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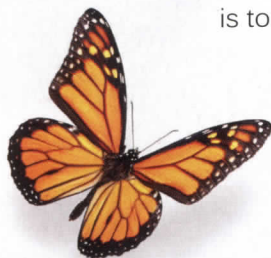
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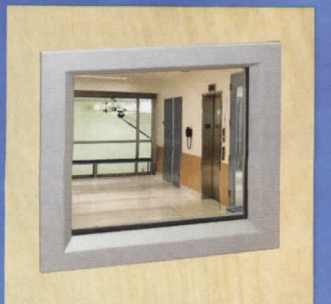
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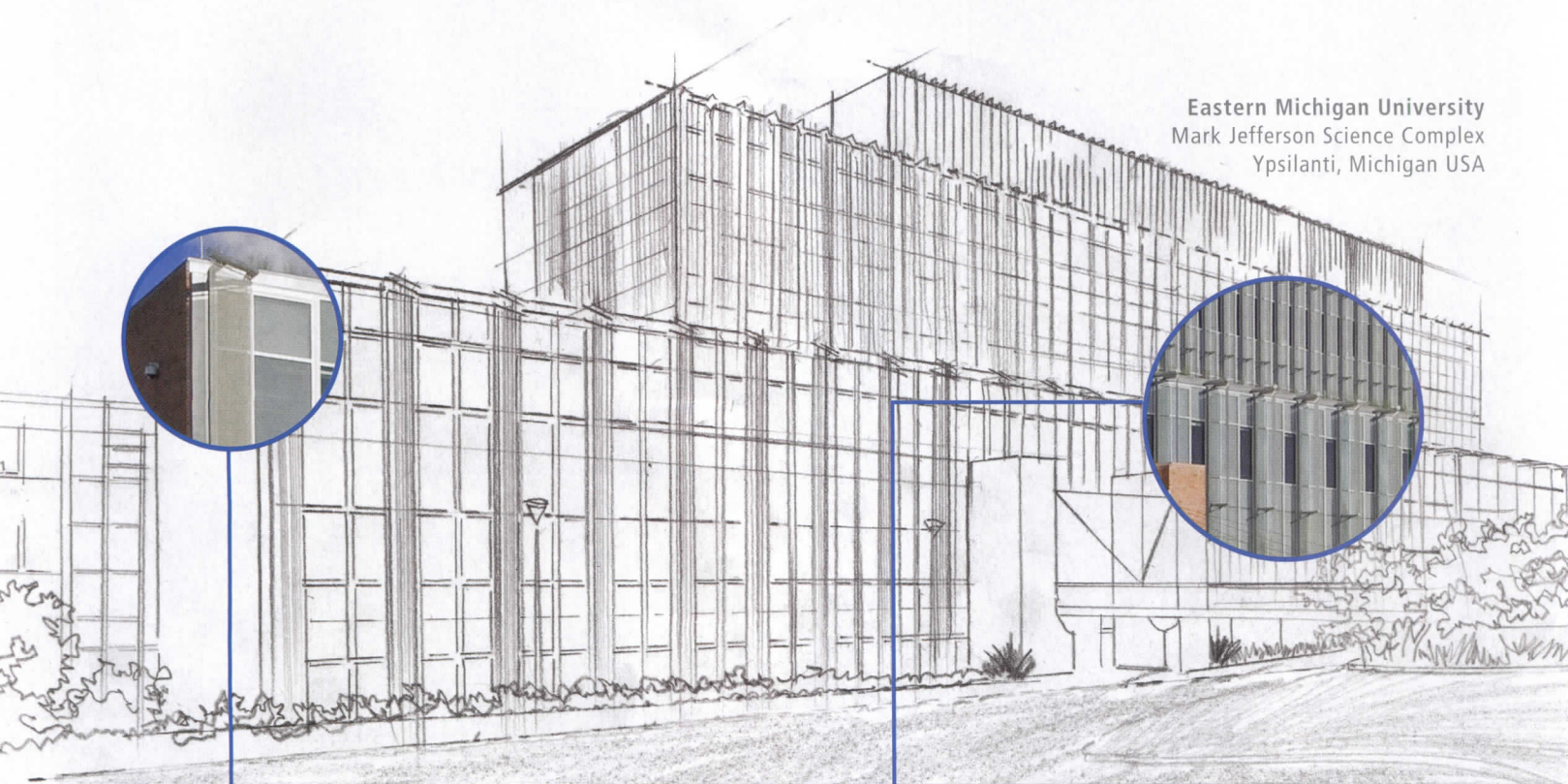
