

Hemp, Stone Foam & Freckles in Milan 84 Landing That First Job 37
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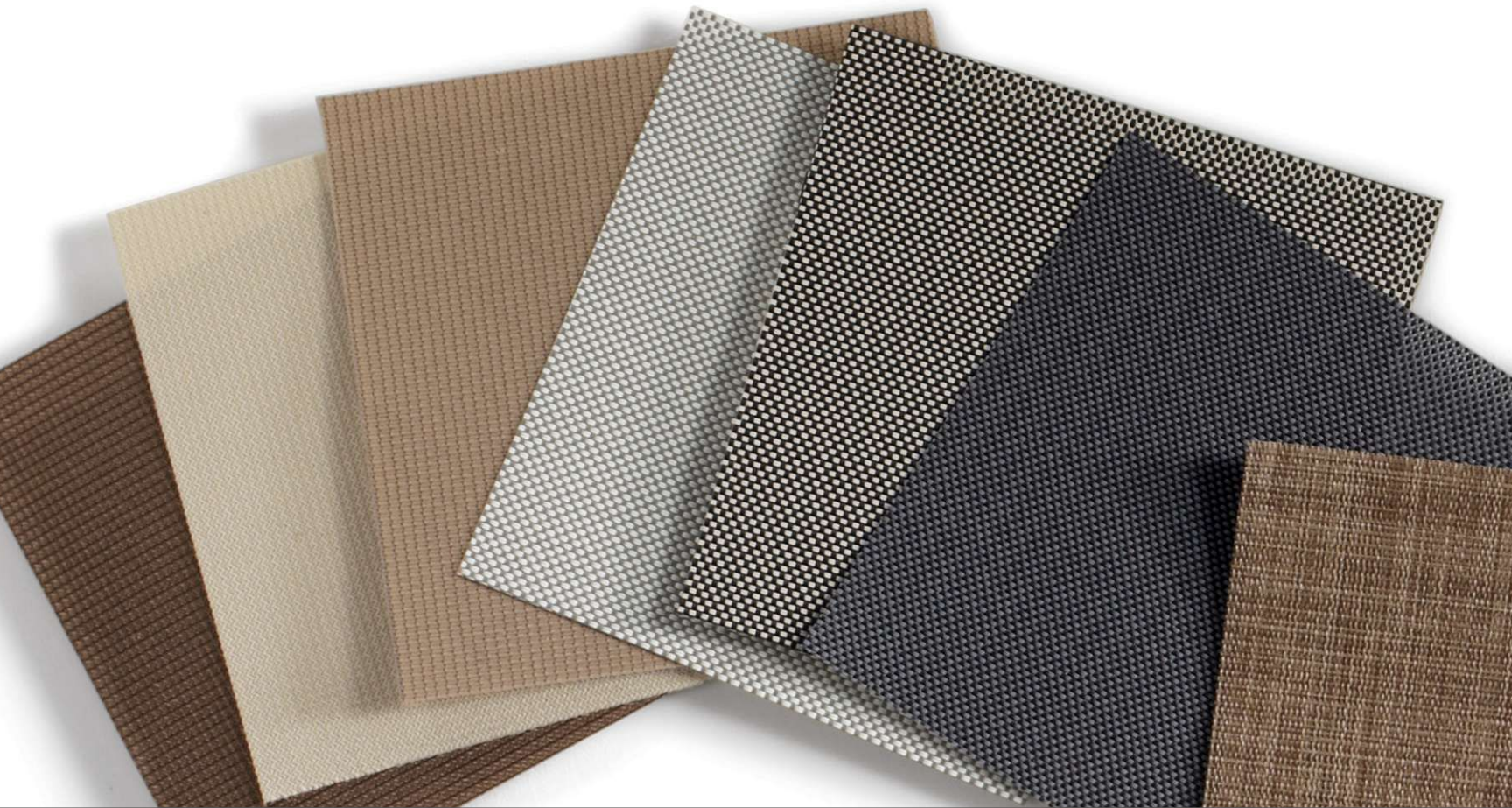
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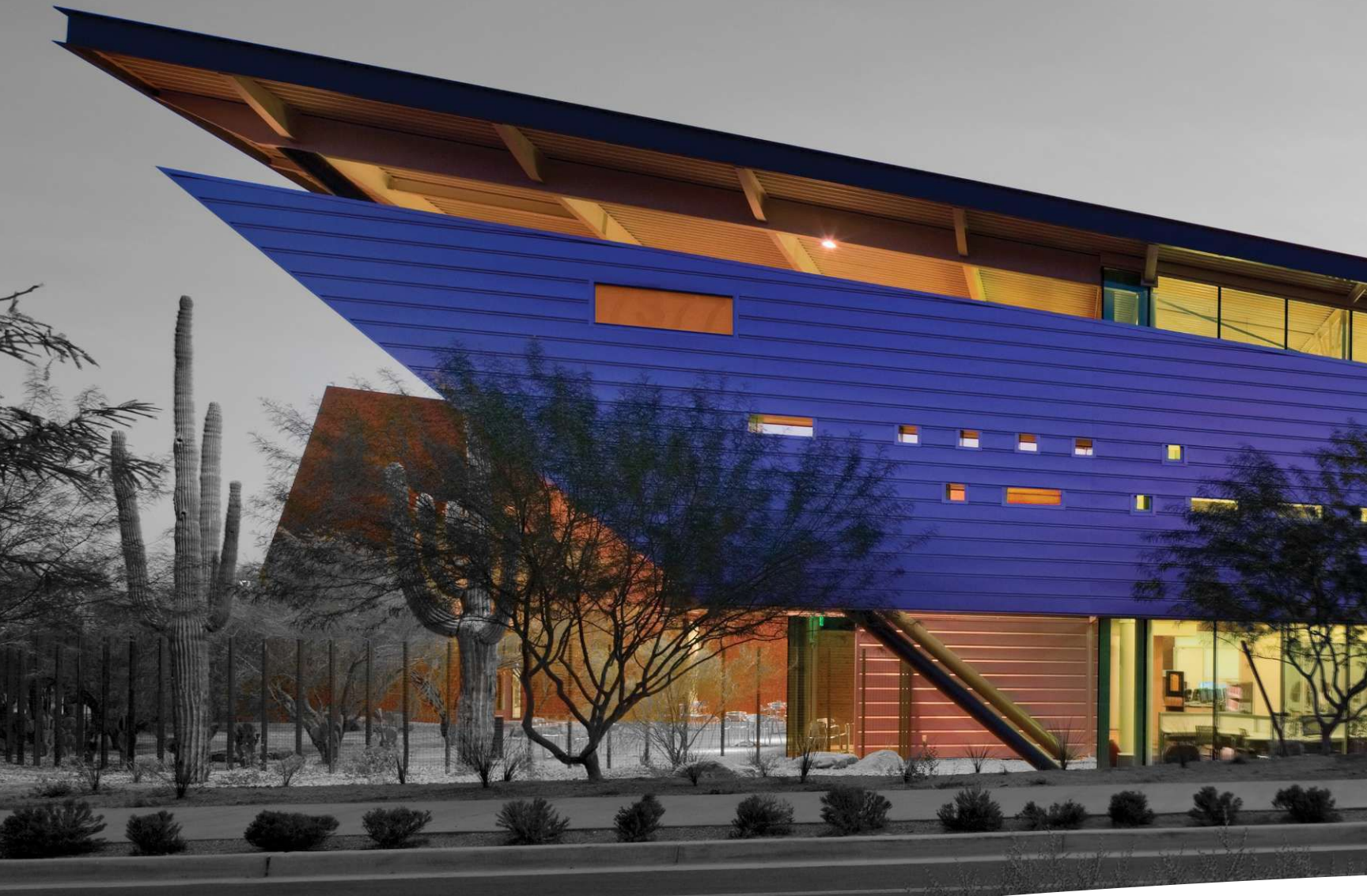
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FEATURE

Milan

It was the year of the *jolie laide* at the Milan Furniture Fair, the world's largest design expo. At the Fiera, where the big brands exhibit, and in displays dispersed throughout the city, a certain amount of risk-taking made the 2011 fair all the more interesting for those willing to look long and hard ... and ARCHITECT has done that searching for you.

SHONQUIS MORENO

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**Lord Aeck & Sargent
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Atlanta

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RDH Architects and David Premi Architects

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Mark Horton / Architecture

House of Air
San Francisco

LISA FINDLEY

→ ONLINE

There's more online at
architectmagazine.com:

Dozens of images and descriptions about more of the exhibits and furniture from this year's Milan Furniture Fair.

Blaine Brownell's Mind & Matter blog looks at products and materials in development and on the market.

Aaron Betsky's Beyond Buildings blog comments on the impact that design has on our society and culture.

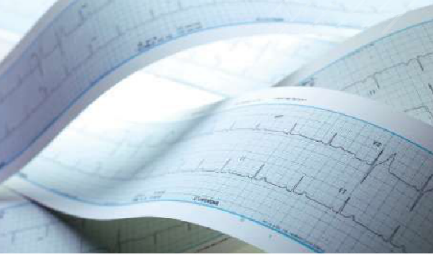
And there are constant updates: breaking news, new products, slide shows, extra images of the projects in the issue, and more ...

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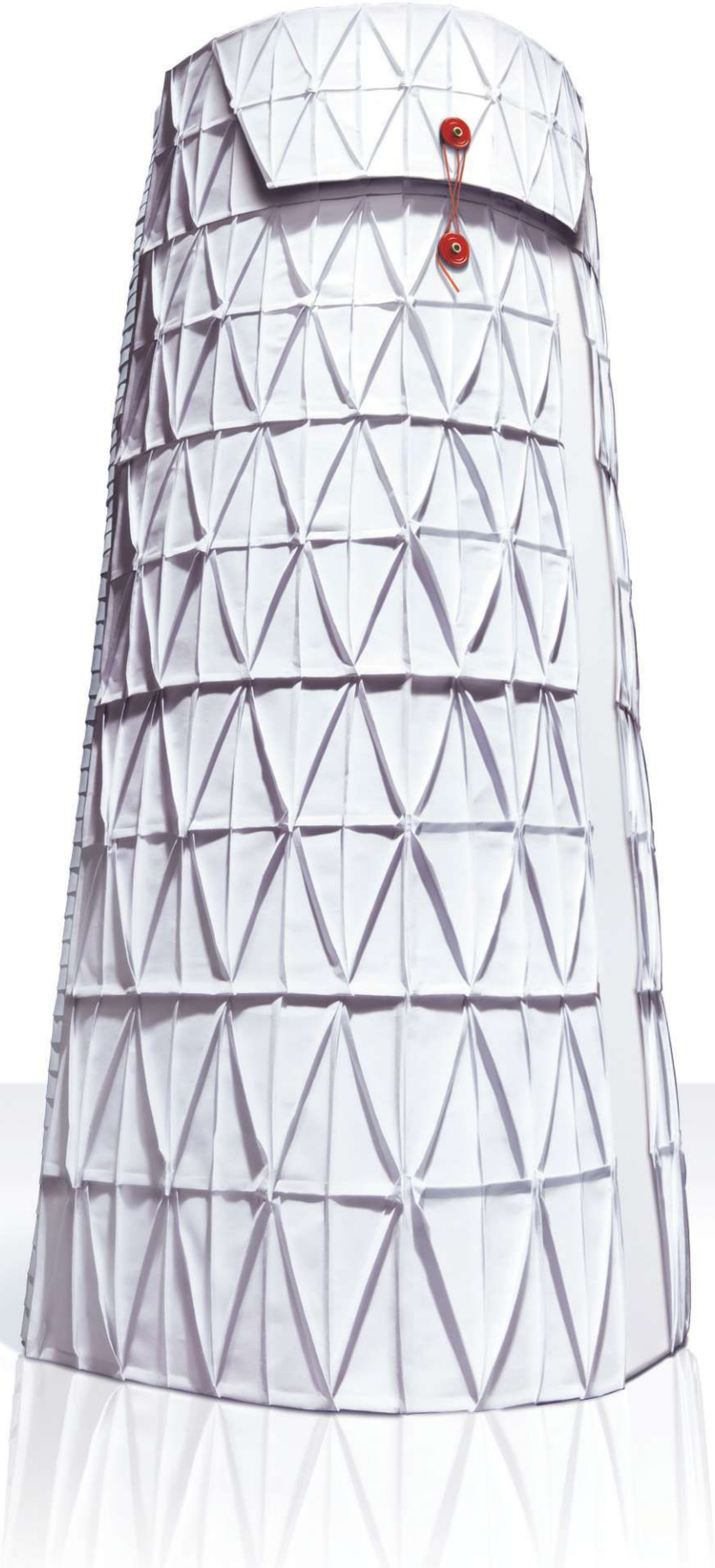
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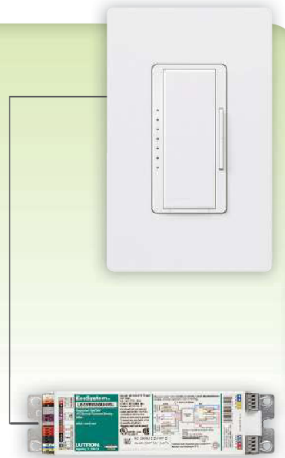
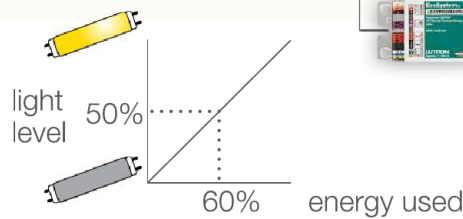
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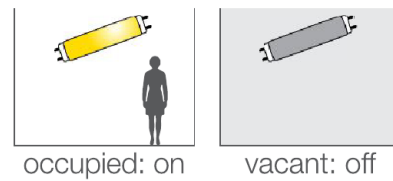
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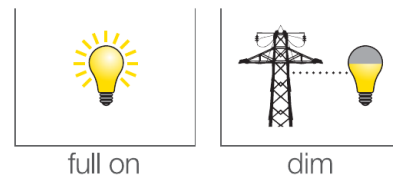


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*Fallingwater is on
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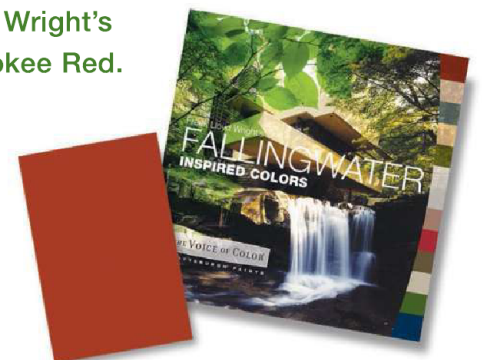
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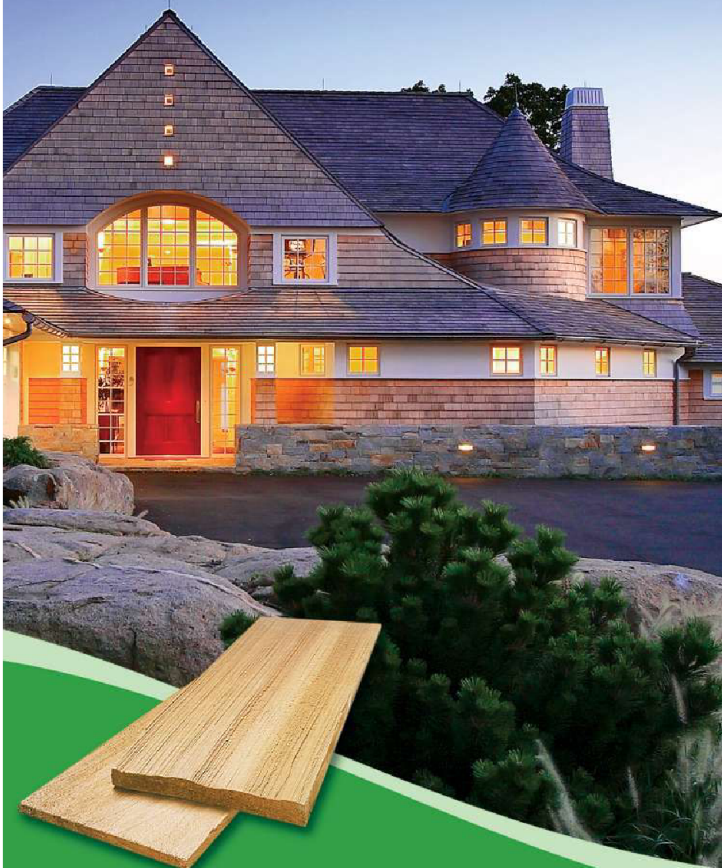
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GOOD BEHAVIOR IN THE 21ST CENTURY SHOULD BE DEFINED IN PART THROUGH ONE'S WILLINGNESS TO ADAPT TO LIFE WITHOUT OIL, COAL, AND NATURAL GAS.

A NEW MORALITY

I ASSUME you were as relieved as I was when the world didn't end on May 21. Christian-radio mogul and numerologist Harold Camping spent \$100 million on advertising to herald the occasion. And now that the date has passed without incident, he's reset the ETA to Oct. 21. Mark your calendars!

Meanwhile, residents of Joplin, Mo., may be wondering if the Four Horsemen of the Apocalypse decided to give them a preview in the form of a tornado that took at least 125 lives, with 1,500 people missing (at press time), and leveled nearly a third of the city.

I can't be the only person who wants to know what the deal is with the weather. Matters rapidly have gone from bizarre to tragic. Not only has this been the deadliest tornado season since 1953, but this spring has seen record flooding on the Mississippi, and the state of Texas and the entire Colorado River Basin are undergoing the worst drought in decades. And that's just in the U.S.

Whenever a natural disaster hits, someone inevitably preaches that God is punishing us for our sins—as though the Weather Channel has supplanted the Archangel Gabriel as God's messenger on Earth. This instead of praying for the souls of the departed or for the well-being of survivors. Such talk, the reading of divine retribution in a thunderclap, strikes me as the most dangerous, primitive sort of demagoguery: "Burn the witch!"

To be honest, I too blame the weather on foolish human behavior. But let's face it: The big sin of present-day *Homo sapiens* isn't the breach of a Bronze Age mandate on sexual intercourse. It's the reckless consumption of fossil fuels, despite the known consequences. God isn't punishing us with freak weather. We've brought the storm upon ourselves.

Some people like to treat inconvenient truths as a matter of personal faith, as when speaker of the house John Boehner tap-danced around the question of President Barack Obama's birthplace and religion. When pressed, he equivocated: "I believe that the president is a citizen. I believe the president is a Christian. I'll take him at his word."

By invoking belief, Boehner treated facts as a matter of personal judgment. But you can't choose whether or not to believe in a fact. Some things just *are*. The denial of reality is at best a function of immaturity and at worst a form of insanity.

Climate change is regularly the subject of such slippery treatment. Earlier this spring, the House of Representatives voted down a resolution that stated, "Congress accepts the scientific findings of the Environmental Protection Agency that climate change is occurring, is caused largely by human activities, and poses significant risks for public health and welfare."

The House of Representatives may have refused,

240–184, to endorse the EPA's climate-change findings, but all the votes on Capitol Hill can't undo the evidence.

What makes the science of climate change reliable? The fact that scientists don't claim infallibility. If that sounds like a contradiction to you, allow me elaborate: Nearly the entire scientific community agrees about climate change, but as a group they also have the wisdom to admit what they *don't know*. In science, no conjecture stands without proof, and proof results in theories, not truths.

Ergo the National Oceanic and Atmospheric Administration's May 12th cautionary response to widespread speculation that climate change is causing the uptick in tornado activity. In its statement, NOAA cited research including the following assertion from the Intergovernmental Panel on Climate Change: "There is insufficient evidence to determine whether [climate change] trends exist in ... small-scale phenomena such as tornadoes, hail, lightning, and dust-storms."

An article on the *Forbes* magazine website took NOAA's statement as proof that there's no connection whatsoever: "Climate Change Unlikely Factor in U.S. Tornado Spree," the headline read. But the good old Capitalist Tool completely missed NOAA's point. Scientists aren't saying that there's no connection. They're saying that there's "insufficient evidence" to say so with absolute certainty. Just give them time.

Forward-looking states such as Florida and cities such as Chicago are already taking measures to adapt building codes and other practices to the new reality of extreme weather. The nation's moral codes, too, must be revised. Good behavior in the 21st century should be defined in part through one's willingness to adapt to life without oil, coal, and natural gas. For architects, that means designing buildings to consume as few resources as possible and with as little impact on the environment as possible. An ethical practice, in other words, is a sustainable practice.

Firms can sign up for the 2030 Challenge to work toward achieving carbon neutrality. Individual practitioners can take the LEED-AP exam. Owners and developers can commit to monitoring their buildings' performance. Manufacturers can submit their products for third-party testing. And policy makers can support legislation to move the marketplace in the right direction.

We know for a fact that the climate change poses a clear and present danger. I pray that humanity will do the right thing.

Neil Crane



Unknown Architect Exhibit: item #794KS

This is a rare fragment of an Insulated Metal Panel (IMP), used in the construction of the Healthy Environment Learning Project (HELP) in New York, c. 2030.

A beacon of sustainability for its era, HELP remains an enduring testament to the Unknown Architect.

When future archaeology reveals our architectural legacies, will yours be among them?

Centuries from now, archeologists will unearth monuments from the present. These will tell a story of people applying advanced thinking and materials toward a viable future. Kingspan is dedicated to helping architects build legacies that will endure, with Insulated Metal Panels that offer exceptional energy efficiency, while capturing every nuance of your signature design.

Legacies take many forms – our Kingspan Legacy Competition is one of them. To enter the competition and to see more of the Unknown Architect Exhibit, visit LegaciesAreBuilt.com



LETTERS

STUDIO VISIT, ANTOINE PREDOCK ARCHITECT, March 2011

I just wanted to bring to your reader's attention the lingering perception that we are "Southwestern regionalists." We have completed one major project in the Southwest in the last 10 years: the University of

New Mexico School of Architecture. The vast majority of our work is in other parts of the United States, Asia, the Middle East, and Canada. I wouldn't say that our work could be characterized as either "Southwestern" or "modernist." Could we please, please, please have a new moniker? *Antoine Predock, FAIA, Albuquerque, N.M.*

BIG-BOX PARADOX, April 2011

When I read ARCHITECT I expect to be enlightened by topics related to the practice of architecture. Not a piece like "Big-Box Paradox," in which you rant about the social values of a global business and rate people's worth based on philanthropy as a percentage of wealth. *C. Robert Cherry, AIA, Montgomery, Alabama*

It's time that architects look beyond corporate greenwashing and focus on real issues of fairness, labor relations, and environmental and social responsibility. It takes courage to challenge large companies that may be our clients or may influence them, so I salute you. *Raphael Sperry, AIA, San Francisco*

THE INTEGRATORS, April 2011

This article reads as a public relations piece for HR&A as your writer slavishly and adoringly reports on its accomplishments. Graphically it's worse—instead of a photograph of a project, there's a photograph of a principal. It implies that HR&A is the only firm in its field. You have done a disservice by not covering firms in allied disciplines that are critical to large projects, and by not providing some sense of how to measure the quality of the diverse players in this area. I am not a competitor of HR&A—it just seems like a story that begs for some real research. *George L. Clafien Jr., FAIA, Philadelphia*

LOU RUVO CENTER FOR BRAIN HEALTH, April 2011

My anger has been rising over the adulation of Frank Gehry and the wrong message his work sends about architects. The Lou Ruvo Center in Las Vegas is a monstrous display of ignoring climate-change-mitigation measures, not to speak of a flagrant waste of clients' and the public's money. It is offensive, and while some may say it fits right in in Las Vegas, putting that monstrosity on the cover of your professional magazine speaks badly of your editorial judgment. *Peter Papesch, AIA, Boston*

Correction

In the May 2011 issue's "In Design, We Trust," the director of design for the National Endowment for the Arts's name should be spelled Jason Schupbach. We regret the error.

→ Want to be part of the conversation? Go to architectmagazine.com. All letters and comments may be edited for length, content, grammar, and style.

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Contributors



Shonquis Moreno

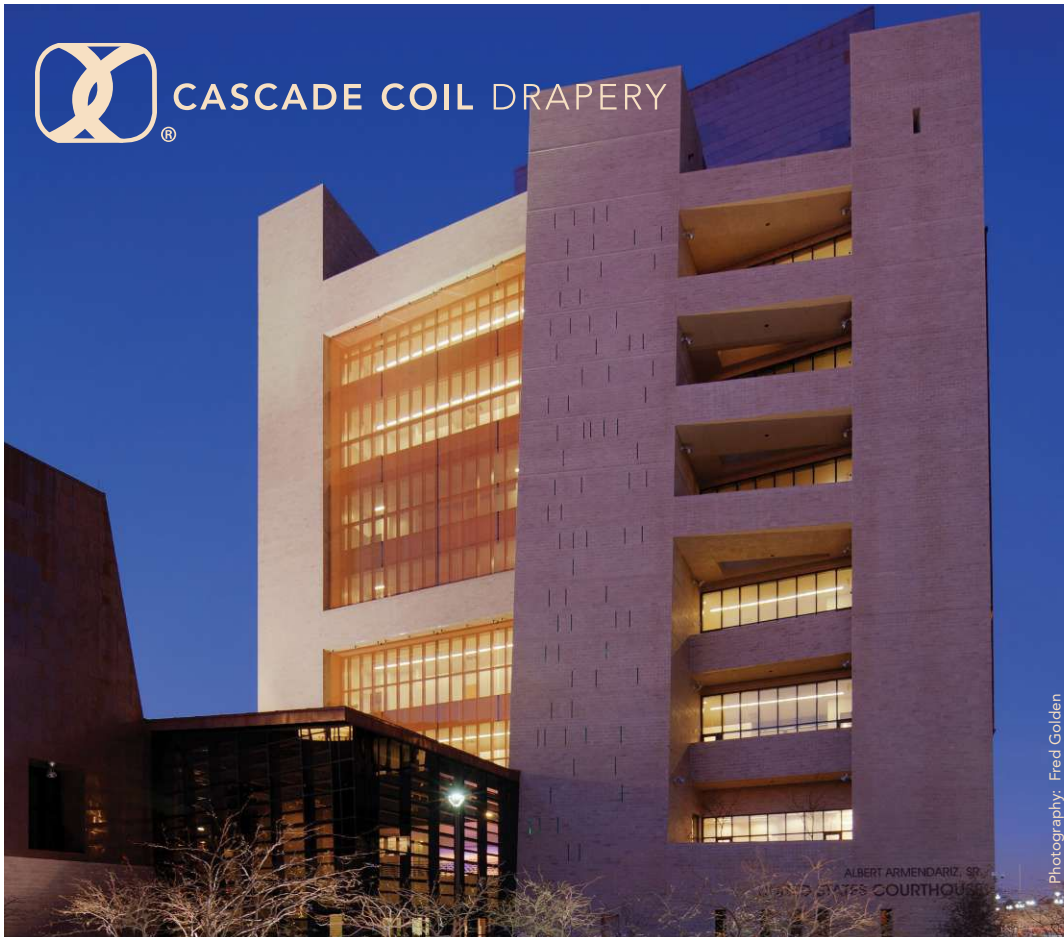
"Milan" • page 84

With a master's degree in journalism from Columbia University, Brooklyn, N.Y.–based writer, curator, and design consultant Shonquis Moreno has served as an editor for *Frame*, *Surface*, and *Dwell* magazines. She writes on a freelance basis for publications such as *The New York Times Style Magazine*, *Wallpaper*, *American Craft*, *Whitewall*, and *W*, among others.

The lead author of *Marcel Wanders: Behind The Ceiling*, *Eat Out! Restaurant Design & Food Experiences*, *Boxed & Labelled: New Approaches to Packaging Design*, and *Forefront*, a survey of international window display design, she also has written essays for a number of books from publishers such as Gestalten, Onomatopée, Berg, and Frame Publishers/Birkhäuser about architecture, interiors, furniture, and product design, among other subjects.



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NEWSWIRE

EDITED BY KRISTON CAPPS



NEWS AT PRINCETON

Architect Ralph Lerner, RIP

Ralph Lerner died of brain cancer on May 7, age 61. He was architecture dean at Princeton from 1998 until 2002, and at the University of Hong Kong from 2002 until this April.



HONOLULU CIVIL BEAT

Honolulu: best public transit in U.S.

The Brookings Institute in Washington, D.C., named Honolulu as the nation's best city for commuting by public transit. The city's buses reach 97 percent of working-age residents.



AIA.ORG

Design Architect Barbie's dream house

To celebrate the introduction of Architect Barbie at retailers nationwide in August, the AIA is holding a contest (ending June 27) for architects to design her new, green dream house.

AIA Elects Next-Gen Leaders

At the AIA Convention in New Orleans last month, delegates elected the organization's next generation of leaders. **Mickey Jacob**, FAIA, will serve as the 2012 AIA first vice president/president-elect and 2013 Institute president. **Russell A. Davidson**, AIA, and **Debra S. Kunce**, FAIA, will both serve as vice president from 2012 through 2013. And **Gabriel Durand-Hollis**, FAIA, will take the role of institute treasurer from 2012 through 2013.

Jacob, the 2013 president, is managing principal at Urban Studio Architects, a seven-person firm in Tampa, Fla. Jacob began a two-year term as an AIA vice president in 2009, and he served as president of AIA Florida in 2004–2005 and as the AIA Florida/Caribbean Regional Director on the AIA National Board of Directors from 2007–2009. He is a strong proponent of the institute's government-advocacy efforts.

Davidson was president of the AIA New York State chapter in 2007 and of the Westchester Hudson Valley chapter in 1999. He is president and managing partner at a 20-person, Mount Kisco, N.Y.–based firm, Kaeyer, Garment & Davidson Architects & Engineers. Kunce, the other new vice president, is currently serving on the AIA National Board as Ohio Valley Regional Director. She is an associate with Schmidt Associates in Indianapolis.

Durand-Hollis, the incoming treasurer, is a former president of the Texas Society of Architects and has been the Texas regional director on the AIA National Board since 2009. He is president of Durand-Hollis Rupe in San Antonio.

Home, Sweet Home (Again)

AT 39, the Southern California Institute of Architecture (SCI-Arc) is ready to settle down.

On April 21, the school finalized a deal to purchase its downtown Los Angeles campus—the original Santa Fe Freight Depot—and adjacent lot. The deal, pegged at \$23.1 million, puts an end to speculation over whether SCI-Arc, which was founded on the concept of a “college without walls,” will stay in the city's Arts District.

SCI-Arc has operated out of the Harrison Albright–designed facility since 2001, and has long pursued its acquisition. Despite a purchase attempt in 2004, the property was sold to MerueloMaddux Properties, which later

filed for Chapter 11 bankruptcy protection.

