of a customized wellness experience.

### Sharing Economy—Sense of Community

Sharing economy encompasses the ideas of a sense of community and social living. Convenience and the desire to forge a sense of community are two of the strongest drivers fueling the lucrative sharing economy trend. According to a 2014 report by PwC, “43 percent of consumers in the US agree that owning feels like a burden, while 83 percent believe the sharing economy makes life more convenient and efficient.”

The success of Airbnb, an online marketplace and hospitality service, has led the way for new community-focused companies. Winston Club,

a hotel booking platform, has vetted users utilizing social media to match like-minded individuals from around the world to share hotel rooms, saving up to half off the room. The Freebird Club, another such peer to peer hotel sharing community, aims to match travelers age 50+ with hosts of the same network. The experience is more personal where hosts are not simply offering rental properties or a key in a drop box, but opening up their own homes, along with conversation and companionship, for much less than the price of a hotel.

### Sharing Economy—Social Living

The co-living and co-working movement is evolving into new communities that offer living and working space to consumers of different backgrounds. In the past, this concept was manifested in villages, groups of families, and tribes who shared resources to maximize their quality of life and make efficient use of their resources.

Now, the combination of public and private spaces plus membership-style pricing has given rise to co-living, a new take on the commune. This trend is gaining momentum but is moving slower than expected within the hospitality market. We can see that this is a very important trend with hotel brands such as AccorHotels in France. Hilton is also exploring the concept while other large companies are sitting back to see what will become of this trend. In the meantime, many small startups are jumping in and offering various options for travelers all over the world.

As work and personal lives begin to blur, and the notion of home becomes more fluid, guests will look to express different sides of their personalities while staying at a social living property. In the very near future, guests will expect work and relaxation zones to be a standard offering. How does a hospitality provider achieve this look and feel? Color, texture, sound, and materials can help to segment these moments.

### Curation-Customization—Personalized Luxury

The Curation-Customization trend includes personalized luxury and micro-communities and is a direct result of the personalized experience trend. Everyone has a personal idea of a great or luxurious experience. Luxury is no longer about the details of thread count in the sheets, but instead, travelers increasingly desire to feel like a local, eat like a local, and experience local culture.



As work and personal lives begin to blur, and the notion of home becomes more fluid, guests will expect work and relaxation zones to be a standard offering.

Off the beaten path locations like Little Corn Island in Nicaragua, typically a spot where only backpackers would go, is now a thriving destination for the new luxury traveler who is looking for specialized and curated vacations. Sometimes, curation is found in the culinary desires of a traveler. Wild foraging vacations offer hands-on experiences such as learning to dig for scallops in Nantucket Bay or harvesting heart of palm for your salad while exploring the rain forests of Belize. In the last decade, food trucks have been springing up all over the world offering a unique urban outdoor dining experience. The key to a curated food experience is fresh and local with an emphasis on health and wellness trends. At the end of the day, luxury boils down to the experience, as created and customized by the individual traveler.

### Curation-Customization— Micro-Communities

Many travelers want unique experiences and unlimited offerings within a micro-community. Consumer demand has inspired the launch of new web-based companies, such as Vayable and Airbnb, who offer curated tours with locals throughout the world. Diverse experiences, like kayaking with manatees in Florida or performing with a Havana night club singer in Cuba, allow the traveler to create memories within unique micro-communities.

Trip.com and Trivago are both tapping into the traveler's desire to be part of a micro-community as well. They are not only hotel search engines but guides to discovering the best places to play, eat, and stay based on an individual's preferences. Trip.com has many unique "tribes" for all of its users. These groups are exclusive forums for consumers to receive advice or recommendations within the micro-community or tribe. Trivago is also exploring ways to make the experience more relevant for the traveler, offering more than listing the lowest price. Utilizing sites such as Trivago, Airbnb, Vayable, or Trip.com, consumers have the ability to join micro-communities before and during travel, fulfilling unique experiences made possible by décor, fellow guests, food, or customized tours.

Jonathan Fu notes, "We designers are looking for materials, patterns, and finishes that reflect the region or location of the project. They are sometimes locally sourced, but may be just an element that reminds the guest of where they are staying." This idea can help designers play into the Curation-Customization trend.

## QUIZ

- Which movement encompasses the ideas of lifestyle, social consciousness, mind, body, and spirit, and active wellness?
  - Experience
  - Sharing Economy
  - Curation-Customization
  - Hospitality-Retail Hybrid
- Which Experience trend is met when hotels reuse and recycle materials, transform existing buildings, and create green roofs that guests can enjoy?
  - Lifestyle
  - Social Consciousness
  - Mind, Body & Spirit
  - Active Wellness
- True or False: Sharing Economy encompasses the ideas of a sense of community and social living.
- According to a 2014 report by PwC, " \_\_\_\_ percent of consumers in the US agree that owning feels like a burden, while \_\_\_\_ percent believe the sharing economy makes life more convenient and efficient," which plays into the Sharing Economy hospitality trend.
  - 10, 50
  - 43, 83
  - 26, 95
  - 83, 43
- True or False: The Curation-Customization trend includes personalized luxury and micro-communities and is a direct result of the personalized experience trend.
- True or False: Thermally Fused Laminate outperforms traditional veneer and High Pressure Laminate for impact and scratch resistance.
- Which surface material is ideal for elevator interiors?
  - Thermally Fused Laminate
  - Compact Laminate
- True or False: In hospitality applications, High Pressure Laminate should be used for doors, desks, dressers, and high traffic shelving.
- Solid surface, or quartz materials, are ideal for restaurant and bar settings in hospitality projects because they:
  - Are easy to clean, inhibit bacterial growth, and are compliant with NSF 51 Food Zone and FDA food contact
  - Have an antimicrobial coating
  - Have fingerprint-resistant technology
- Kosher certified, NSF compliant and UL GREENGUARD Gold certified, \_\_\_\_\_ can be used in hospitality settings at the lobby desktop, the dining areas in out of reach accents to high touch tables and bars, or for bathroom countertops and vanities.
  - Solid surface
  - Quartz
  - Compact Laminate

## SPONSOR INFORMATION



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This article continues on <http://go.hw.net/AR042018-2>.  
Go online to read the rest of the article and complete the corresponding quiz for credit.

People put  
all kinds of  
incredible  
things into  
your spaces



Hollywood  
Costumes



Famous  
Trophies

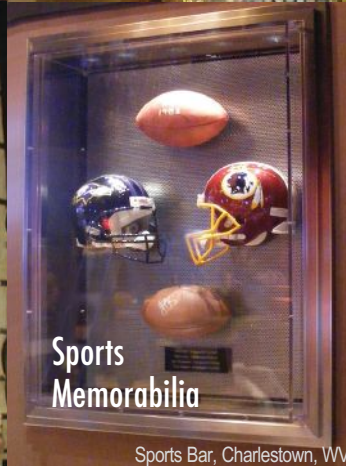
Final Cut Bar, Columbus, OH

Oakmont Country Club, Oakmont, PA



Native American  
Treasures

Agate Fossil Beds NM,  
Harrison, NE



Sports  
Memorabilia

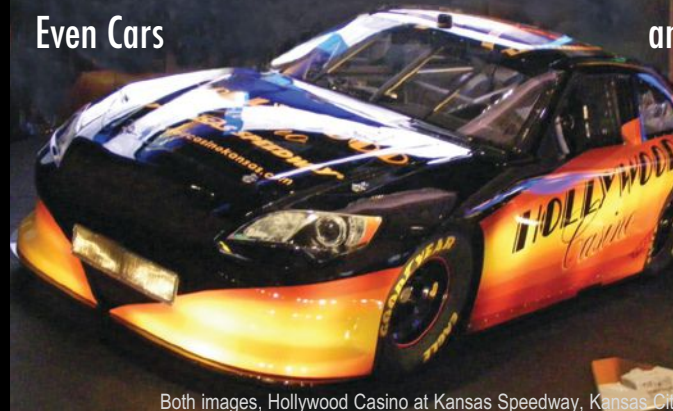
Sports Bar, Charlestown, WV



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# AIA Architect

## AIA Voices



PHOTOGRAPHY: CARL BOWEN

## What Is Research, Really?

### Closing the gap between a trade and a profession.

Thomas Fisher, ASSOC. AIA, is the director of the Minnesota Design Center at the University of Minnesota and he is also the Dayton Hudson Chair in Urban Design at the university's School of Architecture. In a 2017 essay for ACSA's *Journal of Technology | Architecture + Design*, entitled "Research and Architecture's Knowledge Loop," Fisher, a regular contributor to ARCHITECT, argues that differences in how academics and practitioners define research hamper architecture's capacity to truly be driven by research. That challenge, he argues, is more urgent than ever—particularly for small and medium-sized firms to thrive.

As told to William Richards

While there are language issues around [how we define] research, I think the research challenge facing the profession goes deeper than language. The architectural culture has not had a robust tradition around research, which means that much of the research that goes on in offices for projects rarely gets tested, generalized, and shared. In medicine, for example, it is unethical for a doctor not to see and monitor patients post-surgery, and yet rarely do architects revisit and monitor the performance of buildings and conduct post-occupancy evaluations of them. This should become standard practice, written into our contracts, and the knowledge gained from this work needs to be peer-reviewed and communicated.

Many firms tend to see their research as proprietary and are unwilling to share that knowledge more broadly for fear of losing their competitive advantage because of it. At the same time, many schools pursue the research that gets funded, which is often not in a form immediately useful to firms. The architecture culture has also framed success

in terms of individual design contributions rather than in terms of who does the best discovery and communication of new knowledge. Finally, the profession continues to straddle the divide between being a trade, which keeps trade secrets, or a profession, which shares knowledge. To finally become the latter, we need to do a much better job of gathering, assessing, and communicating the best research coming out of the schools and the firms.

There is a lot the profession could do to boost its research production without needing big budgets. The schools, for example, could require a course on research methods and integrate questions faced by firms into the work of the class. And they could develop research internships in offices—as the University of Minnesota has done with its master's degree in Research Practice—that would be both educational for students and beneficial to firms. At the same time, firms could do more to reach out to schools to frame the questions most in need of answers and of most relevance to practitioners. **AIA**

An aerial photograph of New York City, showing the dense urban landscape of Manhattan and the surrounding areas. The image captures the iconic skyscrapers, including the Empire State Building, and the Hudson River in the foreground. The text is overlaid on the image, listing numerous architectural tours and events for the AIA Conference on Architecture 2018.

Long Island City Renaissance: Gantry Plaza State Park & Hunter's Point • Around Lower Manhattan: Architecture Boat Tour • Around Manhattan: Architecture Boat Tour • Governors Island: From Military Outpost to New York's Favorite New Public Space • Renovating Saarinen's Masterpiece: TWA Flight Center Hard-Hat Tour • Bell Works: Breathing New Life into Saarinen's Campus • St. Patrick's Cathedral: Research & Technology in Urban Restoration • Connecting Manhattan's Newest Neighborhood: The #7 Subway Station & Hudson Yards Park • Louis Kahn's Franklin D. Roosevelt Four Freedoms Park • Battery Park City: Creating a New Neighborhood • Creating World-Class Science Facilities in Dense Urban Environments • NYC DOT's Remaking of Broadway into a Place for People • Reclaiming the Waterfront: A Bike Tour of Hudson River Park • Remaking the Historic Battery: Monuments, Gardens, & Delights • Bronx Zoo: Reconstruction of the Lion House • NYC's Resilient Shoreline Communities: Rebuilding Waterfront Neighborhoods After Sandy • Javits Convention Center Renovation & Expansion • Designing the High Line Park • A Changing Financial District: Wall Street Becomes a Neighborhood • Critic's Tour: John Hill's Columbia & Barnard Campus Tour Visit • Sunnyside Gardens: Preservation & Practice in a Historic Green Suburb • Times Square: A Walk Down Historic 42nd Street • Transit in Post-9/11 Lower Manhattan • West Side Story: History & Change at Lincoln Center • George Washington Bridge Bus Station: A Modernist Icon Transformed • Remaking NYC's LaGuardia Airport: Exclusive Hard-Hat Tour • **SPLENDIFOROUS!** A Look at Behind the Curtains of Hugh Hardy's Theaters • The Rockaways: Building a Resilient Transit-Oriented Community • A Tour of the New York City Housing Authority's Landmark Housing Developments • NYCHA's Community Centers as Neighborhood Anchors • Secondary Education in the City: A Lesson Plan • Nature's Beauty on Display: Grace Farm • The Hidden History of the South Street Seaport's Architecture • Game, Set, Match: Designing Spectacle for the US Open • Noguchi Museum: The Interplay of Art & Architecture • From Post Office to Transportation Hub: The New Moynihan Station • Forensic Architecture: Making of the Lower East Side Tenement Museum • Lower East Side: A Century of Styles • Critic's Tour: Stephen Zacks on the Bowery's Transformation from Skid Row to Pritzker Row: The New Bowery • From Lighthouses to the Big Wheel: Rebranding Downtown Staten Island • World Trade Center Overview: History, Architecture, & Planning • Models of Higher Education: Three Universities in Downtown Manhattan • MoMA PSI Young Architect's Program • NYU Superblocks & SoHo: Modernist Urban Renewal • Design Excellence in Civic Structures: NYC Sanitation & Storage Facilities • Bronx Rising: New Architecture, Infrastructure, & Public Spaces • Webster Residence: A Model for Sustainable Supportive Housing • Super Tall, Super Thin, Super Luxe • West 57th Street's Architectural Superblock: Placemaking, Sustainability, & Collaboration • Critic's Tour: Roberta Brandes Gratz on Jane Jacobs' Greenwich Village • Architecture & Archaeology at the World Trade Center • The New York Waterfront: Its History & Future • Renovating the United Nations Headquarters: An Investment in Security & Sustainability • Philip Johnson's Glass House • FitCity Running Tour: Hudson River Park • Bridges, Architecture, & Infrastructure Boat Tour • Critic's Tour: Sam Lubell's Midcentury Modern Manhattan • Greenwich & Washington Streets: New Directions in Architectural Transformations • Masterplanning & Designing Growth: Columbia University's Manhattanville • BAM! How a Theater Saved a Neighborhood • Met Breuer: Renovating a Modernist Icon • Resurrecting Times Square's Historic Theaters • Flushing Meadows Corona Park—World's Fair Walking Tour • FitCity Running Tour: Central Park • Design Trust's Future Culture: Exploring Staten Island's North Shore • Landfill Reclamation: Freshkills Becomes a Park & Coastal Buffer • The Second Avenue Subway: A Debut 97 Years in the Making • White, Breuer, & RAMSA: Three Generations Define a Cliffside Campus • Hudson Yards: Blueprint for a Megaproject • Creative Placemaking in Harlem: ArtPlace America's Sugar Hill Project • FitCity Running Tour: Brooklyn Bridge Park • Bike the Brooklyn Greenway • Javits Convention Center Green Roof Tour • A/D/O: The Message Is The Material • Critic's Tour: AIA Gold Medalists with Alan Brake & Fred Bernstein • Personal Stories of the 9/11 Memorial: 9/11 Tribute Museum • Governors Island: An Island Oasis in New York Harbor • Art Deco on Central Park West • An Evening at the Tenement Museum

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# AIANow

By Cathy Lang Ho  
Art Direction by Jelena Schulz

## Remaking Streets into Places for People

**An A'18 bike tour led by NYC DOT weaves together new microplazas in the heart of the city.**

During Mayor Michael Bloomberg's administration, New York made enormous progress toward making the city more pedestrian- and bike-friendly. Broadway was the site of the city's first "microplaza," a pilot that pedestrianized portions of the busy roadway, which became permanent last year with a formal plaza design by Snøhetta.