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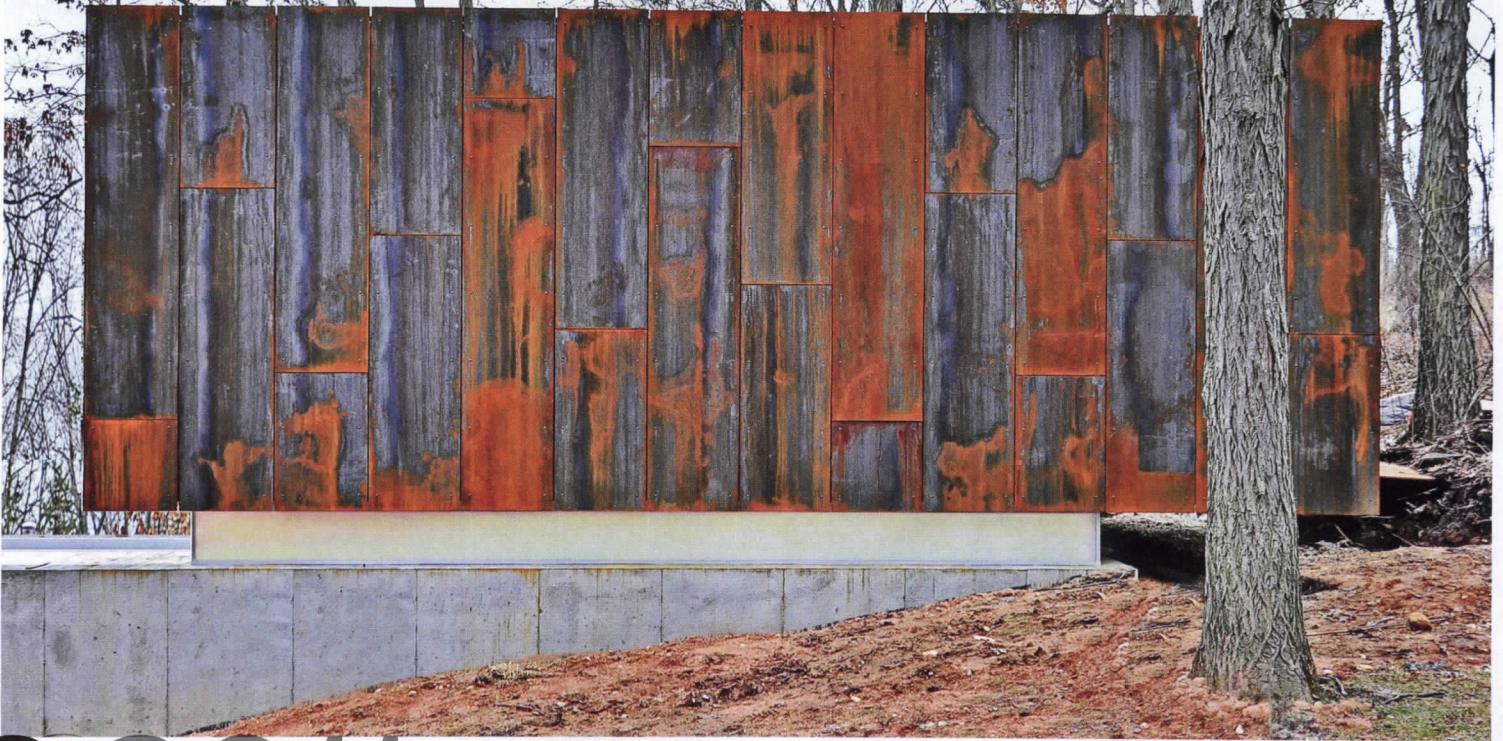
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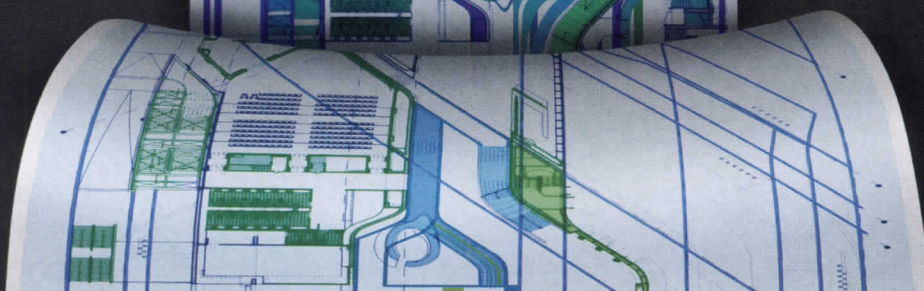
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## CALL FOR ENTRIES