Although the school's lease had renewal options, questions about whether it would remain downtown started to circulate after Legendary Investors Group bought the debt for 10 MerueloMaddux properties, including the SCI-Arc site. But a recent deal between MerueloMaddux and Legendary has permitted the school's purchase of the approximately 90,000-square-foot building that sits on a 4.5-acre lot. Two additional parcels may also become available to the school, according to director Eric Owen Moss, FAIA.

Moss says that the purchase comes at a time when SCI-Arc is

emerging as a more stable institution. As recently as seven years ago, he says, the school had issues relating to finances and accreditation.

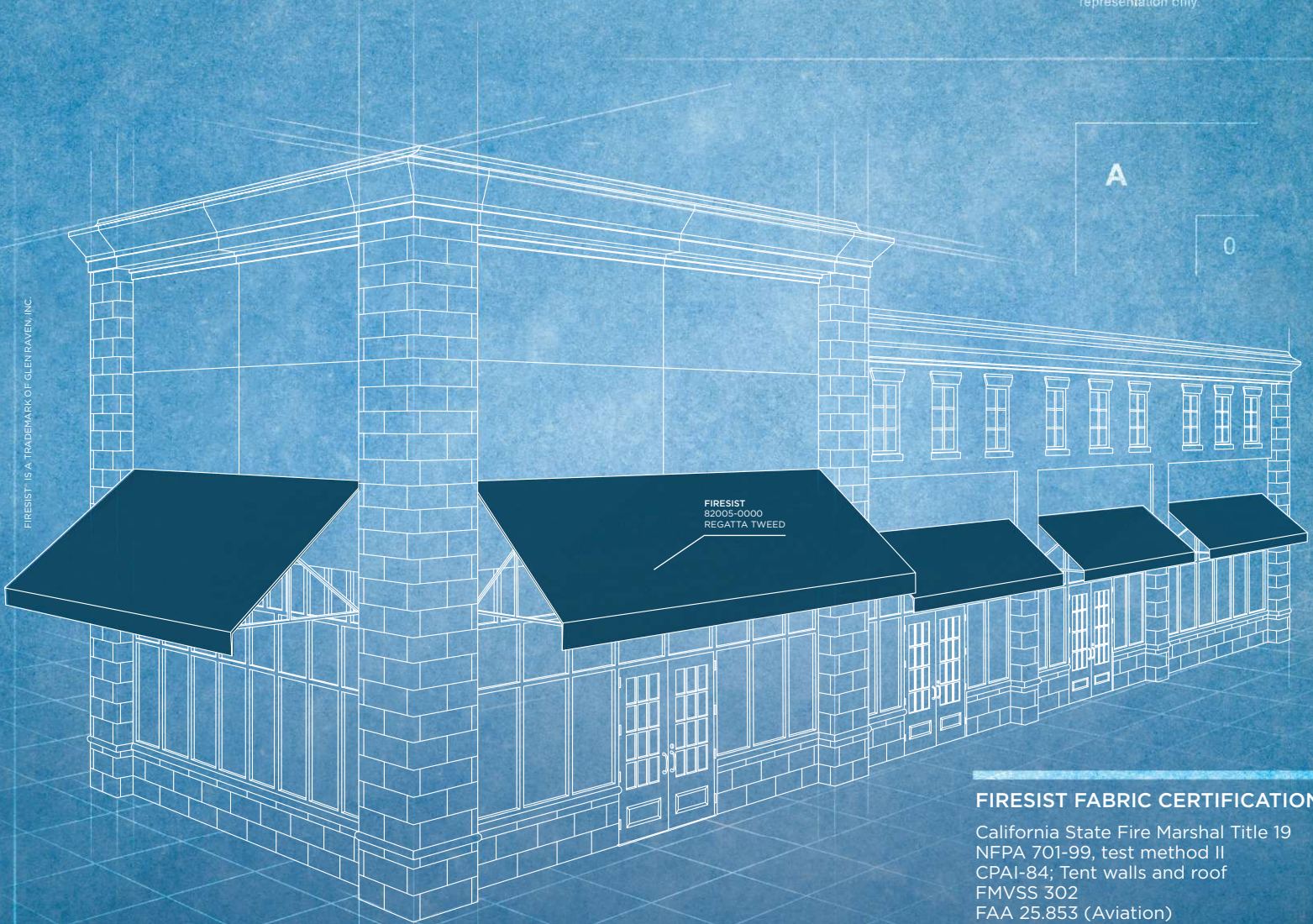
Today, enrollment tops 500, and faculty and staff account for another 105. Earlier this month, SCI-Arc announced that Thom Mayne, FAIA, principal of Morphosis Architects and a co-founder of the school, had joined the board.

“It was difficult, initially, in the Sci-Arc mindset, to imagine a more conservative administration pro forma. ... The content, what goes on at the school, matters more than that there is a building,” Moss says. “But it does take SCI-Arc out of vagabond status.”

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ESTIMATED PERCENTAGE OF THE CITY OF JOPLIN, MO., THAT WAS DAMAGED OR DESTROYED BY THE DEADLIEST TORNADO IN THE U.S. SINCE 1953

SOURCE: ABC NEWS

11.0

PERCENTAGE DECLINE IN CEMENT CONSUMPTION IN 2008

2.0

ANTICIPATED PERCENTAGE INCREASE IN CEMENT CONSUMPTION FOR 2011

SOURCE: PORTLAND CEMENT ASSOCIATION

2.9

THE NUMBER OF POINTS THE AIA'S ARCHITECTURE BILLING INDEX FELL FROM MARCH TO APRIL 2011

SOURCE: AMERICAN INSTITUTE OF ARCHITECTS

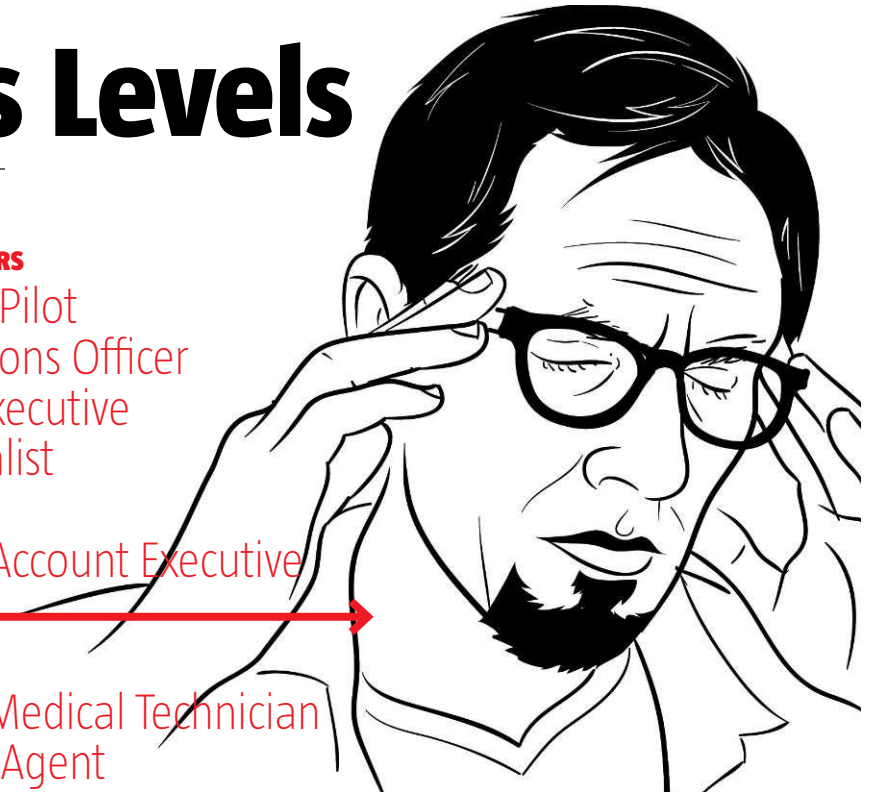
→ NUMBERS

Stress Levels

TEXT BY NED CRAMER
ILLUSTRATION BY JAMESON SIMPSON

MOST STRESSFUL CAREERS

1. Commercial Pilot
2. Public Relations Officer
3. Corporate Executive
4. Photojournalist
5. Newscaster
6. Advertising Account Executive
- 7. Architect** →
8. Stockbroker
9. Emergency Medical Technician
10. Real Estate Agent



IT COULD BE WORSE. You could be a roustabout, doing maintenance on an oil rig. According to CareerCast, roustabout is the single worst job out of 200 considered in the online job service's 2011 Jobs Rated report.

Architect ranks as the seventh-most *stressful* job. But before you call your significant other in triumph—"See, I have proof!"—consider that according to the report's research method, stress is just a subset, one of five metrics that go into CareerCast's overall ratings of best and worst jobs. In other words, a job can make you miserable in lots of ways.

The "Environment" category rates working conditions. And as lousy as your workstation may be, it's not an oil rig.

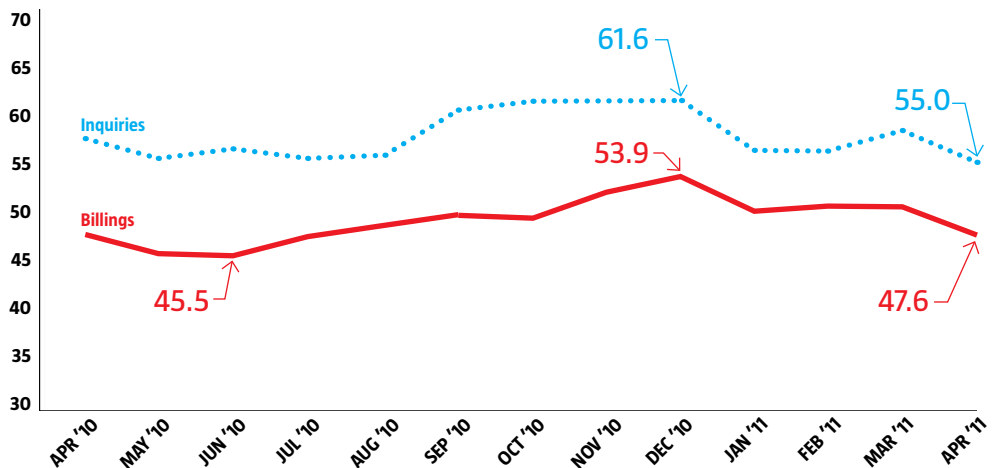
The "Income" category should feel like a win, too, even though you probably deserve a raise. An architect's average annual salary is \$78,800, according to CareerCast, and a roustabout's is \$31,143.

"Physical Demands" tabulates the amount of physical weight a person is required to lift. If you lift fewer than 10 pounds at a time on an average work day, according to the U.S. Department of Labor, your job qualifies as "sedentary"—and unless you work in the model shop, yours most definitely qualifies.

"Outlook" looks at the potential for income growth and the risk of unemployment, which leads us back to "Stress."

To evaluate a job's potential to cause stress, CareerCast looked at variables such as intensity of deadlines (check) and competitiveness (check). So what's the bottom-line reason that an architect's job is so stressful? "There is a lot of competition for contracts and individual jobs," says CareerCast publisher Tony Lee. Check. □

BILLINGS AND INQUIRIES INDEXES



APRIL 2011 ARCHITECTURE BILLINGS INDEX

47.6

- ↓ 49.9 commercial
- ↓ 45.9 institutional
- ↓ 45.2 mixed practice
- ↑ 53.9 multifamily residential

SOURCE: AIA



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On the Boards

TEXT BY KATIE GERFEN



U.A.E. Federal National Council New Parliament Building Complex

EHRlich ARCHITECTS

The competition-winning scheme for this government complex in Abu Dhabi, United Arab Emirates, features a central meeting hall under a domed sunshade, flanked by parliamentary office buildings. Taking cues from Islamic culture—such as the pattern of the *mashrabiya* (or latticelike sunshade, here domed instead of flat) that throws shadows on the meeting hall's white marble walls—and combining it with modern ideals, Steven Ehrlich, FAIA, and his team beat out 13 other firms. “We were contemporary and ancient simultaneously,” he says. The complex is projected to open in 2015.

Queens Library STEVEN HOLL ARCHITECTS

Located on a prime site along New York's East River, the 21,000-square-foot Queens Library takes full advantage of its views of the Manhattan skyline. Glazed cuts in the 100-percent-recycled foamed-aluminum rainscreen allow users to track views as they move up a series of perimeter stairs. The cuts expose the three main sections of the library program: the children, teen, and adult sections. Visitors enter through a grove of ginkgo trees into a multiheight space with exposed structure and clothed concrete walls, where the stacks are organized on a series of stepped risers. The project, which is scheduled to open in 2013, incorporates green features such as geothermal heating and rooftop photovoltaic cells—visible from an accessible roof garden—that provide 10 percent of the building's power. Sustainability is important to principal Steven Holl, AIA, “especially in a library, where it can be an educational tool,” he says.





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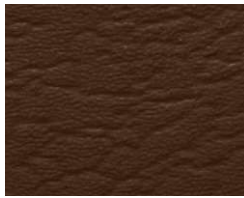
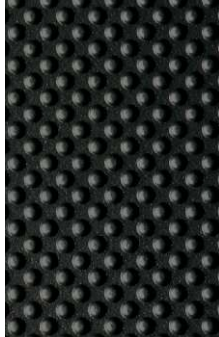
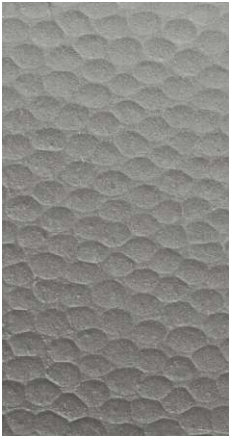
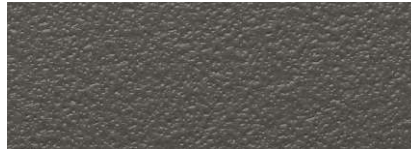
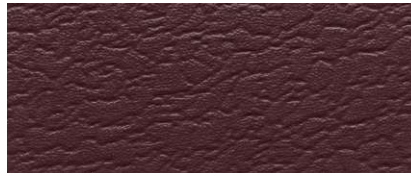
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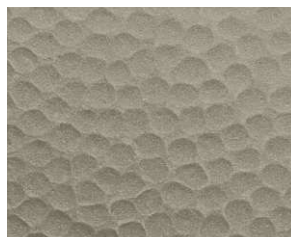
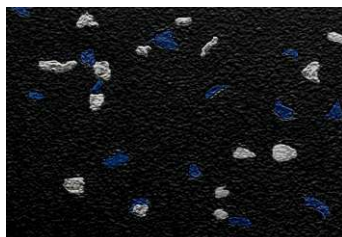
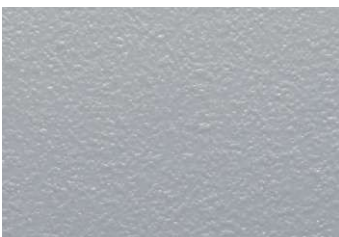




PHOTO: SHAWN G. HENRY

AIA VOICES

PROMOTING PUBLIC-INTEREST ARCHITECTURE WITH A “TRIPLE BOTTOM LINE.”

For Bryan Bell, AIA, founder and executive director of Raleigh, N.C.-based Design Corps, the traditional walls between design and building limit how much good that design can accomplish. Bell, along with Roberta Feldman, Sergio Palleroni, and David Perkes, AIA, received the 2011 AIA Latrobe Prize for Public Interest Practice in Architecture. Currently a Loeb Fellow at the Harvard Graduate School of Design and founder of the Public Interest Design Institute, Bell and his colleagues propose that a “needs-driven” practice, rather than a “client-driven” one, is fertile ground for the profession.

Public-interest design is a very new term. One definition is “putting creative abilities to practical use to improve communities.” It refers very specifically to professional practice, going beyond pro bono volunteerism and grassroots activism. Up to now, the network of practitioners in this field has been very informal. With the Latrobe Prize project, we wanted to expand this informal network and give it structure.

First, we’re doing a survey of the profession to find out four things: what the interest is in doing public-interest design, what experience people have with it, what the obstacles are, and what has supported this work. The AIA is going to send this survey to a sample of 5,000 members. Our effort will find ways collectively to support this work and move past the obstacles. We’ll be asking people to be very specific about how they have generated fees, for instance. As a

personal point, I can’t afford to do pro bono work, but I have found that there are other models where you can add the value of design to communities but still make an income.

We will also be doing the same type of survey for the public—asking probing questions of public-serving organizations that have found value working with designers. The third piece will be to collect this information and combine it with recommendations in a guide.

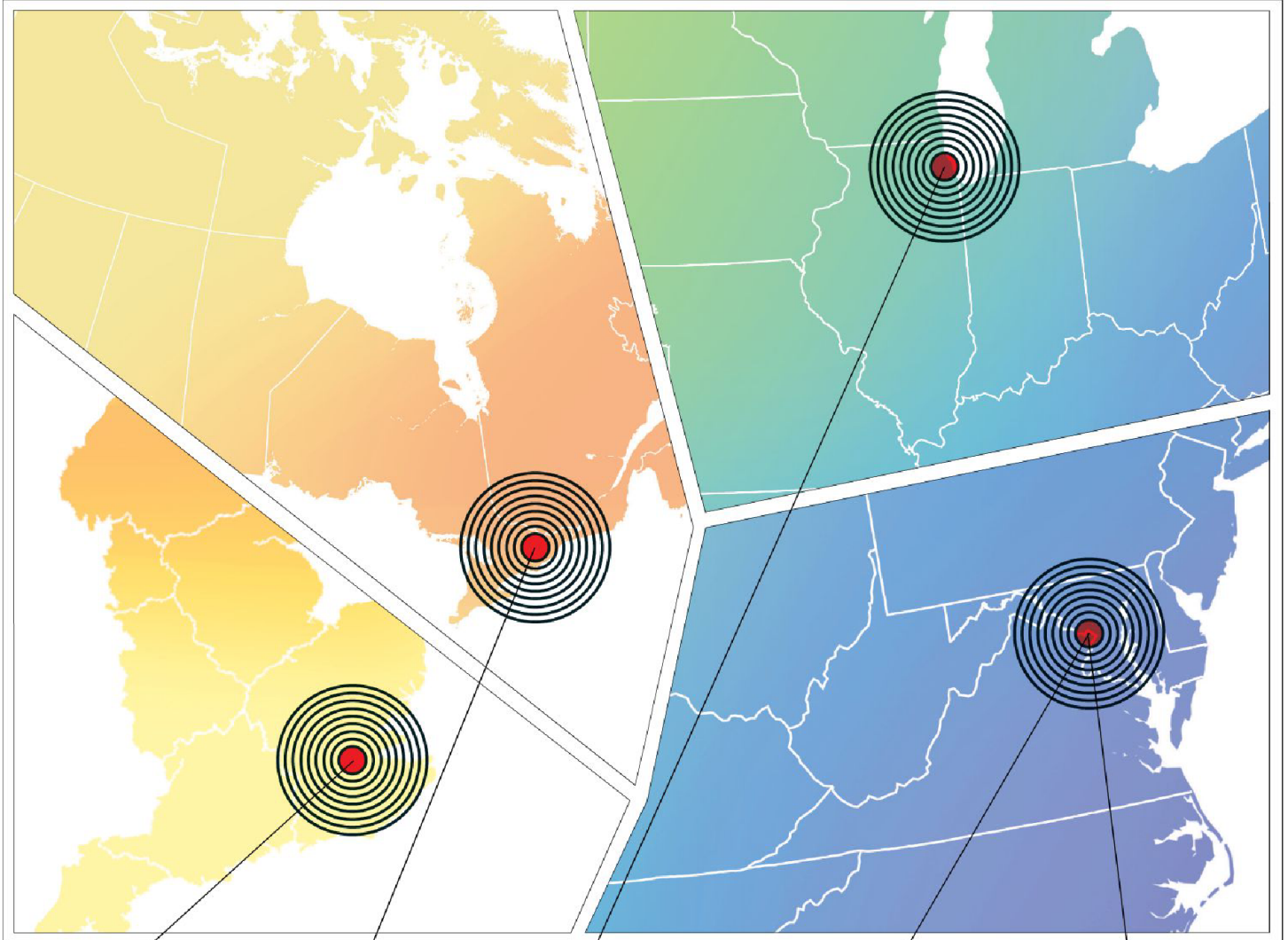
Concurrently, the Public Interest Design Institute will provide in-depth training to architects and others interested in this practice in the form of three-day seminars. The first seminar will be held at the Harvard Graduate School of Design in July, and then we’ll travel to 10 other universities around the country.

The pedagogy for these trainings is the SEED [Social Economic Environmental Design] metric, a set of standards that goes beyond green design with a “triple bottom-line” approach. Yes, the environment is important, but it’s not the only issue. The SEED mission is that every person should be able to live in a socially, economically, and environmentally healthy community. Our challenge is to figure out how design can support that mission. I think the wisdom is out there. *As told to Kim A. O’Connell* **AIA**

➔ To hear more Voices, visit architectmagazine.com/AIA.

AIA NOW

ACROSS THE INSTITUTE



LONDON

At Home with Soane

Excavations in Italy during the 18th century generated a new interest in representing and documenting (sometimes creatively) antiquity's ruins. François Fouquet (with his father, Jean-Pierre) built plaster models of these monuments with an unrivaled eye for accuracy for European collectors, architects, and even Thomas Jefferson. Sir John Soane, the fastidious Neoclassicist, amassed a small collection of Fouquet models for his London home, including Rome's Pantheon and Athens' Parthenon. On view through Sept. 24.

➔ Learn more at soane.org

OTTAWA, CANADA

Local Color

Spaces of the City, a photography exhibition at the National Gallery of Canada in Ottawa, examines urbanity and urbanism in living color. Chromogenic prints, ink-jet prints, and cibachromes detail our shifting perspective on the city: as living space, as working space, as theater and spectacle, and as an arena for sublimity and solemnity. Organized by the Canadian Museum of Contemporary Photography, *Spaces of the City* is on view until Sept. 5.

➔ Learn more at gallery.ca/english

CHICAGO

Bookworms and Buildings

Chicago's Festival of the Architecture Book 1511–2011 celebrates 500 years of design's most influential books since Vitruvius' *Ten Books of Architecture* at area venues including the Glessner House Museum, Loyola University, the Morton Arboretum, and the Art Institute of Chicago. But it's not all *de re aedificatoria*. It's about the culture of building, too: 19th-century pattern books, military architecture guides, and an exhibition of Jens Jensen's work round out the festival's offerings. Through Nov. 30.

➔ Learn more at 1511-2011.org

WASHINGTON, D.C.

Contract Docs Centennial

The AIA celebrates 100 years of Contract Documents this year—the industry benchmark for managing professional and legal relationships. The AIA first issued Uniform Contracts in 1888 and launched Contract Docs in 1911. For about \$25, you could order a proposal, contract, and two styles of agreement and bond (“printed both sides on opaque paper” or “one side of transparent paper.”) Today, more than 120 forms and model language contracts are available to accommodate almost any situation.

➔ Learn more at aia.org/contractdocs

WASHINGTON, D.C.

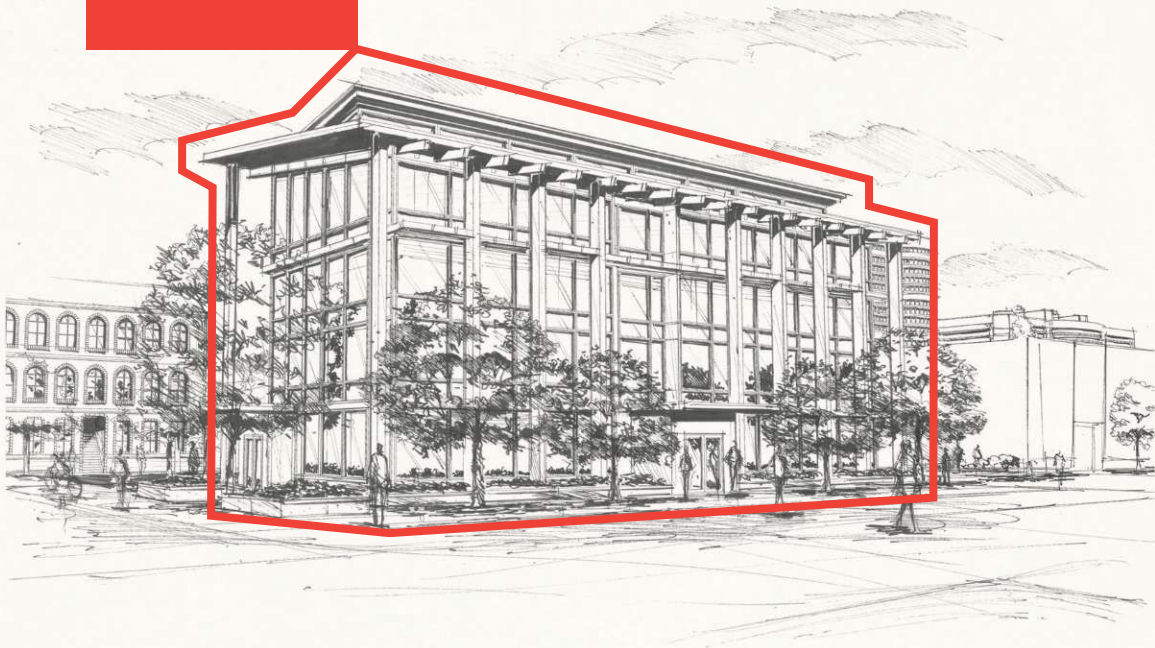
Washington Calling

It's not too soon to start thinking about attending the AIA 2012 National Convention, to be held in Washington, D.C. Convention planning is already in progress, with a call for presentations open through July 1. Proposals from industry leaders on relevant topics to the profession are encouraged. Submission requirements and an explanation of the convention theme are available online.

➔ Learn more at aia.org/conferences/nationalconvention

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AIAPRACTICE

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ILLUSTRATION: MATTHEW RICHARDSON

The definition of “humanitarian design” is still in flux, even if its practice proliferates.

BY LEON KAYE

SOME DESIGN CRITICS, LIKE BRUCE NUSSBAUM, HAVE FRAMED humanitarian design—a cross between high-style architecture, low-tech interventions, and altruistic goals—as the “new imperialism.” Nussbaum, Professor of Innovation at Parsons The New School for Design and former assistant managing editor for *BusinessWeek*, blogs, tweets, and writes on innovation and creativity. His argument is that idealists often impose universal or, perhaps, elitist solutions on a community in the interests of design, rather than in the interests of those who might benefit from design.

Others, such as Emily Pilloton, founder of the nonprofit humanitarian firm Project H Design, argue that this accusation is

shortsighted. “Most critics who call humanitarian design the new imperialism haven’t done the work and realized how messy, political, and complex it can be,” she says. “Frankly, we don’t have the best practices or answers yet. But in my experience, if you have been invited by a community to help them achieve their goals, it’s not imperialistic but one of the most honest ways to do design.”

Pilloton insists that humanitarian design can succeed when the process is democratic and honest, the project centers on a social mission, and everyone involved has a clear investment in the final result. In turn, architects then identify themselves as part of that community, which creates a shared investment in the success of the house, school, or clinic. Some observers of this trend, including Maria Popova, a strategic



planner at TBWA Worldwide and founder and editor of the blog *Brain Pickings*, believe the term “humanitarian design” is itself problematic: Such an all-encompassing catchphrase does not account for the difference in cultures and context between rural and urban areas, or between rich and poor nations.

FILLING IN THE BLANKS

While it is one of Texas’s more prosperous cities, Dallas has several poor, inadequately serviced neighborhoods that languish next



to wealthier districts. The neighborhood around Congo Street is a stretch of 17 homes built before 1910 on what was once named Carroll Drive. The City of Dallas renamed it “Congo Street” during the 1930s as a discreet warning to white visitors attending the nearby state fair about the mostly black residents. Congo Street became one of several Dallas neighborhoods of mostly poor minority residents that civic leaders ignored as Dallas transformed from cow town to energy boom town. The lack of infrastructural improvements over the years led to Congo Street’s decline. Still, most of its families, many of whom lived there for generations, refused to move.

Last September, Congo Street residents celebrated their neighborhood’s renewal with its sixth home refurbished by local architectural firm Building Community Workshop. Led by Brent Brown, AIA, designers at bcWORKSHOP (as it’s known) not only consulted with homeowners on individual design needs, but even built a temporary home for residents

while they waited. The old homes were systematically deconstructed, with all pieces—from sinks to slabs of wood siding—marked for reuse, recycling, or trash. The salvaging of the materials not only reduced costs, but led to these homes’ certifications as LEED Platinum. New energy-efficient features, such as solar panel arrays, will reduce owners’ utility bills.

Congo Street is an example of the thought behind humanitarian design, which integrates architectural solutions with a social mission. Architects who advocate humanitarian design solutions see this movement as a holistic approach to solving social problems, including poverty, poor infrastructure, and inadequate housing after natural and manmade disasters. They view their vocation as more than drawing a house or a school plan. Humanitarian design practitioners find themselves embedded within the communities in which they work, and wear all hats, including those of community liaison, general contractor, project financier, and, after completion, community services provider.

A QUESTION OF SCALE

Hurricane Katrina’s aftermath along the Gulf Coast defined, in part, design’s capacity to be a regenerative guide rather an afterthought or

flourish. David Perkes, AIA, an associate professor at Mississippi State University’s College of Architecture+Design, found himself in the midst of his state’s reconstruction efforts. Under Perkes’s guidance, MSU launched the Gulf Coast Community Design Studio in Biloxi to serve local residents.

Today, the studio crosses architecture’s practice-academy line to provide architectural services and train students to integrate design and community service in other U.S. cities and abroad. Leveraging the resources that local governments and nonprofits can (or cannot) provide, Perkes defines humanitarian design as a platform for architects to work closely with clients, with a budget drawn from sources outside of those clients—clearing a path around money issues and focusing on client needs. “Upon moving to Biloxi after Katrina, we deliberately minimized the university’s presence,” Perkes explained. “When people walked into our studios, we wanted them to see local people doing this work to make it clear this was not just a group of outsiders running the show.”

Catastrophes tend to reorient the thinking of a lot of architects and sometimes reorient their practice. Sergio Palleroni, a senior

Design with a humanitarian focus demands more than a one-off transactional relationship between demand and supply.

fellow at the Institute for Sustainable Solutions and Architecture at Portland State University in Oregon, traveled to Mexico and Nicaragua after their respective earthquakes in the 1980s. Mexican and Nicaraguan communities hit hardest were poor and lacked access to design services, as is often the case.

Palleroni quickly emerged as not only the designer of various projects—including apartment buildings, schools, and health clinics—but as their fundraiser and community advocate. He and a crew of architects, engineers, and aid workers realized early on that, for rebuilding to succeed, they had to collaborate with community leaders. Palleroni’s work in Latin America 25 years ago yet continues with his co-founding of the BaSiC Initiative (basicinitiative.com), an academic service-learning program, which now draws students from some 50 universities worldwide, and that has built houses, schools, and clinics for low-income communities from Montana to central Mexico to Asia.