This bike ride down Broadway, from Times Square to Union Square, will be led by some of the leaders from the NYC Department of Transportation. They will discuss their urban design and arts programs, and how their work considers traffic patterns and impact on commerce, as well as their ambitions for more protected bike lanes, street furniture, commissioned art, plantings, and pocket plazas. Along the way, leaders from the Times Square Business Improvement District and the Madison Park and Union Square Park conservancies will meet us to discuss their roles as stewards of neighboring microplazas. Sign up for this tour at [conferenceonarchitecture.com](http://conferenceonarchitecture.com).



ILLUSTRATION: LAUREN MASSEF



# AIA Feature

# Can Design Help Solve LA's Homeless Crisis?

The homeless population in Los Angeles County could fill a small city. As a design challenge, some architects have advanced both time-honored and unexpected solutions to help those in need of housing.

Steve Cimino



Los Angeles downtown and Skid Row. Skid Row contains a large population of homeless people, and sidewalks are lined with cardboard boxes, tents, and shopping carts.

PHOTOGRAPHY: PEETER VIISIMAA

The scope of the homelessness crisis in the Los Angeles area is staggering. The Office of the Mayor's official website lists the city's total at just over 34,000 homeless people, and LA County's total tops out near 58,000.

This isn't just LA's special challenge; large cities like New York, Seattle, and San Diego are also struggling to address the sheer number of marginalized Americans living on the streets or in temporary shelters. But as a massive urban center with an expanding population and evolving infrastructure, the City of Angels has the chance to offer its own unique design solutions to this global challenge.

### A Shifting City

The Skid Row neighborhood in downtown Los Angeles is perhaps the best-known homeless district in the country, the city's social services and beautiful weather having made it a destination for the disenfranchised. But the number of homeless within the city and county continues to multiply, pushing those services to their limits and demanding options beyond what's currently offered.

Since Mayor Eric Garcetti took office in 2013, the City of Los Angeles has vocally pursued several key initiatives that touch the design realm: improving health, walkability, and public transit, and eliminating homelessness. With the Olympics arriving in 2028, the city has acquired a deadline of sorts to resolve these concerns before the world's eyes turn to La La Land.

"Everyone is aligning to try to address homelessness with money, land, and strategy," says Mark Vallianatos, policy director for Abundant Housing LA and co-founder of the urban policy think tank LApus. "The challenges that remain are, 'Where do you build it?' and 'Can you build it quicker?'"

One of their allies in this regard—pushing not only for more homes but good homes as well—is the Los Angeles chapter of the American Institute of Architects (AIA|LA). Several architects and Will Wright, HON. AIA|LA, the chapter's director of government

and public affairs, serve on the Design For Dignity task force, an AIA|LA-led initiative to develop and prioritize a list of homelessness and housing policy "calls to action," and establish a roadmap to implement recommendations.

"It's tough to get permission to do things here," Vallianatos says. "The city used to embrace all sorts of projects at different scales. Now you can't embark on anything that moves the needle without tens of millions of dollars in investment. How do we make the rules simpler, encourage experimentation, let the city grow, and give designers more opportunities to try new things?"

Los Angeles is growing, at least from a population standpoint. The city surpassed 4 million people in 2017, and the downtown area that includes Skid Row is undergoing piece-by-piece revitalization. But such a revival doesn't always come with affordable homes—that's something Vallianatos pushes for on a daily basis. If organizations like his don't stress the importance of helping those desperately in need, the needy are likely to get left behind once again.

"You can see the slow shift of priorities," Wright says, "from simply being about 'development' in general to one that emphasizes the human spirit. But the homeless issue remains the most visible aspect of how disconnected we've become."

Los Angeles is placing a new focus on infrastructure and public buildings, from a master plan for a redesigned Union Station to an expansion of its oft-maligned subway system. Yet the issues of housing and homelessness are two that the city has yet to solve, despite efforts from organizations like the Skid Row Housing Trust and design techniques from firms like Michael Maltzan Architecture and Brooks + Scarpa. The work of these two firms was documented in *Community By Design: Skid Row Housing*

*Trust*, the grand prize winner in the AIA's 2017 I Look Up Film Challenge.

"We might have over 50,000 homeless," Wright says, "but we also have more empty bedrooms than that. It's not that we don't have the capacity to house everyone; we have a microculture that doesn't connect people as well as it should."

Large-scale government programs are already underway. Seventy-six percent of Los Angeles voters approved a 2016 measure that authorized \$1.2 billion in bonds for the construction of 10,000 units for the homeless, and the county unanimously voted to direct millions from its Measure H sales tax increase into homelessness prevention, crisis housing, and bridge housing. Mayor Garcetti was even the keynote speaker at the AIA|LA Design for Dignity conference in July 2017, where he focused on his Days of Compassion initiative and its emphasis on partnerships between the city and faith-based organizations and community groups.

But more money and well-intentioned speeches from politicians don't always lead to proportional returns. These programs can't help all of those in need of immediate shelter, or provide opportunities for the architects who want to lend their design prowess to the cause. Casey Hughes, principal of Casey Hughes Architects, has encountered homelessness firsthand for almost two decades. His downtown Los Angeles office is located in the Arts District, a burgeoning walkable area that borders Skid Row. As such, he recently designed a not-for-profit prefabricated accessory dwelling unit that conforms to California law and can be massively deployed to supply much-needed housing.

"Most of the design energy in Los Angeles is going toward creating spaces for people who are wealthy," Hughes says. "There is very little thought going into spaces for people who are disenfranchised."

"Frankly," he adds, "when you're working

# AIAFeature

CONTINUED

in a neighborhood where you see this every day, you get to know specific people who put a very human face on the problem. It can no longer be an abstract issue.”

## Outside the Box

In late 2017, the Collective Arts Incubator in the Highland Park neighborhood of Los Angeles hosted an exhibition called “Unencumbered.” Six architects and designers, including Hughes, responded to a prompt that stated: “It is time to rethink urban life and homelessness. Can there be a way of life that is without a home but not without dignity?”

“The curator, Ben Warwas, wanted us to rethink what we think of as a home or an enclosure,” says Cody Miner, a Los Angeles designer and assistant teacher at the Southern California Institute of Architecture who participated in the exhibition. “We were looking to apply alternative solutions to a

problem that is increasing wildly year by year.”

Miner’s proposal explored the idea of 8-by-8-foot “living units” that took advantage of pre-existing infrastructure and empty lots in suburban areas around Los Angeles that had halted construction or were no longer selling. “In thinking about how dense downtown Los Angeles already is—and how expensive it is to build shelters there—I wanted to explore spatial capacity in sprawling suburban communities and take advantage of the space that they often take for granted,” he says.

The exhibition was a series of proposals, and the designers involved all relished the opportunity to offer up solutions for the homeless, noting that their own opportunities to get involved were limited at best.

“Typically, the more established, corporate architecture offices—not as design-oriented—are chosen to deal with these issues,” Hughes says. “They look at it within



Homeless veteran Kendrick Bailey keeps cool inside his tent on a street corner near Skid Row in downtown Los Angeles. After dropping some 30 percent from 2015 to 2016, the population of homeless veterans living on Los Angeles streets increased in the official 2017 count to 4,828 from 3,071 the year before.

PHOTOGRAPHY: FREDERIC J. BROWN (THIS PAGE AND NEXT)

“Let’s get involved in disputes between community groups over affordable housing. And as architects, let’s rethink the entire concept of ‘What is a house?’”

—Will Wright, HON. AIA|LA



Caroline Francis places a platter of food for her fellow homeless neighbor on the street near the Los Angeles Mission, hosting its annual Christmas meal for the homeless in Los Angeles, site of one of the nation's largest homeless populations.

the framework of what's been done and what can be replicated, as opposed to what the best solution might be."

"This complaint goes far beyond just homelessness," Hughes adds. "So many buildings that could've been so powerful—and had the budgets to make a big impact—are squandered on architects that get the commission because they simply got the last one. In the United States, it's not about ideas, [it's] more about qualifications. Buildings are awarded based upon a firm's expertise in project procurement, rather than on a building's effectiveness in serving its inhabitants. The lack of innovation is especially evident in the status quo approach to housing the homeless, which tends to be one-size-fits-all rather than innovating to address the complexity and diversity of the community's needs."

For his part, Wright agrees that the big fix isn't coming from the traditional bucket of answers. "We aren't going to build our way out of this anytime soon, so let's design to address the underlying causes, like mental health challenges and lack of

supportive services and access to dignified and hygienic amenities. As the AIA, let's ask why homelessness comes to be, and let's get more deeply involved in conversations with community groups about the importance of affordable housing. And, as architects, let's rethink the entire concept of 'What is a house?'"

Meanwhile, architects like Jennifer Schab are finding other ways to contribute. A principal at Rios Clementi Hale Studios, she recently embarked on a small but meaningful project for Pete White, the founder of the Los Angeles Community Action Network, that illustrates how every little bit can help.

"I met Pete at one of Will Wright's meetings," she says, "and he called me afterward to ask if we could create a map for him. It would show the area of Skid Row superimposed with two different densities of toilets: one based on United Nations refugee standards and another one based on the Los Angeles County Department of Public Health. When you make a grid based on those standards and overlay it on Skid Row, you'd see they need roughly 387 or 115 toilets,

respectively. That's compared to the nine overnight toilets that the 1,777 homeless in the area had access to at the time.

"I know Mayor Garcetti and the city have recently added more toilets," she says, "which are necessary to combat the recent hepatitis outbreak in homeless communities. But that, at least in part, comes from Pete knowing the issue needed a visual element to make a real impact. And it's exactly the kind of thing we're so happy to do. We're architects. We know how to draw, how to present information concisely. This is exactly the kind of service we want to provide."

The homeless population continues to rise, and the strategies currently in play have proven to be inadequate. Cities like Los Angeles need to take advantage of this chance to think outside the box and pursue solutions beyond what has worked on a smaller scale and in a bygone era, especially when it comes to design.

"I don't think Los Angeles is broken," Wright says. "I think we just have an opportunity to show the rest of the world how to care for our fellow citizens." **AIA**

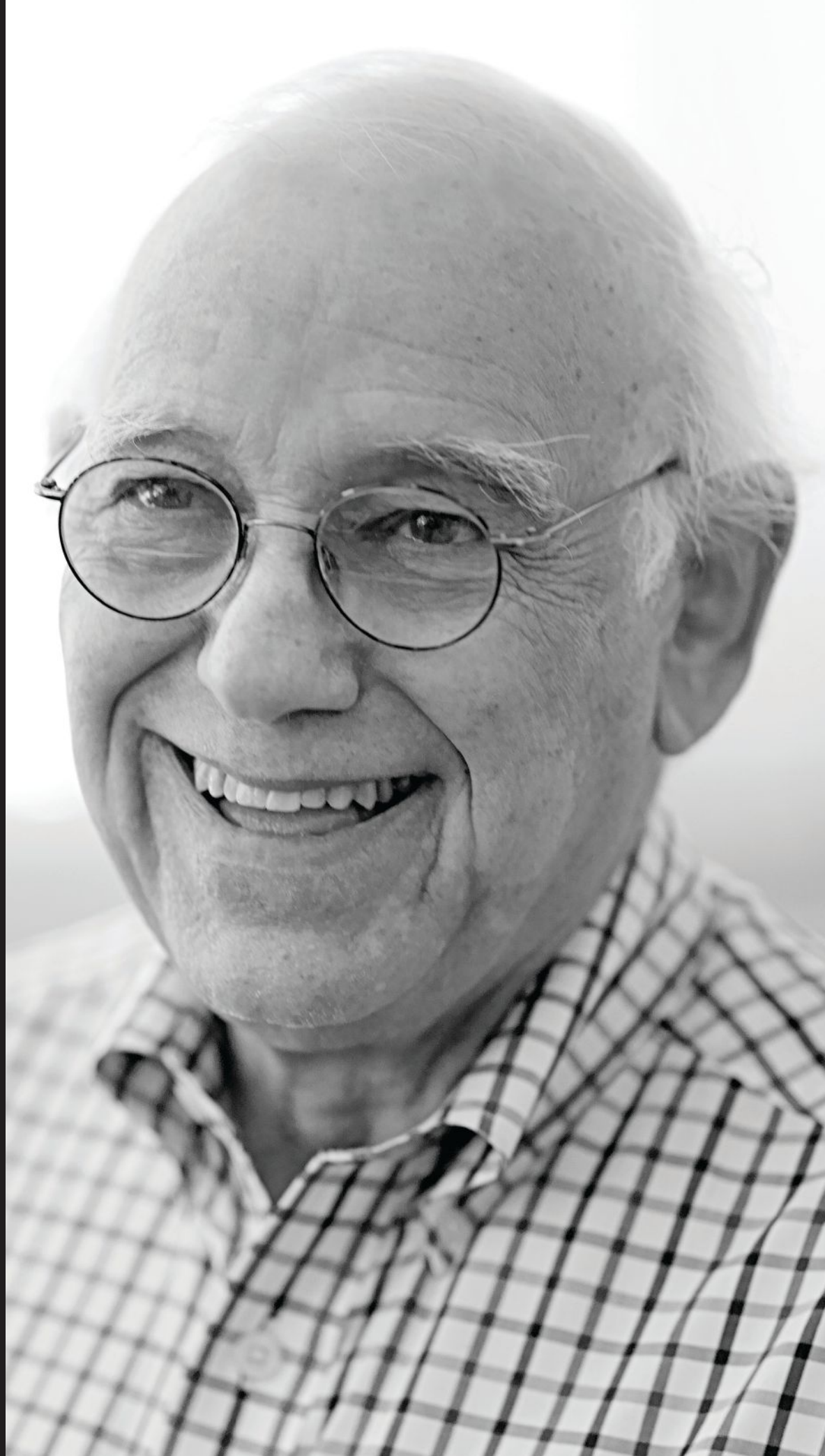
**AIA Awards** Gold Medal

## Congratulations, James Stewart Polshek, FAIA!

2018 recipient, James Stewart Polshek, FAIA, is the founder of Ennead Architects, an award-winning firm celebrated for its human-centered and inspiring design solutions. He's the 74th recipient of the AIA Gold Medal, joining past recipients including Denise Scott Brown & Robert Venturi, Moshe Safdie, and I. M. Pei.