### > RECORD HOUSES 2012

Submissions for our annual look at the best new residential designs are due December 15.

### > GOOD DESIGN IS GOOD BUSINESS

This yearly feature measures design's effect on the bottom line. Submit projects by January 15.

To enter any of our open competitions and contests, visit [architecturalrecord.com](http://architecturalrecord.com) and click on "call for entries" at the bottom of the home page.

"Life in the Slow Lane," our story about parking spaces-turned-miniature parks in San Francisco, sparked a debate on our website about whether parklets are a good use of civic space.

### [ COMMENTS AND LETTERS ]

The parklets are a great success story that underscores the cultural, economic, and environmental benefits of accommodating more people in exchange for one parking space. Between San Francisco's expanding bike network, free tools like Nextbus or Routesy that make transit more user-friendly, and car shares, I've been able to give up car ownership.

—Anonymous

Love the idea, but only if there is ample parking nearby. Otherwise, I have to side with the people that need a parking space! (But I really, really like the concept.)

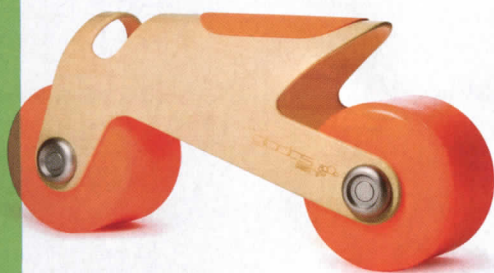
—Don V.

A parklet by San Francisco's Boor Bridges Architecture on Valencia Street in the Mission neighborhood.



## HOLIDAY GIFT GUIDE

RECORD presents its fourth annual Holiday Gift Guide for readers looking for affordable, well-designed presents. It features new books, toys, desktop items, home decor, and personal accessories, as well as a roundup of wine-and-tea-inspired designs. Highlights include Teddy Luong and Dennis Cheng's Bird Cafe for Umbra (above), Glodos's BIT Bike (right), and Drill Design's Geografia paper globes (below).



It's great that businesses are finding a way around bureaucrats and doing what they want with their store frontage.

—Anonymous

I find it ironic that the parklet pictured in the story is about 100 feet from Washington Square Park. Is it too hard for people to go to the park to enjoy some outdoor space? A lot of parklets seem like a boondoggle for restaurants to get free outdoor seating.

—Anonymous

The concept is all very grand until someone gets killed being so close to the traffic zone. Parklets certainly shouldn't be located on the street corners where traffic turns and increases risk...The better solution is to close off portions of the street and force the traffic away. Despite the howls and screams, drivers will get used to it, and most will embrace it.

—Rob Machon





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## Express Yourself!

Architects try to keep the creative juices flowing even when times are tough.

I RECENTLY had the opportunity to pose some questions to Frank Gehry at a small event hosted by McGraw-Hill Construction, in Washington, D.C. Gehry teaches an advanced design studio at the Yale School of Architecture, and I asked him what is the most important lesson he conveys to his students. "Not every student can be an artist," he began, pointing out that many go into various kinds of related work. But, he continued, "for the ones who are trying to create buildings, the hardest thing for them to understand is that if they don't let their own feelings and expression come out in the work, they're doing a disservice."

The emerging architects featured in this month's annual "Design Vanguard" (beginning on page 41) speak to that point. Their unique and varied designs reflect the search for self-expression. Yet many of these younger architects also exemplify new values. One of our chosen firms so resists the idea of a signature authorship that its partners have opted for total anonymity and call their Winnipeg office 5468796 Architecture, after their corporate identification number (we humbly suggest they switch to a more memorable numerical sequence). These iconoclastic Winnipeggers are part of another trend, too, toward architectural practice that is more collaborative and global. The founding partners mirror the diversity of contemporary Canada—both are émigrés, from Finland and Bosnia. Other Vanguard firms are similarly global in outlook and practice: Koji Tsutsui has an office in Tokyo and San Francisco and has worked in Africa and Haiti; Leong Leong, two brothers in practice in New York, have completed a project in Seoul. Like many of the other Vanguard architects, their work is propelled by a strong sense of place and of materials, with a high premium on sustainability.