Design with a humanitarian focus demands more than a one-off transactional relationship between demand and supply: It becomes an integrated discipline that responds to local needs more directly than conventional practice. “We architects become distanced from the real things that motivate us,” Palleroni says. “We are often idealists, but we cannot fulfill those desires that inspired many of us to become architects in the first place when we simply work from one project to the next and—meanwhile—have little or no involvement [after] our vision is finally completed.” **AIA**

Visit aia.org to learn more about guidelines or contracts for pro bono work and visit aia150.org to learn more about the AIA’s Blueprint for America.



Uptight (Everything's Alright)



The Urban Priorities Committee meets weekly at Beaubien House, Detroit AIA's headquarters.

Joongsub Kim (left), Robert Platek (front with arms folded), Jonathan Disbrow (far right), Brian Hurttienne (center with checked shirt), Steven Flum (at rear with glasses), Michael Poris (upper left).

PHOTOS: DWIGHT CENDROWSKI

Detroit AIA's Urban Priorities Committee hopes to revitalize the city despite Motown's terminal prognosis.

BY ANGIE SCHMITT

You've heard the sad tales of broken windows, senseless crime, and grating poverty. For years now, screaming headlines and dismayed television anchors have announced that Detroit is a ruin so complete that even God has forsaken it.

But the truth about this city is a little more complicated. There's an underlying and less-explored narrative in the Motor City, and it involves ordinary people fighting an extraordinary battle—a narrative in which architects are playing an important and increasingly visible role. Many of Detroit's most vexing problems—outsized infrastructure, urban sprawl, and vacant land (40 square miles by recent estimates)—are ripe for design intervention.

That's where Joongsub Kim, AIA, and his colleagues at AIA

Detroit's Urban Priorities Committee (UPC) come in. Kim and a team of seven volunteers are putting their collective decades of experience up against the immense problems of this once-great American city.

Theirs is the team behind *Leaner*, *Greener Detroit*, a 2009 blueprint for urban revitalization. Embodied in that plan is a concept that has been the subject of intense attention and debate, particularly in the media frenzy that followed recent news that the city shed a staggering 25 percent of its population over the past decade.

The plan's most controversial suggestion is that not all of Detroit's neighborhoods can be saved. There are simply too many homes, too many streets, and too many neighborhoods for the 713,000 who currently occupy a 140-square-mile space that once held 1.8 million. Instead, the group argues, the city should focus on shrinking into densely populated urban villages in order to strengthen its healthiest neighborhoods, while letting the others return to nature and disappear.

The plan calls for connecting walkable neighborhoods via improved transit and cycling facilities—a stark departure from Detroit's notoriously autocentric design. Finally, between these revitalized urban nodes, Kim and the UPC propose that fallow urban land could be converted into parks, green infrastructure, and even commercial farms.

AIA Michigan doesn't have an official position on the shrinking-to-grow proposal, according to Barb Sido, CAE, executive director of

AIA Michigan. Sido is hopeful, though, that the city can turn around. “Detroit’s best chance is to leverage its social capital,” she says, “to leverage relationships between people and their communities—particularly since the hard manufacturing core isn’t here in the same way that it once was.”

These concepts have been embraced by Detroit Mayor Dave Bing, whose short tenure at city hall has brought sweeping changes. Through his Detroit Works project, Bing has been exploring bold solutions to the city’s economic, land use, and transportation challenges: The financial, physical, and social realities leave him little choice. Meanwhile, the UPC is acting as a formal partner in this effort by consulting with the Detroit Works Project and the city’s Planning and Development Department.

“The city is in a transformative position right now, with a new mayor and a new council,” says Mark Nickita, AIA, a UPC member who serves as liaison from the AIA Detroit Board, and the mayor pro tem of Birmingham, Mich. “There’s a sense of moving forward with a big idea—a plan to change. Architects are looking at ways of assisting him [Bing].”

In light of Detroit’s doomsday prognostications, city leaders, local architects, and planners have a few counterpoints: homesteading artists, a budding entrepreneurial scene, and another less tangible but perhaps more important factor. Emanating from the city’s grand theaters and Art Deco skyscrapers, there is a hardened optimism. You might call it hope.

Beginning in April and continuing through the end of June, the UPC is hosting a series of symposia, under the heading Detroit: By Design. The group has invited the top urban thinkers and designers to share their visions for a new Detroit. The series is planned around three events, each exploring a different recurring shrinking-city theme: transportation, urban centers, and urban agriculture.

It turns out that it’s not just locals and the media who are captivated by Detroit’s unique blend of grandeur and wreckage. According to Kim, early registration netted more than 90 people, representing creative professionals and students in several countries and a number of major U.S. cities.

April’s transportation symposium included transit proposals that would serve as economic boosters, draw nature back into the city, and emphasize the human scale above all others. These aren’t new ideas, but collectively they create a landscape of actionable possibilities for a city that many have written off. Some of April’s presenters will bring their ideas to the wider design community and garner public feedback through a workshop.

The UPC hopes that some of the best proposals can be implemented directly through the Detroit Works project.

Despite the clear impetus for change, planners, architects, and city leaders are being forced to chart new territory, so to say. Vacancy and abandonment on the scale of Detroit is a problem without precedent in the history of the urban planning profession.

The Kresge Foundation recently tapped Toni L. Griffin, an adjunct associate professor at Harvard Graduate School of Design, to help advance the mayor’s goals. Griffin formerly worked in planning and development in Newark, N.J., and Washington, D.C. (See ARCHITECT’S interview with Griffin online at bit.ly/duuA7S.)

“It’s an interesting time, where the architecture profession is able to think more broadly about the issue of the city and urbanism,” Griffin says. “More cities are using planning to move that forward.”



“We all feel that we’ve reached the bottom,” says UPC chair Joongsuk Kim, AIA. “From today on things will be better.”

Of course, Detroit isn’t alone. A broad swath of the country, including St. Louis; Youngstown, Ohio; Cleveland; and Buffalo, New York, is struggling with the same issues to varying degrees, although none on quite the same scale. The Detroit: By Design and Detroit Works projects can be instructive for other shrinking cities, according to members of the UPC.

The UPC meets weekly downtown at Beaubien House, Detroit AIA’s headquarters, across the street from the Renaissance Center. Occasionally they hold meetings at the Detroit Studio in the New Center area, Lawrence Technological University’s community outreach, workshop, and exhibition space. UPC’s meeting structure and its revolving roster of members is more fluid than, say, an urban design center. But there is no less energy. Sometimes the lines between work and community service are blurred.

Kim, an associate professor at Lawrence Tech’s College of Architecture and Design, spends much of his time at the Detroit Studio, where his students are lending their expertise to local community development organizations. Another UPC member, Robert Piatek, AIA, LEED AP, is a Detroit native and part of an artists’ collaborative that is brightening the former Polish enclave of Hamtramck. Nickita is the founder of Archive D.S., a design studio that proudly makes its home in downtown Detroit. His support has led directly to the opening of several businesses and developments along the city’s Woodward corridor, around which the city is planning to focus its transit and revitalization plans.

“They’re very passionate volunteers,” says AIA Michigan’s Sido, “and Detroit is the best laboratory in the country for that kind of committee.”

On the other hand, the group tries to be realistic about what it can achieve. Detroit may never return to its height of 1.8 million people, as it was in the chrome-plated glory days of 1950s. But that doesn’t mean the city must continue to decline the way so many outside observers have presumed. Detroit isn’t out yet. Every volunteer hour donated, every business begun, and every proposal advanced will add up.

“We all feel that we’ve reached the bottom,” Kim says. “Things cannot be worse than this. From today on things will be better.” **AIA**

➔ Find out more at aiaetroit.com and aiaetroitbydesign.wordpress.com.



AIAPERPECTIVE

RIGHTSIZING BY DESIGN



PHOTO: WILLIAM STEWART

For the first time in history more than half the world's people live in cities. How can architects help those in urban areas attain their design aspirations? That was the issue raised at the AIA Convention last month by keynoter and founding secretary general of the International Council for Local Environmental Initiatives—Local Governments for Sustainability (ICLEI), Jeb Brugmann.

The point is well (and gratefully) taken by this architect. And even though the word “architect” does not appear as a topic in the index to Brugmann’s book *Welcome to the Urban Revolution: How Cities Are Changing the World*, it’s clear from the context of his research that the way buildings and the spaces evolve together makes a difference. In other words, design matters. It’s a key strategy for enabling cities to be engines of economic mobility.

But what about cities whose very reason for existing is challenged? Is there a role for architects to manage the process of change that preserves the historic function of the city as an incubator for opportunity?

As America’s boomtowns of the late 19th and early 20th centuries show, the disappearance of what had been vibrant communities is not a new phenomenon. Once the timber and coal in Thomas, W.V., and the silver of Nevada’s Comstock Lode played out, those who could often pulled up stakes; those who could not were left behind in poverty. What’s different today is the scale of collapse.

Downsizing became an issue in New Orleans in the wake of Katrina. After the forced departure of tens of thousands of its residents, how (or even whether) to rebuild—especially in parts of the city such as the Ninth Ward—ignited passionate debate. In response to a site vulnerable to the next storm, would a rebuilt New Orleans have to be smaller?

Six years after the event, New Orleans is on track to reassert its historic position economically and culturally. Architects—in

partnership with other design professionals, community leaders, and organizations such as Make It Right—are using design as a strategy to bring the city back to life.

Of course, it could be argued that a revitalized New Orleans was preordained. The city’s strategic commercial location has not changed. Energy continues to fuel (and, yes, sometimes foul) the economy. And its rich cultural assets ensure its role as destination for millions of tourists—as long as the waters can be kept at bay. The elements of a vigorous economic infrastructure are in place for revived commerce.

But what about America’s Rust Belt? Cities like Detroit find themselves in a downward spiral with no end in sight. 2010 U.S. Census data show that the Motor City’s population had plunged by 25 percent over the past decade. As reported by *The New York Times* on March 22, the number of people who left Detroit since 2000—237,500—is larger than the 140,000 who left New Orleans after Katrina. As the tax base erodes, the deterioration of the quality of life only accelerates.

Yet if cities are, as Brugmann argues, the most efficient and sustainable way to organize human activity and the best hope people have to improve their lives, we cannot allow America’s urban heartland to fail.

The stakes for America’s Rust Belt cities are enormous as Detroit seeks to reinvent itself. The outcome will have consequences not just for them; it will affect all who believe that cities are one of humankind’s greatest achievements. **AIA**

➔ Join our conversation at aia.org.

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BUSINESS



INTERVIEW BY ERNEST BECK
PHOTO BY JAMEY STILLINGS

The advice for a graduate looking for a first job is often the same for a professional looking to make a move within the field. **Stella Papadopoulos**, a practicing designer and assistant professor at Notre Dame, describes the strategies that work best for both.

→ BEST PRACTICES

Head of the Class

THE SOUR ECONOMY and downturn in architectural billings has made job-seeking a challenge, especially for recent graduates. That's one reason why Stella A. Papadopoulos, a visiting assistant professor at the University of Notre Dame School of Architecture in South Bend, Ind., teaches a course to prepare new graduates for the rigors of finding work. In addition to teaching, the 36-year-old Yale School of Architecture grad—and a veteran of several New York firms—now runs Poleis Design Architecture, a solo studio in Chicago. Papadopoulos offers salient tips for newcomers and seasoned professionals alike on how to land a job in a competitive marketplace.

Build your own brand.

"Many students are not prepared for job searching and are unclear about how to market themselves," Papadopoulos says. A good starting point is to think about branding. Just as there is a narrative in design, you should have a narrative about your own work. "That's your brand; use it to sell yourself."

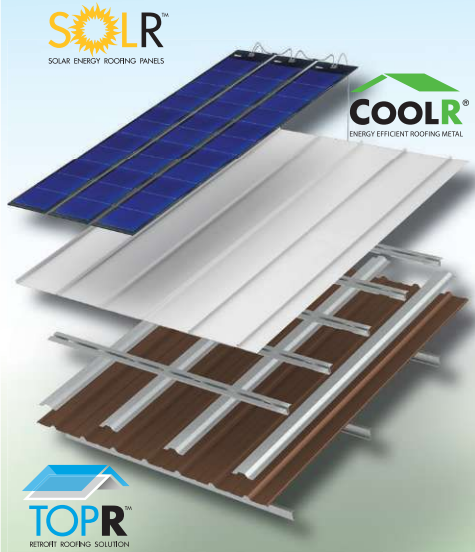
Create a portfolio that pops ...

Avoid a generic portfolio by giving it a clear identity, Papadopoulos suggests. A portfolio is more than images





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business



in a binder. Include hand drawings, paintings, graphics, photographs, animation, computer renderings, and competitions—everything that shows what you can do. Firms today are looking for smart thinkers who have a vision and a variety of skills and experience.

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You can tailor a portfolio to a specific firm. For an interior design firm, for example, push that angle in your portfolio. “Research what different firms are doing, their specialties, what awards they’ve won, and the new projects they’re working on, and adapt your portfolio to fit what they might be looking for.”

Cover letters count.

A sharp cover letter that piques interest is a bonus to the CV. “It’s all about putting yourself out there and pushing hard, because jobs don’t come easy anymore.” In the letter, use key words such as “management” and “leadership.” “Even if it was managing people at a fast-food restaurant, it shows you can lead and multitask and manage a full team.”

“DON’T LEAVE ON TIME. DON’T PACK YOUR BAG AT 10 MINUTES TO SIX. ALWAYS BE BUSY, AND ASK AROUND IF PEOPLE NEED HELP.”

Cast a wide net.

Many of the big firms are in New York, Chicago, and Los Angeles—but think about going outside your comfort zone. A job doesn’t have to mean a high-end firm or a “starchitect’s” office, and it could mean “going back home and living with your parents for a while,” Papadopoulos says. A smaller firm can give you basic, valuable experience and a chance to work on different projects before that big break arrives. “That can be more important than meeting a famous architect.”

Dress the part.

Before an interview, find out how an office dresses. Architects don’t always wear black and designer glasses. “At Robert A.M. Stern, you can’t wear jeans,” she points out. A simple suit and good shoes always works. If it’s an in-house design job at say, Ralph Lauren, add something fashionable. In general, don’t be too laid-back or too Bohemian.

Don’t be discouraged.

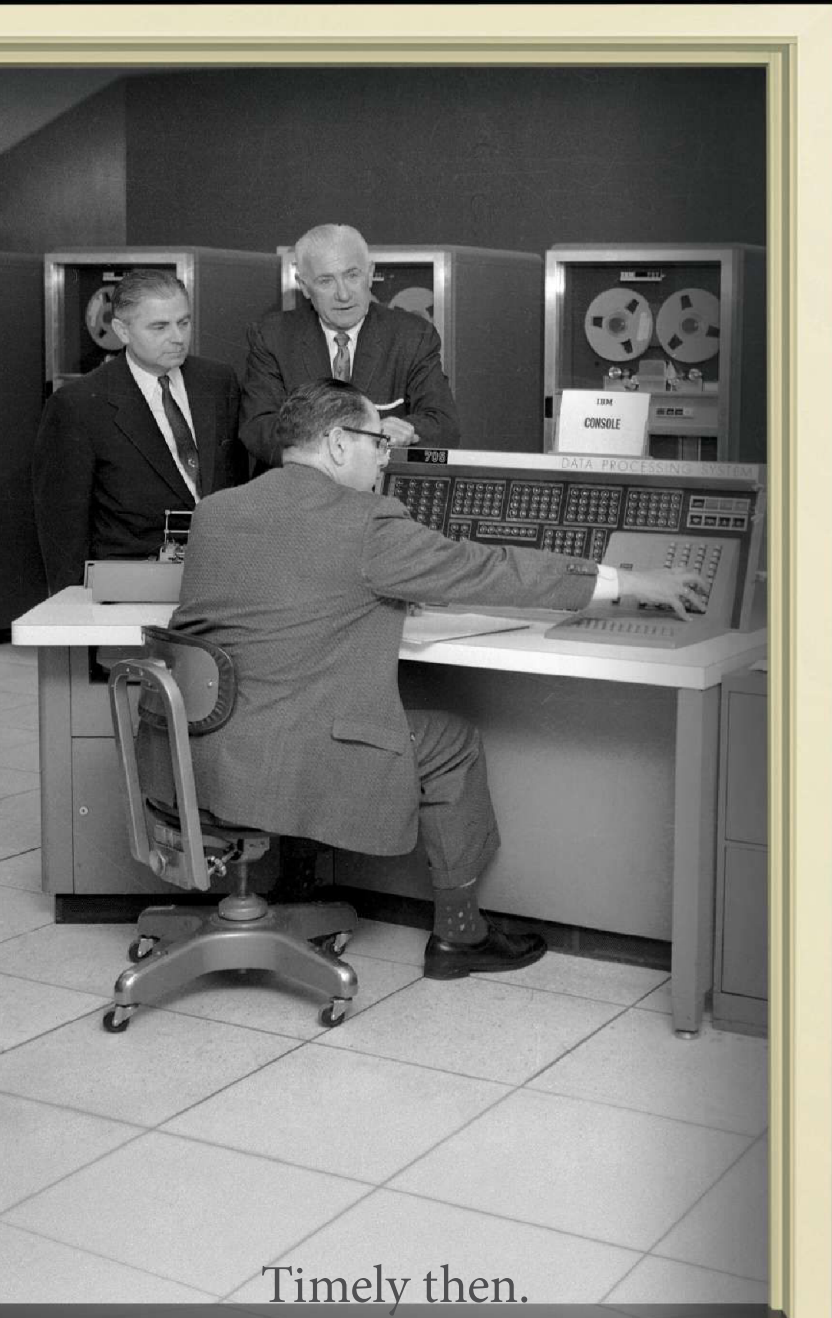
Remember that if a firm tells you, “we will keep your CV on file,” it is not necessarily just to dismiss you. For a firm, having your name at the ready is a cost-effective way of recruiting—cheaper than hiring a headhunter. “Send a thank-you note to show that you’re still interested and a CV update every six months to let them know what you are doing.”

Work the job.

If you land a position, remember that there were a lot of people aiming for that job. Don’t be complacent. “Don’t leave on time. Don’t pack your bag at 10 minutes to six,” Papadopoulos says. “Always be busy, and ask around if people need help.”

Climb to the top.

Consider each job a stepping stone. And always think about the next step. “You can switch jobs to find out what you want to do, until you really know what you want,” she says. At some point, though, you will know what excites you. Strive for that. “If it’s Zaha Hadid’s office, just go for it.” □



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→ **TPOLOGY**

Global Shopping Spree

RETAIL DEVELOPMENTS ARE LEADING THE SURGE IN NEW CONSTRUCTION IN EMERGING MARKETS. BUT SHOPPING MALLS TAKE VERY DIFFERENT SHAPES IN CHINA, INDIA, AND BRAZIL.

CHINA: IT'S THE COUNTRY at the top of everyone's list when it comes to a robust market for retail architecture. As the well-documented transition from rural to urban continues, major cities are expanding their central business districts (CBDs), and smaller towns are exploding into real cities courtesy of massive government investment. Throughout, retail is at the core of new mixed-use developments, and international architecture firms are providing design direction.

"A few years ago, there were 80 cities with 1 million inhabitants [each]. By 2025, there will be more than 220 cities with over a million people," says Boris Planer, research director for Planet Retail, a global retail-analysis business based in Frankfurt and London.

And many of these cities will have more than one business district with retail at its center. "Typically the American city has one CBD. Cities in China now have two or four CBDs, and they seem to be continuously growing," says Ro Shroff, AIA, a principal in the architecture firm Callison's Seattle office. Couple that with an emerging middle class interested in luxury brands and you get a buying power driving people to malls.

Beyond China, Brazil and India are emerging as top

retail markets, while once-booming countries, such as Russia, are no longer major players. "Russia has shot itself out of the group because of corruption, so the Russian market is consolidating primarily among Russians," Planer says. The Middle East has also cooled, owing in no small part to the overspeculation of cities such as Dubai and political upheavals throughout the region. What does this mean for U.S. firms looking to capitalize on the international retail construction boom? One clue comes from the role that retail plays in each of these markets.

The New Mega-Mall

At 4 million square feet over seven levels, with four subway connections and hundreds of stores, the largest mall in China is now under construction 20 minutes outside Beijing's CBD. The Grand China retail center, designed by Baltimore-based DDG, will be central to a new 9-million-square-foot development that includes a theater, opera house, art museum, library, youth education museum, and natural history museum, all being designed by international firms. "This mall is at the center of a massive development with cultural centers all around it," says Ahsin Rasheed, chairman and CEO of DDG. "It's almost

18

Annual percentage of growth in average spending by Hong Kong residents on designer brands since 2006.

SOURCE: SYNOVATE



mimicking the National Mall in Washington.”

The mall, which connects to Beijing via high-speed rail and subway, will offer something for everyone with an interior separated into different zones, from luxury brands to bargain stores. But it’s the high-end brands—Gucci, Prada, Burberry, Cartier—that the Chinese market craves the most, according to Rasheed. “The market has cash, and they want the best of the best.”

“Modern shopping centers are under construction everywhere in China,” says Paul Lipo Chen, AIA, principal at Shanghai-based Haipo Architects. Chen is carrying out design development for Grand China’s interior and has served as architect of record for several other DDG projects in China. “The government is interested in building modern and glamorous retail centers along the main streets in the city and in the center of newly developed areas. They are looking for modern, international projects to uplift their city images,” he says.

Retail as Catalyst

Chen describes a generation of retail projects that is taking risks not just with form, but also with program. “The whole shopping-mall concept originated in the U.S., but I think it has matured and taken a different spin in Asia, particularly China,” adds Callison’s Shroff. “It’s not just what it [the retail] looks like, but also the placemaking potential of the form. It becomes the nuclei, the real center of town where everything comes together.”

When the Chinese government decided to turn the quiet waterfront resort town of Hangzhou into a full-fledged city, they used retail as the first phase in a new central business district called Qianjiang New City. The resultant MixC retail space, designed by Callison and completed last year, is a nine-level podium that anchors

a mixed-use master plan including retail, office, and hotel. The retail was the first to go in. “When we started the project, it was in the middle of nowhere,” Shroff says. “Today a lot of development is happening. MixC is a catalyst. It invigorates the neighborhoods and creates new opportunities.”

The mall weds Qianjiang’s resort past with its urban future through aesthetic choices that include an undulating façade mirroring the nearby Qiantang River and a rooftop park with river views and a landscaped connection to residential, hotel, and office towers.

Ronald Altoon, FAIA, partner with Altoon + Porter Architects, has 10 projects in China that are either completed or under way and that range from 1 million square feet to 8.5 million square feet. “By and large in Asia, China specifically, almost everything is mixed use and transit oriented. There will be a subway stop and bus lines nearby. There will be a retail podium with residential, office, hotel above it. They are pretty intense uses,” Altoon says.

For Marina City, completed last year, Altoon + Porter designed a four-level retail project on the water in Qingdao, next to the sailing venue used in the 2008 Olympics. Glass canopies on the exterior reference the sails of boats in the nearby marina, and a tall glass-and-steel lighthouse creates a visual reference for visitors. There are 150 specialty stores, restaurants, and bars, a cinema, a health club, 200 service apartments, and a rooftop food court overlooking the Qingdao Bay.

Often, these complex projects move at a whiplash speed from design conception to construction. “If you insist on applying your tried-and-true process, you’ll

The MixC • Hangzhou, China • Callison

The MixC has emerged as a new retail mixed-use hub for Qianjiang New City, Hangzhou’s new central business district. The complex’s 2.54 million square feet of retail space is located in a nine-floor podium topped by a roof park, and an additional 3 million square feet devoted to office, residential, and hotel space. This is the second MixC development, the first is in Shenzhen. The Hangzhou complex capitalizes on its affluent resort-city location: Two weeks after opening in April 2010, the retail center already had an occupancy rate of 80 percent.

Grand China • Tianjin City, China • DDG

Scheduled to be completed as early as 2012, the Grand China mall has 4 million square feet of retail space on seven levels, making it the largest shopping center building in China. Situated over four city subway lines and near a high-speed connection to Beijing, the shopping center serves as a hub for a 7.5-hectare cultural district that will play host to an opera house, library, and several museums.



CALLISON; DESIGN BY DDG



Marina City

Marina City • Qingdao, China • Altoon + Porter Architects

Completed in 2010, this mixed-use development has over 1 million square feet of gross leasable area on four levels, one of which is below grade. Anchored by a 131-foot-tall glass tower, the complex has indoor and outdoor retail venues, as well as 200 apartments; underground parking for 2,000 cars is available. Next to the 2008 Olympic sailing venue, the center was designed (starting in 2006) as a cultural hub to continue development after the games.



never get off the ground in China," Altoon says. "You have to deal with it like you're playing water polo. You'll never get your feet on the ground, so you have to tread water and figure out how to do it as you go."

Rasheen says the speed of development requires nimble business methods. "Chinese sites run 24 hours a day and the first thing to get built on a construction site is worker housing," he says. Rasheen likes to tell about the time he entered a new development for a three-hour meeting via a dirt road and left on a street that had been fully planted, lit, and nearly paved. "It was like driving out of a completely different place," he says.

Emerging Markets

Whereas China moves at a breakneck pace, retail development in India is slower. Malls are a new concept to this emerging market, with the first opening around 2003. After a dip in retail development owing to the global recession, retail is now reviving, according to analyst Boris Planer. But this revival comes with challenges. "Ownership of foreign retailers is tricky in India," Planer says. "Every state has different governments with a say in retail and it's hard to create large, coherent store networks."

Sanjay Kataria is director of New Delhi-based La Archplan and he has served as architect of record for DDG on several retail projects. "Typically in India, developers

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like to collaborate with an international architect, especially from the U.S. or Southeast Asia," he says.

This is done for two reasons. First, experienced developers want the international expertise. And there are developers "who have sprung up overnight, and they feel by hiring an international architect it helps bring prestige to their project," Kataria says.

Because the mall is a new typology for the market, management has been spotty. Initially, many untested developers did not use a leasing model; rather, they sold the retail space without any mall management. "They were basically trying to build a mall and make a quick buck," Kataria says—but that backfired, and many of these malls have now closed.

This is changing as experienced developers tackle increasingly complex projects. Viva City, located in Thane, a northern suburb of Mumbai, India, is a mixed-use project designed by DDG and set to open in September. The new town center includes retail, entertainment, and dining in the first phase, followed by residential and office space in subsequent phases. The mall is meant to be the hub of this new community.

In Brazil, the design aesthetic and consumer taste is much more experienced than in India. Developers understand sophisticated retail management, and with the World Cup and Olympics bound for Brazil, the government is investing heavily in infrastructure.

"Brazil is under-retailed as compared to the U.S.," says Jeff Gunning, AIA, a senior vice president at RTKL. A first wave of retail came in the form of suburban-style shopping centers, but now the building type is becoming a sophisticated component of new transit-oriented development and mixed-use projects in cities such as São Paulo.

RTKL completed schematic design last year for a new retail project called Panambi in an upscale neighborhood of São Paulo. In this case, an aging market on a sloping site needed to be updated, and RTKL transformed the market into a four-story structure with a string of box-shaped buildings threading through a curvaceous glazed curtainwall like a string of pearls. "Each box has different materials on the façade, so they are of a piece but unique," Gunning explains. Inside, white-and-cream colored finishes and sustainably grown Brazilian hardwoods give luxury stores a museumlike environment. A transparent roof system will flood public spaces with light.

"In Brazil, there is a tendency to want to create a modern statement and something that is very fashion-forward. There is no desire to create nostalgia in [retail] design, as there has been in the U.S. in the past few years," Gunning says. "Brazil has never been afraid to make modern statements and as architects we like working there because there is an expectation that we will be bold." □

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TEXT BY MARGOT CARMICHAEL LESTER
AND CAROLYN FOY EVANS

→ LOCAL MARKET

Scottsdale, Ariz.

MARKET STRENGTHS

- Transportation infrastructure
- Sonoran Desert amenities
- Active arts community

“The McDowell Sonoran Preserve provides a 16,000-acre open space of natural desert and mountains within our city limits,” says Douglas Sydnor, FAIA, president of local firm Douglas Sydnor Architects and Associates. “Plans are under way to double its size. There’s also a strong arts community.”

MARKET CONCERNS

- Challenging development and design ordinances
- Questions about future water supply
- National and state economic woes

“Highly detailed development requirements have been crafted to preserve the natural settings in the north, mirrored by the processes for redeveloping the urban core,” says John Douglas, FAIA, president of locally based

John Douglas Architects. “The two completely different contexts have led to a constant battle for the city’s resources and attention.”

POPULATION & JOB GROWTH

The 2010 U.S. Census puts the population at 217,385. Jobs are expected to grow from 171,000 in 2011 to 229,000 in 2016.

“We expect the Census data to be raised after a review of housing-tract data,” says Scottsdale economic vitality marketing and public information officer Kim Hanna. “A study we commissioned projects the 2020 population at 270,000.”

RESIDENTIAL MARKET

Home sale prices were stable, rising only slightly from \$334,000 in May 2010 to \$336,300 in May 2011.

“New housing in downtown is predicated on new jobs being created by the private sector and by a perceived desire of people wishing to live in a lively area,” Douglas says.

COMMERCIAL REAL ESTATE MARKET

The 9.9-million-s.f. office market was 28.5 percent vacant in May 2011, with an average asking rate of \$23.92 p.s.f. “The vast majority of land in Scottsdale has been master-planned, zoned, and developed, but there are numerous infill opportunities with the Scottsdale Airpark,” Sydnor says. This new commercial area north of the central business district is designed to attract high- and clean-tech office and industrial tenants.

FORECAST

“The two major issues I see Scottsdale wrestling with in the next five to 10 years are the completion of land acquisition for the McDowell Sonoran Preserve and refining development standards for downtown,” says Philip Weddle, AIA, a fourth-generation Arizonan and principal architect at local practice Weddle Gilmore Black Rock Studio. “Ultimately, it comes down to architects developing issue-responsive design that works well within the environment.”

2.84

EXPANSION INDEX VALUE, PHOENIX METRO AREA (May 2011)

The Expansion Index from Reed Construction Data is a 12- to 18-month look ahead at the construction marketplace. A value of 1.0 or higher signifies growth.

SOURCE: REED CONSTRUCTION DATA



Optima Camelview Village

ARCHITECT: David Hovey & Associates Architect, Optima, Scottsdale.
COMPLETION: 2010.
BRIEF: \$500 million, 700-unit mixed-use residential project recalls Frank Lloyd Wright. Each residence features landscaped roof gardens and private terraces. Received the 2009 AIA Arizona Honor Award.