Nominations for the 2019 Gold Medal open April 27. Learn more at [aia.org/goldmedal](http://aia.org/goldmedal).

PHOTOGRAPHY: ANDY RYAN



# AIAFuture

## Open Source for Everyone?

**Proponents of open source architecture say it could solve the global housing crisis. The reality is a little more complicated.**

In 2016, Alejandro Aravena, winner of that year's Pritzker Architecture Prize, placed the plans of four housing projects that he had designed for construction in his native Chile on his firm's website for anyone to download. "From now on they are public knowledge, an open source," Aravena and his firm, Elemental, stated when they released the designs. "We hope [this] will be able to rule out one more excuse for why markets and governments don't move in this direction to tackle the challenge of massive rapid urbanization."

Open source architecture—or a "citizen-centered design movement" that aims to democratize the power of design—has been gaining traction over the last decade, but the idea isn't entirely new. People have been thinking about ways to take the power of design from the hands of architects and design professionals for as long as those professions have existed. In the 1972 essay "Housing as a Verb," architect John F.C. Turner made the case that housing ought not to be a static unit that is packaged and handed over to people, but rather it should be conceived of as an ongoing project wherein the residents are co-creators. In this way, the designs are constantly evolving and iterating, selecting the features that work most effectively.

However, with the rise of the internet, open source architecture became easier than ever to explore and execute. Modeling itself on the success of open source software that anyone can build upon and share, open source architecture—its advocates hope—has the potential to radically disrupt the relationship between architects, developers, and consumers while at the same time addressing the housing crisis that is already emerging as the world develops more rapidly.

"You have tools for collaborative design that [have] never existed before, and those are being democratized across people who don't have, necessarily, an M.Arch. degree or know how to read blueprints," says Matthew Claudel, co-author of the 2015 book *Open Source Architecture*.

This is seen as a boon in a world with a swiftly growing population, and a corresponding need for shelter. "I would say



that if you look at the rate of urbanization between now and 2050, it's the equivalent of building a city the size of New York every five weeks for the next 33 years," says Alastair Parvin, co-founder of WikiHouse, a London-based nonprofit company working on open source innovation and R&D for the built environment.

"We have fundamental building challenges that we face in this century," Parvin continues, "and the current design industry just isn't going to be able to do it."

Of course, architecture is already seen by some as a luxury type of which not everyone can take advantage.

"The engine of architecture has become geared toward the privileged few: Today, buildings designed by architects account for no more than 2 percent of global construction," Claudel and co-author Carlo Ratti, both of MIT, wrote in *Open Source Architecture*. By democratizing the design process used by skilled and credentialed architects, Ratti and Claudel hope, architecture can be used to meet the needs of consumers, and not the needs that developers imagine consumers will have.

The reality, of course, is a little more

difficult. "We will know for sure [if it works] if some enterprising investor or development agency picks up the idea, runs with it, and makes it work in the real, unfortunate world," renowned architecture critic John Bentley Mays wrote of the idea in Toronto's *Globe and Mail* in 2014.

Claudel, however, sees the monopoly of development agencies on the design and building process as a symptom of the much larger malaise that open source architecture seeks to address. With open source architecture, he argues, there's much more room for discussion about whose needs a building should meet.

"The book ends with the idea of architects creating frameworks—processes, not buildings—and the occupants creating 'infill'—a kind of 'choral' design discovery that implicates architects and the public," he says. "We called it the 'choral architect.'"

The "choral architect" idea is manifested in projects like WikiHouse, which bills itself as "representative of the next industrial revolution in the way we make homes." The brainchild of Parvin and co-founder Nick Ierodiaconou, both formerly with Architecture 00, WikiHouse uses

# AIA Future

CONTINUED

an online platform that hosts downloadable blueprints that can be made on CNC (computer numerical control) machines that automatically cut and label the components (in this case, from wood), following a digital pattern to make customizable shelter available to whomever has the means of building it. The idea is that people with limited knowledge of construction can fit the fabricated pieces together like a Lego set.

“We were really interested in this question of how we could empower, how we could distribute the power to build,” Parvin says. “That’s kind of what we called the idea: the right to build.”

So what does all of this mean in the real world? The WikiHouse concepts are being developed by more than 30 teams worldwide, and its main online hub features a community forum currently hosted on GitHub. But the supply chain technology available for the project—which WikiHouse has started to develop—has yet to catch up. Skeptics of the concept point out that most homes aren’t going to be plywood in the future, to which Parvin says, “Of course not.”

“The vast majority of people saying, ‘It won’t work,’ are coming from that, and it’s basically because they’re taking what they can currently see,” Parvin says. Parvin is confident that the technology for enhanced versions of WikiHouse will eventually be developed.

The plans that Aravena and Elemental released in 2016 were for a “half-house” public housing model that’s already been implemented in Chile: Governments provide half of a move-in-ready house to those in need, with space for expansion on the other side when occupants acquire the means. This idea embodies a tenet central to open source architecture: Residents should build only what they can afford to at any given time, thus reducing—or possibly even eliminating—the cost of borrowing.

While work like Aravena’s is currently the exception, not the rule, Claudel thinks that the model is something that architects, designers, and anyone interested in open source architecture can learn from.

“I think something that’s hinted at in Aravena’s work—and which is expressed in city-making over time—has been the process of exploring and learning by doing, which is how biological evolution works,” he says. “There is a mutation, and if it’s a good one it sticks. And that’s something that doesn’t really exist so much in formal architecture.” **AIA**

Katherine Flynn

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# AIA Perspective



PHOTOGRAPHY: GABRIELA MARIKIS

## Welcome to Our Urban Future

For architects in “traditional” practice (like me), it is hard to pay much attention to anything beyond our daily lives. The never-ending cycle of seeking new work while successfully completing work under contract demands so very much. When am I supposed to find time for larger issues and trends? Why should I care? How do they affect my firm, our clients, the community?

As AIA President, I feel a duty to relate to the daily lives of members like you (and me) the broad professional, industry, economic, and even global trends that the AIA’s extensive intelligence resources track. This column starts with the most important: the dawning of the “urban era.” Today, for the first time in the history of human civilization, the majority of people across the globe live in cities. It changes the relevance of architects and architecture from this time forward—no exaggeration.

The population explosion that started in the 19th century (1 billion by 1800) accelerated exponentially in the 20th (from under 2 billion to more than 6 billion) and continues into the 21st (exceeding 7 billion around 2010). As mind-boggling as these population numbers are, the shift from rural to urban dwelling is even more extreme. Over the same period, urban population shifted from about 3 percent in 1800, to 14 percent in 1900, to 54 percent today. Projections put urban population at 84 percent

by 2100. It can be difficult to relate these silent numbers to the bustling life around us.

What do these numbers mean for you and me, to our profession and our practices? They mean that our future lies in cities. They mean that whatever people need and desire must be satisfied in cities. They mean that architects, who are designated by our culture, laws, and economy to shape the built environment, have the power to address those needs and desires.

We have the responsibility, but we also have the opportunity.

The new realities of the urban era propelled architecture to heightened importance. We don’t just shape buildings; we shape lives. Every social, economic, and environmental challenge is directly affected by our work. This isn’t just a generational change, it’s historic.

When the AIA was founded in 1857, it addressed a world that looked and functioned differently than it does today in terms of settlement patterns. For the most part, architects came from the wealthy and educated classes. They worked for their peers. At the dawning of the urban era, architecture’s client base is expanding exponentially. Every community, everywhere, has needs and desires that can be met only by shaping the built environment that shapes their lives.

If the architectural profession embraces the opportunities of the urban era, the numbers tell us our future is secure. If not, how long will it be until others do it for us? **AIA**

Carl Elefante, FAIA, 2018 AIA President



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# LED REVEALS



“To add insult to injury, the drab U.S. pavilion, which one blog reader described—not unfairly—as resembling a low-end shopping mall, was designed by a Canadian.”

“Meet me in St. Louis,” sang Judy Garland in the 1944 movie of the same name, “meet me at the Fair.”

World’s fairs used to be a big deal. The Eiffel Tower was built as part of a world’s fair. So were Jackson Park in Chicago, the Space Needle in Seattle, and Habitat 67 in Montreal. It’s been 50 years since Montreal’s Expo, and during that time world’s fairs have lost their luster—at least in the United States. The 2010 Shanghai fair, the largest ever, barely registered with the American public. Neither did Seville (1992), Hannover (2000), or Milan (2015). Hannover? That year, the U.S. didn’t even bother to participate. What happened?



The answer is the subject of Mina Chow, AIA’s documentary film, *Face of a Nation*, which was screened in February at the National Building Museum’s Architecture and Design Film Festival. Briefly put, in Montreal and then Osaka three years later, the U.S. put its best foot forward and built imaginative and evocative national pavilions filled with memorable exhibits. These were a spirited representation of a country at the top of its game. Starting with the Seville fair, that changed. American participation in world’s fairs had been a propaganda tool in the Cold War, and with the collapse of the Soviet Union in 1991, that war was over—we won. Federal funding for the Seville pavilion was drastically reduced at the last minute, leading to a makeshift solution. In 1998, a budget-conscious Congress abolished the United States Information Agency, which among other things oversaw American participation in foreign exhibitions, a responsibility that was transferred to the State Department. Then

the George W. Bush administration decided that world’s fair pavilions would be better off without federal funding—since international fairs benefited trade, American corporations should pony up. In short, U.S. world’s fair pavilions were outsourced.

#### A “Sorry Spectacle”

Chow, an architect who teaches at the University of Southern California School of Architecture, convincingly demonstrates in her film that the result of this shortsighted decision has been a series of national embarrassments. Corporate sponsorship and design-by-committee has resulted in uninspired architecture and mediocre exhibits. Asked about the U.S. pavilion at the Shanghai fair, then Secretary of State Hillary Clinton said, “It’s fine.” A half-hearted endorsement—most assessments were less sanguine. *The Los Angeles Times* reported that “the pavilion is so loaded with corporate logos that the messages are nearly lost to branding by Chevron, General Electric, and others.” *Foreign Policy* went further and called the U.S. pavilion a “sorry spectacle.” Not that the Chinese public wasn’t interested—there were long lines at the pavilion. In *Face of a Nation*, Chow interviews some of these Chinese visitors, who appear distinctly underwhelmed, as well as puzzled, that the world’s greatest superpower would put on such a lackluster show.

To add insult to injury, the drab U.S. pavilion, which one blog reader described—not unfairly—as resembling a low-end shopping mall, was designed by a Canadian. Clive Grout, of Vancouver-based Grout McTavish Architects, told *Fast Company*: “We have a very prominent site and it is the USA Pavilion. People will find it. We have not felt the need to do an architectural handstand to get attention.” But surely handstands are precisely what is required at a world’s fair. Especially if you are competing with the likes of Thomas Heatherwick, whose knock-your-socks-off U.K. pavilion in Shanghai was a shimmering mirage consisting of 60,000 projecting acrylic rods. Or EMBT’s ultra-green Spanish pavilion, made mostly out of wicker. Or John Körmeling’s Netherlands pavilion, “Happy Street,” that consisted of a spiral ramp lined with a representative sample of Dutch houses (the theme of the Shanghai fair was “Better City, Better Life,” although you would not have known that from the U.S. pavilion). Cold War-era world’s fairs had been the site of one-on-one confrontations between the U.S. and the Soviet Union, with the former usually prevailing. No longer. The striking Russian pavilion at Shanghai, designed by Totem/Paper, was a kind of fairy-tale city that combined parametric forms with Russian folk motifs—nothing like a shopping mall.

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The next fair, Milan in 2015, exposed another shortcoming of outsourcing. As *Politico* reported, fundraising fell short of the final cost of the U.S. pavilion, leaving more than \$26 million in unpaid bills—and leaving the organizers, Friends of the U.S. Pavilion Milano 2015, to declare bankruptcy. The pavilion, designed by Biber Architects, was a step up from Shanghai, although it paled beside Norman Foster, HON. FAIA’s United Arab Emirates pavilion, or Jacques Herzog, HON. FAIA’s quietly monastic wooden pavilion for Slow Food.

#### The Rise of Nation Branding

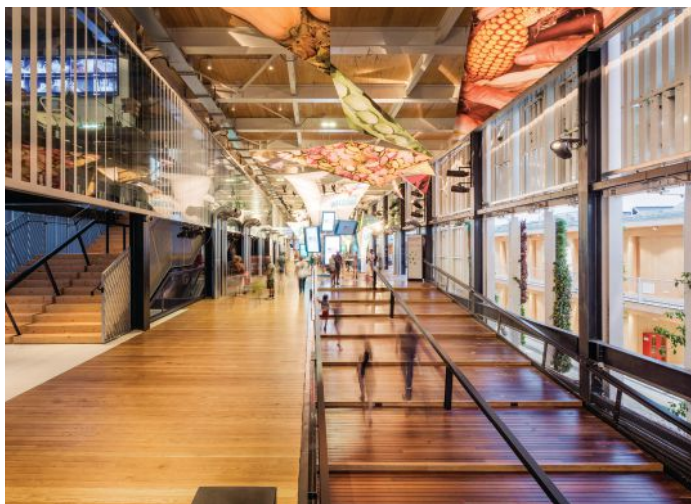
World’s fairs have always been architectural beauty contests. I remember visiting Expo 67 in Montreal. There were many runner-up, forgettable pavilions such as the U.K. pavilion, designed by Basil Spence—the ’60s was not a great decade for British architecture—and the self-consciously arty French pavilion, designed by Jean Fautrier. The swooping roof of the Soviet pavilion, designed by a team led by Mikhail Posokhin, owed a lot to Eero Saarinen’s Washington Dulles International Airport, but its clumsy structure paled beside Frei Otto’s West German pavilion, a graceful and featherlight tent, all cables and stretched fabric. The spectacular U.S. pavilion was a 20-story-tall, transparent geodesic dome designed by Buckminster Fuller and Shoji Sadao, AIA. The exhibit designer, Cambridge Seven Associates, decided to show only actual objects: an Apollo space capsule, its bottom charred from re-entry and attached to parachutes suspended from the dome; a lunar landing vehicle; a chariot from the movie *Ben-Hur*; Elvis Presley’s guitar; a collection of Raggedy Ann dolls; a Checker cab. The controversial exhibit was unserious and ironic,

even campy; *Life* magazine called it a “soft-sell,” President Lyndon Johnson hated it.