Not surprisingly, these themes were echoed in ARCHITECTURAL RECORD's ninth annual Innovation conference, "Crossing Borders & Disciplines," in New York last month (page 22). Keynote speaker Bjarke Ingels of BIG, which now has an office in New York as well as in Copenhagen, is proving himself to be one of the profession's wittiest and most inventive presenters (check out his talk at TEDxEast on YouTube). Besides showing such radical projects as the mixed-use 8 House (RECORD, August 2011, page 44), Ingels preaches a message that sustainability should be "fun," dismissing what he calls the Protestant ethic "that it has to hurt to be good." Later, a panel on American



architects working abroad—with A. Eugene Kohn of Kohn Pedersen Fox Associates, Thom Mayne of Morphosis, and Audrey Matlock, who has a 12-person office in New York—demonstrated that firms of all sizes can successfully compete for foreign projects. The panelists talked about the welcome opportunity to create innovative architecture for adventurous overseas clients, while damning the timidity of most American developers when it comes to taking design risks.

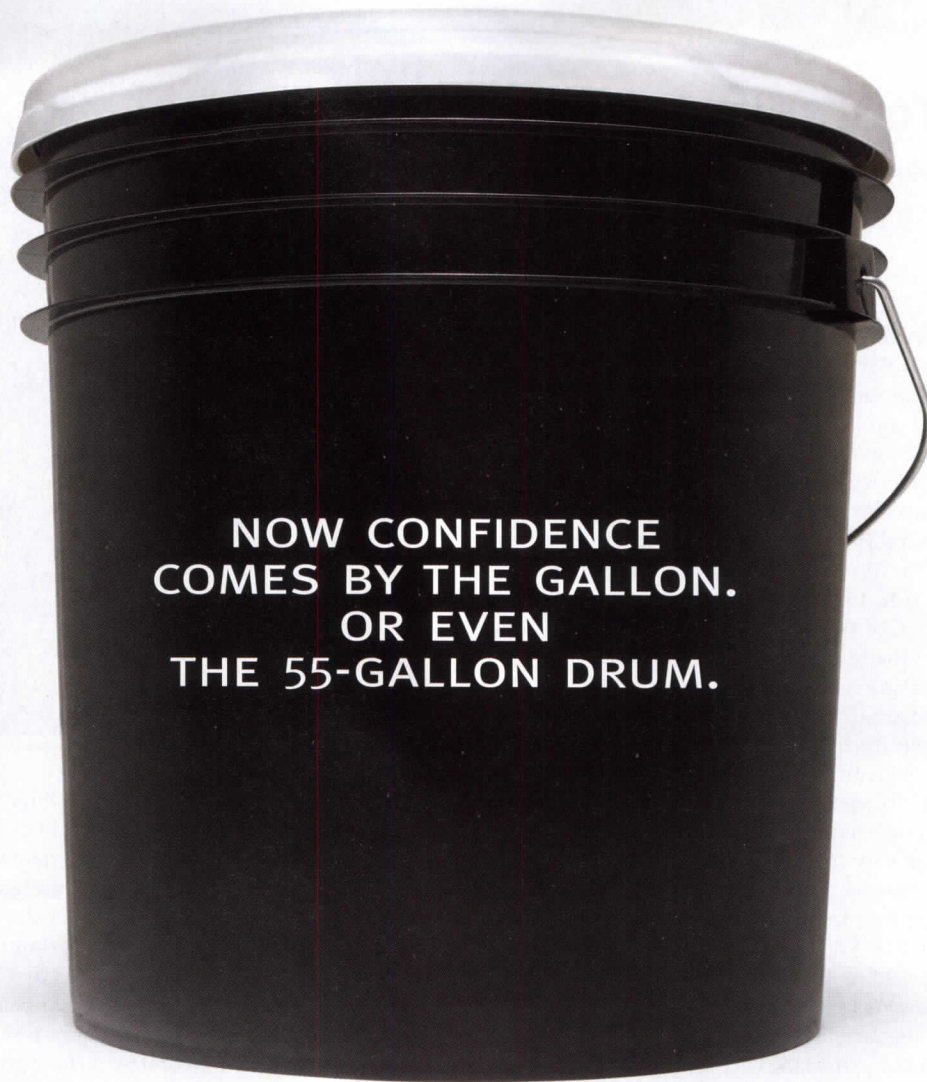
Yes, good design still matters (as Michael Speaks argues in Commentary, page 29). We applaud those designers who are continuing to be as inventive as possible—in their progressive ideas and in their built work, even when times are tough. "The crisis is not economic—the crisis is when you stop thinking," said architect Michel Rojkind of Mexico City at the Innovation conference.