Scottsdale Appaloosa Branch Library

ARCHITECT: Douglas Sydnor Architect and Associates, Scottsdale; DWL Architects + Planners, Phoenix.
COMPLETION: 2009.
BRIEF: \$10.5 million, 21,242-s.f. LEED Gold municipal library featuring drought-resistant landscaping, a solar array, and a floating pavilion.



Gateway to the McDowell Sonoran Preserve

ARCHITECT: Weddle Gilmore Black Rock Studio, Scottsdale.
COMPLETION: 2009.
BRIEF: \$5.6 million, 8,800-s.f. LEED Platinum building minimizes the impact on the native desert by preserving an existing network of arroyos. Funded through a preservation tax passed by Scottsdale voters.



Salt River Fields at Talking Stick

ARCHITECT: HKS, Phoenix.
COMPLETION: February 2011.
BRIEF: \$100 million, 11,000-seat Major League Baseball training facility includes separate training and clubhouse facilities for each team, plus two soccer fields and a roof that shades the stands. The first MLB facility built on Native American land.

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*Flotkoetter, Brent. "ZIP System® wall sheathing and energy performance" November 2008.
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→PRODUCTS

Office Chairs

EDITED BY LAURIE GRANT



Designed by Konstantin Grcic and released in 2009, the **Magis 360 Degree Chair** has an epoxy-resin-painted steel tube frame topped by a polyurethane seat. On castors and with a die-cast aluminum footrest, the chair swivels in a full circle, allowing users to have full range of motion. 360 Degree is available in olive green, orange, gray, or black, and is height-adjustable. magisdesign.com • Circle 100

The **Cherner swivel-base task chair**—a new release based on the molded plywood original designed by Norman Cherner in 1958—from the **Cherner Chair Co.** has a chrome-finish steel base and is available with upholstered seat pads. The one-piece, molded plywood seat is height-adjustable from 16 1/2" to 20 1/2", and the plywood has a beech core covered with beech or walnut veneer. chernerstore.com • Circle 101

The Yves Béhar–designed **Sayl Chair** is one of **Herman Miller's** newest task chairs. Its signature feature is a Y-frame back covered in a 3D elastomer suspension mesh (available in eight colors) that accommodates full range of motion. Tension in the backing material is greater in transition areas, as in the thoracic-to-lumbar area. Sayl is also available in upholstered and side-chair variations. Last month, it won the International Design Awards Product Design of the Year award for 2010. hermanmiller.com • Circle 102



Released in 2008, **Herman Miller's Embody** chair was designed by Bill Stumpf and Jeff Weber. A follow-up to the success of the Aeron chair—which Stumpf designed with Don Chadwick—Embody seeks to provide an active ergonomic system. A spine-like vertical back support, combined with lateral supports, conform to user movement and ensure that the lower back is supported with no necessary adjustments. A narrow back allows free arm movement. The frame is available in graphite and white, and the base in graphite, titanium, and polished aluminum. Embody is made from 42% recycled material and is 95% recyclable after its life cycle. hermanmiller.com • Circle 103



When Charles and Ray Eames decided to add cushions to their iconic **Herman Miller** aluminum group chairs in 1969, the result was the now equally classic **Eames Soft Pad Chair**. Available in executive (shown), management, side, and lounge models, the chairs can be upholstered in myriad leather and textile options. Executive and management models come with seat-height and tilt-swivel adjustments; all have one-piece, curved aluminum side ribs and a die-cast aluminum base. The chairs are Greenguard-certified. hermanmiller.com • Circle 104

24

OFFICE SEATING COLLECTIONS CURRENTLY ON THE MARKET THAT ARE CRADLE-TO-CRADLE CERTIFIED

SOURCE: MBDC



The **Keilhauer Sguig** chair, released in 2006, has a glass-filled nylon polypropylene back that supports the spine from the T1 to L5 vertebrae. Sguig was designed by Eoos with gender-specific ergonomics in mind: the chair accommodates the seating patterns of both men (who tend to lean back) and women (who tend to pitch forward). Available in three electro-welded back patterns, the chair features polyester textiles that come in 12 colors. Arms, back height, tilt lock, and seat pan are adjustable. keilhauer.com • Circle 105

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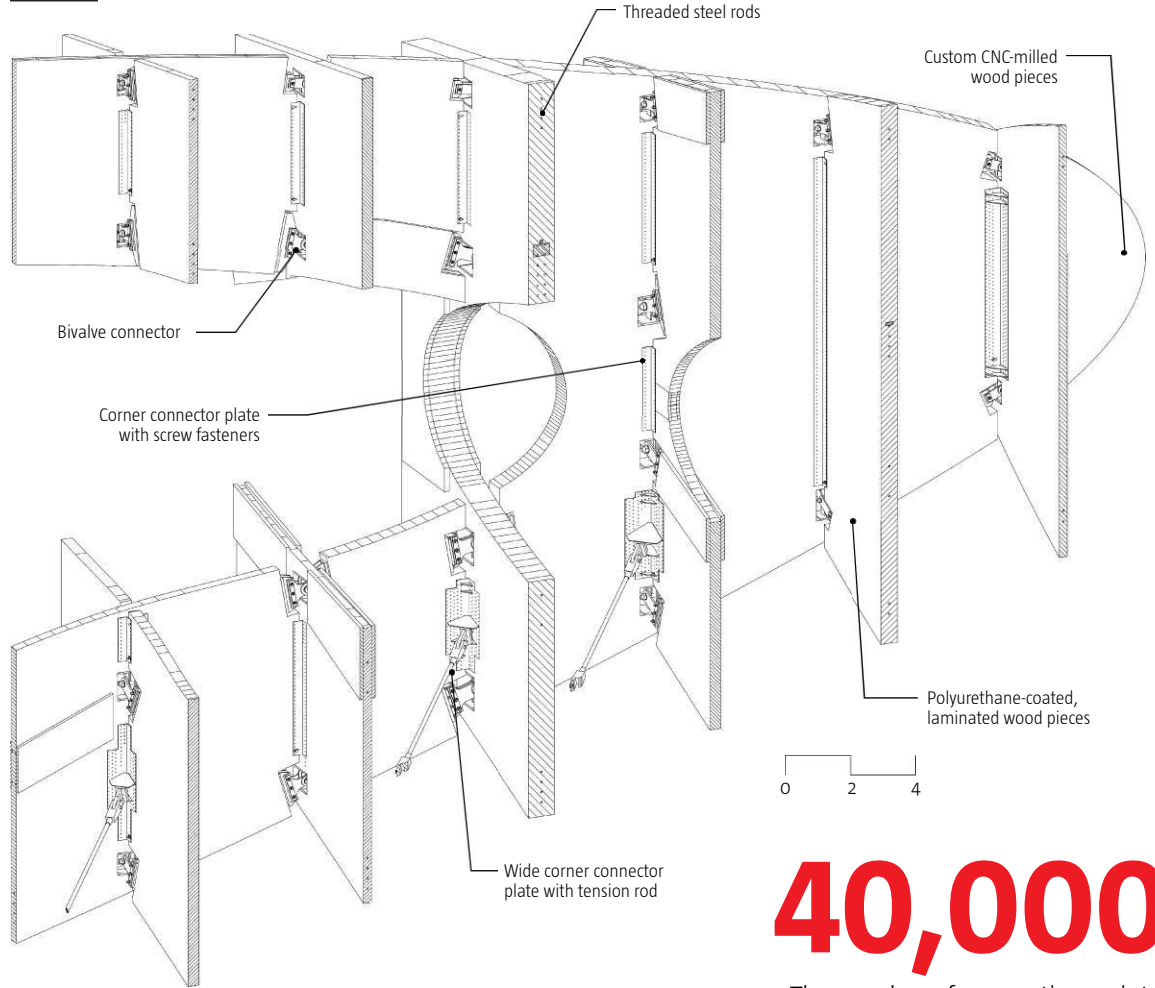
→DETAIL

Metropol Parasol

Architect: Jürgen Mayer H.

Location: Seville, Spain

Isometric



TEXT BY GIDEON FINK SHAPIRO

PLYWOOD, METAL, AND GLUE go back a long way in the building industry. But they can always be pushed further, as demonstrated by the project that debuted in March 2011: the new Metropol Parasol in Seville, Spain, designed by Berlin-based Jürgen Mayer H. and engineered by Arup. Discard assumptions about how laminated wood pieces fit together, how they are shaped, how they are coated, and how large a structure they can create—and the possibilities open up.

Structural and material engineering did not drive the Parasol until later in its development. Most important to the 2004 competition-winning entry was the spatial

configuration and sectional layering that makes the Metropol Parasol at once a shading canopy and elevated plaza, but also a farmers market, restaurant, shopping arcade, roof promenade, and archaeological museum—all while breaking ground in only six spots so as not to disturb ancient Roman ruins below. This is a machine for revitalizing public space in the heart of the old city.

But how to actually construct this exuberant civic monument? Steel was considered as a building material, as was fiber-reinforced concrete, and wood both with and

40,000

The number of connection points between conjoined segments of the Parasol structure





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The Parasol structure is designed as a grid of right angles, which create equal bays measuring 5 feet square in plan. Although the structure features wavy edges—and it undulates in section—in plan, the Metropol Parasol is a consistent grid (below).

THE METROPOL PARASOL IS THE WORLD'S LARGEST BUILDING TO BE HELD TOGETHER PRIMARILY BY GLUE. THIS STRUCTURE MEASURES UP TO 492 FEET LONG, 246 FEET WIDE, AND 92 FEET HIGH.



without a weatherproof coating. Cost, fire performance, and the effects of expansion and contraction under the fierce Mediterranean sun were all parameters for the design. Ultimately, the Parasol structure was designed as a square waffle-grid system of interlocking, CNC-milled timber fastened with steel connectors and high-strength glue. The wood itself is laminated Kerto-Q LVL, manufactured by Finnforest in Aichach, Germany, in sheets measuring approximately 131 by 7 feet. It has a clear polyurethane coating that is fully weatherproof, yet elastic and breathable, just like the sculpted columns of a college canteen that Mayer designed in Karlsruhe, Germany.

The Metropol Parasol is the world's largest building to be held together primarily by glue. This long-spanning structure measures up to 492 feet long, 246 feet wide, and 92 feet high. The glue—a new formula developed by the Fraunhofer Institute, according to Mayer—hardens inside the custom-engineered joints where steel connectors penetrate the wood. The 3,000 or so conjoined segments (with about 40,000 connection points) were preassembled off site, then tempered to increase



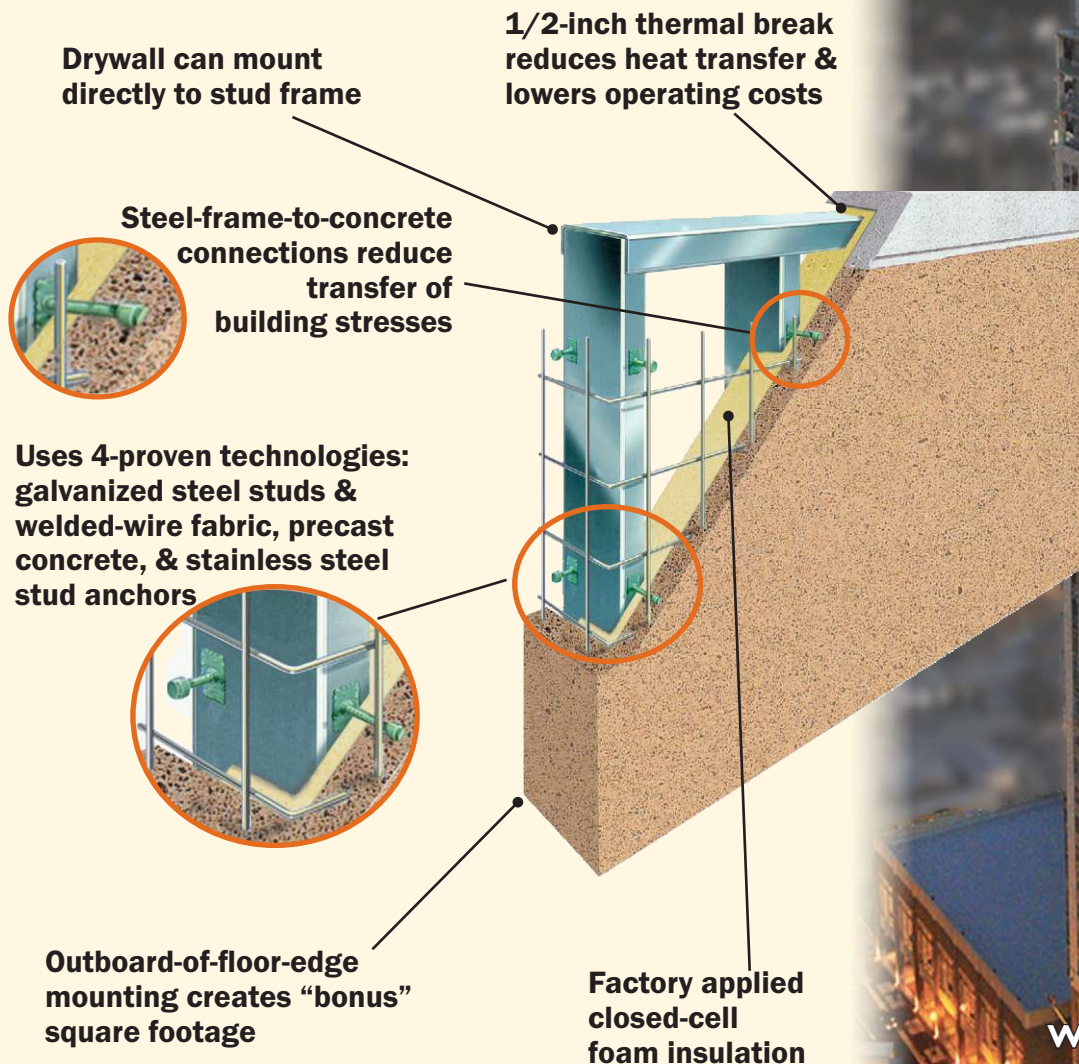
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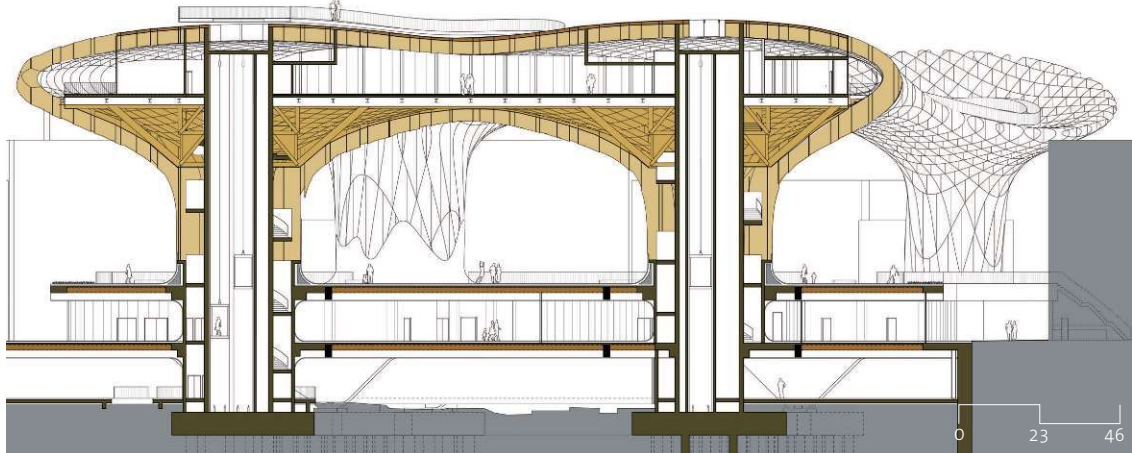
Section drawings reveal the different layers of the project: An archaeological museum is in the basement level, and a market hall occupies the ground floor. The next level features commercial programming such as restaurants, and the structure is topped by an elevated promenade.



North-South Section



East-West Section



the glue's heat-resistance to about 176 degrees.

The Parasol's free-sculpted form may evoke Joan Miró (the Catalan painter), or perhaps the undulating vaulting of Seville's cathedral. Yet any number of such references pale in comparison to the forceful presence of this building in itself, which spreads its aqueous geometries over the Plaza de la Encarnación like a

hovering pond in the middle of Spain's hottest city.

The overall typology of the Parasol is matched by the constant differentiation of individual wood shapes and ply thicknesses, the latter optimized via digital modeling for lightness and strength. (More glue equals stronger.) "When you're up there you can see how the material jumps from one thickness to another," Mayer says. That is, if you're not too busy taking in the sweeping views of Seville. □

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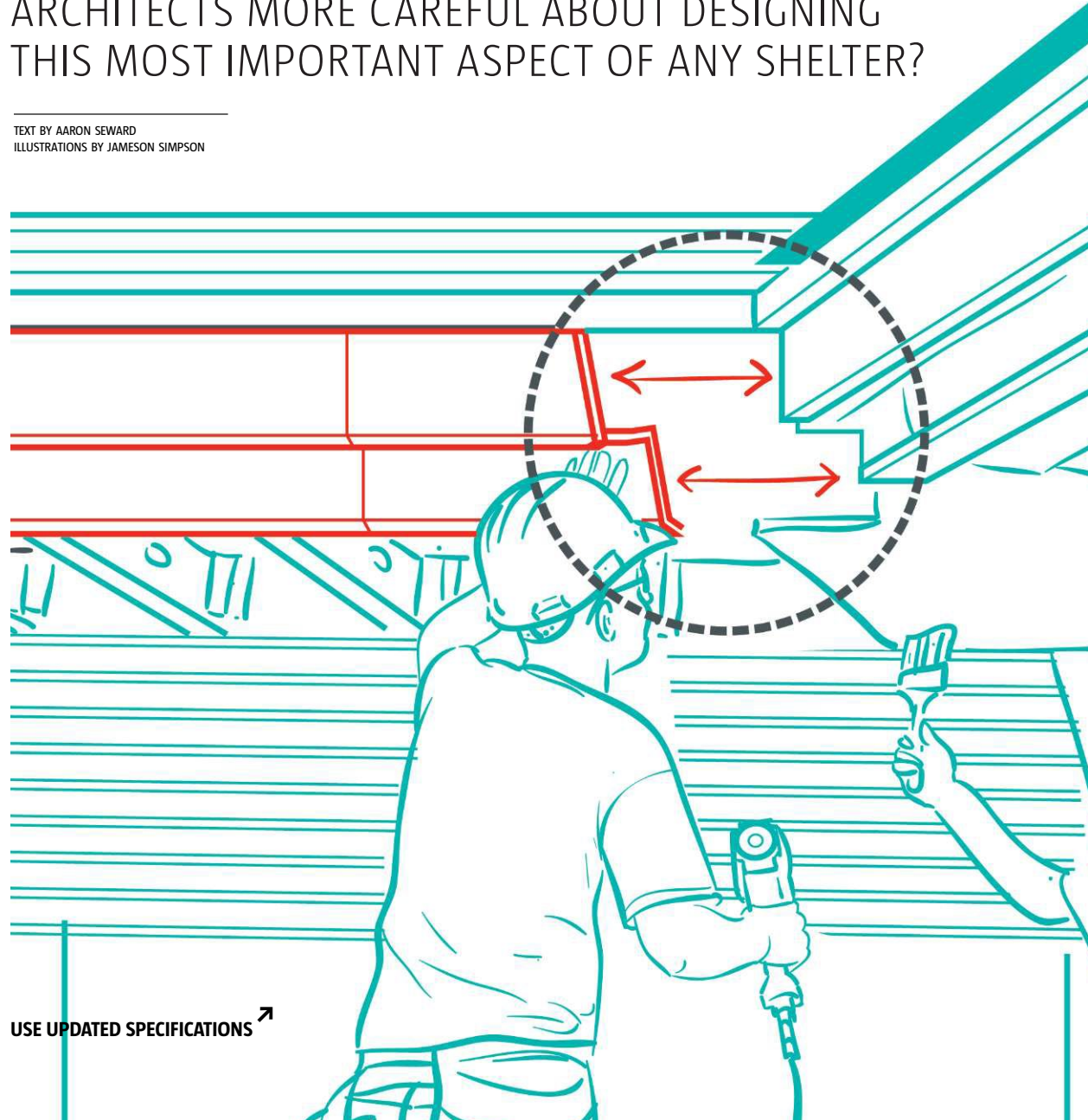
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When it Leaks it Pours

WATER INTRUSION MAKES UP MORE THAN 70 PERCENT OF CONSTRUCTION LITIGATION. ROOFS ARE OFTEN THE CULPRIT, SO WHY AREN'T ARCHITECTS MORE CAREFUL ABOUT DESIGNING THIS MOST IMPORTANT ASPECT OF ANY SHELTER?

TEXT BY AARON SEWARD
ILLUSTRATIONS BY JAMESON SIMPSON



USE UPDATED SPECIFICATIONS ↗

WHEN STRIPPED DOWN to its most fundamental purpose, architecture is about sheltering people from the elements. From this point of view, perhaps the most important part of any building is its roof. Roofs keep us dry and, combined with walls, warm. The sheltering function of a roof is a straightforward concept, yet a quick glance at statistics on building failures will show that—in spite of having a good handle on the idea of the roof—those in the architecture, engineering, and construction industries have a rather difficult time putting it into practice in acceptably reliable ways.

Roofs, on average, last only about half of their designed lifetime. Furthermore, 40 percent of all building-related problems are due to water intrusion—and water usually intrudes through roofs. Most startling, though, is the fact that, while roofs only make up about 2 percent of construction costs, water intrusion accounts for more than 70 percent of construction litigation; roof failures and related fallout are often at the root of the issue. So what's going wrong?

Before architects start sweating under the collar too much, it must be said that the design side of the building industry is not considered the primary culprit. "The most common thing that leads to roof failures is improper installation," says Stan Graveline, vice president of technical services at Sika Sarnafil, a global manufacturer of roofing and waterproofing systems. "The contractor doesn't put the materials on properly and ultimately the roof begins to leak at a joint or seam."

Karen L. Warseck, AIA, president of Building Diagnostics Associates (BDA), a Florida-based firm that specializes in identifying and fixing building-envelope problems, breaks it down further: "Normally we find that it's about 60 to 70 percent construction, 20 to 25 percent design, and 10 percent materials," she says. Her firm has experience to back up her claims. BDA has been involved in 1,500 remediation projects "from Alaska to the Bahamas," Warseck says.

Architects do play a part in this blame game, and there are measures that they can take in the design phase to help prevent roof failure. After all, contractors follow construction documents prepared by architects, and if the CDs don't include correct details, problems are bound to occur. What follows are common reasons why architects flub roof designs, and some ways they can improve their game.

Detailing in Three Dimensions

"What do architects do to make their buildings fail?" Warseck asks. "The biggest thing they do is they don't consider things in three dimensions. It's ironic because architects are supposed to be able to think in 3D. But when it comes to roof details, that three-dimensional thinking goes out the window."

The conventional set of architectural drawings includes numerous sections. Eventually, though, those sections meet other sections and designers must figure out how the two will meet (i.e., how an edge condition should be flashed to prevent water intrusion). What happens all too often is that architects turn inadequate sectional drawings over to the contractors, who in turn

leave it up to a roofing subcontractor to figure it out. In those cases, you wind up with a laborer faced with challenges that he or she is not prepared to overcome. The typical on-site solution to an ambiguous edge condition is to patch everything together with roofing cement and caulk. Since these materials are not designed to last as long or to have the same amount of durability as other roofing materials, it's only a matter of time before the whole thing fails. And when it does, the lawyers wind up at the designer's door looking for retribution.

"Roofs should last 20-plus years, but caulking and sealant only last a few years," Graveline says. "If you rely on caulking rather than proper details, water begins to get in. You have to go back and re-caulk and re-caulk, when in fact there are more-permanent ways to flash things. But if ... [roofs are] not detailed properly, people will go to the path of least resistance. A lot of times that's using a lot of sealant."

By and large, the industry relies on generic details such as those found in CAD. Most generic details are 2D sections, which may not be adequate to show how an item should be flashed; what works along the length of a wall or parapet doesn't work at the ends. Wherever there is a transition, penetration, or termination, there must be a detail. Architects must be vigilant and detail all such trouble spots to make sure that they are properly flashed, and they need to review their drawings for impossible-to-flash details. As the industry transitions to BIM, the generic 3D details need to be checked just as, if not even more, carefully on a project-by-project basis.

Some details are more common trouble spots than others. "One of the most common things we see done wrong are expansion joints," Warseck says. "Nobody bothers to detail what happens when an expansion joint ends. The roofer just runs it up to a wall and puts a glob of sealant on it, and of course it's going to fail." There are other trouble spots, such as curved parapets, stairs that terminate at the roof, unistruts, channels, interior gutters, doors, and louvers not set high enough above the roof line, and penetrations too close to walls and curbs. Infill projects and additions pose another set of problems. Even if they touch, the old and new buildings may move independently of one another and—if improperly detailed—the roofing materials over the joints may be prone to rippling or cracking as a result of this movement, allowing water to intrude.

Check your Specs

Next to inadequately detailed drawings, architects sign their roofs' death warrants most frequently through a lack of attention to specifications. Architects frequently—without even realizing it—use specifications that are outdated or don't meet code, or they reuse boilerplate specifications again and again without tailoring them to the specific needs of a given project.

"Nobody changes their specs," Warseck says. "They'll use the same set for 20 years. In the meantime, the whole industry has evolved." A common jumping-off



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Learning Objectives

1. List three things that architects can do better to prevent roofing failures and related damages.
2. Describe at least two reasons why roofs fail.
3. Describe at least three reasons why specifications for roofing materials and systems should be updated regularly.
4. Describe three reasons why specifications should be written for each project separately.





point for product information is the National Roofing Contractors Association (NRCA) *Handbook of Low Slope Roofing Systems*. Unfortunately, architects sometimes fail to update their copies. Of the roofing manufacturers listed in a 10-year-old copy, half have gone out of business. Only 65 percent of the products listed are

still being produced under a recognizable name. Manufacturers revise their product lines every three years, and they constantly add and delete products from their catalogs and update recommended installation methods. In addition, most municipalities update their building codes every three years as well, meaning specifications have to be updated to stay legitimate. In fact, the third-most-common error made in specifying roofs is that the specifications don't actually meet code.

Even when specifications are kept up to date, they cannot always be relied upon. "There's a high reliance on manufacturers' standards," Graveline says. "However, there are only so many standards, and there are going to be conditions that aren't going to be in the book." As with generic details, standardized specifications are not necessarily going to meet the needs of a given roof, and too often architects reuse manufacturer or in-house specs without customizing them to a specific building. In addition to the differing physical conditions of projects, there are geographic differences in codes and insurance requirements, and different client goals as well. Boilerplate specifications may refer to elements that don't exist on the roof in question, or, alternately, fail to account for elements that are. And manufacturers' specifications are generalizations meant for the entire country. But what works in Nevada probably won't work in Massachusetts.

An equally vexing problem for architects is their reliance on warranties, which are not a substitute for a properly designed, installed, and maintained roof. Warranties are typically written by the manufacturer's attorneys for the benefit of the manufacturer, and not the architect or their clients. Furthermore, warranties are not the same as insurance. In fact, they rarely cover the items damaged by water intrusion that are the most costly to replace: incidentals such as furniture, equipment, interior finishes, and electronics. What they do instead is lull architects into a false sense of security.

Preventing Damage

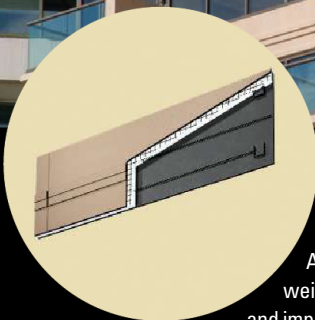
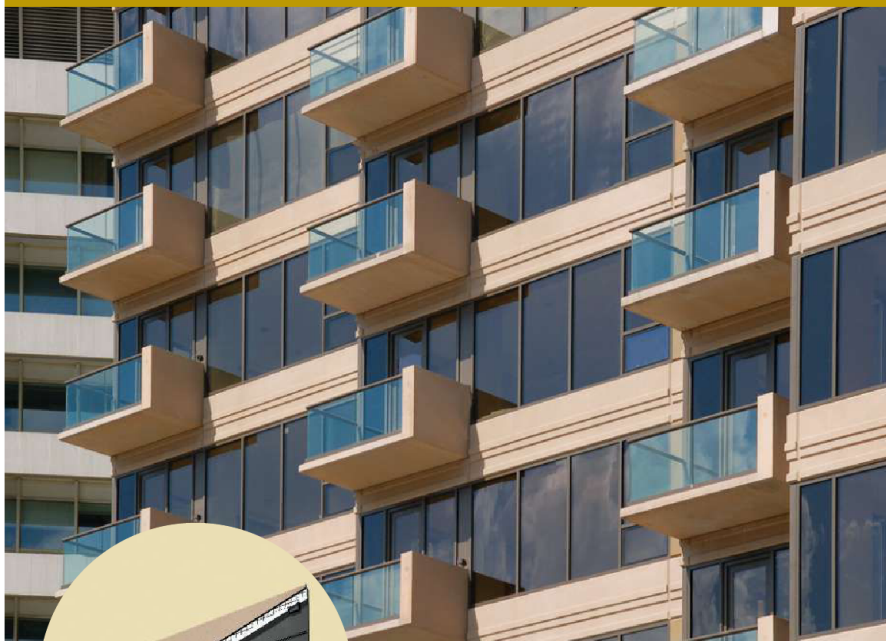
Preventing roof damage may seem beyond the control of architects, and in some ways that is true. There is little a designer can do to stop blue ice, meteorites, or falling trees from wreaking havoc on their projects. However, there is a more pervasive and insidious foe to the integrity of a roof: mechanical equipment. Never mind the flashing details and penetrations that these systems require, the real threat are the men and women who service them. "We're putting more and more stuff on our roofs," Graveline says. "If it's not protected with adequate walkways and cover boards beneath the membrane, a roof can get damaged because service people just treat it as a work surface. They drop tools, they drop covers, they roll carts. Those things can result in damage. On top of doing the damage, they also don't report it, so by the time you notice the problem you have a big issue on your hands."