The fey U.S. exhibit in Montreal was light years away from the original mid-19th century world’s fairs, which were chiefly industrial exhibitions that featured steam power and electricity, and all sorts of machinery. The link between the fair and architecture was there from the beginning, however: consider Joseph Paxton’s Crystal Palace, built to house the Great Exhibition of 1851, and Ferdinand Dutert and Victor Contamin’s imposing Galerie des machines, which was the centerpiece of Paris’ 1889 Exposition Universelle. The international presence expanded, as more and more participating countries competed to display their wares. Over time, the emphasis in the national pavilions



The U.S. pavilions in Shanghai (below) and Milan (top right and right)



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*Clockwise from Top Left: Spain's pavilion in Shanghai; the United Arab Emirates' pavilion in Milan; the Dutch pavilion in Shanghai; the Finnish pavilion in Queens; the Slow Food pavilion in Milan*



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shifted from simply exhibiting products to putting the nation itself on display. This was particularly true of smaller countries. The Alvar Aalto–designed Finnish pavilion at the 1939 New York World’s Fair was one example, the Czech pavilion in Montreal was another. Cultural exchange is still part of a country’s participation in a fair, but national pavilions have increasingly become an exercise in public diplomacy. Crudely put, this is nation-branding: not just *this is what we make*, but *this is how we live*, *this is what we believe in*, and *this is who we are*.

#### Should the U.S. Even Participate?

Chow’s documentary, which covers some of this history, occasionally strays, and what could have been a punchy *60 Minutes*–type exposé is stretched out to an hour. She begins the film by devoting a lot of time to her immigrant parents’ experience of the 1964–65 New York fair, which seems like a roundabout way to get to her subject, especially as her chief argument is that the message of world’s fair pavilions is directed outward at a foreign audience. Chow herself is occasionally an intrusive presence, and there are too many talking heads in the Ken Burns mode. On the other hand, the film comes alive when Jack Masey is interviewed. A Yale-trained architect and designer, Masey spent three decades with the United States

The unanswered  
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Information Agency, where, as director of design, he brought in figures such as George Nelson, Charles and Ray Eames, Ivan Chermayeff, and Buckminster Fuller, and was responsible for both the Montreal and Osaka pavilions. Masey, who died in 2016, is also remembered for organizing the model American kitchen display in a 1959 Moscow exhibition that was the setting for the so-called Kitchen Debate, a famous Cold War confrontation between Richard Nixon and Nikita Khrushchev.

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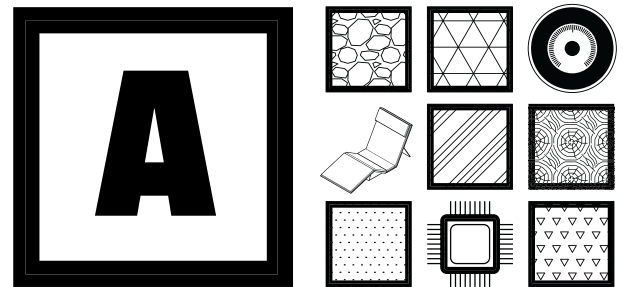
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Masey's view of world's fair pavilions is blunt: "These buildings are seen by the world. They need to be the best." His advice to the State Department is to stop outsourcing and request Congress to appropriate the necessary funds, and to tell the politicians, "Either you fund us or we're not participating." (Despite occasional press reports to the contrary, there is no law against using federal funds for world's fair pavilions.) But Masey's recommendation doesn't seem to be in the cards. Last month, the State Department published a Request for Proposals in the Federal Register for the fundraising, project management, design, construction, operation, and disassembly and removal of a U.S. Pavilion at Expo 2020 Dubai. "The design of the USA Pavilion should be spectacular, and worthy of carrying the name of the United States," instructs the RFP. "The applicant should describe how they plan to create a design that is inspiring, while remaining cost-efficient." Good luck with that.

Perhaps it no longer makes sense for the U.S. to even phone it in. The unanswered question that

hangs over *Face of a Nation* is: Do we really need world's fairs anymore? In a globally interconnected world of instantly accessible information, what is the purpose of an American world's fair pavilion? Technological innovations such as self-driving cars and drone delivery already get wide publicity. Hollywood already does a good job showing global audiences how Americans live. American products are universally known, or at least universally advertised—Coca-Cola had its own pavilion at the Milan fair. Thanks to global media, America's role in the world is endlessly discussed and dissected. Moreover, the tenor of the times has changed. The historical high points of the world's fair were the late 19th century and the post-World War II decades, both periods when optimism about technology and the future ran high. The "world of tomorrow" was the underlying ethos. Optimism has been replaced by anxiety—about rogue nations, terrorism, resource depletion, and global warming. Not exactly something for Judy Garland to sing about.



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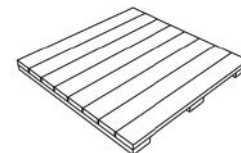
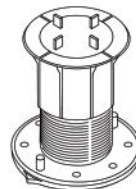
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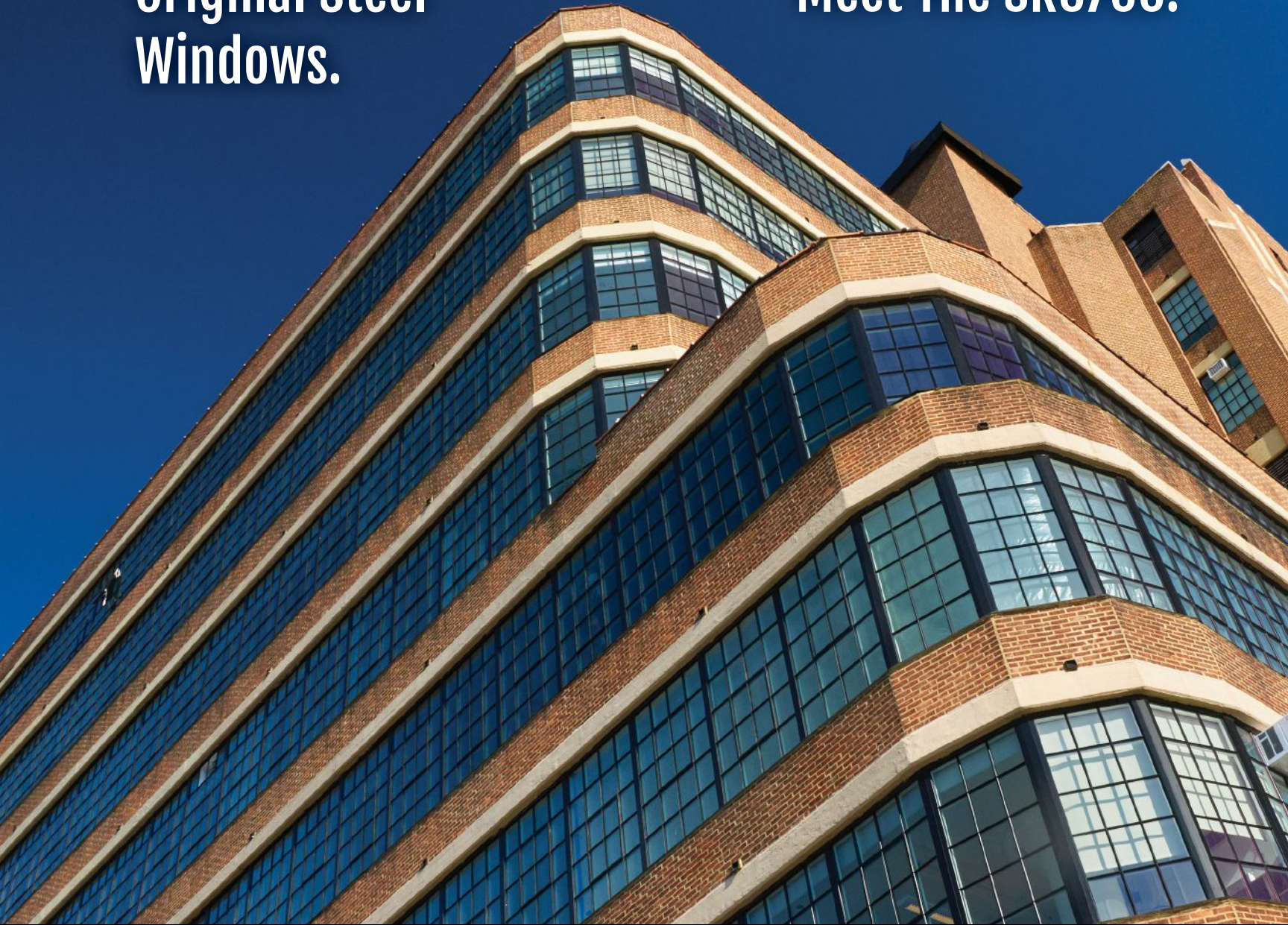
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““Could I create a narrative that Park Avenue is worthy of some sort of aesthetic regulation?” Bankoff asked rhetorically, once he was done laughing at my suggestion. ‘Definitely.’”

One of my most treasured books is a skinny 76-page paperback called *Four Walking Tours of Modern Architecture in New York City*. It was published in 1961 by the Museum of Modern Art and the Municipal Art Society and written by Ada Louise Huxtable, a couple of years before she became the *New York Times*' first architecture critic.

The first tour in the book is a survey of Park Avenue from 43rd to 59th Streets. From time to time, I walk that stretch with Huxtable as my guide. I find her tour to be like a mild hallucinogen, heightening my perceptions of a familiar urban landscape. Because of Huxtable I first came to notice and fall in love with the 11-story Pepsi-Cola World Headquarters building, designed by Natalie de Blois of Skidmore, Owings & Merrill and completed in 1960. Huxtable calls it a "palazetto" set among its much taller, bulkier contemporaries. "By its extreme simplicity, austerity, and careful detailing," she writes, "the Pepsi-Cola Building asserts its presence with quiet dignity and pride." Indeed, it's a gorgeous little office building that appears to magically float above the pavement.

Without Huxtable's guidance, I might have overlooked 460 Park Ave., a 1955 office building designed by the prolific Emery Roth & Sons that is clad in a unique stamped aluminum that was "prefabricated at the factory, [and] installed quickly and



Above: The Pepsi-Cola Building at 500 Park Ave., circa 1960; Below: The view looking south on Park Avenue from E. 53rd St.





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460 Park Ave., designed by Emery Roth & Sons

easily at the site.” I might not have glanced twice at 445 Park, the Universal Pictures Building by Kahn & Jacobs, a limestone-clad multi-terraced wedding cake completed in 1947. It may not have the glassy shimmer of its more celebrated neighbors—the Seagram Building and Lever House—but, as Huxtable notes, it has an innovative structural system that eliminated interior steel columns and enabled more flexible office layouts. Both are now among my midtown favorites.

To see this stretch of Park Avenue through the eyes of one of New York’s most perceptive architecture critics, who was writing at a moment when all those corporate headquarters were freshly erected, is to visit a version of the city that embodies the optimism and power of the emerging American culture in the postwar decades. Huxtable described it this way in a 1957 feature for *The New York Times Magazine*: “The staples of our civilization—soap, whisky, and chemicals—have identified themselves with advanced architectural design and their monuments march up the avenue in a proud parade.”

So I was startled to learn that the city now regards this slice of Midtown, not as one of its irreplaceable treasures, but as string of plum redevelopment sites. Because social media has become the voice of officialdom, I discovered this thanks to a series of tweets. “This is big. @JPMorgan will build new headquarters at 270 Park Ave, the first new skyscraper to rise under the East Midtown rezoning,” Deputy Mayor for Housing and Economic Development Alicia Glen wrote in February. “The rezoning is just 6 months old and already it’s bearing fruit. A state-of-the-art building announced that will also trigger a \$40M minimum investment from the company in East Midtown’s public realm.”

270 Park Ave., I quickly realized, is stop number two on Huxtable’s tour, a 53-story black glass tower completed in 1960 for Union Carbide. Among architecture critics, the response to the news of its impending demise was outrage. “The Union Carbide Building deserves to continue existing, not because it was in the vanguard of a movement with a dubious urban legacy, but because it’s among the finest of its kind,” wrote Justin Davidson at *New York* magazine. Alexandra Lange at *Curbed* noted how unseemly it is for a mayor “who acts as if he has environmentalist bona fides” to be “crowing over what would be the largest voluntary building demolition in the world.” The modernist advocacy organization, Docomomo, wrote a letter demanding that the city’s Landmarks Preservation Commission immediately place 270 Park Ave. on their calendar for possible designation.

I was among those who were surprised that 270



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isn't already a landmark. It has been proposed many times and is old (and intact) enough to be eligible. Even the rezoning plan's environmental impact statement recognizes its importance, calling it: "One of the City's greatest modern buildings." And, as *New York Times* real estate reporter Charles Bagli noted, "Natalie Griffin de Blois, a pioneer in the male-dominated world of architecture, led the team at Skidmore, Owings & Merrill that designed the building." So, like the Pepsi building farther up the avenue, the tower, while customarily credited to Gordon Bunshaft, was likely designed by a woman.

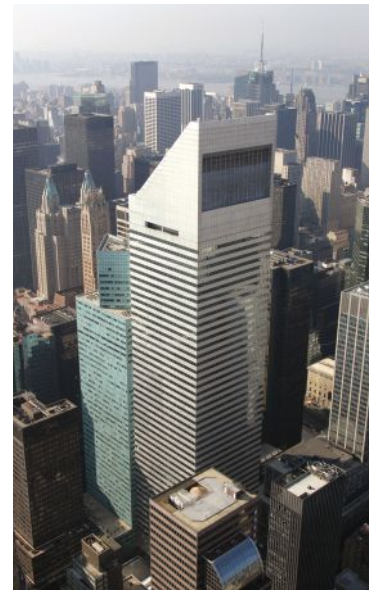
#### A Good Building that Didn't Get Landmarked

In an effort to understand what the de Blasio administration actually thinks about Park Avenue's future and the fate of its midcentury inventory, I asked the city agencies involved whether the redevelopment of that stretch is one of the goals of the rezoning. The planning department responded that approximately 16 new buildings will go up within the rezoned area, which consists of the 78 blocks between 39th and 57th Streets and from just west of Madison Avenue to just east of Third. And that "market conditions will determine where redevelopment occurs."