And great architecture, we know, doesn't have to be costly: We were pleased to hear that RECORD's November cover project, the St. Nicholas Eastern Orthodox Church in Arkansas, won the Civic and Community award at the World Architecture Festival in Barcelona. Made of corrugated metal, with a dome fashioned from an old satellite dish, this modest building by Marlon Blackwell Architect is a triumph of thoughtful invention—and just one more example of the power of personal expression. ■

*Cathleen McGuigan*

Cathleen McGuigan, Editor in Chief





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## [ URBAN DEVELOPMENT ]

## Toronto on the Rise

Rapid population growth and a stable economy are fueling a construction boom in this Canadian metropolis.

**IN MOST** North American cities, active construction cranes are a rare sight these days. But in downtown Toronto, they're ubiquitous, lifting up steel beams and glass panels for new towers in Canada's largest metropolis, where the population—currently at 2.5 million—is gaining 80,000 to 100,000 people per year.

While the U.S. construction market remains in the doldrums, Toronto's real-estate sector has been humming along since the late 1990s, with only a brief slowdown in 2008. Today, the research service Emporis is tracking 147 high-rise buildings, among other projects, under construction in Toronto; the majority are residential and office buildings in the urban core, although towers are also popping up in the suburbs [read about the Absolute City Centre on page 39]. In terms of design, most of these buildings won't turn heads. But some developers are tapping top talent in hopes of creating architectural standouts.

"We're very excited about what's coming," says Alfredo Romano, head of Castlepoint Realty, one of the developers of 3C Lakeshore, a 2.4 million-square-foot district that Foster + Partners is master-planning for a former docklands. Romano says the 13-acre, mixed-use site will feature "signature towers" by Foster, along with buildings by the local firms Kuwabara Payne McKenna Blumberg and architectsAlliance. The project is part of a larger initiative, dubbed Waterfront Toronto, to reimagine roughly 2,000 acres on Lake Ontario. West 8 has designed a series of promenades, while Michael van Valkenburgh has proposed an 18-acre park to anchor a new neighborhood. Buildings by Moshe Safdie, Pelli Clarke Pelli, and Saucier + Perrotte are now



Corus Quay (right, foreground) by Diamond + Schmitt is the first key project in the redeveloping East Bayfront district.

in the works. Ultimately, the Waterfront Toronto project will accommodate 40,000 residents.

Why are developers in Toronto so bullish? Romano cites the city's consistent population growth, for starters. "Then, on a macro level, the economy is stable and secure," he adds. "We have a strong banking sector, and our development model is a lot more conservative than in other places." Local banks typically require new buildings to be 60 percent sold before construction begins, and mortgage lending is tighter here than in the United States. For projects with rental housing, many of the landlords are recent immigrants, from China or South Asia, who see real estate as a solid, long-term investment.

The city's development boom isn't free of criticism. Suburban sprawl, highway gridlock, and a transit system pushed to capacity are among the gripes. "We have a city that isn't proactively planned, and hasn't been for years now," says Meg Graham, principal of

the firm Superkül Architect and a professor at the University of Toronto's architecture school.

Given the sharp market downturns in other major cities, there also are fears in Toronto of a real-estate bubble and bust, and most experts agree that a market correction is inevitable. Still, the downtown area appears relatively stable. Through the 1970s, Toronto resisted urban-renewal projects, and its prewar neighborhoods remained vital. (Jane Jacobs, who lived in the Annex neighborhood from 1968 until her death in 2006, was a major figure here.) Good public schools, ample social services, recreational facilities, and a diverse population—over 50 percent of Torontonians are now foreign-born—make the city attractive to young people. Indeed, many of the new towers are catering to single professionals and young families who want urban lifestyles and are willing to live in small spaces. A 500-square-foot condo in the downtown area costs at least \$300,000.