Architects can do their part to prevent this kind of damage by placing walkways where they will actually be used, as opposed to either not at all or where they look



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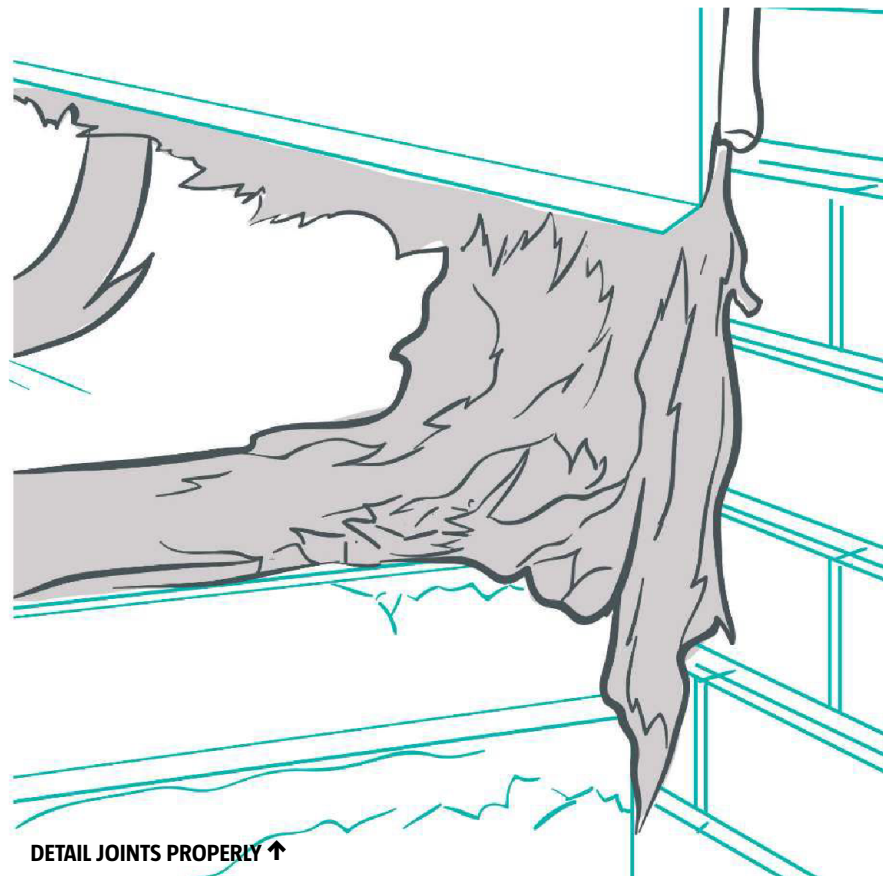
 



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NO ROOF, NO MATTER HOW WELL DESIGNED OR INSTALLED, WILL LAST AS LONG AS THE REST OF THE BUILDING. IT'S SIMPLE MATH: MOST ROOFS HAVE AN AVERAGE LIFE SPAN OF 20 YEARS, MOST BUILDINGS ARE DESIGNED TO LAST AT LEAST 50.



pretty. That means placing walkways in a direct line, the shortest distance from roof access to mechanical units. No service person is going to follow a course of 90-degree turns to replace a filter or squeegee a solar panel.

There is also a payoff to be had in educating clients on how to properly maintain their roofs once they are installed. Since the architects are familiar with the materials specified and installed, they can pass on this information to help avoid roof failures due to improper maintenance or cleaning; if enough dirt and debris builds up on a roof surface, the owners can find themselves with an unintended rooftop garden on their hands, and the root systems can cause damage to roofing materials. Roofs do fail due to poor maintenance, and when that happens, litigators look to the architect. So a little shared knowledge can help to avoid headaches later on.

What To Do

The fact of the matter is that no roof, no matter how well designed or installed, will ever last as long as the

rest of the building. It's simple math: Most roofs have an average life span of 20 years, most building are designed to last at least 50. Sooner or later someone will have to re-roof the building, so plan for it.

There are steps that architects can take to ensure that a roof lasts as long as it is supposed to. Since most roofing problems do stem from poor installation, it behooves the designer to investigate the quality of the local labor pool and specify systems that fit their abilities. Architects should also only specify materials that are actually necessary and that include warranties favoring the owner; and they should use current products and customize boilerplate specifications to meet the project in question; they should customize manufacturers' details and make sure to detail every termination and penetration. And perhaps most importantly, architects must remember to think in three dimensions. Even though most people won't see the roof, its design deserves as much attention as the rest of the building. □

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QUIZ

1. True or false: Water intrusion accounts for 70 percent or more of construction litigation.

2. One firm has found that roofing failure is often 60 to 70 percent related, 20 to 25 percent related and 10 percent related.

- a. Design, construction, materials
- b. Materials, design, construction
- c. Construction, design, materials
- d. Construction, materials, design

3. According to the article, what things can architects do to help protect themselves from roof failure related to the design?

- a. Design in three dimensions
- b. Update specifications
- c. Be familiar with local building codes
- d. Provide details in drawings to show proper installation
- e. All of the above

4. Why is it important to update your roofing specs?

- a. Building codes change every three years
- b. Materials and manufacturers change frequently
- c. One specification is not going to work on every project
- d. All of the above

5. According to the article, roofs can fail because: (choose two)

- a. They were improperly installed
- b. They were improperly maintained
- c. Too many building components are put on roofs today
- d. Manufacturer warranties are insufficient

6. True or False: Architects frequently—without even realizing it—use specifications that are outdated or don't meet code, or use boilerplate specifications that are reused again and again without tailoring them to the specific needs of a given project.

7. What is one of the most commonly mishandled part of a roof drawing?

- a. Flashing details
- b. Expansion joint details
- c. Fastener details
- d. Substrate details

8. Without sufficient details, contractors or installers often patch joints with roofing cement and caulking. Why is this a problem?

- a. These products won't last as long as the roof construction
- b. These products may not be compatible with the roofing material or substrate material
- c. These products may void a warranty
- d. Both A and B
- e. Both A and C

9. True or False: Warranties are not a substitute for a properly designed and installed and maintained roof.

10. True or False: There is not a high reliance on manufacturers' standards, which contributes to material failure and voided warranties.



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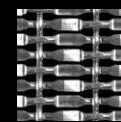


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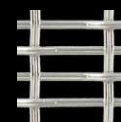
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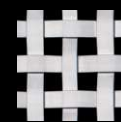
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Disaster Design

THE TORNADOES THAT DEVASTATED THE SOUTHERN U.S. RAISE QUESTIONS ABOUT CLIMATE CHANGE—AND ALSO ABOUT FRACTURE-CRITICAL DESIGN.



THE MASSIVE TORNADOES that hit the southern U.S. this spring left more than ruined neighborhoods in their wake. Questions about climate change have resurfaced, as has speculation about how to prepare for future disasters. The frequency and severity of natural disasters is sound cause for concern. “By now, most people get that you can’t attribute any single weather event on global warming,” Texas state climatologist John Nielsen-Gammon told *The Dallas Morning News*. “But some things are clear: Temperatures have been going up, and models all agree that the temperature rise will continue unless we get some massive volcanic eruptions or the sun suddenly becomes much dimmer.”

Architects will be moved by the storm that killed 230 people in Alabama alone, and more in nearby states, to design and construct more-durable buildings—particularly after the publicity concerning the flimsiness of contemporary residential construction. Threats posed by natural disasters will motivate the development of more-resilient design strategies, sturdier building products, and more-reliable building codes.

The vulnerabilities exposed by recent extreme weather events point to what University of Minnesota architecture dean Thomas Fisher, Assoc. AIA, calls “fracture-critical design.” Based on an engineering term for the weak points in a structure, fracture-critical design is characterized by the lack of redundancy and a hypersensitivity to stress. At one level, fracture-critical design is a technical problem. Responding to the devastation invoked by Hurricane Andrew in 1992, the state of Florida enacted tougher construction codes for buildings and tie-down legislation for mobile homes.

New homes in Florida are 60 percent less likely to be destroyed than those built before 1998.

At another level, fracture-critical design is a space-allocation problem. Emergency shelters or large basements have obvious benefits as redundant zones for occupant survival in hurricanes or tornadoes—just as adequately elevated buildings are less vulnerable to damage caused by flooding. The location and disposition of a building’s zones of occupation have direct implications for architectural program, which should be considered carefully in high-risk areas.

Finally, fracture-critical design is a planning and development problem. One reason for the increased frequency of disasters is simply that the area of inhabited development is so much greater today. The U.S. has quadrupled its urban land area while doubling its population since World War II; this vast suburban expansion has effectively elevated the chances of damage caused by tornadic activity. As insurance companies will confirm, there are real economic and environmental limits to such development strategies. That the area of developed land has outpaced population growth twofold is indicative of fracture-critical land use.

Design and planning vulnerabilities have resulted in the global tripling of economic losses and quintupling of insured losses by natural disasters since 1960, causing U.S. Geological Survey researcher Chris Barton to claim that “natural disasters have become so expensive that the Federal Government shares in the economic risk.” One way to mitigate this risk: by using fracture-resistant designs that exhibit robust and resilient approaches to architecture and planning. □

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CULTURE



ALEX MACLEAN, COURTESY ROBERT KOCH GALLERY

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→ EXHIBIT

Sometimes you can see things better from the sky. Alex MacLean, an aerial photographer with an M.Arch., has taken the bird's-eye view of the human-planet relationship for over 30 years. This 1994 photo, *Guillotined B-52 Bombers at the 'Bone Yard,' Tucson, Arizona*, is part of his **American Landscape at the Tipping Point** at the Robert Koch Gallery in San Francisco, an exhibition of the modern landscape. Through July 2. • kochgallery.com

→ EXHIBIT

Rosie the Riveter built planes in factories designed by Allied architects who were equally hard at work during World War II. Richard Neutra built U.S. Navy shipyard housing in California, while Albert Kahn built the Ford Motors bomber factory (shown) in Michigan. Another legacy is the Pentagon, built in a matter of months in 1943. On the other side, Axis architects built concentration camps, among other things. **Architecture in Uniform** at the Canadian Centre for Architecture in Montreal considers how architecture on both sides affected postwar methods, construction technologies, and Modernism. Through September 18. • cca.qc.ca



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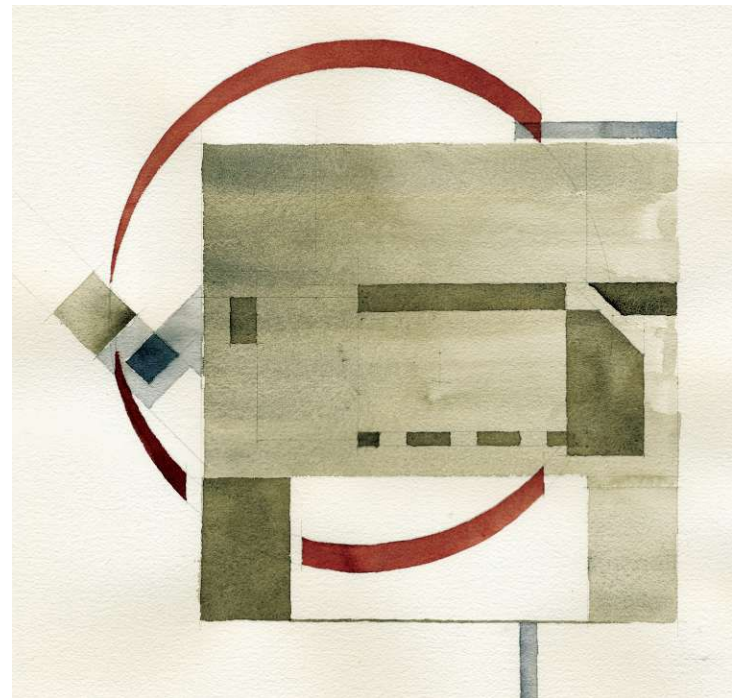
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→ INSTALLATION

For the 10th anniversary of an arts center he designed for Los Angeles's Otis College of Art and Design, Frederick Fisher builds a 142-foot-diameter circular wall (the same dimension as Rome's Pantheon) with a mural of sketches from his time at the American Academy of Rome, on the building's plaza. (Watercolor of **Circle and the Square**, shown). June 25–Sept. 1. • otis.edu

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→BOOK

Color acrylic. CNC Topography. Flocked surface. These and other approaches to constructing architectural models are documented in chapters of **Model Making** by Megan Werner, founder of San Francisco firm zDp Models. For each approach, Werner recommends tools, techniques, alternatives, and shows a sample model. A practical how-to for those looking to explore a building in model form. • \$24.95; Princeton Architectural Press, June 2011

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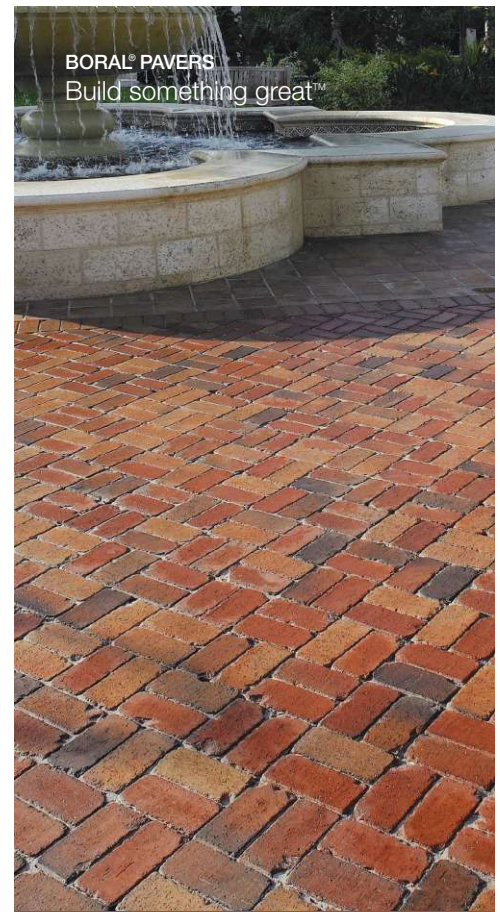
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→EXHIBIT

Architectural historian Nina Rappaport assembles a history of American manufacturing for **Vertical Urban Factory** at the Skyscraper Museum in New York. In the early 20th century, architects and engineers used vertical buildings to aid in processing. And then Le Corbusier and Gropius applied the industrial "factory aesthetic" to other building types. Rappaport emphasizes the buildings that became the archetypal urban factories and presents new examples including Volkswagen's 2001 plant in Dresden, Germany (shown). Filmmaker Eric Breitbart's documentary complements photographs, designs, and other exhibition materials that anticipate the factory's future, should industry return to the cities it built—Detroit, Pittsburgh, and New York. Through July 10. • skyscraper.org



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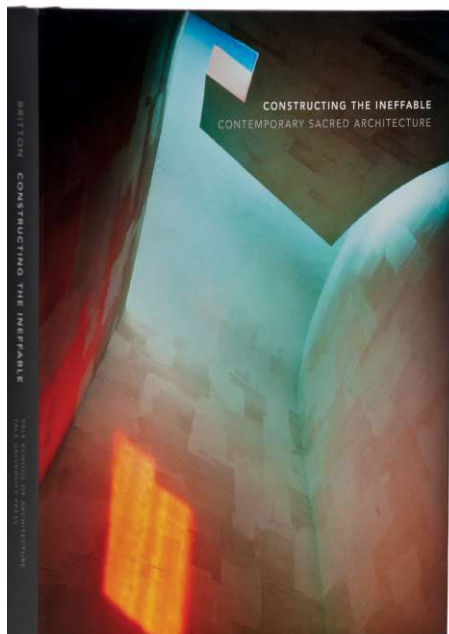
Most painters paint still-lives of fruit. Wendy Heldmann chose the clutter of architectural studios instead. The Los Angeles artist and SCI-Arc public programs coordinator presents her paintings of spray cans, rolls of paper, tape, stacks of foam and plywood, computer peripherals, X-Acto knives, pens, scissors, scraps, notes, name tags, boxes, garbage cans, overturned chairs, lamps, and paint spills in **You Are So Beautiful and I Am a Fool**. Like evidence of a wreckage, her paintings (*Where Would You Have Stood?*, shown) capture the leftovers of student all-nighters and act, in a way, as portraits of those same students. At SCI-Arc through July 29 • sciarch.edu

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→ **BOOK**

Far from being dead, as Nietzsche declared, God seems to be alive and well, if one judges from the postmodern emphasis on religion. Karla Cavarra Britton's **Constructing the Ineffable, Contemporary Sacred Architecture** brings together 20 essays by Diana Eck; Kenneth Frampton; Zaha Hadid, FAIA; Richard Meier, AIA; and others to consider what sacred architecture is, and what it isn't. Vincent Scully provides an overview of the topic from antiquity onward, and philosopher Karsten Harries argues that "the sacred needs architecture if it is not to wither and that, similarly, architecture needs the sacred." The book spans Christian, Jewish, Islam, Hindu, and Baha'i faiths and structures. • \$50; Yale University Press, March 2011

CLOCKWISE FROM TOP LEFT: COURTESY PRINCETON ARCHITECTURAL PRESS; WENDY HELDMANN, COURTESY SCI-ARC LIBRARY; MIKE MORGAN; PHOTO COURTESY VW



→INTERNET

You are what you eat? No, you are what you read. **Designers & Books**, a new website created by design consultant Steve Kroeter and designed by Pentagram, chronicles and facilitates book reading for creative minds. Architects and designers of all stripes are asked to reveal what they consume: Steven Holl, AIA, likes *Moby Dick*; Peter Eisenman likes Ian McEwan's *Atonement*. And don't miss the list of books that every architect should read from *The New Yorker's* Paul Goldberger. Then create a reading list on the site, and shop at any of the country's design-focused bookstores listed. • designersandbooks.com

→EXHIBIT

The long arc of New York-Amsterdam partnership extends to the American metropolis's founding. A new collaboration between AIA New York's Center for Architecture and the Amsterdam Center for Architecture could guide both cities' futures. **Glimpses of New York and Amsterdam in 2040** asks 10 architecture, landscape, and design firms to rethink these waterfront cities as models for sustainability, with focuses on recreation, food production, transportation, living spaces, and economic production. At the AIA New York's Center through September 10. • cfa.aiany.org






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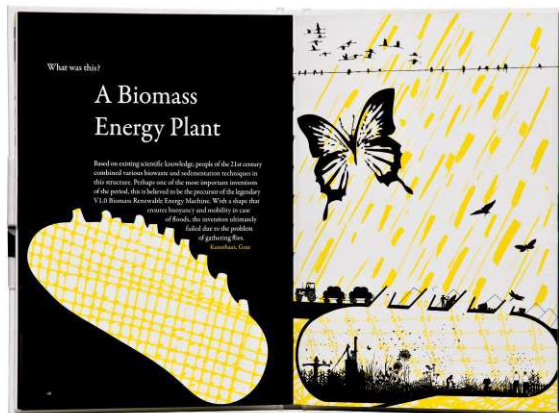
→EXHIBIT

Daniel Toole, Assoc. AIA, went to Chicago, San Francisco, Melbourne, Australia (shown), and Japan to study alleyway architecture as the 2010 AIA Seattle Emerging Professionals Travel Scholarship recipient. "Alleys," he says, "serve as places where green infrastructure and public space can ... emerge in place of detritus and waste services." His findings will be on display in **Tight Urbanism** at AIA Seattle through July 1. Then the exhibit will be displayed on shipping pallets in situ throughout Seattle's alleys. This fall, Toole, a designer at Perkins+Will in Seattle, will continue his studies of these liminal spaces throughout the Mediterranean and Northern Europe as winner of the 2011 Cavin Family Traveling Fellowship. • aiaseattle.org

LEFT: W ARCHITECTURE AND LANDSCAPE ARCHITECTURE
RIGHT: DANIEL TOOLE; MIKE MORGAN

→BOOK

As tomorrow's users adapt to today's iconic building forms, Aude-line Duliere and Clara Wong see Austria's Kunsthau as a biomass energy plant and Beijing's CCTV tower as a sports park in their witty manifesto, **Monsterpieces: Once Upon a time ... of the 2000s!**. The two Harvard Graduate School of Design alums "unlearn architectural history" to imagine the archifuture. "These speculations glorify the absurdity of architectural forms in the 2000s," they write in one of the essays that add some heft to this pictorial parody. • \$19.95; Oro editions, September 2010



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RATHER THAN A WILLFUL OCCUPATION OF AN OBSOLETE MESS, OR A SKILLFUL ERASURE OF THAT MESS BEHIND WHITE WALLS AND GLASS, LTL'S INTERVENTION DRAWS TOGETHER DISPARATE SURFACES AND SPACES—BY EXHIBITING, EXPLOITING, AND STRANGELY EXACERBATING THE DISCONTINUITIES.

TEXT BY THOMAS DE MONCHAUX
PHOTOS BY MICHAEL MORAN



Architect and writer Thomas de Monchaux was the inaugural recipient of the Winterhouse Award for Design Writing & Criticism. He teaches at Columbia University.

IS AN ARCHITECT a content provider? That shorthand describes other cultural workers, from sculptors to filmmakers, who produce original and formal material to social and cultural effect. And yet the architect's seeming expertise is not content (acknowledged as "program"), but form. The architect's dream is not only that form follows function, but that function can be transformed and transcended by sufficiently fabulous or fierce form.

It's a question prompted by the new Arthouse at the Jones Center, a *kunsthalle* and visual art organization in downtown Austin, Texas. Following a multiyear capital campaign and the inauguration of an architecturally ambitious new home, it eliminated funding for the position of its permanent curator—which, framed as a trade-off, has the appearance of, at best, establishing a zero-sum game between form and content. And at worst, of gaining a new body at the cost of one's soul. Although that move followed some local tempests beyond the architectural accommodation, it presents that new home with dilemmas that its designers could not have foreseen.

It couldn't have happened to a better building. Nor to one more up to the unexpected task. In its ingenuity and interactivity, the Arthouse—a remarkable, direction-setting project by New York firm Lewis.Tsurumaki.Lewis Architects (LTL)—reimagines restoration and renovation as methods of architectural intervention and invention. The 20,830-square-foot structure began life in 1851 and was a theater by 1926; in 1956, it was converted to a department store with the addition of a second story and storefront windows featuring Austin-in-August sidewalk overhangs and awnings.

In 1995, the space was inhabited by Arthouse after a minimal renovation that essentially sealed off two-thirds of the building that were not up to code. The result required reuse that was more than usually adaptive.

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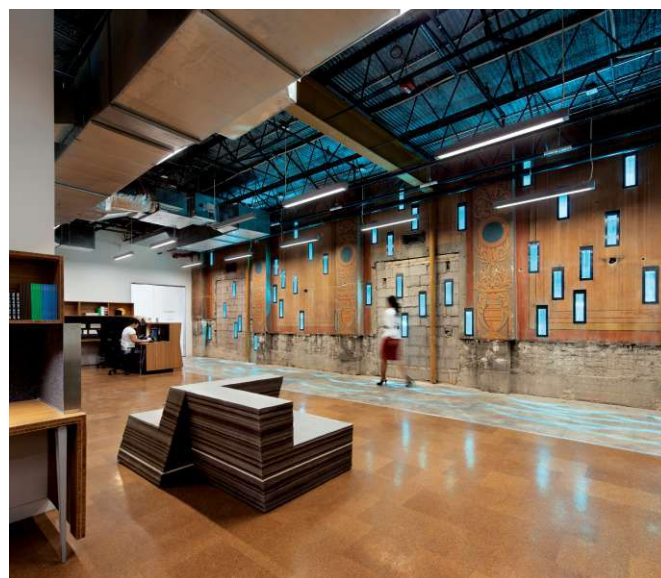
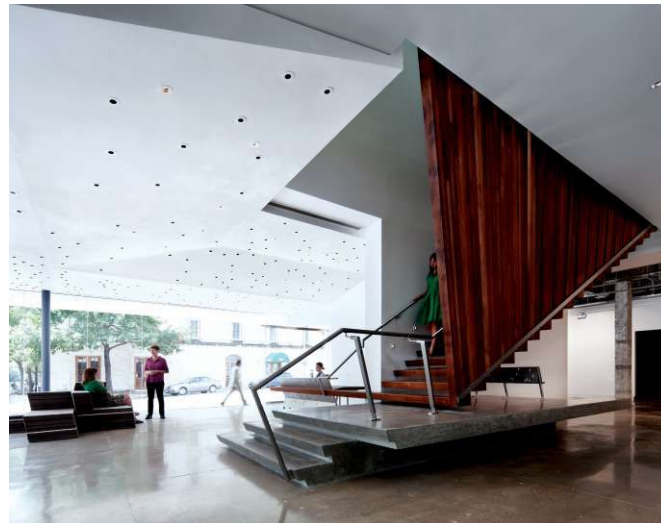


Located at the corner of Seventh Street and Congress Avenue, the Arthouse at the Jones Center (above) stands in the heart of downtown Austin—a vibrant business district that's not as funky as the rest of the city. The building opens directly to the busy intersection by way of a series of floor-to-ceiling windows at the Arthouse's entrance (top right). At night, the 177 custom laminated glass blocks that perforate the building's exterior (bottom right) are illuminated by LEDs.



moved into mills. But here LTL goes further. Rather than a willful occupation of an obsolete mess, or a skillful erasure of that mess behind white walls and glass, the firm's intervention draws together disparate surfaces and spaces—by exhibiting, exploiting, and strangely exacerbating the discontinuities and misfits to be found between them.

There is, to be sure, a big white wall. All 57 linear feet and 16,000 pounds of it, suspended and motorized like a flat from a theater grid, can glide around to reconfigure the major second-floor gallery in order to make use of the column-free house of the former theater. The workaday but hard-working wood joists above that column-free span are ennobled by an ipe structure that leans down from them in a kind of swoon, terminating in an entry desk and treads for a grand staircase; and presaging a 5,000-square-foot ipe roof deck above that is an elevator headhouse lookout and movie screen. Ducting, mechanicals, and structural reinforcement are tucked into the residual space between the former gabled roof



and new deck, while the former theater proscenium frames a reading room.

Below, floor-to-ceiling glazing extends the logic of the former department-store picture windows and, shaded by a deep awning, provides a surprisingly glare- and reflection-free membrane between sidewalk and lobby. A constellation of circular punctures are arrayed across both lobby ceiling and awning soffit, featuring spotlights, speakers, or mounting points for temporary partitions. A similarly uncanny array of 177 4-by-16-inch laminated and LED-lit glass blocks puncture the façade at structurally opportunistic moments, bringing surprising daylight into gallery and ground-floor administrative space. Where the picturesque palimpsests of theater trompe l'oeil decoration, ghost stairs, and blocked doors have been uncovered along the interior of that façade, they have been left stabilized and visible with archaeological care.

The result—simultaneously exuberant and restrained—cannily co-opts the residual qualities of



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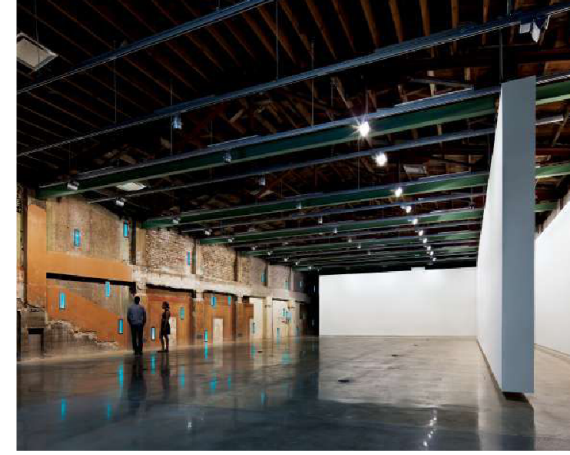
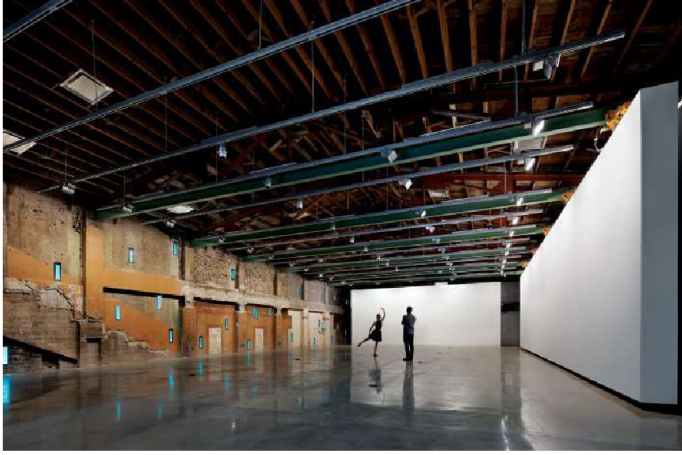


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The column-free, second-floor gallery space (shown across all four images, right) can be configured for different purposes by moving the 57-foot-long, 13-foot-high suspended wall.



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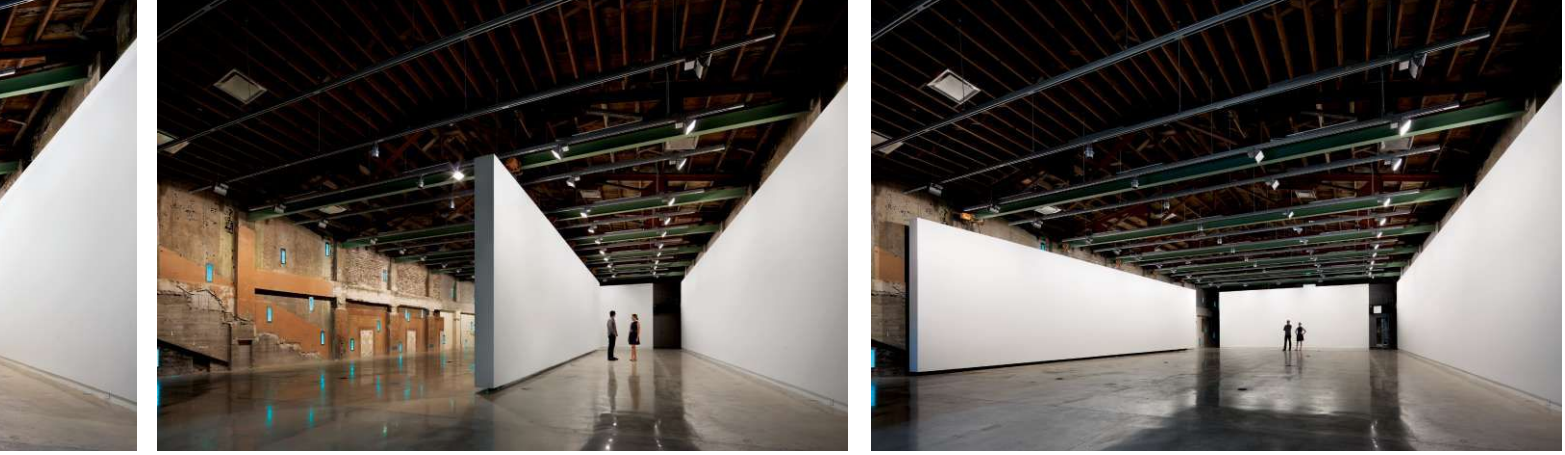


theater and department store, and stretches the project's \$4.3 million budget to an operational limit. This kind of treatment of an existing structure by architects is often called curatorial. LTL, veterans of much exhibition and installation design (including a 2004 venture at the Venice Biennale's American pavilion that modified its classical columns into delirious fins worthy of a '57 Chevrolet Bel Air), are those rare architects who appear to be as interested in the conditions that precede and proceed from their own work as in that work itself. Much of their early research, from dysfunctional doorknobs to a presciently tragicomic 1996 vision of a displaced World Trade Center tower as a floating urban-renewal project for New York Harbor's Governors Island, represented the collection and juxtaposition of architectural artifacts to discursive effect.