Landmarks Preservation Commission communications director Zodet Negrón emailed me a prepared statement: "Further consideration of this building (270 Park) as a landmark is not among the Commission's priorities at this time. As part of the interagency East Midtown rezoning initiative, the Commission evaluated buildings in the area, including this one. As a result, we prioritized and designated 12 iconic buildings that represented the key periods of development in the area as individual landmarks, but the JPMorgan Chase building was not among them."

Of the iconic 12, the only modernist building is the Citicorp Center on Lexington Avenue, completed in 1978 and designed by Hugh Stubbins and Associates. According to Simeon Bankoff, executive director of the Historic Districts Council, an organization dedicated to preserving historic neighborhoods, no one really asked for Citicorp to be designated, and, despite the recent demolition of the building's Hideo Sasaki-designed fountain, it doesn't seem to be particularly threatened. On the other hand, Bankoff says numerous requests were made to the commission to landmark 270 Park. "We proposed it back in 2013 and they said, 'You know you're right. This is a good building. We'll look at it in the fullness of time.' And then we sent it again in 2016 and they said, 'Well, we still hold true to our 2013 [opinion] that this is a good building and we'll look at it in the fullness of time.'"

Currently, there are three modernist buildings on Park Avenue between Grand Central Terminal and East 59th Street that have been designated as landmarks by the city: Lever House, the Seagram Building, and Pepsi-Cola World Headquarters. All the other midcentury buildings on that stretch, like 270 Park, are not. Some of them, I've been told, are too derivative to consider. Others have been heedlessly reskinned or otherwise altered: The most egregious example is 320 Park, a 1961 tower by Emery Roth & Sons. Originally the headquarters of ITT, it was redesigned in 1993 by Swanke, Hayden Connell Architects, which, at the behest of an insurance company, rebuilt the original steel frame outward and topped the building with a late PoMo gable. Preserving some of the original structure allowed the new version to be built to a size allowed by pre-1961 zoning rules. Similarly, 425 Park



The Union Carbide Building (left) and Citycorp Center

is the site of a Foster + Partners building, currently under construction, that's being built atop the bones of another Emery Roth building.

There are endless philosophical arguments for and against making any given building a landmark. Why save this building and not that one? Do you only designate the buildings with the best pedigrees, or do you look at the role that less august ones play in the fabric of their neighborhoods? Do you save modernist buildings at all given that Modernism was, originally, a rebellion against history? At the very least, I wish that the de Blasio administration had had these kinds of discussions. But I don't imagine it did.

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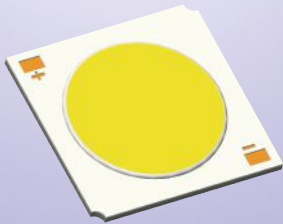
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The rezoning document itself is ruthlessly pragmatic. It prioritizes the redevelopment of buildings that have broad swaths of avenue frontage. Park, because it's an unusually wide street, is a logical site. The same openness that gave the midcentury corporate headquarters here such grandeur will also inevitably doom some of them. The city has decided that the true value of substantial buildings like Universal Pictures is that their sites can accommodate even more substantial buildings. If the former Union Carbide headquarters, one of the best non-landmarked buildings on Park, is now just fodder for the expansion plans of JPMorgan Chase, what chance does a building like Universal Pictures have? Or any building really?

Apart from a Frank Lloyd Wright–designed Mercedes-Benz showroom, a sort of mini-Guggenheim with a spiraling ramp, which was renovated out of existence in 2013, most of the stops on Huxtable's Park Avenue tour still exist. And so I was struck by a crazy idea: Instead of agitating to prevent the destruction of one building—270 Park—we should be fighting for all of them. Wouldn't it be remarkable to have a historic district that honors the postwar Modernism that for decades embodied midtown Manhattan?

### A Historic Empowerment Zone

"It's funny that you pose this question," says Robert A.M. Stern, FAIA. The architect whose firm compiled another of my most treasured books, *New York 1960*, a 1,300-page tome on the midcentury city, admits to having made just such a proposal. "Twenty-five years ago, I was invited to go to one of those breakfast meetings at the Municipal Art Society. And I opined on that very idea, saying that we lost the Park Avenue of the apartment buildings that had grown up after the First World War when the zoning was changed in 1939 or so to allow commercial development below 59th Street. Then all these buildings had been built up. Some very good, like Seagram. Some said to be very good, like Lever, but actually destructive to the streetscape. And others okay, like 270 Park. And a lot of them really banal. But the totality was very interesting. So I argued in my contrary way, I guess, for a historic district."

Stern's proposal didn't go over very well. "The people at the society looked at me as though I was Genghis Khan," he recalls. "They just couldn't believe what I was saying."

I also floated my trial balloon with Theodore Prudon, FAIA, the president of U.S. Docomomo. "In an informal sense, the discussion has come up before," Prudon tells me. Docomomo had once tossed around



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the idea of trying to designate a stretch, not of Park Avenue, but of Sixth Avenue, known for its 1960s office buildings. Much that can be said about Sixth Avenue is also true of Park, as Prudon explains: “The whole idea is that you’re dealing with a series of period pieces that are individually maybe not as significant in their own right, but as a collection, they are creating a very clear vision of what they, in that point in time, thought the future would look like.”

Still, Prudon says, “Politically and practically you’d never get anywhere.” He does offer an intriguing suggestion: Give it a different name and the proposal might fly. “Call it a historic empowerment zone,” he suggests.

Andrea Goldwyn, director of Public Policy at the New York Landmarks Conservancy, a nonprofit organization that promotes historic preservation, says, “As an academic exercise, it’s a good idea.” But, she quickly adds, “It’s not viable.” Why? “The city just spent however many years in rezoning East Midtown and allowing buildings especially on Park Avenue, the section you’re talking about, to be replaced by new buildings.”

The effort to rezone East Midtown actually began during the Bloomberg administration, with a plan that went public in 2012. The plan had a “sunrise provision,” as Bankoff reminds me. It wasn’t supposed to go into effect for five years, to allow the Hudson Yards area to be completed before developers turned

If Union Carbide, one of the best non-landmarked buildings on Park, is now just fodder for the expansion plans of JPMorgan Chase, what chance does a building like Universal Pictures have?

to Midtown. The Bloomberg plan, which never became law, was focused most intensively on the area right around Grand Central Terminal. It increased the floor-area ratio (FAR, a measurement of how tall and bulky a building can be relative to its lot size) in the blocks immediately around the train station from 15 to 24, and along Park Avenue from 15 to 21.6. To access the higher FARs, developers would have needed to contribute to a “District Improvement Fund” to spruce up the streetscape and nearby subway stations. “It was zoning for dollars,” Bankoff says.

East Midtown also has a rich inventory of early 20th-century masonry buildings, of the sort that are

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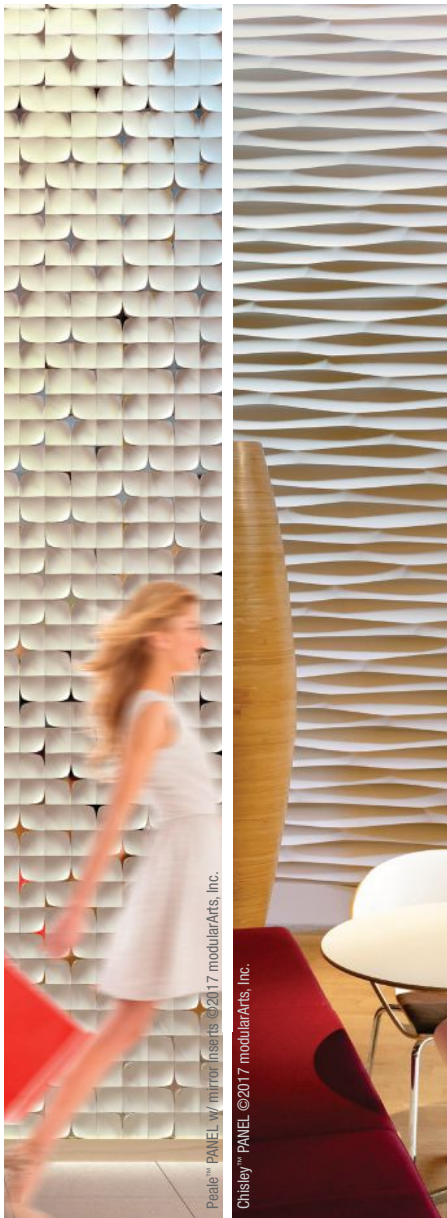
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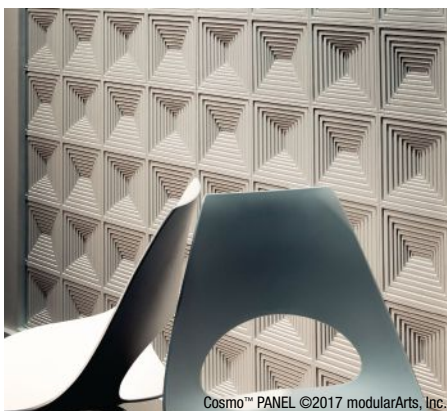
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425 Park, currently being redeveloped by Foster + Partners

commonly proposed as landmarks, as Goldwyn notes. “In the original Bloomberg plan,” she says, “those were the ones that were more likely than not to be considered potential development sites.”

Under de Blasio’s rezoning effort, the method of acquiring added FAR changed somewhat. Developers will now have to buy air rights from landmark buildings like St. Patrick’s Cathedral (with some of the money earmarked for the maintenance of those landmarks). The developer will also have to make a donation, based on the size of the air rights purchase, to a Public Realm Improvement Fund. “This is still zoning for dollars, but they dressed it up,” says Bankoff. The bigger change, though, is the FAR; it increased to 27 around Grand Central and 25 on Park, above 47th Street. The 270 Park site occupies a full block in midtown. Multiply the dimensions of that block by 25 (or even 21.6, the FAR on the western half of the block) and it becomes clear how a 53-story tower can become an irresistible redevelopment target.

#### Channeling Don Quixote

What’s conspicuously absent in the rezoning plan, and also in the current controversy over 270, is any discussion of Park Avenue as a place—as a genuinely historic place. After taking another walk on Park,



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The Wright-designed Mercedes showroom on Park

looking at both Huxtable’s picks and the buildings in between, I can sympathize with the argument that the modernist version of Park Avenue has become too degraded to preserve. There have indeed been some unfortunate recladding jobs. But even so, I’m not convinced that my idea is without merit.

“Could I create a narrative that Park Avenue is worthy of some sort of aesthetic regulation?” Bankoff asked rhetorically, once he was done laughing at my suggestion. “Definitely.” He concluded: “If somebody wanted to go for it, I’d probably end up supporting them, because I’m that kind of sucker.”

Stern, for his part, accused me of being Don Quixote. Fair enough. But I’ve lately come to think that tilting at windmills isn’t always pointless. If we’ve learned anything over the past year or two, it’s that the maybe best way to counter the dumb mulishness of our current political leaders is with ideas that are big enough to be borderline crazy. So, instead of fighting to save one building on Park, it might be a better strategy to go to the mat for all of them.

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# The Strong Silent Type

For a society that lives in a state of near-constant excitement, architectural restraint can be a precious commodity, with restorative and possibly even curative properties. Three cases in point appear on the following pages: a soft-spoken addition to a blockbuster museum, a purposely anodyne school in a historically fraught context, and a deferential adaptation of a raw industrial building.

Modesty makes them exceptional.



**Johann-Pachelbel-Realschule/Staatliche Fachoberschule II  
Nuremberg, Germany  
Lederer Ragnarsdóttir Oei Architekten**

In the historically fraught context of Nuremberg, a new middle school and vocational high school combines historical references into a neutral but powerful style that is uniquely its own.





In Germany, where history is especially fraught, architects face few locations as complex as Nuremberg. A medieval center of commerce that became the site of Nazi rallies and post-WWII war crimes trials, today it is a bustling town with a *mélange* of historical, historicist, and contemporary buildings. That history weighs on any new project: How a building looks is not just a question of style, but of politics and memory.

So when the city asked Lederer Ragnarsdóttir Oei to design a new public school on Nuremberg's west side, the Stuttgart-based firm effectively sidestepped the question. The resulting building seems wholly out of time and yet draws upon references from early and midcentury Modernism, Postmodernism, and a village plan circa the Middle Ages. It is a new building that feels timeless, managing to reference its surroundings while seeming, paradoxically, contextless.

The Johann-Pachelbel-Realschule/Staatliche Fachoberschule II combines a middle school and vocational high school in one low-slung building, with two long, straight wings connected at the center by an entrance hall that houses an auditorium, music room, and other shared spaces. The building is urban in compact plan and yet—sited in a forested area and surrounded by trees—almost bucolic in its setting. At the same time, says managing partner Arno Lederer, its squat shape places it “in dialogue with the heterogeneous everyday architecture of multistory housing buildings nearby.”

The school is built around two plazas created by the H-shaped plan: A public one, facing a nearby street, is both entrance and an outdoor space for the cafeteria (the firm compares it to a medieval village marketplace), and a more private one in back is used for recess and outdoor performances. Inside, exposed concrete contrasts with bright red linoleum, natural stone floors, and lime-green walls; light-colored wood is used for railings and furniture tucked into study alcoves spread around the building.

The firm clad the exterior of the three-story structure with brick, punctuated with strips of windows along its length and large portholes along its shorter sides. Some corners are right angles, while others are curved, giving it a tinge of art moderne—explicit references, Lederer says, to two classic examples of modernist school design: the Crow Island School in Illinois by Eliel and Eero Saarinen and the Munkegaard School in Denmark by Arne Jacobsen.

The result is less a combination of styles than a building that refuses to be categorized. “We like to refer to styles that have a strong aesthetic, are sustainable and useful, yet hold something back,” Lederer says.