Moreover, the downtown is attracting a fair share of wealthy residents. For a site along a busy road in the exclusive Yorkville district, the local firm Hariri Pontarini Architects is designing a six-story luxury condominium with limestone and glass cladding. Its 10 units (starting at 1,800 square feet) are priced from \$2 million to \$5 million; half have sold. "People have developed an appetite for apartment living. I think the city is anticipating a dramatic shift toward a more sophisticated, European environment," says architect Siamak Hariri, who was born in Germany and studied at Yale.

Locally, everyone is talking about Toronto gaining world-class status; certainly, it is rivaling Montreal for the title of Canada's cultural capital. For Hariri, Toronto offers a higher quality of life than any global metropolis. "Look at our restaurants, our live music, our galleries. People are dressing well," he says. "It's not a great jump to make this a better city." ■

## WEB HIGHLIGHTS

- Clyfford Still Museum Opens in Denver
- Cooper-Hewitt 90% Show Occupies UN
- Holcim Group Honors Sustainable Projects

## DAILY UPDATES

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BY JAYNE MERKEL

[ INNOVATION CONFERENCE ]

## Breaking Boundaries Across the World of Design

NOT MANY conferences have a syncopated beat—or a program as on-time as a Swiss train—but ARCHITECTURAL RECORD'S "Innovation" conference on November 3 had both. Subtitled "Crossing Borders and Disciplines," it featured speakers and panels discussing not building types, but trends—and, of course, innovation: where it is taking place, where it is not, its nature, and the challenges ahead.

The conference opened with an innovative "lecture" by the Danish architect Bjarke Ingels, who danced around the stage in black pants and T-shirt (no tailored Prada jacket for him!), showing some of his firm's groundbreaking recent projects in an almost music video format. Irregular, angular housing complexes in Copenhagen and other Danish cities—and one planned for New York—depart from the high-rise, rowhouse, or neatly stacked mid-rise models, and assume shapes that provide views, create plazas, and make an impact on skylines (RECORD, August 2011, page 44). But the driverless cars his firm has been working on for Audi are even more radical. They could help solve the pressing problem of cities choked by traffic.

The first panel, "Doing Architecture Abroad," featured three architects with varied practices—Eugene Kohn, of the 500-employee firm Kohn Pedersen Fox, Audrey Matlock, of the 12-person Audrey Matlock Architect, and Thom Mayne, of Morphosis, who limits his practice to 50. Kohn's firm builds skyscrapers on three continents; Matlock has designed an extraordinary house and sports club in Kazakhstan; Morphosis is building the gigantic, parametric Phare Tower in Paris.

But they all agreed about differing attitudes toward innovation in

other countries.

"In Japan, they ask how it will work in 20 or 30 years and say, 'We want your best work.' In China, they say, 'Don't get overinvested in the function. We want an icon,' and in the U.S., you work with one hand behind your back," Mayne said. "We are a country in doubt, questioning who we are at every level. These are not useful constructs when you are trying to promote innovation."

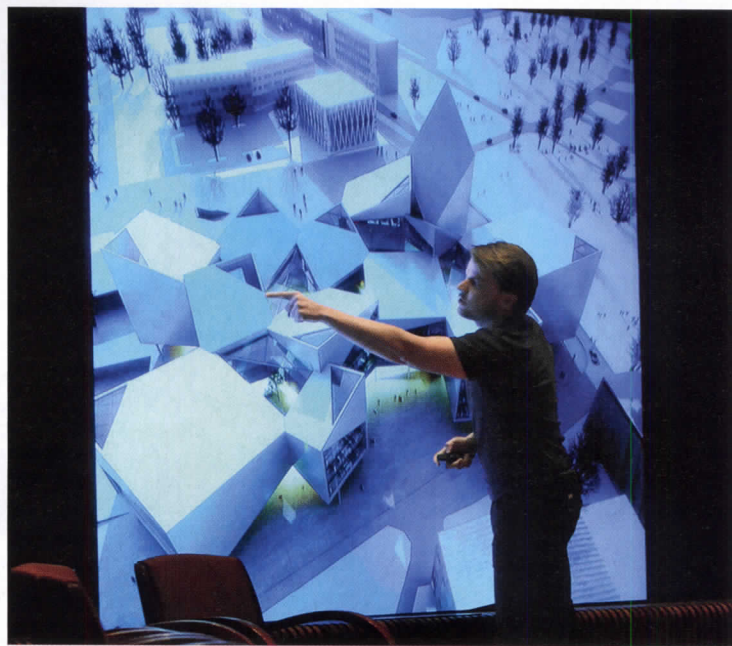
Kohn concurred. "There is a desire of clients abroad to create great buildings," he said. "In the U.S. we can't build anything that might be iconic because the shareholders might object."