FOLLOWING A MULTIYEAR CAPITAL CAMPAIGN AND THE INAUGURATION OF AN ARCHITECTURALLY AMBITIOUS NEW HOME, IT ELIMINATED FUNDING FOR THE POSITION OF ITS PERMANENT CURATOR—WHICH, FRAMED AS A TRADE-OFF, HAS THE APPEARANCE OF, AT BEST, ESTABLISHING A ZERO-SUM GAME BETWEEN FORM AND CONTENT.

The Arthouse's curatorial conundrum is institutional as well as architectural. Some five months after reopening in October of 2010, the museum's board, citing budget shortfalls, abruptly eliminated funding for the position held by curator and associate director Elizabeth Dunbar, who was Arthouse's first permanent curator. That was closely followed by the resignation of one museum board member, and of another longtime staff member, Jenn Gardner, who told the *Austin American-Statesman*, "I strongly disagreed with the concept of Arthouse existing without a full-time curator." A group of local artists protested by abstaining from, or topically and critically participating in, an annual fundraiser in which artists contributed some one-thousand small works for auction.

In architectural terms, these events could appear to come perilously close to those nightmarish tales in



which ambitious institutions spend all their money on architecture, then die. The storied American Center in Paris famously spent some \$40 million on a not-especially distinguished Frank Gehry building in 1994, and became bankrupt and homeless 19 months later; midtown Manhattan's much-indebted American Folk Art Museum just sold its high-end 2001 Tod Williams Billie Tsien Architects building to the neighboring Museum of Modern Art, and plans to decamp to a smaller satellite. (See "Beyond Buildings," page 82.) The peril of such cautionary tales is that they can frame architecture itself as a kind of excess in which form comes at the expense of content, or mere exuberance comes at the expense of expression.

The case of the Arthouse is not one of budget shortfalls alone. Prior to her departure, Dunbar had expressed concern to the Arthouse board about an event in which artist Graham Hudson's "Rehearsal at the Astoria," a reconstruction of the legendary rock club, had been authorized as a promotional venue to Warner Music Group during Austin's 2011 South by Southwest music festival. Earlier, a video installation had been suspended, without consultation by the artist, during hours when its potentially provocative content might have coincided with teenage educational programs. Such incidents are subject to debate about what is proper and proprietary in our experience of an artist's authorship and intention. Yet they inevitably invoke universal issues of privacy and publicity, enclosure and exposure, installation and intention, use and reuse, that are all critically architectural.

In this digital age of information architecture, there is a hierarchy of production and consumption that begins with the content provider, and ascends through a process of iterative gathering and filtering through aggregators and curators, eventually delivering you the feed you need. By providing the Arthouse with such stimulating material and conceptual content, LTL's design has a curatorial effect not only on its physical structure but, arguably, on its institutional life: weirdness demands weirdness. "Keep Austin Weird," reads the ubiquitous bumper sticker, referencing a lively live-and-let-live culture best exemplified by the city's noted music and cinema festivals. The aggregated adaptations of LTL's design serve as an invitation to its occupants to mirror back the liberties and sensibilities embodied therein. In this way, the Arthouse at the Jones Center has the potential to renew not only our approach to adaptive reuse when economic and ecological restraints have made that a critical endeavor, but also to renew our understanding of the cultural role of the architect. □

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→ STUDIO VISIT

Hood Design

LANDSCAPE ARCHITECT WALTER HOOD TALKS ABOUT HIS STUDIO'S CULTURE—AND WHAT IT MEANS FOR HIS DIVERSE ARCHITECTURAL AND INSTALLATION PROJECTS.

TEXT BY KRISTON CAPPS
PHOTOS BY JASON FULFORD



Walter Hood, 53, has maintained his West Oakland, Calif., studio for 15 years. "It has these double-wide red doors," Hood says. "I was renting in the area for a while, and I used to go by when it was a neon-sign manufacturer, and I was drawn by the doors." Hood lives in a space above the studio, with no real physical barrier separating home and office. But as early as this summer, Hood's moving out. The designer is rehabbing a new residence for himself about three miles away from his studio—within biking distance of the University of California at Berkeley, where he is a professor. At the same time, Hood is expanding his studio. "We've always been five people—and that's five too many," he says. "I'm really intrigued about what happens this summer when I get three times the space."

Blending Aesthetics & Energy-Efficiency

VRF solutions from Mitsubishi Electric Cooling and Heating helped the Lance Armstrong Foundation fulfill its vision for a dynamic new headquarters while earning prestigious LEED® Gold certification.

Lance Armstrong — international cycling star and well-known cancer survivor — has built an unparalleled legacy of achievement. His LIVESTRONG™ movement, along with the Lance Armstrong Foundation, is dedicated to improving the lives of the 28 million people around the world living with cancer.

After years based in a generic office space in downtown Austin, Texas, the seven-time Tour de France winner decided to seek a new permanent home for his operations that would better reflect and enhance the dynamic LIVESTRONG™ culture.

The Mitsubishi Electric Solution

The foundation discovered a 30,000-square-foot former warehouse near Austin. The loft-like space offered the openness, youthfulness and sense of energy that Armstrong sought.

At the same time, he wanted the new headquarters to highlight the foundation's concern for the environment. He turned to San Antonio-based Lake/Flato Architects to fulfill his vision of this becoming one of Austin's first LEED® Gold-certified facilities.

Designing an inspiring, collaborative, free-flowing space was just the beginning. To achieve LEED® Gold, the architects knew they needed an HVAC system that could earn LEED® credits in the Energy 7 Atmosphere (EA), Indoor Air Quality (IAQ), and Innovation and Design categories.

That's where Mitsubishi Electric Cooling and Heating came in. The first two systems the architects looked at — DX (direct expansion) and chilled water — were rejected for being inefficient or too expensive. But Mitsubishi Electric's VRF solution offered lower energy costs while fitting smoothly within the space's aesthetics.

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There was one key driver — make that two. Mitsubishi Electric offers the industry's only two-pipe system that can simultaneously deliver heating and cooling to different zones within the same building. The two-pipe system requires many fewer fittings, plus a smaller investment for installation and labor and equipment.

Mitsubishi Electric's low-profile, energy-efficient indoor units were ideal for the demands of the new facility's open design:

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In the end, Mitsubishi Electric was able to provide precise cooling and heating without interrupting or compromising the design aesthetics of the space. And that was vitally important to the designers.

Additionally, Mitsubishi Electric was the leading factor in the foundation earning LEED® Gold certification. According to Greg Lee, chief financial officer for the Lance Armstrong Foundation, "In less than two years, we already know that our new building uses 30 percent less energy than a conventional office building, and much of the savings can be attributed to (Mitsubishi Electric's) intelligent HVAC system."

Superior energy efficiency. Unobtrusive design. Mitsubishi Electric's VRF solutions met all of the foundation's needs. And they have the industry-leading technology and products to handle your next project.

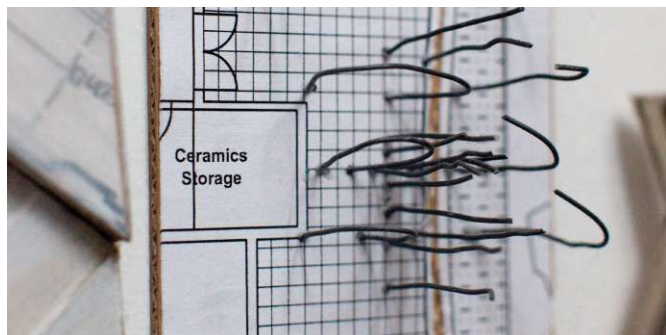
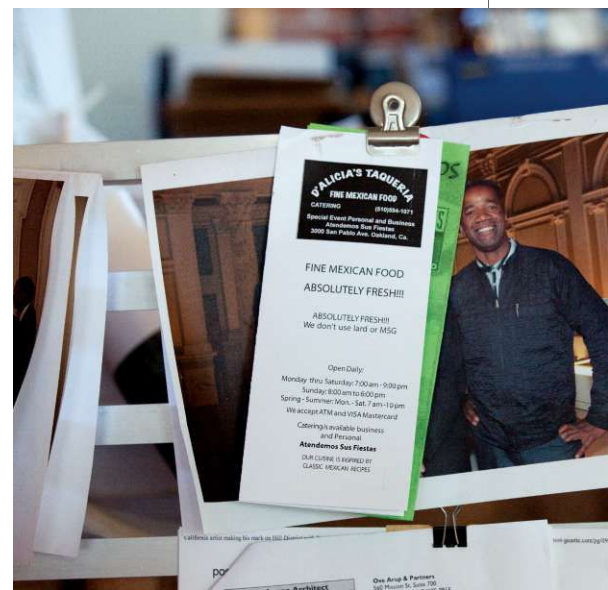
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Among Hood's best-known projects is his work for San Francisco's De Young Museum, where the landscape outside continues into the building, and Oakland's Splash Pad Park, a former traffic island under I-580. A number of Hood's current projects are planned for the Bay area, including two BART stations (one in West Oakland), the Powell Street Promenade, and a public-art piece in Hunter's Point. Yet Hood Design's corner of West Oakland has changed little in 20 years. Gentrification hasn't yet come to the area, which is largely characterized by single-family dwellings. Its neighbors are "still the drug dealers, the prostitutes, the artists," he says.

"I notice now with a lot of the newer generation—or maybe I should say with the rise of technology—we're becoming less present in the work," Hood says. "The idiosyncrasy of the work has almost disappeared because we don't commit ourselves in the same way." Hood's notion of personal "presence" is evident in the juxtaposition of bamboo and barbecue in the studio courtyard (right). He notes that his current studio has weathered the entire technological transformation of architecture—and remains unchanged in some ways. "Maybe I'm just old-school, but I still believe in being present. Being able to pick up the phone and call a client instead of email."





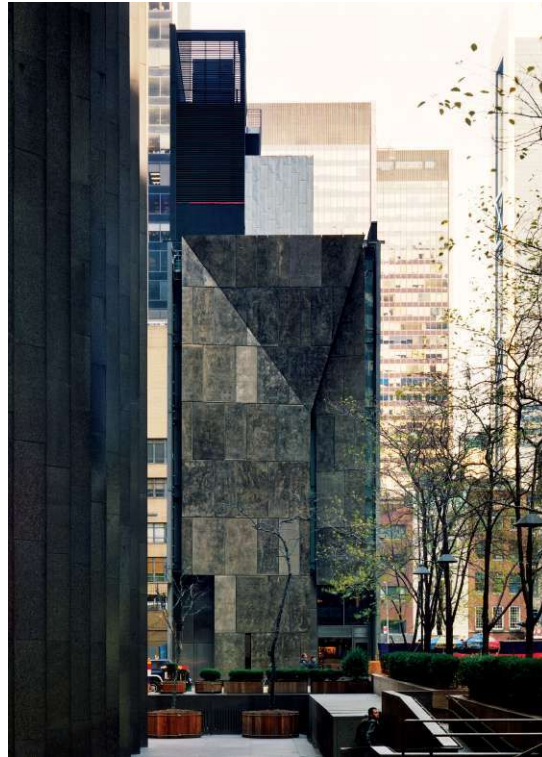
Hood acknowledges that his studio (above images) has a comfortable quality absent from many of the sleek studios of his peers. "It's what I think of as a studio. It's not an office per se," he says. In part, that lived-in quality directly reflects the nature of his approach to landscape design. "There is a sense that work is being made. We make a lot of models. I still draw. Work is all around you, from mock-up to materials." It's not an environment suited to every designer who comes in, he says. "The ones who don't share that attitude get frustrated very fast."

Hood's design for the 2.5-acre stretch of Seventh Street encompassing the West Oakland BART station (left) includes pedestrian "dancing lights" and other features to reconcile the site's industrial-rail past and gentrified-corridor future.

Hood says that one of his ongoing goals is to build what he describes as a "cultural practice"—with a flexibility to respond to the wide variety of projects he takes on. With temporary installations and museum commissions as well as landscape architecture and traditional garden projects in the works, this notion is a moving target. "I think Diller [Scofidio + Renfro] would be one of my champions who are able to work that magic," Hood says. "There's not a lot of landscape firms that can."

→ BEYOND BUILDINGS

Modern Folk



The American Folk Art Museum, designed by Tod Williams Billie Tsien Architects.

I WAS SAD TO READ that the American Folk Art Museum will be closing its Tod Williams Billie Tsien Architects–designed doors on West 53rd Street in New York. The Museum of Modern Art is buying the building; once it gets around to raising all the money it needs for the next major expansion—to follow its move into the base of the tower by Jean Nouvel, FAIA, for which developers are seeking funding—it will no doubt tear this recent monument down.

The news comes the same week as reports that the Metropolitan Museum of Art and the Whitney Museum are about to reach an understanding by which the Met, the mastodon of encyclopedic art museums, will take over the Marcel Breuer–designed Whitney building after the Whitney decamps for the hipper environs of the neighborhood now known as the High Line. This is a tribute to reuse, both because the “Breuer Building,” as many of us know it, will still be in use as an art museum, and because the Whitney’s move downtown is as much a sign of the power of revitalizing neighborhoods through reuse as it is to the power of the Whitney’s moneyed current neighbors to stop any expansion. The Whitney wanted to expand on its site, but either neighbors or timid board members curbed every single plan. If only the Whitney was moving into an existing building, rather than commissioning an

CAN THE MUSEUM OF MODERN ART PRESERVE THE MODERNIST STATEMENT THAT IS THE AMERICAN FOLK ART MUSEUM?

expensive and questionable design from Renzo Piano, the picture would be complete.

The fact that both MoMA and the Met can’t live within their bounds, and that smaller institutions with a more focused mission have trouble surviving, is itself indicative of a culture in which far-ranging browsing for images trumps the concentrated focus on selected works. Both the Met and MoMA overwhelm the visitor just through their sheer size—and the size of their collections and activities. It takes very intelligent programming for an institution such as the nearby Museum of Arts and Design to make a mark and an audience for itself.

Saving the American Folk Art Museum will be almost impossible, though I would like to be surprised. Williams, FAIA, and Tsien, AIA, designed an intricate rabbit warren of exhibition spaces around a narrow staircase slot. Each of the objects has not just one but many frames that place its explorations of the joys and sorrows of the everyday—and its visions of escape from that world—within the context of sensual and almost didactic materials. The architects mined a variety of spaces and forms out of the canyons of New York and used them to turn the museum into a treasure vault of work far removed from the gridded metropolis.

Such a framing device would not work well for either MoMA’s collections or its expansive public programs, not to mention the circulation that its success with both necessitates: MoMA needs not warehouse space, but department-store space. My only hope is that the American Folk Art Museum’s façade, an indentation in the midtown block’s façades that directs you into a small opening below the patina of its massive panels, can become part of whatever MoMA decrees. A memory of the particular kind of reaction to modernity that the American Folk Art Museum building represented should be part of the history that the mother ship of modernism preserves and shows. □

TEXT BY AARON BETSKY



→ Read more of Aaron’s design observations at ARCHITECT’s Beyond Buildings blog: go.hw.net/betsky.



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TEXT BY SHONQUIS MORENO
PHOTOS BY NOAH KALINA

IT WAS THE YEAR OF THE UGLY-BEAUTIFUL AT THE MILAN FURNITURE FAIR, THE WORLD'S LARGEST DESIGN EXPO. ZONA TORTONA, ONCE FERTILE GROUND FOR EXPERIMENTATION, HAS DEVOLVED INTO A CARNIVAL MIDWAY OF MARKETING. BUT AT THE FIERA, WHERE THE BIG BRANDS EXHIBIT, AND IN DISPLAYS DISPERSED THROUGHOUT THE CITY, A CERTAIN AMOUNT OF RISK-TAKING MADE THE 2011 FAIR ALL THE MORE INTERESTING FOR THOSE WILLING TO LOOK LONG AND HARD. ARCHITECT HAS DONE THE SEARCHING FOR YOU.

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AN





COMPLEX ↑

Over the length of her one-of-a-kind Mother of Pearl “textile frieze,” Danish designer Louise Sass laid down fields of color in seemingly random, staggered layers that shift to a more orderly repetitive pattern along the length of the cloth. Inspired by the dynamic surfaces of the Italian Baroque, which she thinks of as a “delicate grid” beneath her own composition, Sass has made a wholly modern print. danishcrafts.org, louisesass.dk

Dutchman Aldo Bakker has said of his designs, “Even when they are not used, they have something to say.” Jug, his recent, highly sculptural vessel for Particles Gallery in Amsterdam, seems to demonstrate just that. The voluptuous form could be construed as either fluid or flesh and can rest in two positions, with the pitcher mouth facing upward while in use or downward when empty. When facing downward, the pitcher attaches to its accompanying cup in a peculiarly tender fashion that suggests a creature sheltering its young. aldobakker.com

COMPANIONABLE ↓

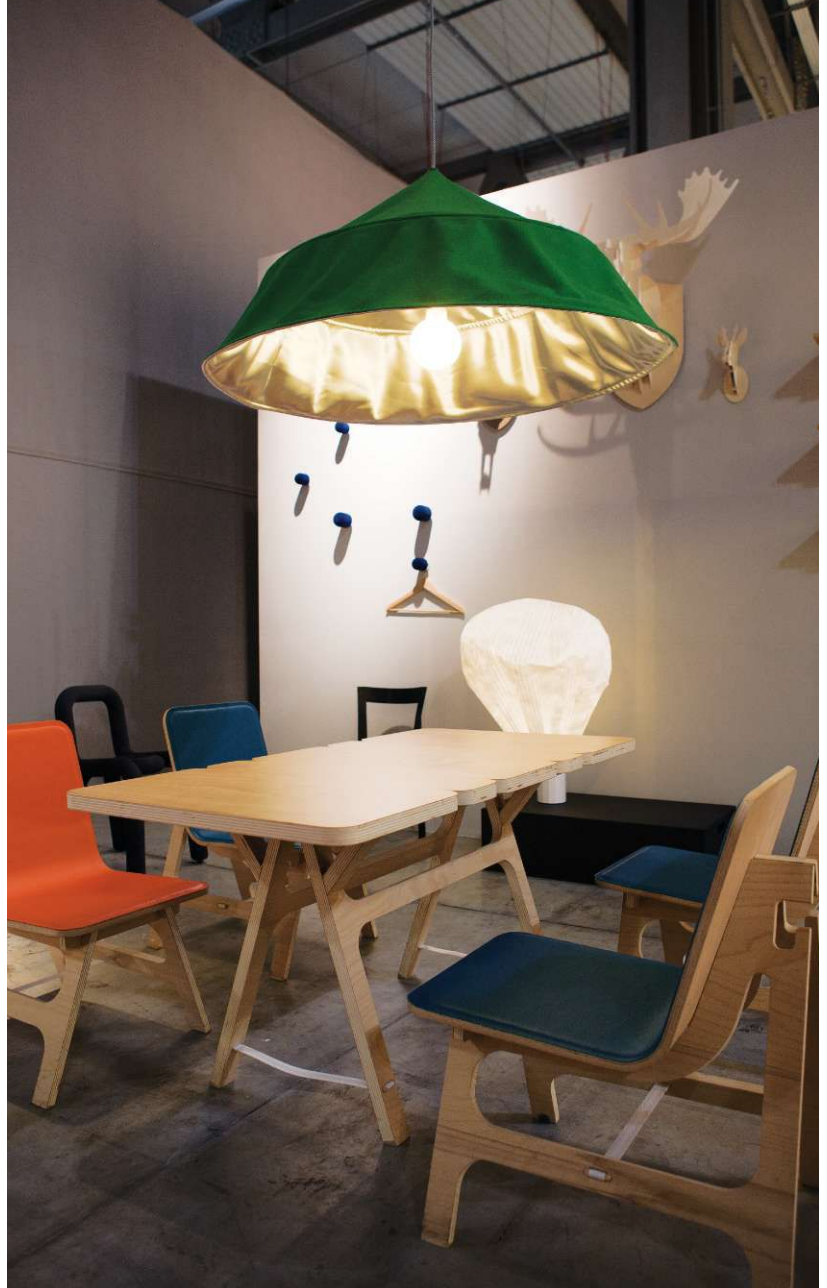


FRUGAL ↑

Paris-based Moustache introduced designs that riff on European furniture classics: François Azambourg’s Petite Gigue, a three-legged oak chair, and Matali Crasset’s Instant line (shown), consisting of a plywood trestle table and matching seats. The tabletop is made of pieces left over from the process of cutting the base. Waste not, want not. moustache.fr, azambourg.fr, matalicrasset.com

Hemp, that most ugly and clichéd of green materials, has been given new life in an aesthetically sustainable way. Werner Aisslinger’s Hemp Chair may be the world’s first natural-fiber monochair. Its cannabis fibers were molded under heat, using an eco-friendly adhesive, into a natural composite that looks great unfinished, and has the strength to cantilever in a swank, coolly laid-back curve. aisslinger.de

SMOKIN’ →







Last year, the four-man Swedish studio Brikolör paid for a fair booth in which the designers displayed nothing because, at the eleventh hour, they were unsatisfied with the quality of their prototypes. This year, the booth was crowded with finely crafted pieces such as the arched, modular, tricolor glass shelving, *Bågar*, which resembles a Roman aqueduct but comes in cheerful shades of pink and in tawny, transparent grays. brikolor.com



EXPERIMENTAL ↑

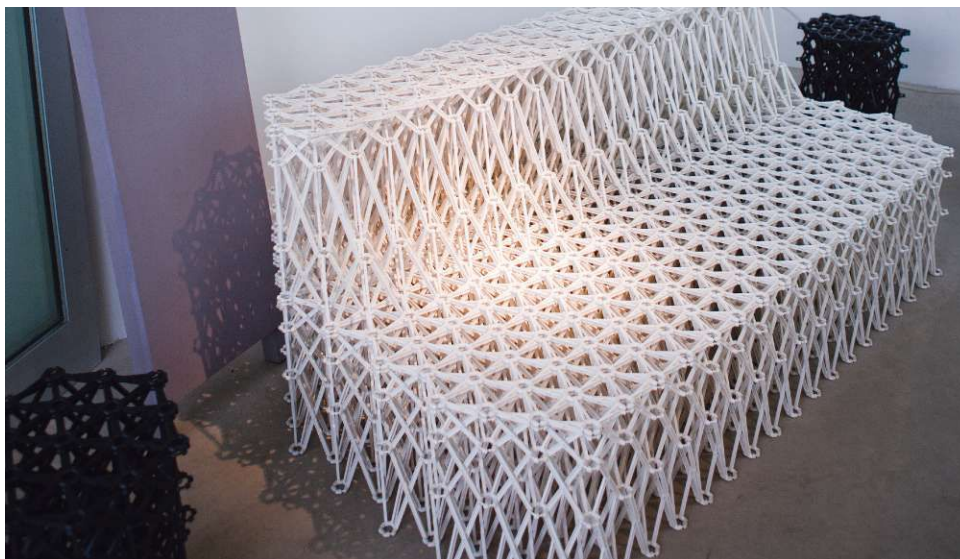
A display of student work from Jerusalem's Bezalel Academy of Arts and Design involved straightforward experiments with remarkable results: Ori Yekutiel has a patent pending on his stone-foam furniture-production technology while, using a microwave, Ori Sonnenschein made tableware from fruit rinds. Ronit Landsman, in a less pragmatic mood, made jewelry by mapping freckles. bezalel.ac.il



FLOWING ↑

The stackable Tip Ton chair, designed by British design darlings Edward Barber and Jay Osgerby for Vitra, resembles a sled with long runners and a diminutive backrest. Though not a rocking chair with great amplitude, the polypropylene Tip Ton can be set into motion with a gentle shift of one's weight. Because movement increases the flow of oxygen through the body, office workers or anyone who sits for extended periods will benefit from a little tippie now and then. www.vitra.com, barberosgerby.com

MODULAR ↓



Mechanical-engineer-turned-designer Yuya Ushida's XXXX series for Ahrend is made up of eight injection-molded recycled PET components, including rings, joints, and four different lengths of stick. When snapped together, the elements create a deep honeycomb pattern that can be formed into a sofa, stool, table, and other configurations. The stool can even be collapsed like a telescope for easy portage or storage. yuyavsdesign.com, ahrend.com





REDUCTIVE ↑

The lofty chambers of the 17th-century Palazzo Durini were illuminated by the Lit Lines family of rigidly linear, unembellished floor and pendant lights. In designing the brass fixtures, London-based Michael Anastassiades was inspired by trips to India, where he saw locals hang long fluorescent bulbs—bare, plastic-encased, mounted on brackets, or simply tied to buildings or trees. www.nilufar.it, michaelanastassiades.com

Nilufar, the Milan gallery that mounted the Palazzo Durini show (see above), achieved some awesome contrasts between the Baroque setting and contemporary furnishings: Ornate frescoes, for instance, became a backdrop for Studio Nucleo's pixel-ish console tables.

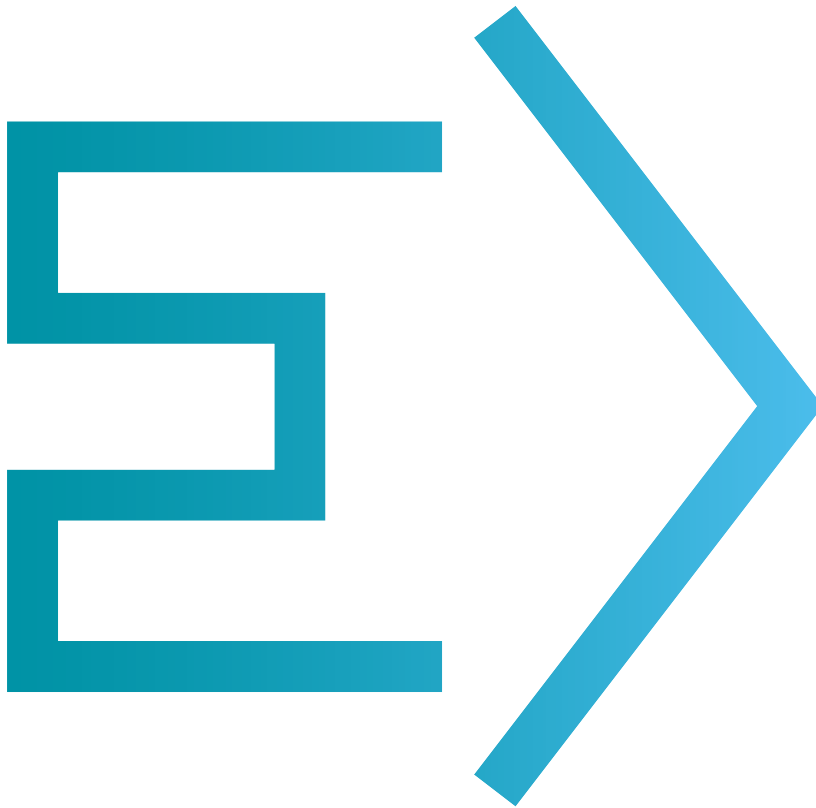
Each limited-edition piece is composed of 380 pigmented resin cubes. www.nilufar.com, nucleo.to

← PIXILLATED



STRUCTURAL ↑

Works by Patricia Urquiola appeared at seemingly every turn this year. For B&B Italia, the Milan-based, Spanish-born designer produced the quilted, Bucky Fuller-esque Husk armchair (shown). Equally striking is her chaise longue for Moroso, called Big Knit, which consists of a chunky wooden chassis strung with an industrial-scale stocking stitch made from "yarns" as wide as an arm. The stitch, vastly enlarged, serves as both surface and structure and gives new meaning to the term "cable knit." bebitalia.it, moroso.it



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→ DESIGN

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HINMAN RESEARCH BUILDING REHABILITATION AND ADAPTIVE USE

ATLANTA
LORD AECK & SARGENT IN COLLABORATION WITH OFFICE DA

TEXT BY VERNON MAYS
PHOTOS BY JONATHAN HILLYER

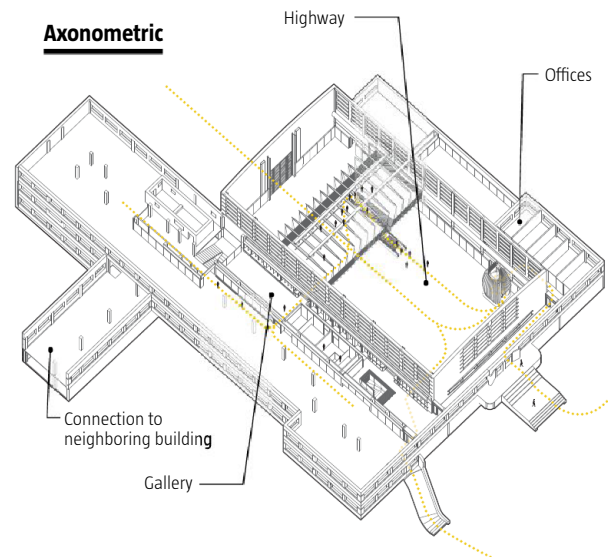


The Crib suspended over the studio floor



Interior stair

Axometric

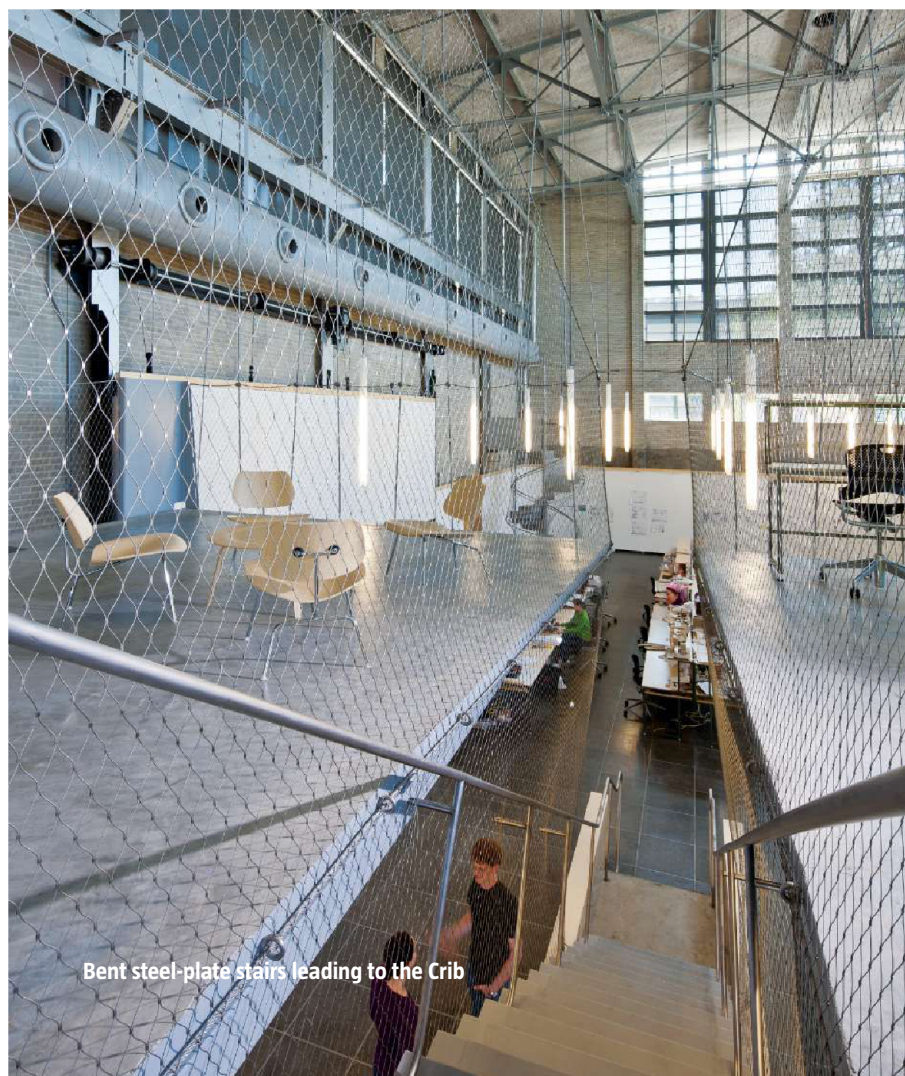


REPURPOSING BUILDINGS is becoming a linchpin of development on state college and university campuses, where shrinking capital budgets provide the impetus to find new uses for old structures, rather than building new ones, to house still-growing student populations. But the potential in this more-frugal approach was not lost on administrators at the Georgia Institute of Technology College of Architecture, whose expanding programs had the college bursting at the seams. An outdated building about to be vacated by the university's research institute turned out to be just the antidote to the space crunch; the college relocated its graduate design studios and labs into the newly renovated Hinman Research Building.