Third-Floor Plan



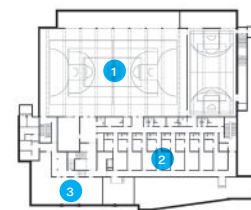
Second-Floor Plan



Ground-Floor Plan



Lower-Level Plan





- 1. Sports halls
- 2. Locker rooms
- 3. Utilities
- 4. School yard
- 5. Entrance hall
- 6. Workshops
- 7. Recreation rooms
- 8. Classrooms

- 9. Cafeteria
- 10. All-weather field
- 11. Library
- 12. Administration
- 13. Teachers rooms



Previous Spread: View of end-cap detailing at northeast corner

Top: View of porthole windows of sports halls on north façade

Above, Left: View of entry yard from east

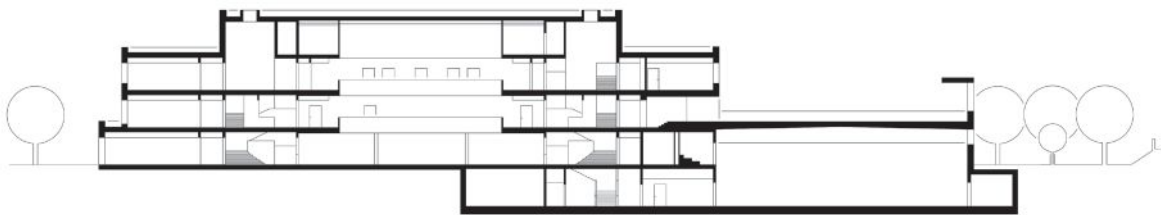
Above, Right: View of plaza from west



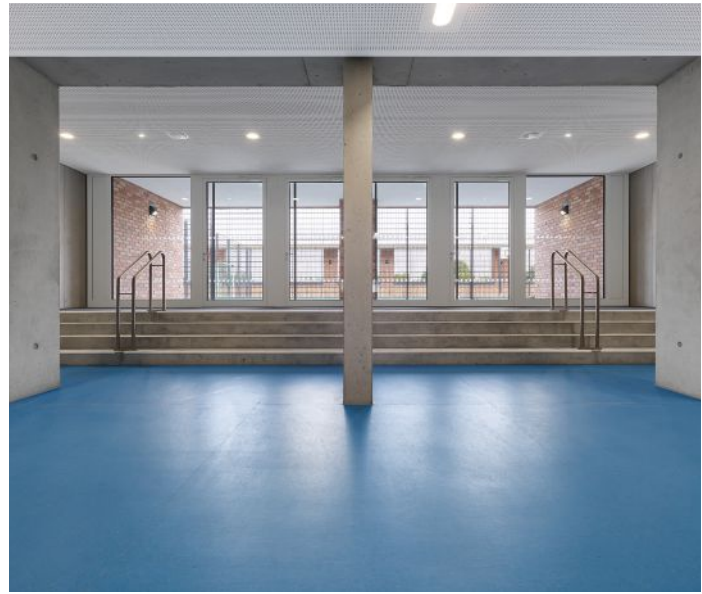
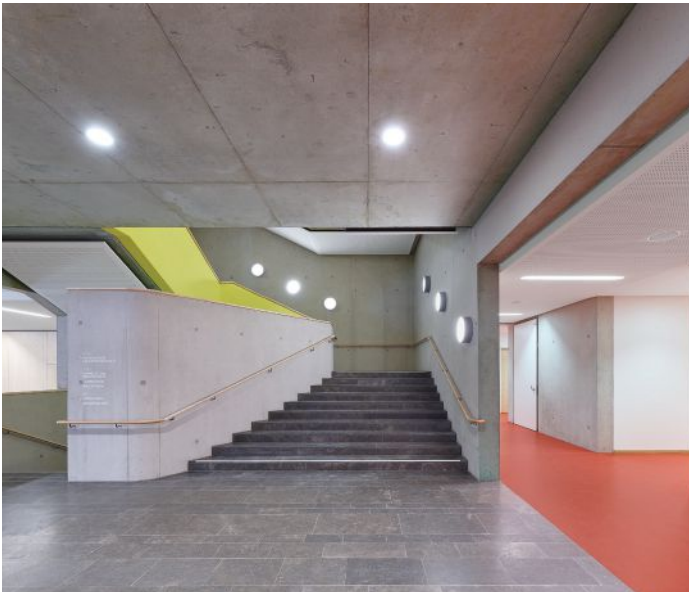
View from northwest with vocational high school wing in foreground



Section A-A<sub>1</sub>



0 5 10



*Top, Left:* Concrete stair in connecting volume

*Above, Left:* Specialty classroom in vocational high school

*Top, Right:* View to year-round playing field on roof of sports halls

*Above, Right:* Cafeteria, with view to entrance plaza



View of balcony spectator seating in sports halls

View of entrance hall, looking north

**Project Credits**

*Project:* Johann-Pachelbel-Realschule /  
Staatliche Fachoberschule II, Nuremberg,  
Germany

*Client:* City of Nuremberg

*Architect:* Lederer Ragnarsdóttir Oei  
Architekten, Stuttgart, Germany · Arno Lederer,  
Wolfram Sponer, Alexander Hochstraße,  
Michael Maier

*General Contractor:* Georg Reisch

*Structural Engineer:* Bauer & Partner

*Building Engineer:* K + P

*Electrical Engineer:* Werner Schwarz

*Façade Planning:* Ingenieurbüro Koch

*Structural Physics:* ITA

*Passivehouse Consultant:* Herz & Lang

*Fire-Protection Consultant:* IB Oelmaier

*Landscape:* IB Kovacic

*Kitchen Concept:* Ingenieurgruppe Walter  
Beratende Ingenieure

*Ground Surveyor:* Vermessungsbüro Phometric

*Construction Management:* Architekturbüro  
Kappeler

*Size:* 21,490 square meters (231,316 square feet)

*Cost:* Withheld







**Walker Arts Center Addition and Expansion  
Minneapolis  
HGA Architects and Engineers, with Inside Outside**

Tasked with expanding upon the work of Edward Larrabee Barnes, Herzog & de Meuron, and even their own firm, architects Joan Soranno and John Cook sought to balance the iconic and invisibility.



**When did your association with the Walker start?**

*John Cook, FAIA:* My own association with the Walker goes back to 1987, when I worked on the Frank Gehry retrospective—his first big show in a museum. At HGA, we had a few projects pre-1999 when the Walker hired Herzog & de Meuron to do an expansion [with HGA as architect of record] to the 1971 Edward Larrabee Barnes building. At the end of that project in 2005, Ralph Rapson's Guthrie Theater was still attached to the Walker; it came down in 2007, leaving an unfinished landscape and an architectural gap.

**But before you started the addition, there was another project—reskinning the Barnes building.**

*Cook:* Almost from the beginning, the Barnes building suffered from leaks in the roof, which HGA fixed in the '80s. Over time, it experienced wall leaks as well. For six years I chased leaks, making Band-Aid repairs, and at one point I just said: "The only thing to do here is to start over." So every brick came off and we put on a vapor barrier and more insulation. In that process, the building got about 2½ inches bigger, which created some really unique conditions. I kept asking myself: "What would Barnes do?" Using brick from the same plant as the original, and replicating his details—making sure that the wall brick turned and became the brick of the coping—was important. You mess that up and you're just someone who ruined a great building.

**How did the design for the addition develop?**

*Joan Soranno, FAIA:* Andrew Blauvelt was the curator of design and is now director of the Cranbrook Art Museum. He was the protector of the campus. One thing that he was very clear on was, "We don't want a third charm on the charm bracelet," which, to me, teed up the whole project. We had to mediate between the very diverse language of the Barnes building and the Herzog addition and create something that responded intelligently to both but also tried to create a statement that is reflective of where the Walker is today.

We decided early on that the addition wanted to integrate itself into the hill. So if you're up in Petra Blaisse's new upper garden looking down at our addition, you actually see no architecture, only landscape. I think it is quite a challenge to design a non-building from certain perspectives that is also the new front door to the entire museum. It's invisible, but wants to have a strong identity and to be welcoming.

**How did you distinguish the entry?**

*Soranno:* One move that we made to make it a stronger statement was the Walker signage—that oversized text within that 5-foot soffit—and another was the yellow

vestibule. When you're thinking about creating visual interest, you think about color but you also think about finish, and the high-gloss, highly reflective surface makes for a kinetic experience even though the ceiling is very low. To align floors, we couldn't make the building any taller than 15 feet; Barnes had established a very strong datum line of 10 feet inside his building, which came into our addition. But for a main entry into a museum, a 10-foot ceiling is not very tall.

**Not at all. How did you make it feel bigger?**

*Soranno:* A trick that we did with the vestibule was to make it even lower—8 feet—so that when you come into the entry foyer, the 10-foot ceiling looks tall in comparison. And then we also have skylights. Those are really important to give this space more volume, and with the size and angled ceilings, we were trying to get as much volume and daylight as we could.

One of the driving forces of our work is light, the manipulation of light. Light is such a restorative life force, so trying to harvest as much as we could in this space to counter some of the more inward-focused spaces in the Walker was really important.

**There is so much precedent on this site. What did you incorporate and reference in your addition?**

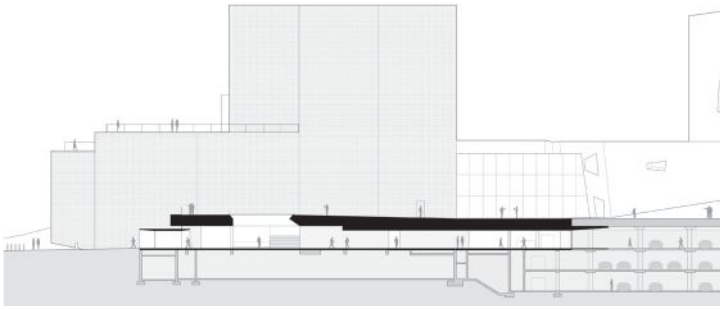
*Soranno:* We chose materials to try to tie the Herzog and the Barnes buildings together. I think the obvious one is the white aesthetic: If anybody talks about iconic finishes in the Barnes building, they talk about white terrazzo floors, so continuing the white terrazzo was really important. Jacques Herzog took the Barnes brick and turned them into floors in his town square, and we brought that brick down into the remodeled Barnes lobby so there's a little bit of Herzog there.

The one thing we did that at first I was really nervous about was the natural wood in the restaurant—in 240,000 square feet. I don't think there's a stick of wood at the Walker besides furniture, but we detailed it in a contemporary way, and I think it works well.

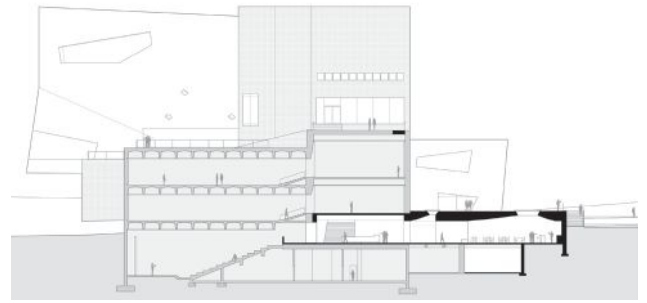
**The new addition is also an entry from the parking garage. How important was that?**

*Cook:* Seventy percent of people coming to the Walker enter through the garage. Before, it was a leftover connection between the Guthrie and the Herzog addition—a rabbit hole that led to ticketing via a narrow corridor without any daylight. Now, if you look through the corridor, the new foyer, and across into Barnes' sculpture garden, you see Claes Oldenburg's *Spoon Bridge and Cherry*. That visual connection, not only to daylight, but to the sculpture garden's iconic piece—you can't put a dollar value on that.

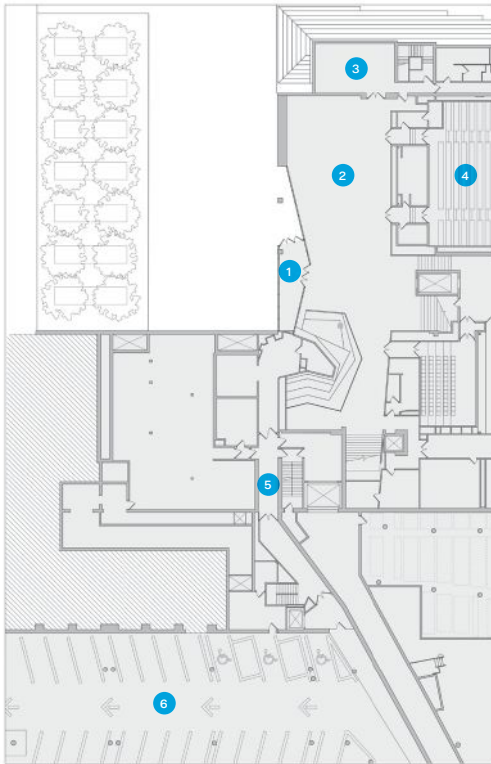
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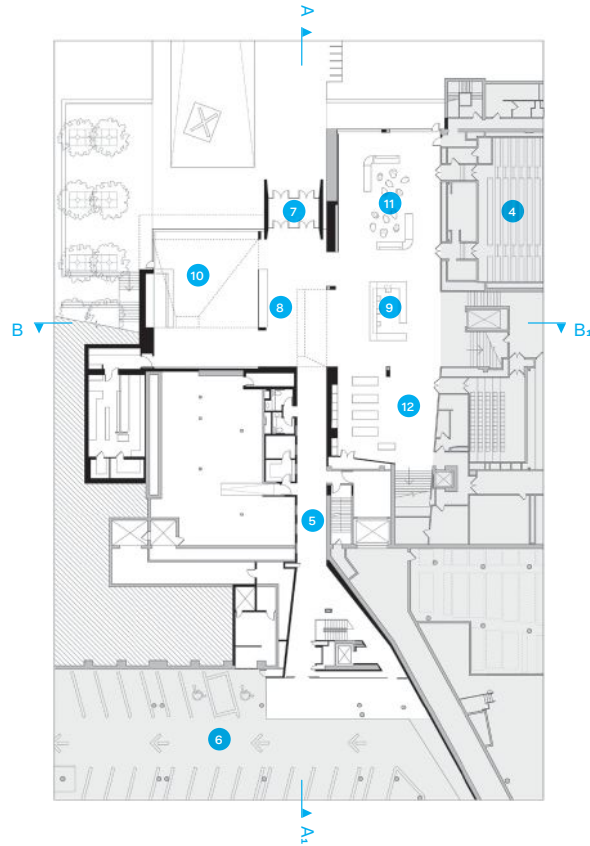
Section B-B<sub>1</sub>



Ground-Floor Plan Before HGA Addition



Reconfigured Ground-Floor Plan



*Previous Spread:* The yellow metal walls and ceiling of the new entry vestibule draw in visitors, and were part of an effort “not of making it art, per say, but to take it almost out of the realm of being architectural,” Cook says. “You don’t normally find this high-gloss paint finish in buildings.”