"Today in the U.S., it's no longer 'can-do,'" Matlock added. "In other countries, they talk about design ideas. Here we have 'design solutions.'"

An architect in the audience asked how smaller firms got work abroad. Mayne said he won competitions. Matlock said size didn't matter: "With 12 people you can do any project. You just can't do a lot of them."

Other panels looked at ways architects are expanding the boundaries of architecture through "Crossing into Product Design," with Nicholas Holt of SOM, Alexander P. Lamis of Robert A.M. Stern Architects, and Hilary Sample of MOS, and "Team Collaboration," with Mahadev Raman of ARUP, Charles Renfro of Diller Scofidio+Renfro, and Sylvia J. Smith of FXFOWLE Architects, who all worked together on the redevelopment of Lincoln Center in New York.

During "Crossing Disciplines," the final panel—with graphic designer Michael Bierut of Pentagram, glass-wall artist and designer James Carpenter, musician-turned-architect Michel Rojkind of Mexico City, and Corie



Sharples of SHoP Architects—the idea of learning surfaced. They all found working outside established parameters inspiring; Bierut and Carpenter both said their work experience had helped compensate for narrow professional educations (Carpenter studied architecture but also sculpture—which opened up a world of materials and fabrication). At the Pentagram offices, Bierut said, the open plan encourages innovation because colleagues see what their peers in various disciplines are doing, so critiques flow naturally in the course of the day.

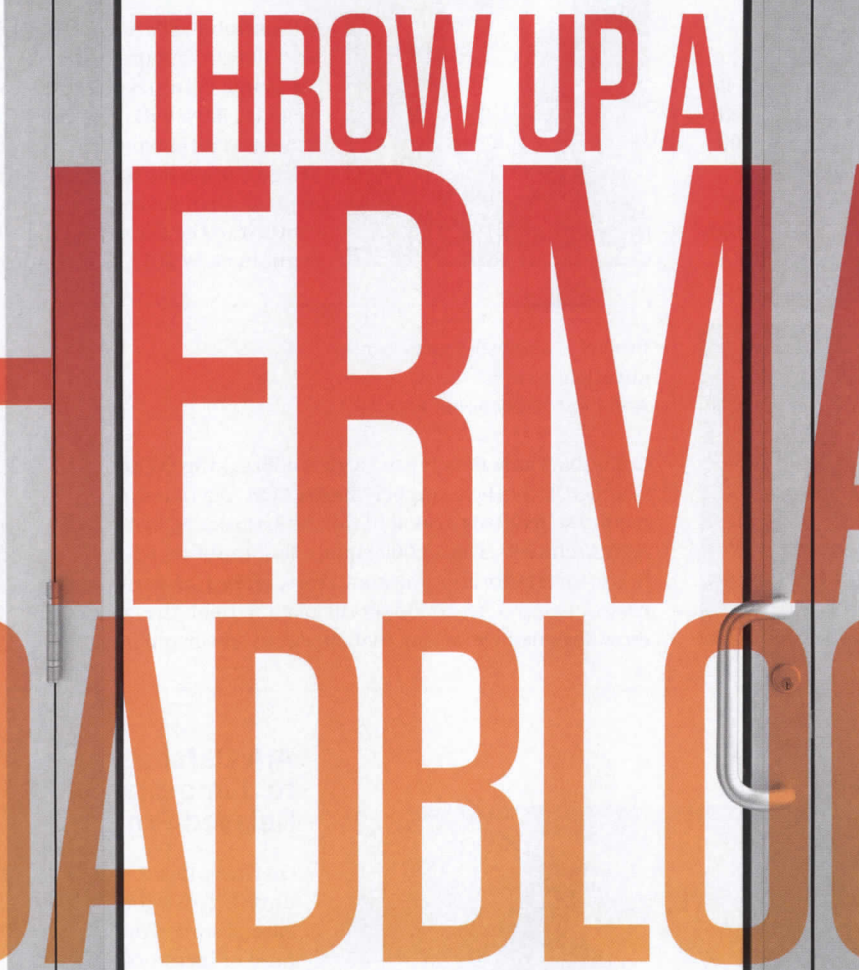
That panel was a perfect opening act for the day's last speaker, Richard Saul Wurman, who trained as an architect but is best