Originally opened in 1939, the Hinman Building was the first of several structures designed for Georgia Tech by Paul M. Heffernan, an architecture faculty member and, later, school director, who introduced Bauhaus-influenced functionalism to both the curriculum and the campus. With its 50-foot-high central volume, the "high bay," the Hinman Building had long served the schools of engineering and earth sciences as a center for full-scale research and prototyping. Now, its rehabilitation and reuse (which won a Progressive Architecture Awards citation; see *ARCHITECT*, February 2011) by Lord Aeck & Sargent, of Atlanta, in collaboration with Office dA, of Boston, has produced a vibrant new teaching space that reveals the construction methods of the old structure and provides a lab for the development of new technologies.

The job was advertised as a preservation project, says Jack Pyburn, FAIA, a principal at Lord Aeck & Sargent. And indeed, the shell of the building required concrete repairs, new precast sills, low-E glazing, and a roof replacement. But Pyburn says that it was the collaborative nature of the interiors work and the rich dialogue between preservation and design that made the project stand out.

His counterpart Nader Tehrani, principal in charge at

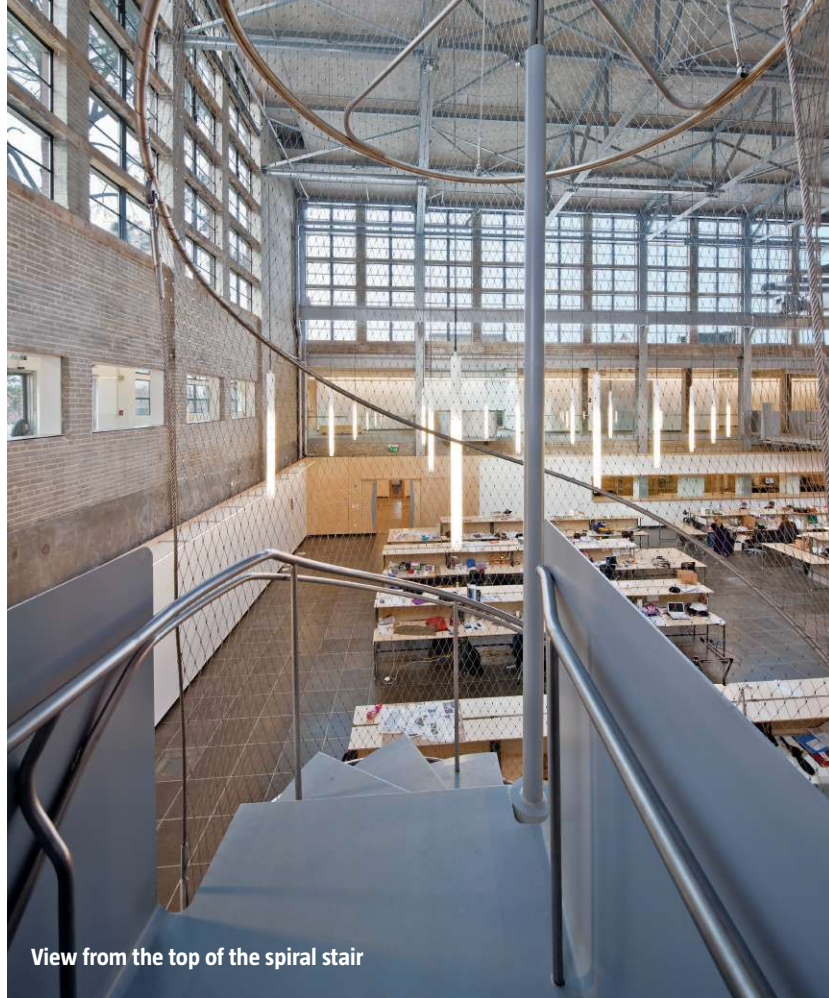


Bent steel-plate stairs leading to the Crib

Preceding spread: A stair linking the Crib to the floor below is supported on a single box girder that appears to peel down from the Crib's floor system. The stair itself is a series of welded, bent steel plates, bracketed by a stainless steel railing and draped with steel mesh. Interior staircases lead from the studio level to offices and galleries above.



Second-level gallery and corridor, with new balcony



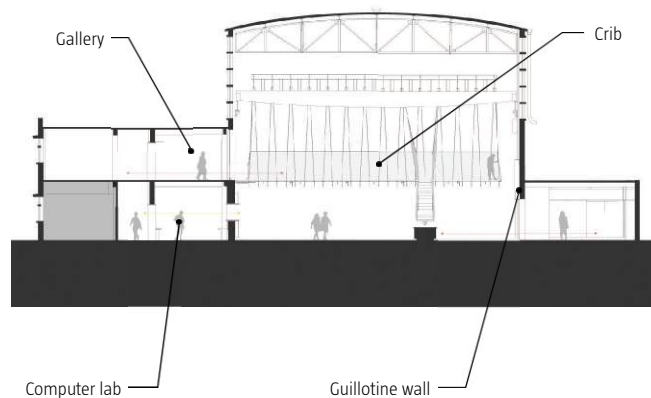
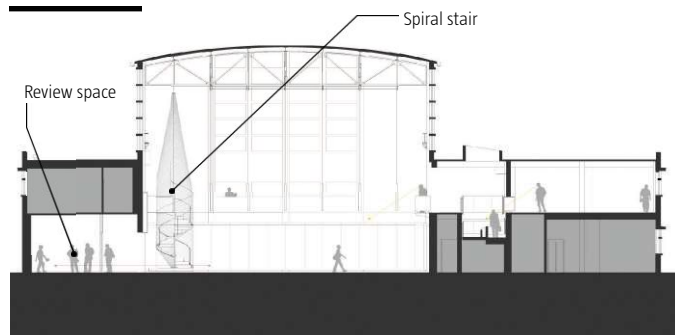
View from the top of the spiral stair

Office dA (and now partner of a new Boston-based firm, NADAAA, formed this year with Katie Faulkner, AIA, and Dan Gallagher), saw in the commission an opportunity to reinvigorate Heffernan's loft. Tehrani's first step was to analyze the building to identify key attributes for development. By far, he says, "The high bay and how to reinhabit it were number one." His central concept was to liberate the floor of the high bay to enable the room's use as a setting for design studios, lectures, movie screenings, parties, graduations, and large-scale prototypes and installations. The key to that strategy? Hang the essential new program elements from above.

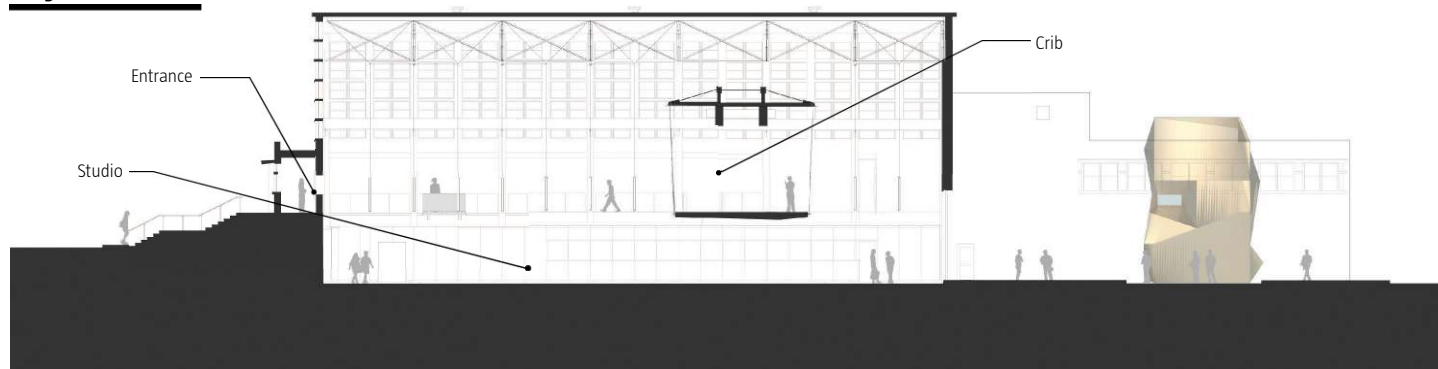
One of these elements is new lighting—suspended 4-inch-diameter acrylic tubes, each with four fluorescent lamps. The second is a 32-foot-long guillotine wall along the south wall that lifts via a series of pulleys to reveal a multipurpose space, which functions alternately as a venue for studio crits, exhibitions, or video projection. The third insertion, a spiral stair rising to a suite of third-floor faculty offices, occupies the space's southwest corner. Fabricated from a series of steel-plate risers welded to resemble a single folded surface, the stair appears to lift slightly off the studio floor on a wooden platform—a bit of conceptual sleight of hand. In reality, only its shroud of steel cable mesh, which has a spiraling stainless steel guide rail to lend it shape, hangs from the truss overhead.

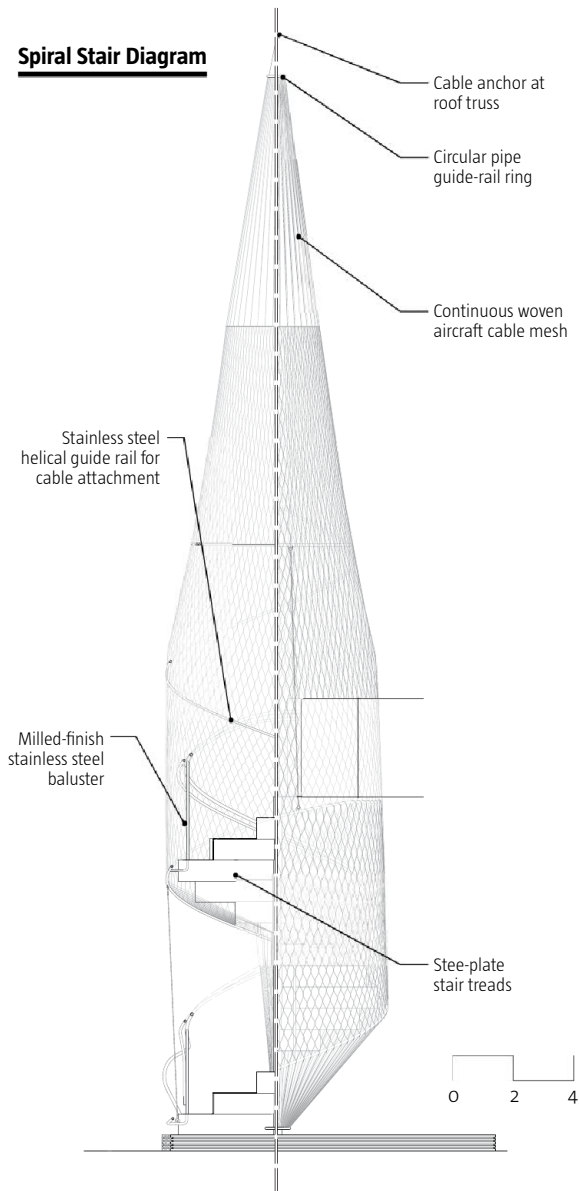
The fourth of the suspended elements—and the centerpiece of the interior—is the Crib, a 24-by-53-foot mezzanine supported by the building's beefy bridge crane, which once hoisted equipment and materials into the high-bay space. This flex-space addition delivers new

Cross Sections



Longitudinal Section

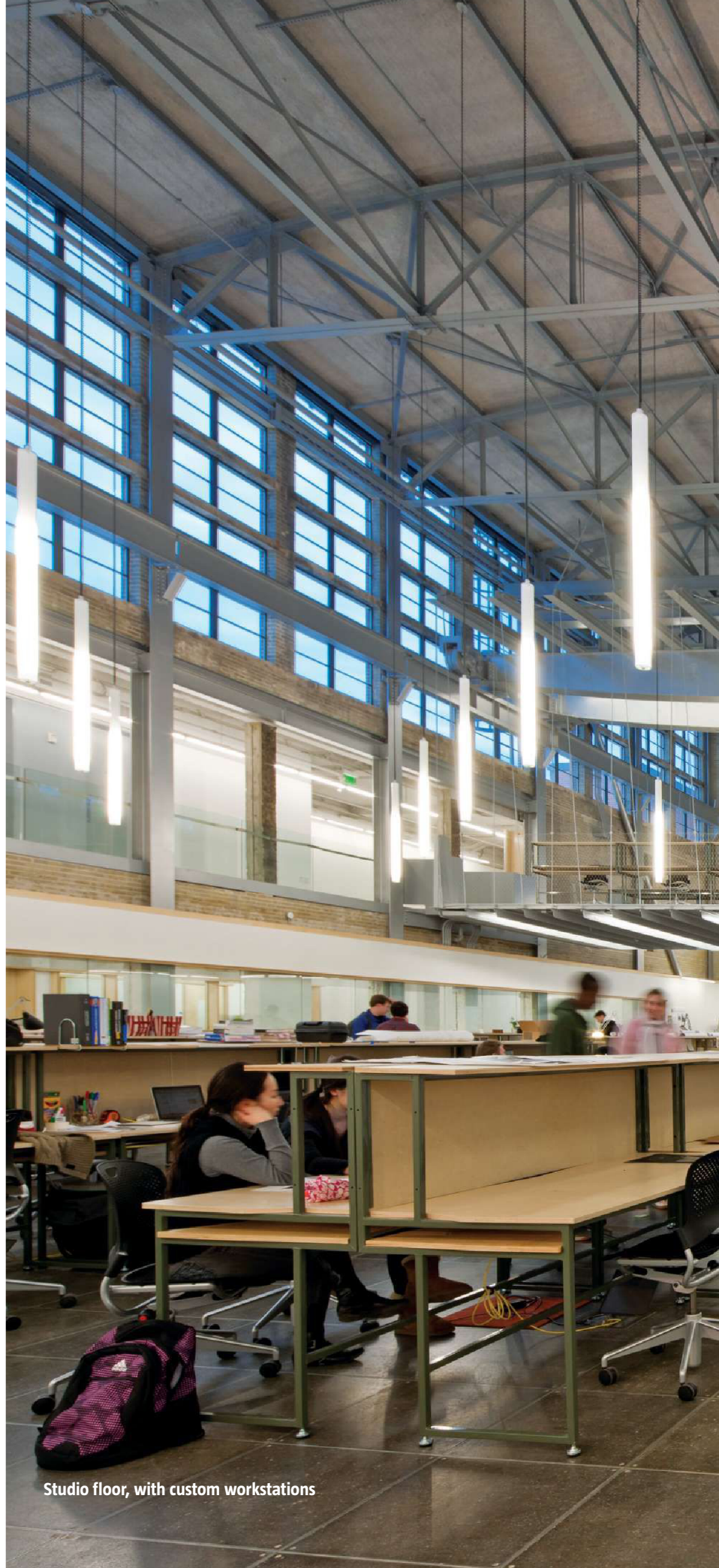


Spiral Stair Diagram

studio space and a student lounge, but can be pressed into service for end-of-semester exhibitions. Functionally, the Crib serves as the main circulation connector between the third-floor studios and gallery in the building's north wing and the second-floor studios in the high-bay space. (Renovated lower-level offices and labs in the north wing fill the building's first floor.)

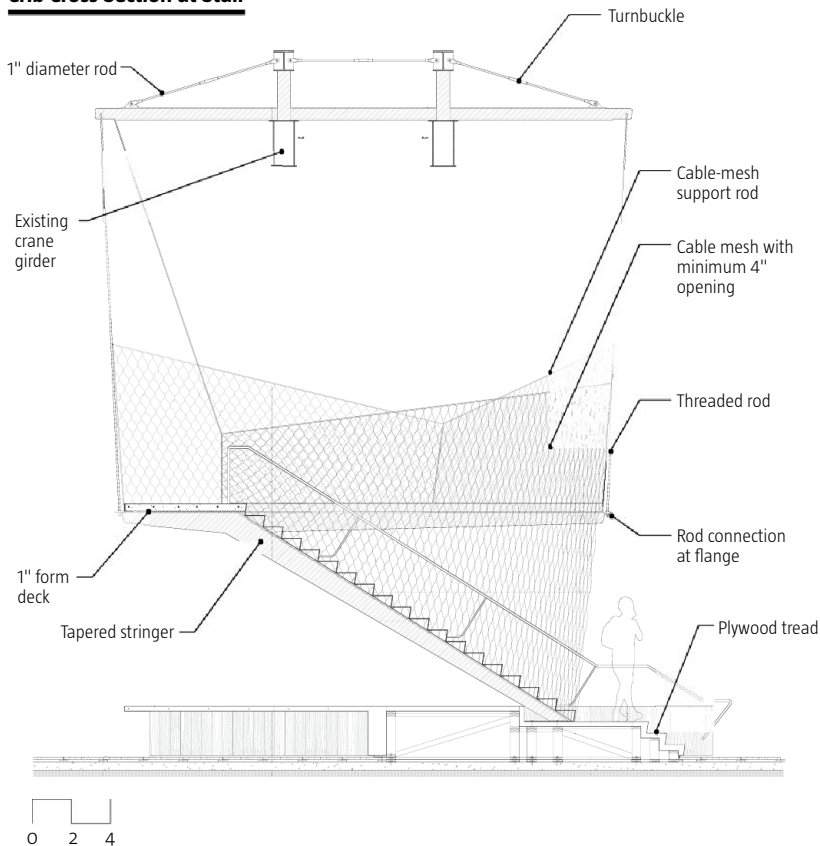
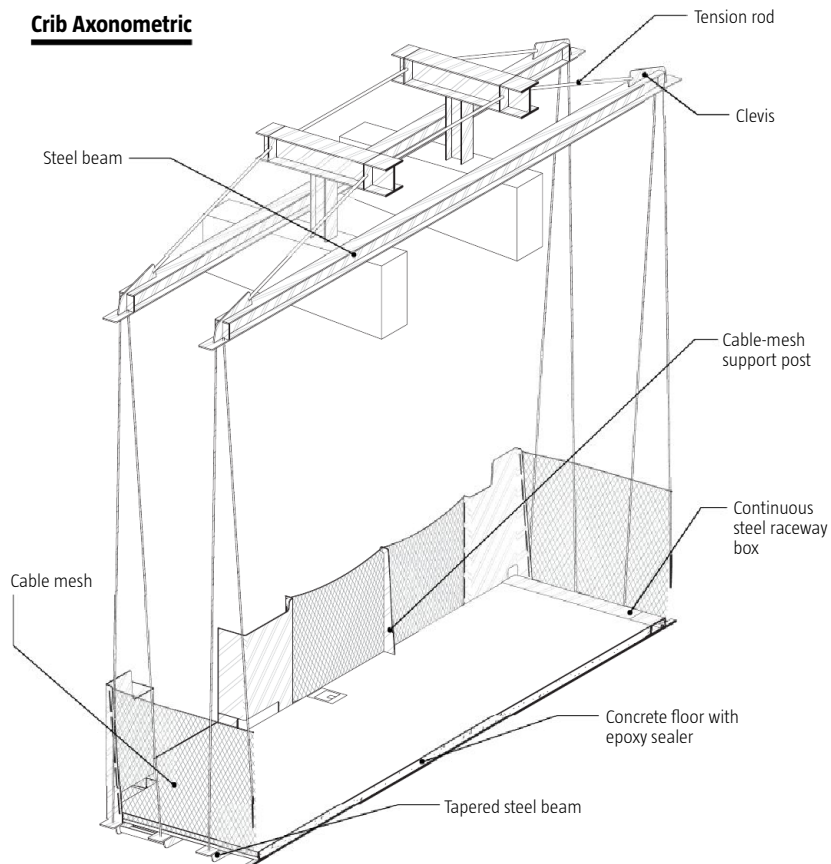
"What's important is how these four elements establish a dialogue with the building, its architect and its history," says Tehrani, who tends to intellectualize the Hinman Research Building as a didactic instrument—a real-world demonstration of how materials and technology join to make architecture.

Alan Balfour, Assoc. AIA, dean of the college, strikes a more visionary pose as he strides across the suspended mezzanine with his arms gesturing broadly to indicate the new possibilities presented by the high-bay studio. "Clearly the grand height suggests we can produce things that fill the space," Balfour enthuses. "The point is: What can you conceive of happening here that you couldn't do anywhere else?"



Studio floor, with custom workstations



Crib Cross Section at Stair**Crib Axonometric****TOOLBOX: THE CRIB**

A key goal in the renovation of the 1939 Hinman Research Building was to preserve what Nader Tehrani calls the “salient features” of its Bauhaus-inspired industrial aesthetic. In the impressive high-bay space, nothing speaks to the building’s industrial character as much as the 10-ton-lifted-load-capacity bridge crane originally installed to roll overhead along steel rails. The design team studied many alternatives for adding required new space to the building, ultimately arriving at the idea of suspending a new mezzanine—or “Crib”—from the crane.

The task was a design and technological challenge. “We didn’t want to oppose the existing context, we wanted to engage it,” says Tom Beresford, project coordinator for Office dA. At the same time, the team desired a minimalist, nonintrusive solution. Atlanta-based structural engineers Uzun & Case Engineers were key partners in developing several iterations of the Crib, refining the suspension system and pinpointing the necessary connections. To build the Crib’s structural system, the designers attached 14 steel outriggers to the top of the crane. Pairs of slender, 5/8-inch steel rods hang from the outriggers, connecting to 28 steel T-beams that run beneath the Crib. The profiled T-beams support 1-inch corrugated steel decking and a 4-inch-thick concrete slab on top with embedded electrical and data conduit.

The biggest technical challenge was reducing vibration in the suspended mezzanine. The original design placed two large steel beams on top of the crane to dampen vibration and to suspend the Crib below. When vibration levels were still perceptible, inconspicuous tie-ins to the building’s steel structure were added along the sides of the Crib as additional bracing. The renovation team fashioned safety railings from stainless steel cable mesh (X-tend Mesh by Carl Stahl DécorCable), which drapes off of heavier steel cables held to the suspension rods with stainless steel fittings. The Chicago office of German firm Officium Design Engineering generated 3D models to study the effect of the cable on the Crib structure, which must resist additional bending forces because of the weight of the mesh. Steel plates were welded to the corners of the Crib as a place to attach the mesh and help keep it taut.

Project Credits

Project Hinman Research Building Rehabilitation & Adaptive Use, Atlanta

Client Georgia Institute of Technology College of Architecture

Architect Lord Aeck & Sargent, Atlanta in collaboration with Office dA, Boston—Jack Pyburn, FAIA (principal, Lord Aeck & Sargent); Nader Tehrani (principal, Office dA); John Kisner, AIA (project manager, Lord Aeck & Sargent); Daniel Gallagher (project manager, Office dA); Karen Gravel, AIA (project architect, Lord Aeck & Sargent); Tom Beresford (project coordinator, Office dA); Tom Butler, Seth Hammonds, Jim Nicolow, AIA, Claire Oviatt, Cobb Quarles, Ben Ridderbos, Benjamin Scott, Jihan Stanford (design team, Lord Aeck & Sargent); Remon Alberts, Yousef J. Alsaleem, Marzouq A. Al-Mutairi, Arthur Chang, Brandon Clifford, Jeff Dee, Sarah Dunbar, John Houser, Pepe Giner Ivars, Samuel Ray Jacobson, Harry Lowd, Jonathan Palazzolo (design team, Office dA)

Structural Engineer Uzun & Case Engineers—James Case, John Hutton

M/E/P/FP Engineer EMC Engineers—Douglas Gray, Chip Tabor

Cable-Mesh Systems Consultant Officium Design Engineering—David Bradley, AIA

Concrete Repair and Rehabilitation Wiss, Janney, Elstner Associates—Paul Gaudette

Civil Engineer Haines Gipson & Associates—Robert McCann

Acoustics The Sextant Group—Brian Patrick

Construction Manager The Beck Group (millwork contractor and custom furniture contractor)—Bill Hicks (project executive); Brad Oliva (project manager); Troy Nixon (project engineer); Steve Wheeler (superintendent)

Structural Steel Subcontractor SteelFab

Masonry and Concrete Rehabilitation Subcontractor Southeast Restoration & Fireproofing Co.

Steel Window Fabrication and Repair Subcontractor Southern Machine Specialists

Glazing Subcontractor Trainor Glass Co.

Framing and Drywall Subcontractor Mulkey Enterprises

Mechanical Subcontractor Ragan Mechanical Contractors

Electrical Subcontractor MetroPower

Fire Protection Subcontractor Century Fire Protection

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Construction Cost \$8.5 million

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RDH ARCHITECTS AND DAVID PREMI ARCHITECTS

TEXT BY CAIA HAGEL
PHOTOS BY TOM ARBAN





Images of books both opened and closed were abstracted into a frit pattern that, combined with color-changing LEDs, creates a vibrant new façade for the existing Neo-Brutalist structure. The primary entrance to the farmers market is on the northeast corner (this image). A secondary entrance on the northwest corner (opposite) is marked by a projection wall where large-scale artwork can be displayed.

WHEN ROUNTHWAITE DICK AND HADLEY ARCHITECTS (RDH) and David Premi Architects (dp.Ai) took on the renovation of and addition to the uniquely conjoined Hamilton Farmers Market and Central Public Library, in Hamilton, Ontario, Canada, they had the task of creating a dialogue between two very different and seemingly unrelated public spaces. The farmers market has been operational on the downtown site for 150 years, but the two typologies have been sharing their awkward fate since 1980, when a new building went up and the library moved in.

“The building itself was challenging to work with,” says Tyler Sharp, an associate at RDH and the project designer. “It was a mass of dilapidated Neo-Brutalist concrete that offered little opportunity for structural modification.” His solution was to strip the building back to its skeleton, and clean, restore, and polish the surface of the original structure so that existing floor slabs and air ducts became functional aesthetic features. A new LED-lit glass façade joins the library and the market with a common skin; the social programs of each entity can now operate in dialogue with one another.

Occupying the northeastern end of the building, the split-level farmers market sprawls simultaneously downward to a lower level and

upward to the slightly elevated ground floor. The architects rearranged the stalls, and added a glass elevator, glass stairs, and a continuous retractable glass vestibule (with street-level cafés and food stalls that invite the outside in).

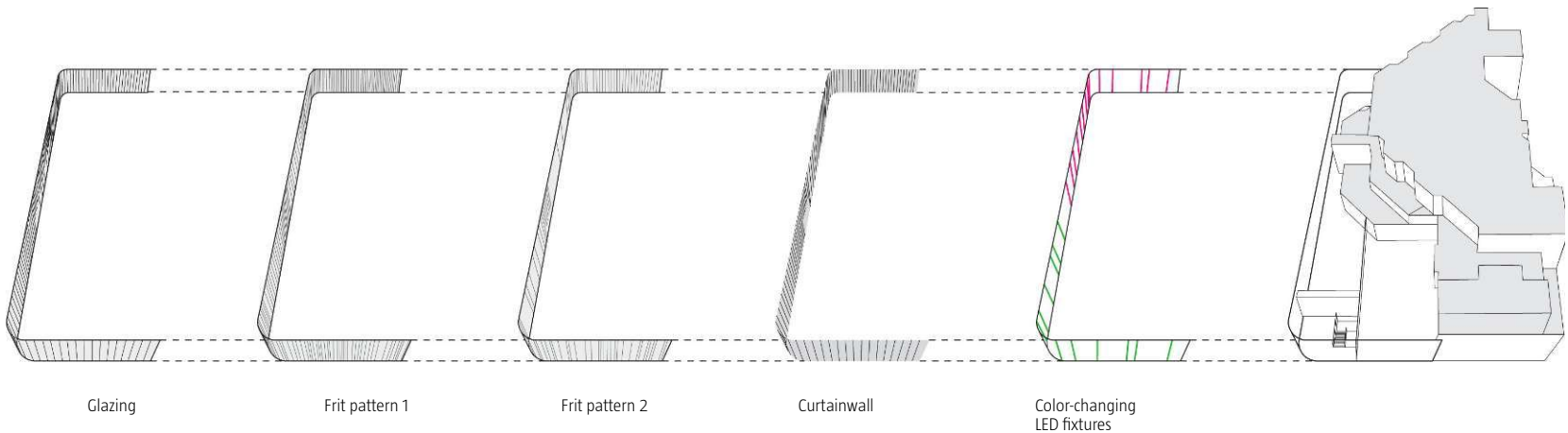
The ground floor of the public library floats above the market and is separated by a glass partition, which is a fire-rated partition that blocks market noise while allowing views to the street and cityscape beyond. “The resulting open space elevates the people and the material in all sectors; they provide the color in the program like in an art gallery or a museum,” says chief librarian Ken Roberts.