- |                        |                           |
|------------------------|---------------------------|
| 1. Existing entrance   | 7. New entrance vestibule |
| 2. Existing Lobby      | 8. Entry foyer            |
| 3. Storage             | 9. Ticketing              |
| 4. Cinema              | 10. Restaurant            |
| 5. Corridor to parking | 11. Remodeled lobby       |
| 6. Parking garage      | 12. Museum store          |



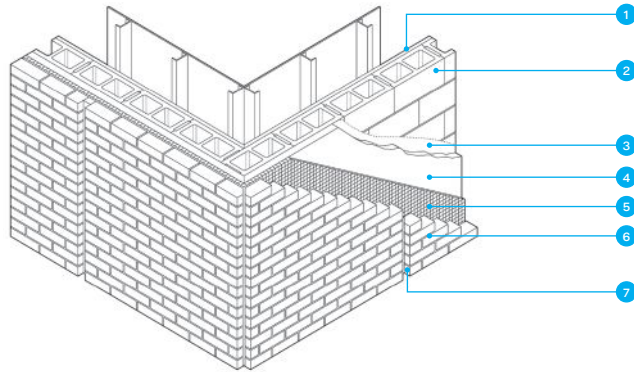
The Walker had moved its main entrance with the construction of the Herzog & de Meuron addition in 2005 (at right, beyond). The new HGA addition restores the main entrance to the site of the original—an atrium that connected the Barnes building to the Guthrie next door. “I think they realized it was really hard to deny the gravitational pull of the sculpture garden” across from the Barnes building, Soranno says.





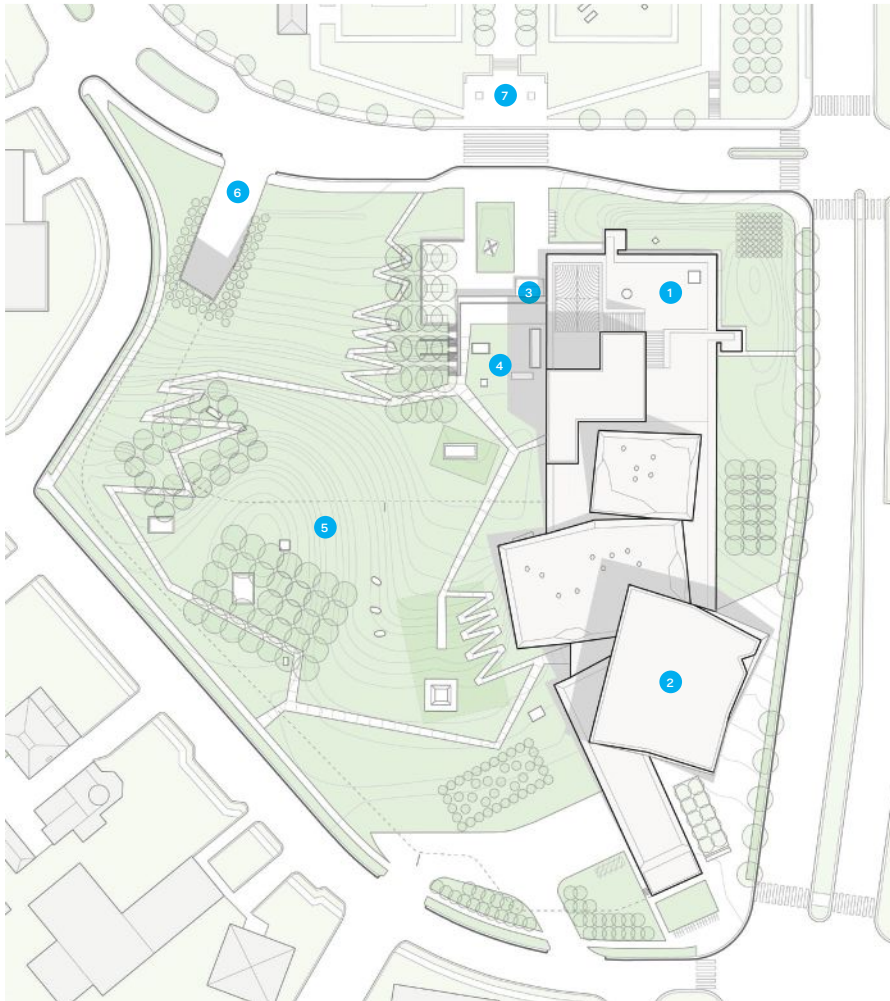
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New Brick Cladding Diagram

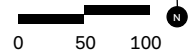


- 1. Existing 1"-thick insulation
- 2. Reinforced existing CMUs
- 3. New vapor retarder
- 4. New 2"-thick insulation
- 5. Cavity drainage mesh
- 6. New brick
- 7. Copper shadow gap

Site Plan



- 1. Edward Larrabee Barnes building
- 2. Herzog & de Meuron addition
- 3. New public entrance
- 4. Green roof
- 5. New upper garden
- 6. Parking ramp
- 7. Sculpture garden



When the Guthrie Theater was demolished in 2007, what was left behind was a large open space that has become a gathering place for large museum events over the years. Petra Blaisse and Jana Crepon of Amsterdam-based firm Inside Outside worked with HGA to sculpt up a hill over the parking garage that both conceals the bulk of the new, low-slung, bronze-clad addition (seen from the garden to the west), and serves as the basis for a new landscape component on site. "That was a really important thing, to create a topography that would make a shape and a form and a presence as seen from the inside," Blaisse says, "and also to tone down the scale of the surrounding buildings a bit."

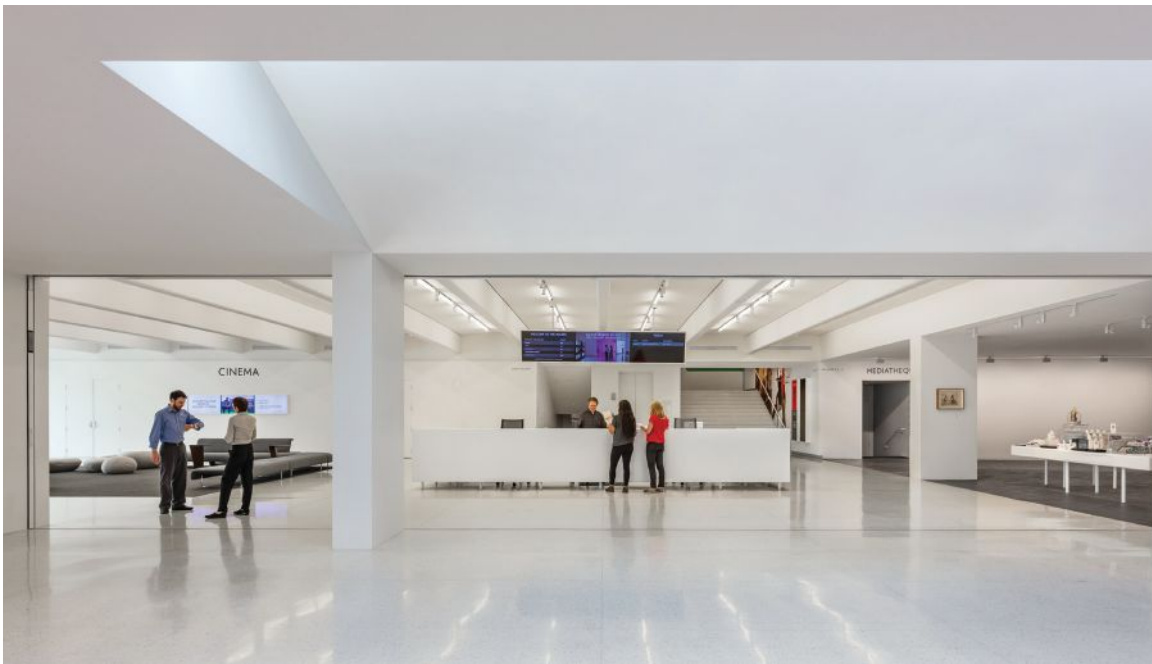






*Top:* The concrete parking entrance was part of the 2005 addition, but it stood out starkly against the undeveloped landscape. Blaisse and Crepon's design includes trees and plantings that vary in height, scale, and color to create a more integrated environment. Copses of trees were used to create what Blaisse calls "vegetal galleries" on site to host programs and events.

*Above:* The bold blue of the new garage entrance recalls the vivid yellow vestibule at street level.



*Top:* A 40-foot-long art wall flanks the new restaurant in the foyer, and features a rotation of site-specific commissions. "If you're outside looking in, there still is a connection to the visual arts in the lobby, even though this is a restaurant," Soranno says.

*Above:* The renovated lobby in the Barnes building features a new seating area, ticket counter, and gift shop, in a space that now has floor-to-ceiling windows.

In the main foyer, “we wanted to maximize visual connections to the garden,” Soranno says, so the team used a 2”-thick curtainwall with gaskets between the panes of glass instead of mullions. Soranno and Cook tend toward what she calls “hyper-minimal” details. “Transparency in how things are constructed has never interested me,” Soranno says. “I’m more in favor of pristine spaces that almost defy construction.”



esker  
grove

**Project Credits**

*Project:* Walker Art Center Addition and Expansion, Minneapolis

*Client:* Walker Art Center

*Architect:* HGA Architects and Engineers, Minneapolis · Daniel Avchen, FAIA (principal-in-charge); Joan M. Soranno, FAIA (design principal); John Cook, FAIA (senior project architect); Alex Terzich, AIA (project architect); Michael Hara, ASSOC. AIA, Douglas Gerlach, AIA, Andrew Holmgren, AIA, Adam Luckhardt, AIA, Steve Philippi, AIA, Michael Koch, AIA (design team); Rich Bonnin (interior designer); Tao Ham, Connor Frazier (lighting team); Theodore Lee,

Trygve Hansen (landscape team); Robert Johnson Miller (specifications)

*Landscape Architect:* Inside Outside—Petra Blaisse, Jana Crepon

*General Contractor:* M. A. Mortenson Co.

*Structural/M/E/Civil Engineer:* HGA

Architects and Engineers

*Lighting Designer:* Taylor and Miller Light

*Irrigation Designer:* WaterinMotion

*Owner's Representative:* Tegra Group

*Kitchen Consultant:* Rippe Associates

*Size:* 5,500 gross square feet (addition);

15,160 gross square feet (renovation)

*Cost:* Withheld



**Shipyards 1862**  
**Shanghai**  
**Kengo Kuma & Associates**

A disused shipbuilding facility finds new life as a mixed-use community hub, while honoring a rare piece of the city's industrial past.

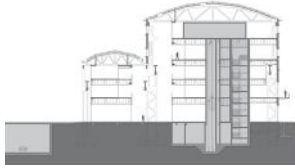




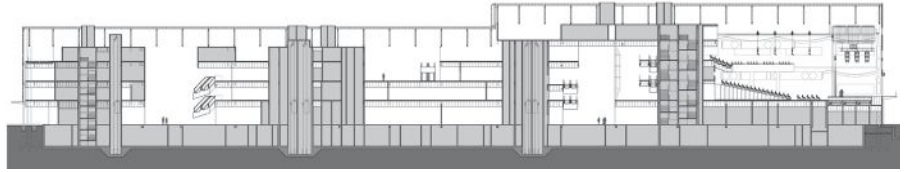
Kengo Kuma & Associates converted a 1972 ship-manufacturing building in Shanghai into a new cultural complex (east façade, left) called Shipyard 1862. The north façade (below) faces the Huangpu River and was repaired in 2010 for the Shanghai World Expo, but by then the building was already long abandoned. “Lujiazui, Pudong used to be an industrial area that has been transformed into a financial and services district,” say partner-in-charge Javier Villar Ruiz and chief project manager Yutaka Terasaki about the area. “Shipyard 1862 is the only structure still belonging to that industrial past.”



Section A-A<sub>1</sub>



Section B-B<sub>1</sub>



Third-Floor Plan



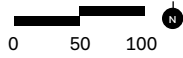
Second-Floor Plan



Ground-Floor Plan



- 1. Entrance
- 2. Atrium
- 3. Restaurant
- 4. Retail
- 5. Theater foyer
- 6. Theater
- 7. Exhibition space
- 8. Multimedia room

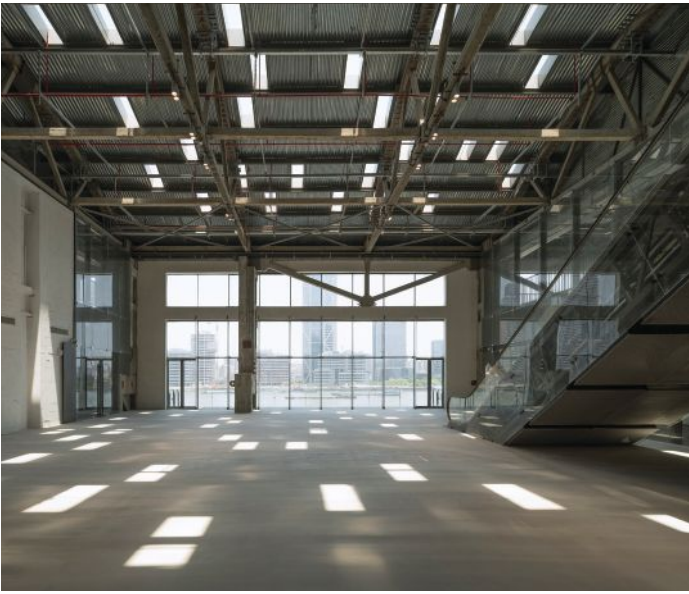




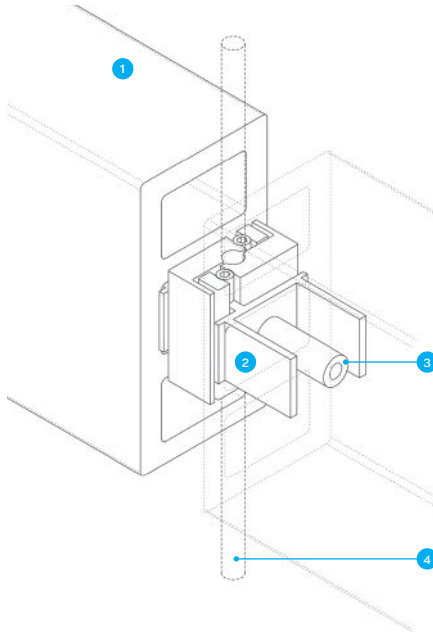
“We chose to keep using the brick as the main materiality, but not in a nostalgic way,” Villar Ruiz and Terasaki say. “This new brick screen not only brings the views and lights that the new uses require, but allowed us to create a smooth gradation of transparency, going from complete solidity when in contact with the river brick façade and gradually becoming more transparent.” The south façade (shown) is now the main entry, and pairs the bricks—suspended on stainless steel wires—with the exposed structure left when an adjacent building was previously removed.





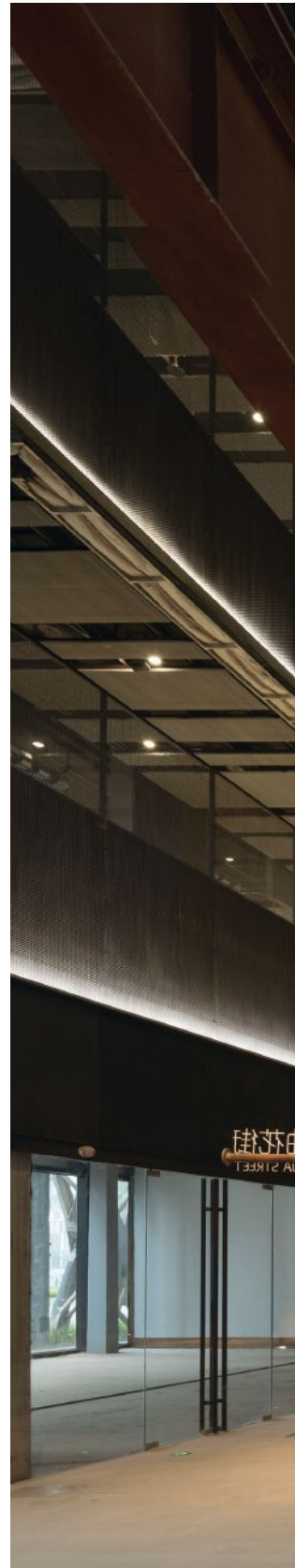


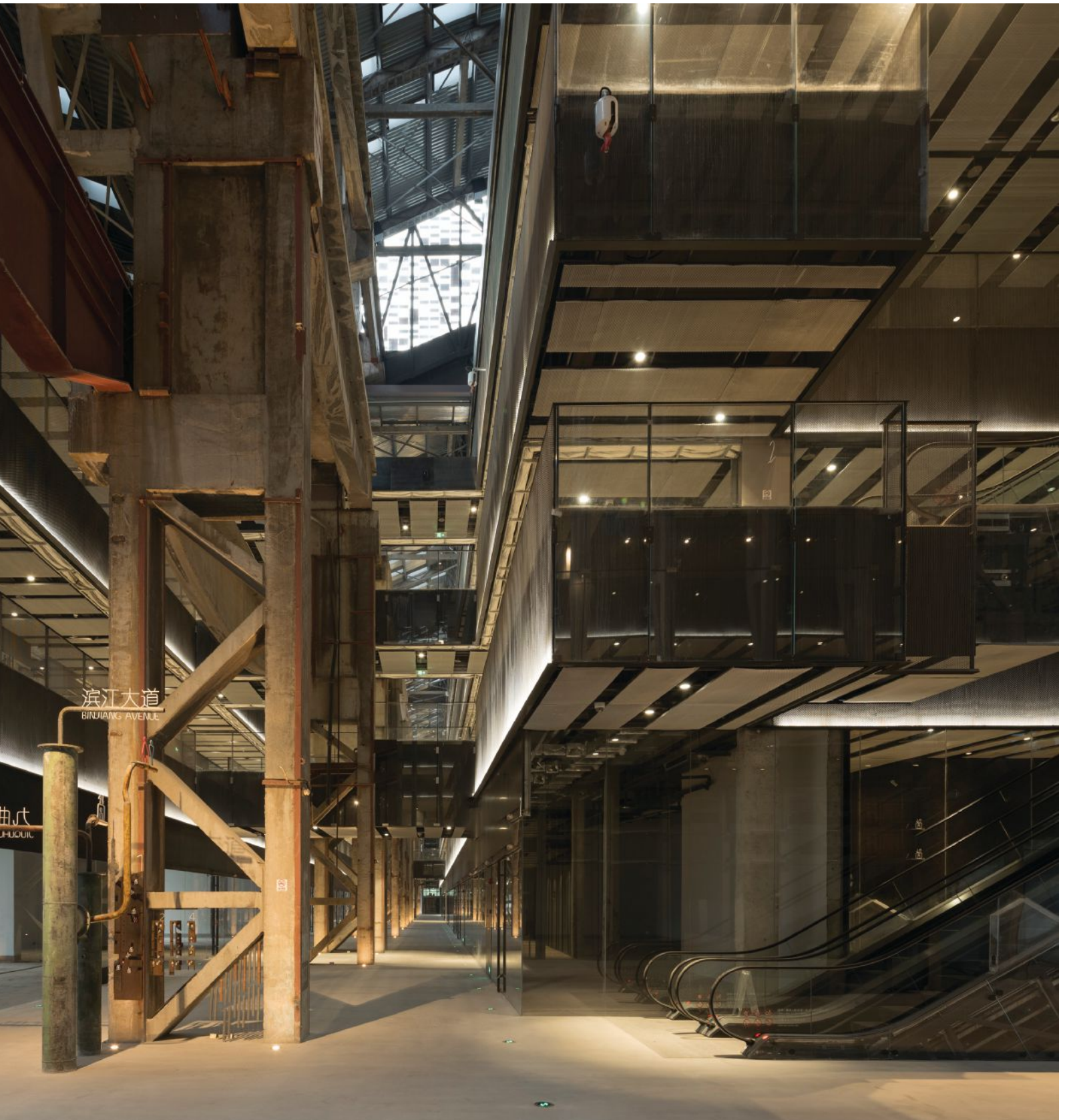
Suspended Brick Façade Detail



The building's interior was an empty 656-foot-long, 145-foot-wide nave, which has been renovated to incorporate stores, restaurants, a theater, prefunction space (top left), and a balcony (above)—all connected by full-height atria (top right and opposite). Throughout, old structure is exposed and new spaces feature a simple materials palette of glass, metal, concrete, and brick. "New materials and old can get along well if carefully chosen, and confront each other with an appropriate sense of distance and respect," Villar Ruiz and Terasaki say.

1. Ceramic brick
2. SUS support bracket
3. Aluminum alloy pipe
4. Stainless steel wire





The 800-seat theater at the building's eastern end can accommodate a variety of performances. Two massive pipes were retained on either side of the space to conceal a new air-conditioning system—another example of the blending of old and new. “Throughout this area, endless buildings are lined up, all clad with shiny modern materials,” Villar Ruiz and Terasaki say. “The Shipyard 1862 is the only heritage left in this area of the city. It is indeed the only major renovation one can find there. We could not just ignore this; we wanted to respect the history held within.”

#### Project Credits

*Project:* Shipyard 1862, Shanghai

*Client:* CSSC Complex Property Co.

*Architect:* Kengo Kuma & Associates, Tokyo, Shanghai · Javier Villar Ruiz (partner-in-charge); Yutaka Terasaki (chief project manager); Qiu Tian, Rita Topa, Chen Wei-Chih, Shirley Woo, Hung Renjie, Sum-ying To, Stephy, Junki Wakuda (project team)

*Local Architect:* Shanghai Institute of Architectural Design & Research Co.

*Structural/M/E/P/Curtainwall Engineer:* Arup

*Lighting Designer:* Panasonic; Arup

*Theater Consultant:* China Poly Group Corp.

*Retail Consultant:* Life Style

*Contractor:* Shanghai Construction Group

*Size:* 9,000 square meters (96,875 square feet)

*Cost:* Withheld





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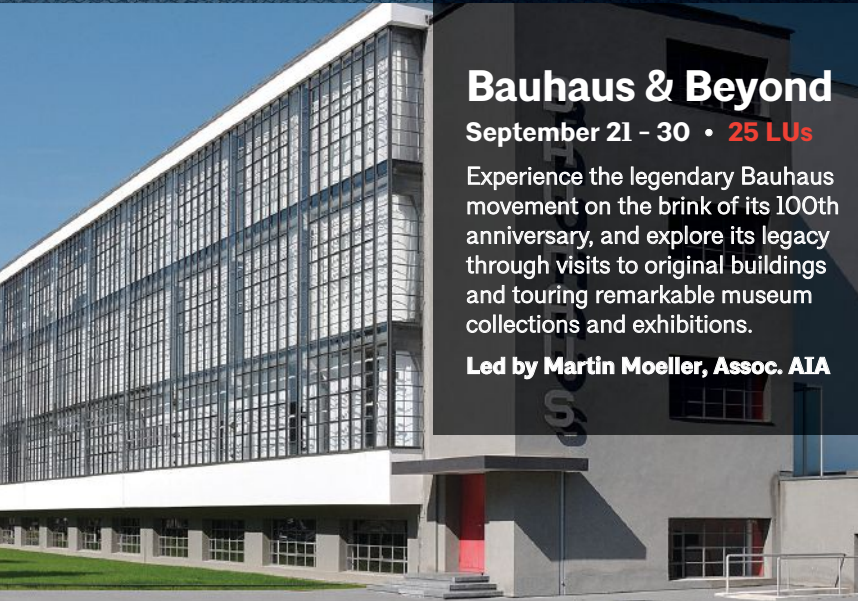
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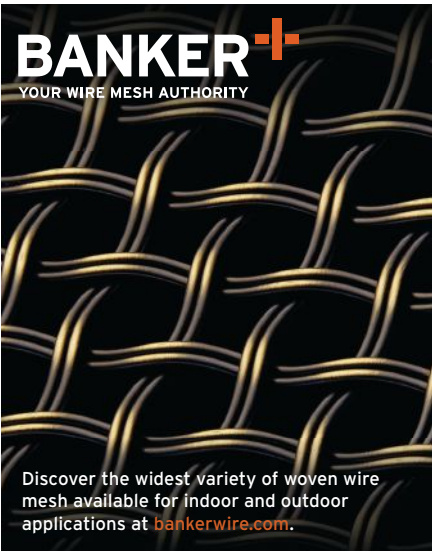
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# Editorial: The Men of Architecture

*Out of deep respect for the women who every day must grapple with sexism in architecture, I'd like to use this space to specifically address the men of the profession.*

*All are welcome to read along, of course, and to respond.*

Gentlemen,

Let's be honest: The architecture profession still smells like a men's club. We may not like to think so, but it's a statistical fact. And can we admit that the burgeoning #MeToo movement makes many of us ... uncomfortable? Ever since the Harvey Weinstein story broke last year, it felt as though we were holding our collective breath, waiting for architecture's turn—for our turn—under the harsh light of truth.

The moment finally arrived on March 13, thanks to the five women who bravely went public with sexual-misconduct allegations against Richard Meier in *The New York Times*. I hope we, the men of architecture, will honor their courage by responding with open hearts and great humility.

To borrow a line from that great agitator Karl Marx, “man is at last compelled to face with sober senses his real conditions of life, and his relations with his kind.” Where gender parity in architecture is concerned, brother, those conditions and relations aren't good. And we have no one to blame but ourselves. For the full 5,000-year history of the discipline, men have excluded or belittled women by sheer weight of numbers, and we maintained the advantage through the domineering culture we created.

I, for one, can't claim a guiltless conscience: I haven't maintained a perfectly non-hormonal, bias-free level of professionalism at every turn of my career. Neurochemistry may be largely innate, but testosterone cannot govern our behavior. An imperfect nature doesn't relieve any man of the obligation to treat women with fairness and respect, as the equals they are.

Never forget: Social equity remains one of the great moral struggles of our age. Numerous forces are bringing about unprecedented and sometimes acrimonious relations among the genders, not to mention among different cultures, races, and classes, and the architecture profession must do everything possible to smooth the way for everyone.

I don't have all the answers. Neither do you. That's not a cop-out. At this juncture, probably the best thing the men of architecture can do is shut up and give women the floor. If you're uncomfortable about #MeToo and other social movements, that's a good thing—accept it. Discomfort is precisely what men need to experience. We need to spend time sitting quietly with ears open, heeding our female peers and getting a taste of what they face daily: the feeling of being unwelcomed and disempowered. That would be one step toward true empathy, growing as individuals, and supporting the struggle for equity in architecture.

*The ARCHITECT team has been planning since last year to devote our May 2018 print issue to diversity and activism. And for the foreseeable future, both in print and online, ARCHITECT will provide a dedicated platform for women and other underrepresented groups in the profession to relate their experiences. We hope you'll join us.*



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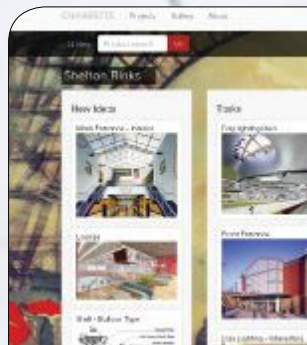
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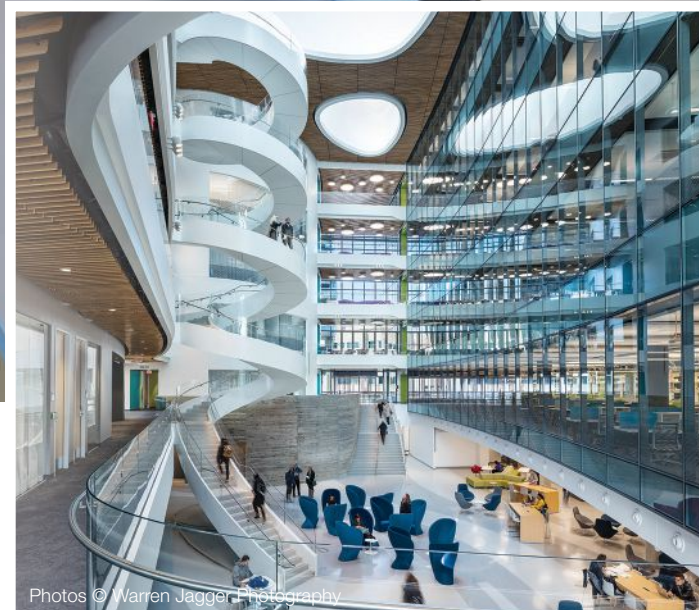
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