“Functionally, the openness and visibility of the plan makes it a unique and expressive environment that is highly legible to the user,” David Premi, partner at dp.Ai, says. “Very minimal signage and wayfinding is required for visitors to remain oriented.”

The new glass façade—an energy-efficient double-glazed envelope that stretches the length of a city block—reflects the overarching aim of combining two typologies and inner and outer urban spheres in a single contemporary building. At street level, the low-iron, ultra-clear glass zeroes out so that the interior floor meets the exterior sidewalk



Curtainwall



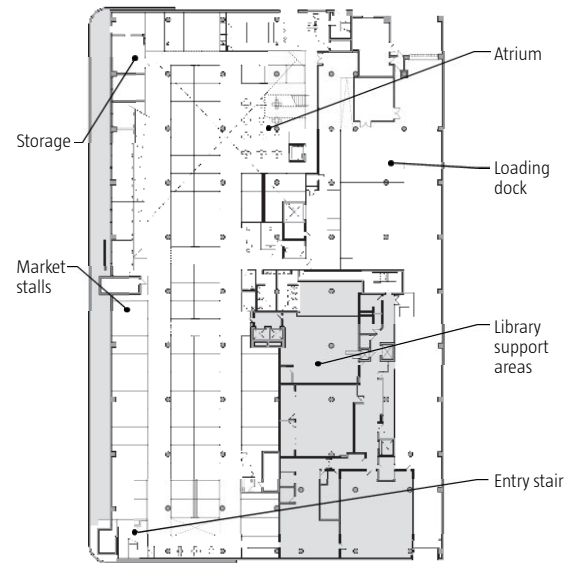
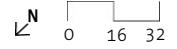
DESIGN → RDH AND DP.AI

Color-changing LED fixtures are affixed to the inside of the curtainwall. The light reflects back into the library entrance vestibule (this image). The ground floor is actually slightly above grade, and accessed by concrete ramps and stairs; a glass wall by the stairs has a holographic film that allows it to double as a projection screen. A green wall (opposite) filters air before it returns into the HVAC system.

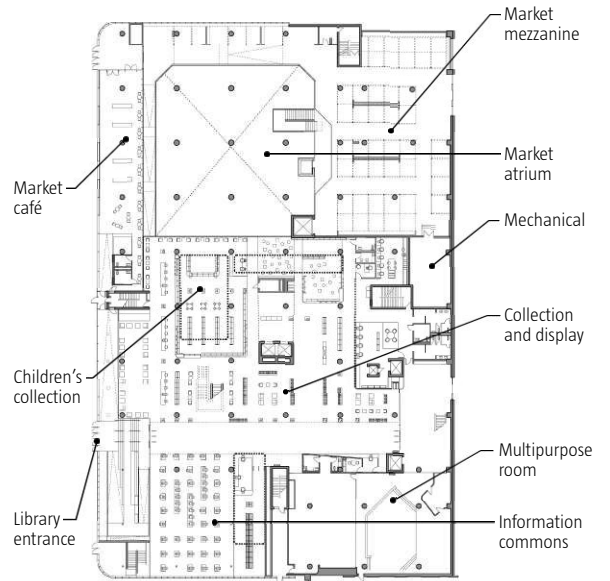




Lower-Level Plan



Ground-Level Plan





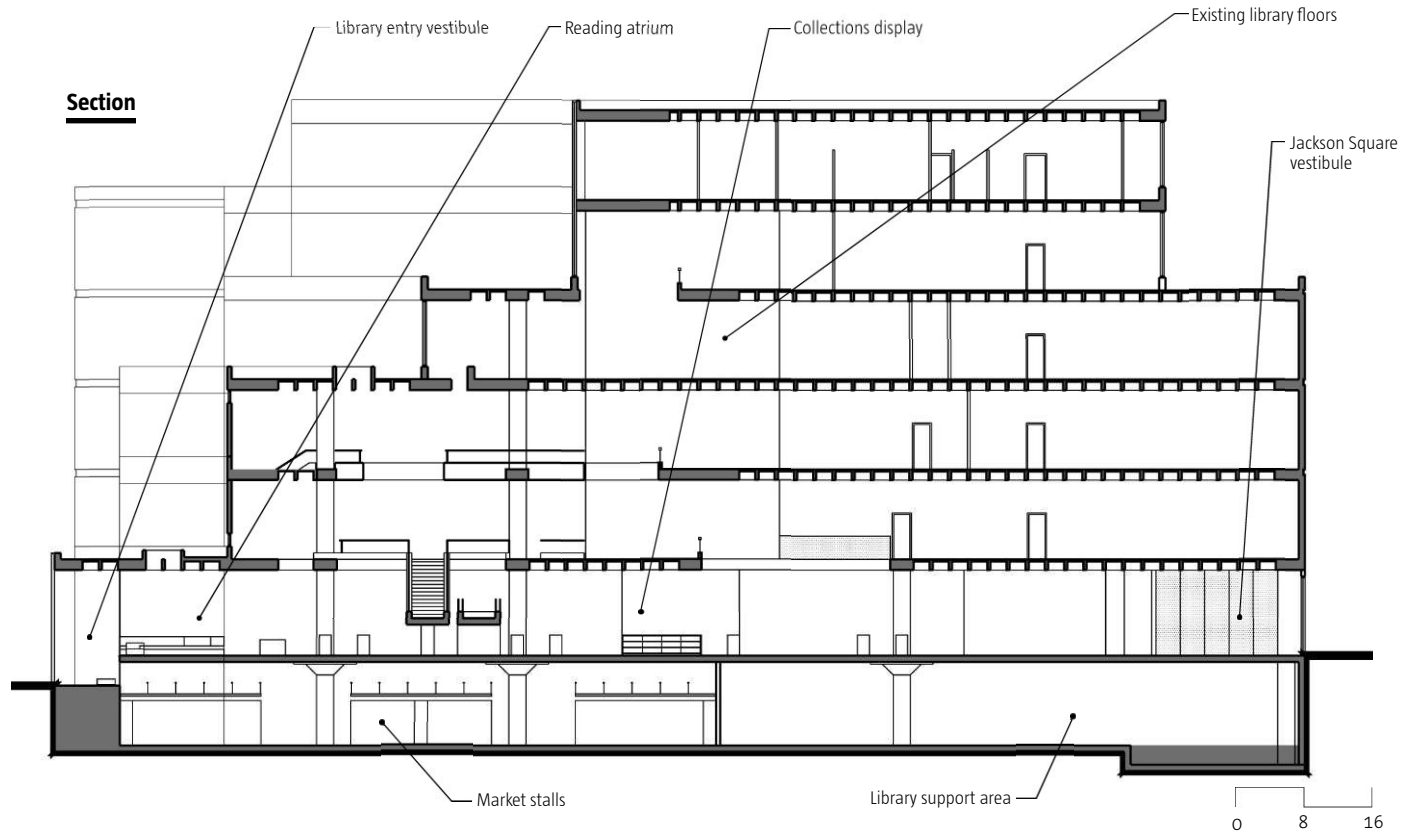
in seamless transition. Color-changing LED fixtures programmed with a predetermined display pattern are integrated into the curtainwall system; the light moves in a slow pulse that mimics the indicator light on a sleeping MacBook. While the farmers market is rife with the colors of food, flowers, and shoppers, the ground floor of the library is alive with technophiles, and the films and artworks projected onto three holographic-filmed glass walls are visible from outside at night. The overall effect “feels like walking through an iPod Touch. It reflects the Apple lifestyle,” says Roberts.

Technology looms large in the library, where a radio frequency identification system of self-check-in and -checkout obviates the need for traditional check-in desks; after being returned, books and other materials proceed via a conveyor belt down a glassed-in ramp and into the basement where they are sorted into bins. A new efficient no-software computer system has allowed the library to increase ground-floor computer terminals to 50, filling the space with a high-tech hum.

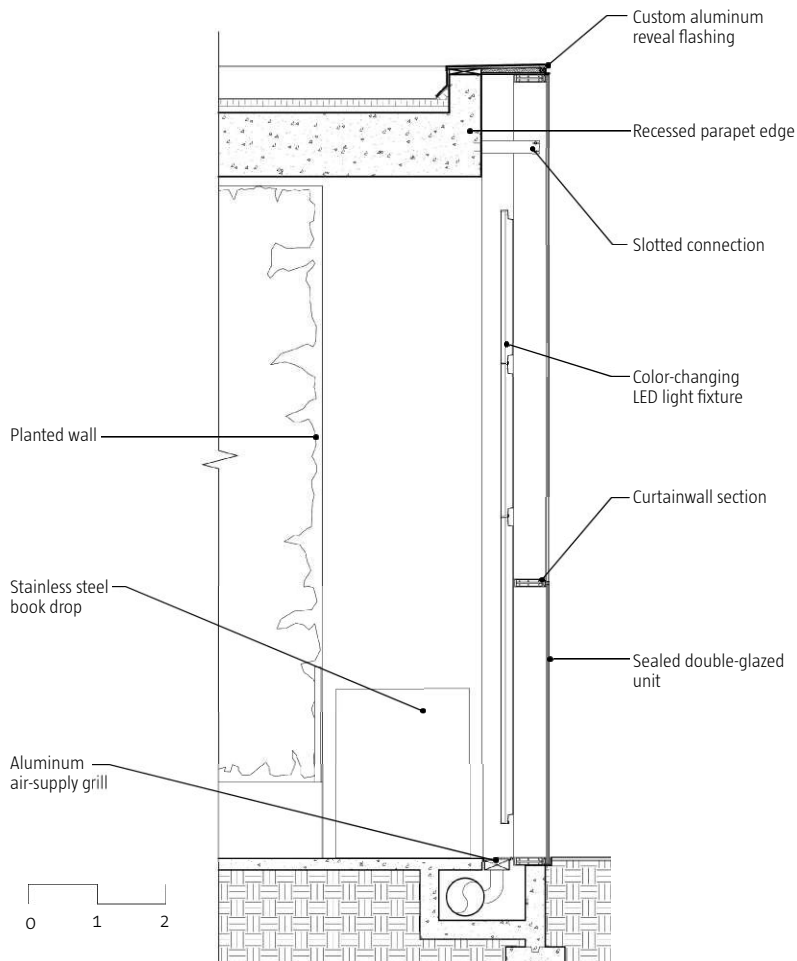
The heaviness of the concrete ceiling, walls, and floor is diminished by their polished finish and by a dimmable indirect lighting system that harvests daylight and reflected light. Elements such as a fireplace in the information commons and an aquarium in the children’s section—which boasts a recycled rubber floor and custom canary-yellow chairs—create an inviting living-room-like feel. All of this has helped increase circulation twofold. “People stop and talk, people stay all day,” Roberts says, delighted. “People say ‘I’ll meet you at the library.’”



A major goal of the design was to connect the market and library as they never had been before. An atrium allows views between each—the best are from the library's children's section and perimeter circulation ramps (this image). A glass firewall prevents the noise of the market from echoing into the quiet library beyond. Exposed ductwork (opposite) snakes under and around the newly reworked floor plates.



Curtainwall Section



Project Credits

Project Hamilton Farmers Market and Central Public Library, Hamilton, Ontario, Canada

Client City of Hamilton; Hamilton Public Library

Design Architect RDH Architects, Toronto—Bob Goyeche (partner); Tyler Sharp (associate, project designer); Cara McKibbin, Bunty Sambhi, Scott Waugh (project team)

Prime Consultant David Premi Architects, Hamilton, Ontario, Canada—David Premi (partner); Sam Garagello, Magdalena Kieslowski (project team)

Mechanical/Electrical/Structural Engineer Group Eight Engineering

General Contractor Kemp Construction

Lighting Designer Group Eight Engineering

Size 59,471 square feet

Cost \$13 million CAD (\$13.29 million U.S.)

Materials and Sources

Acoustical System Decoustics decoustics.com

Appliances Sub-Zero subzero.com

Concrete LaFarge lafargenorthamerica.com

Exterior Wall Systems Ferguson Nuedorf Glass fnglass.com

Fabrics and Finishes Ferguson Nuedorf Glass fnglass.com

Flooring Compass Flooring compassfloor.com

Furniture Ital Interiors italinteriors.com; Capellini cappellini.it

Glass Ferguson Nuedorf Glass fnglass.com

Lighting-Control Systems Philips Color Kinetics colorkinetics.com

Lighting Philips Color Kinetics colorkinetics.com; Metalumen Manufacturing metalumen.com; Phillips Lighting lighting.philips.com

Seating Ital Interiors italinteriors.com; Capellini cappellini.it

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926



184



HOUSE OF AIR

SAN FRANCISCO
MARK HORTON / ARCHITECTURE

TEXT BY LISA FINDLEY
PHOTOS BY ETHAN KAPLAN PHOTOGRAPHY

THE OWNERS OF House of Air, two 30-something snowboarding entrepreneurs, happily build upon the flight connotations of their new home: a 1921 biplane hangar converted into what they call an indoor trampoline park. The staff wear reflector-embellished fluorescent nylon vests with “FLIGHT CREW” stenciled on the back. When asked the meaning of their logo—a penguin sporting a jetpack—employees recite their tagline with a grin: “We give flight to the flightless.”

Labeled with military flatness, Building 926 is part of a complex of hangars and support buildings tucked in the shadow of the Golden Gate

Bridge in San Francisco. Crissy Field, as the area is called, was added to the sprawling Presidio military base on the heels of World War I and played host to a number of aviation firsts before rapidly evolving airplane technology rendered its short field and windy, foggy locale operationally obsolete.

Decommissioned in 1994, the Presidio became part of Golden Gate National Recreation Area. Many of its buildings, including 926, were designated as historic by the National Historic Landmarks Program, which severely limits modifications to the exterior of the buildings, even



as the nonprofit Presidio Trust requires LEED certification for any new work on the property.

Mark Horton / Architecture was recommended to the trampoline park's owners because of the firm's studies for an unrealized aviation museum in the Crissy Field buildings. Moreover, principal Mark Horton, FAIA, is a strategic thinker who thrives on projects that require industrious invention on tight budgets, a good thing given that half the budget was required to seismically upgrade the light, steel structure holding up the original 6-inch-thick and supposedly bombproof concrete roof. Another quarter of the budget was required for extensive remediation of asbestos and other toxics.

"These guys came to us just wanting to get it built out and up and running. They had no real vision about the design," Horton says. The architect convinced his clients to spend what was left of the budget on two key ideas: First, a massive 45-foot-wide bifold glass door to replace the original hangar door; second, a pair of interior pavilions framing the most visible of four trampoline areas. The north pavilion contains the check-in station, a café, a shop, and the shoe room (trampolining, like

bowling, requires special footwear). The south houses bathrooms and locker rooms.

Given the soaring ceiling, Horton included a set of party rooms and offices on an upper level, serviced by a lift and stairs and connected by a series of catwalks. The catwalk system extends to allow a lively overview of the action on all the trampolines. The full-height pavilion walls are simple white sheetrock for the first 9 feet, they then switch to vivid, blue Polygal affixed to metal studs. Sandwiched in the Polygal wall are randomly scattered, vertically oriented fluorescent lights that urge the flyers ever higher and give the entire park a blue glow.

The flightless who take flight on the trampolines at the House of Air range from eight-year-olds burning off steam to adult snow- and skateboarders perfecting their technique. On a typical day, a group of women take aerobics on the field of trampolines that occupies the back third of the hangar; office workers engage in a (mostly) friendly game in the steep-sided dodgeball stadium that occupies the one side of the middle trampoline zone; and a family out for a day of recreation uses the inflatable bounce house (for those too young for the tramps).



House of Air is located in a former airfield (preceding spread), part of a burgeoning sports district that includes a bike shop, a rock-climbing gym, and a swimming pool. The facility is marked by a 45-foot-long glass bifold door (opposite) that allows passersby to see people training on three high-performance trampolines (this image).

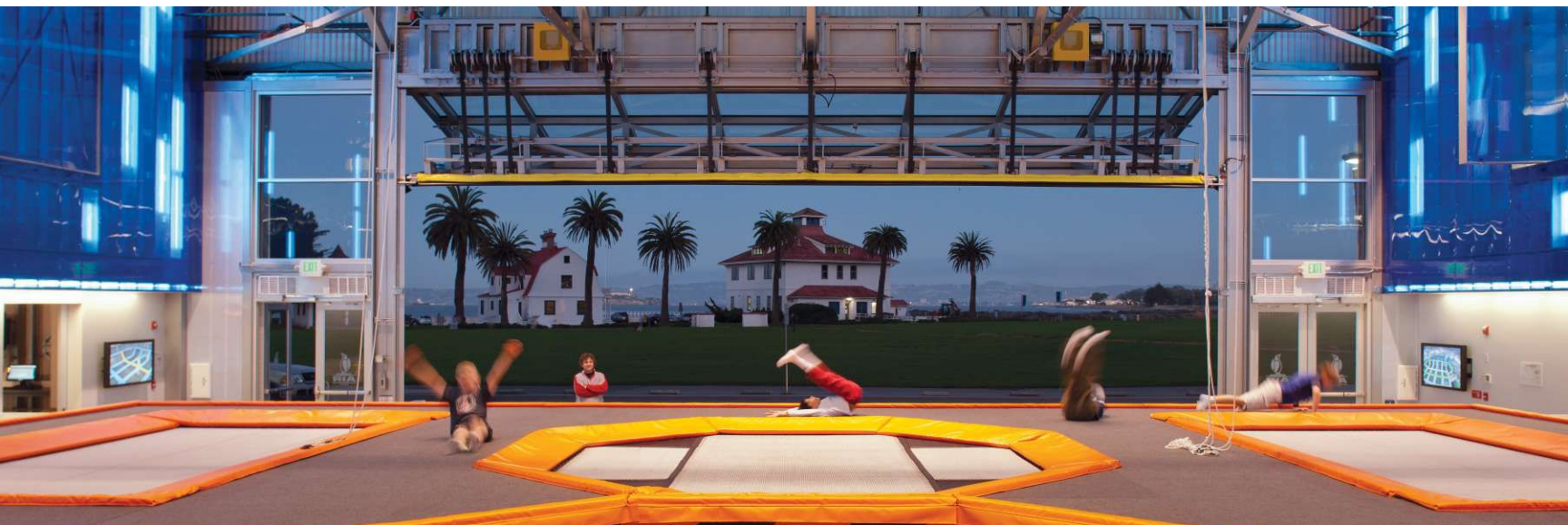


Blue backlit Polygal walls brighten the interior and create brand identity (above). Pivot doors in the upper-level party rooms (right and opposite) allow groups to shut off or take in the raucous atmosphere below.

For those abstaining from jumping, there is a lounge eclectically furnished with Ikea couches, aluminum picnic tables, plastic children's tables, and four old ski-lift chairs suspended from the underside of the catwalk. Finally, front and center, are flyers using three high-performance trampolines, known as the Training Ground, for lessons, and competitions.

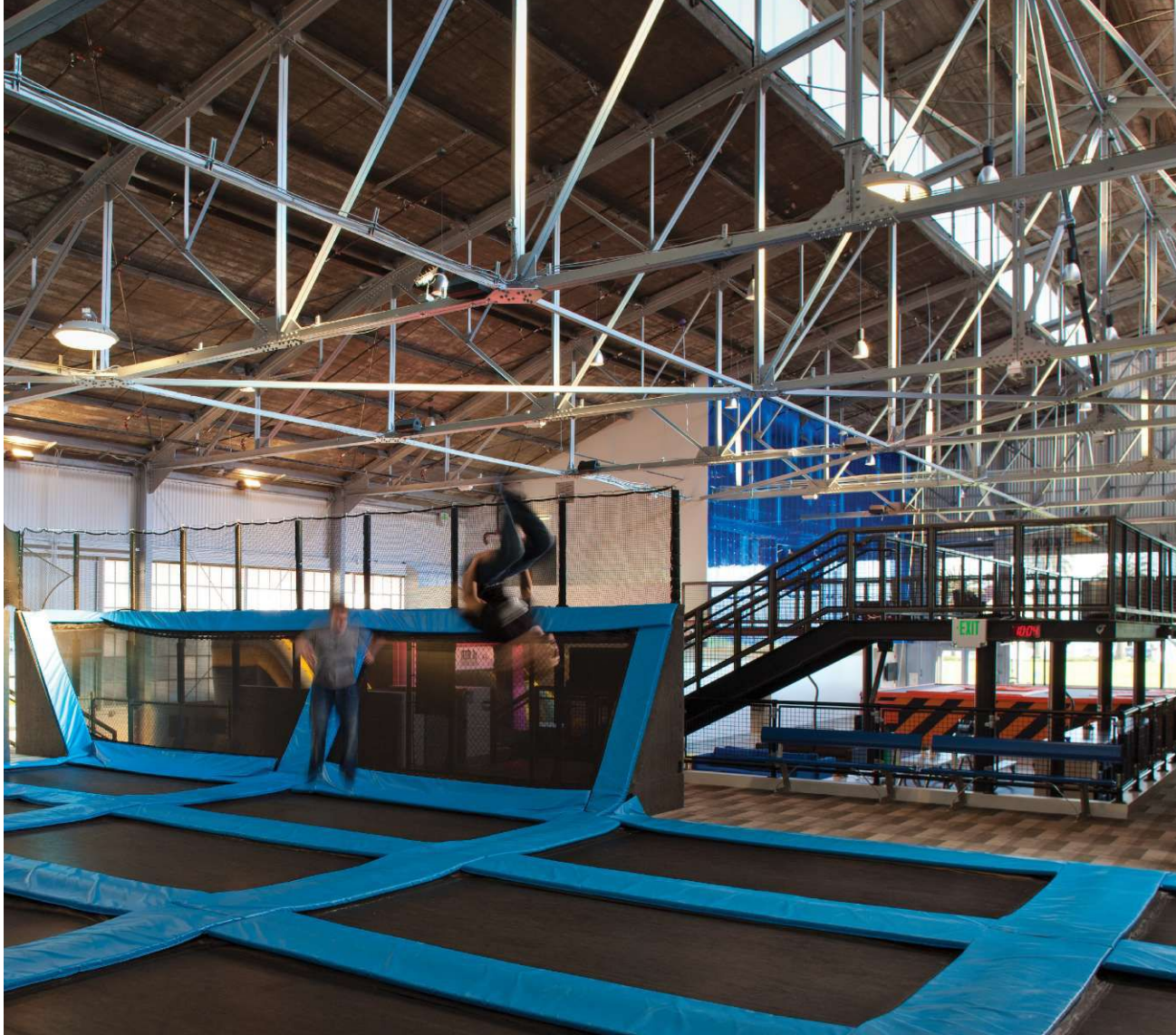
In nice weather, the bifold door is opened. Exterior signage was severely limited by the historic protocols, but the House of Air needs no other sign than its glowing interior. "We had no idea what a great design could do for us," says co-owner Paul McGeehan. "Within three days of opening, we were operationally profitable."



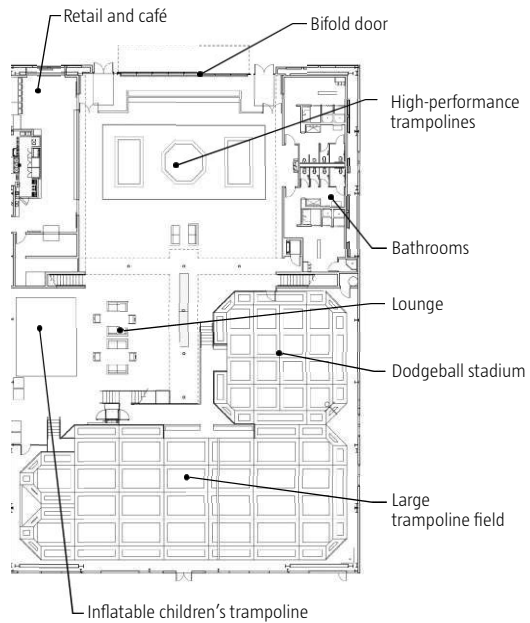




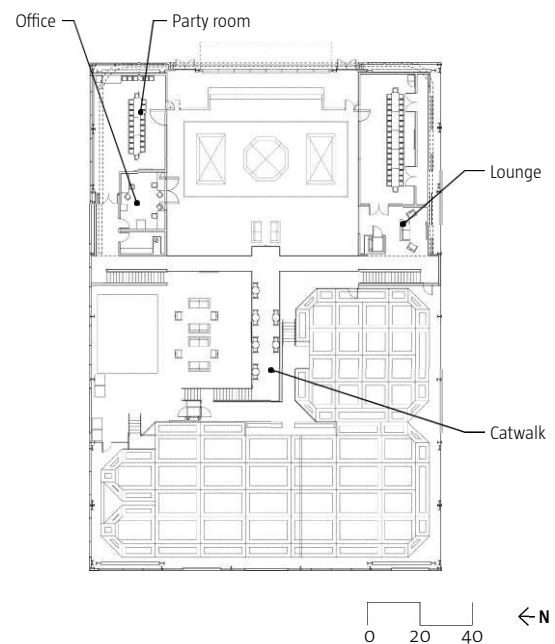
Catwalks (this image) provide access to upper-level party rooms and offices, but also afford views of all four trampoline areas: the Training Ground in the front, the green, net-enclosed dodgeball stadium and inflatable bounce-house in the middle, and the large blue field of trampolines (opposite) in the rear.

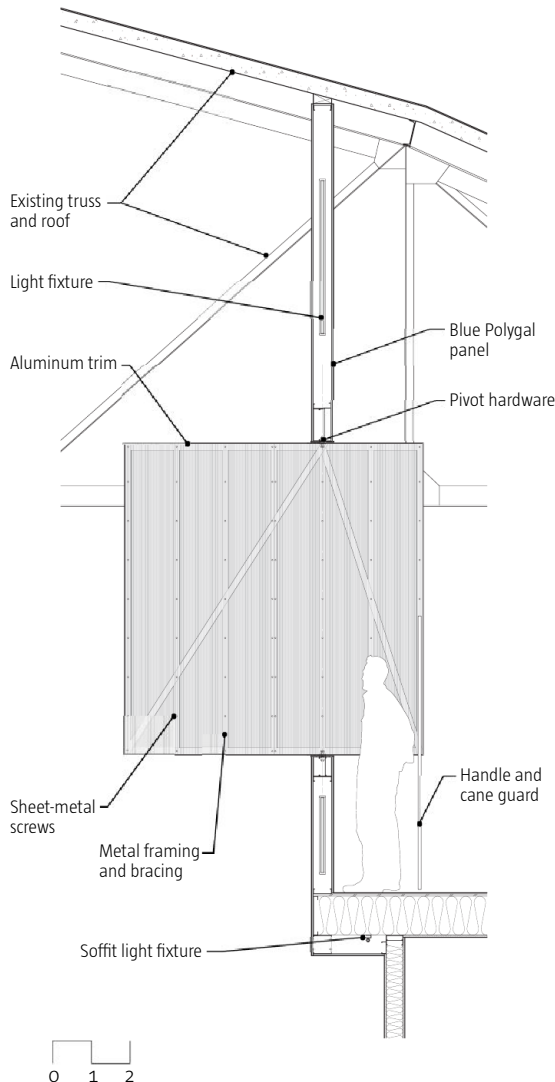


Lower-Level Plan



Upper-Level Plan



Wall Section**Project Credits**

Project House of Air, San Francisco
Client House of Air
Architect Mark Horton / Architecture, San Francisco—Mark Horton, FAIA (principal); David Gill (project architect); Matt Shanks (designer)
Mechanical Engineer Allied Heating and Air Conditioning Co.
Structural Engineer Holmes Culley
Electrical Engineer Cupertino Electric
General Contractor Hathaway Dinwiddie Construction Co.
Lighting Designer Associated Lighting Representatives
Fire Consultant Holmes Fire & Safety
Graphic Designer Mine SF
Plumbing Engineer DPW
Owner's Representative Studley Project Management
Size 21,440 square feet
Cost Withheld

Materials and Sources

Adhesives, Coatings, and Sealants Sika usa.sika.com
Appliances True Manufacturing Co. truemfg.com; The Manitowoc Co. manitowoc.com; Nuova Simonelli nuovasimonelliusa.com
Carpet Tandus Flooring tandus.com
Concrete Structural grade slab, footings, and wall repairs
Flooring Azrock azrock.com
Furniture Ikea ikea.com
Glass PPG Industries ppg.com
Gypsum National Gypsum Co. nationalgypsum.com
HVAC Carrier Corp. www.corp.carrier.com; Titus titus-hvac.com
Insulation Owens Corning owenscorning.com
Lighting-Control Systems WattStopper wattstopper.com
Lighting H.E. Williams hewilliams.com; Finelite finelite.com; Solis; Philips Omega omegalighting.com; Visa Lighting visalighting.com
Metal Structural steel; Anodized aluminum

Millwork Commercial Casework commercialcasework.com
Paints and Finishes Kelly-Moore Paints kellymoore.com
Plumbing and Water System Zurn Industries zurn.com; Elkay Manufacturing Co. elkay.com; Florestone florestone.com
Roofing Siplast siplast.com
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Walls Polygal North America polygal-northamerica.com
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→1991 P/A AWARDS CITATION

ABSORBING EXISTING INTO NEW

ARCHITECTS **KOHN PEDERSEN FOX** INTEGRATED OFFICE BLOCKS BY BUNSHAFT AND KLING INTO THE FULL-BLOCK WORLD BANK COMPLEX.

TEXT BY JOHN MORRIS DIXON, FAIA

1991 P/A Awards Jury

Dana Cuff
Ralph Johnson, FAIA
Rem Koolhaas
Eric Kuhne
Dean Macris
Samuel Mockbee
Adele Santos, FAIA
Donald Watson, FAIA

THE WORLD BANK HEADQUARTERS, which fills an entire city block near the White House in Washington, D.C., is a rare combination of new and old structures. Designed by Kohn Pedersen Fox Associates (KPF) of New York with D.C.-based KressCox Associates, the complex incorporates two earlier increments of the World Bank's expansion, one by Gordon Bunshaft of Skidmore, Owings & Merrill and one by the office of Vincent G. Kling, FAIA, which together covered about half the block. The KPF-designed construction (completed in 1997) was calculated, in both its volumes and its surfaces, to look like two more increments roughly comparable to the existing ones. The result, though subtly varied, looks as if it was all built at one time. The blurring of the distinction between old and new dominated the awards

jury's discussion. Juror Rem Koolhaas found it "both very intriguing and at the same time vaguely sinister."

The architects had won this commission through an international design competition between eight finalist teams. Major factors in the competition jury's choice were the retention of the existing buildings and the creation of a 150-foot-square skylit atrium at the center of the block. An exhilarating space, the atrium became a favored setting for Washington gatherings. Sedyá Kocer, AIA, the bank's senior project manager since its construction, reports that "minor interior adjustments" have been required to keep pace with technology and that building security has had to be enhanced. But, she says, "the integrity of timeless architecture" has been maintained. □

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