TOP: Bjarke Ingels. BOTTOM: Deputy editor Suzanne Stephens (far right) with Thom Mayne and Audrey Matlock.

known as the founder of the TED Conferences. He immediately removed his jacket and pulled his chair to the edge of the stage and spoke, almost intimately, to the audience of 400 as if they were patients and he the therapist. He talked about how categories are determined and statistics amassed in various disciplines. Ultimately, he explained, simply getting people to listen and talk to one another is the best way to promote innovation. ■

The 2012 Innovation Conference will take place on October 4 in New York City.





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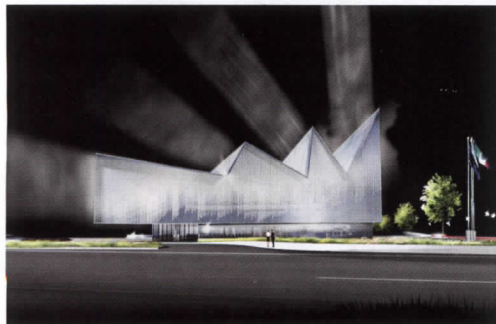
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## ON THE BOARDS

Project **Automotive Research Facility**  
 Location **Monterrey, Mexico**  
 Architect **Brooks + Scarpa**

Los Angeles-based Brooks + Scarpa recently broke ground on a lab and office facility for an automotive company in Monterrey, Mexico—its first project outside the United States. Divided into two phases, the building will total 54,000 square feet. The upper level, partly clad in perforated metal, “floats” over a glazed lower story. A saw-toothed roof takes its cue from old factories and nearby mountains. The project is designed to earn LEED Platinum Certification.



Project **Angkasa Raya**  
 Location **Kuala Lumpur**  
 Architect **Buro Ole Scheeren**

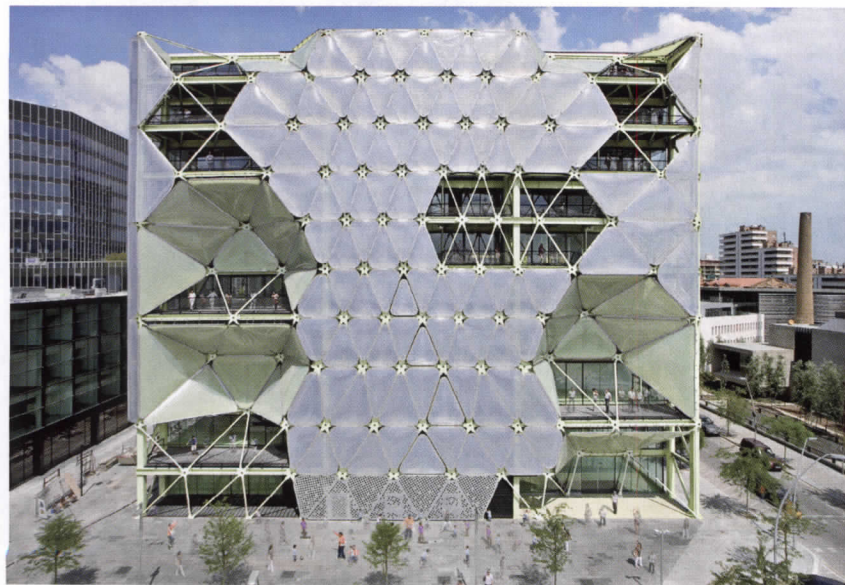
In November, OMA alum Ole Scheeren revealed his design for a new mixed-use skyscraper that will be built across from the iconic Petronas Towers in Kuala Lumpur. The 65-story Angkasa Raya will contain offices, restaurants, retail space, fitness facilities, and luxury hotel rooms and condos. The design comprises stacked rectilinear and cubic volumes clad in glass. Lush gardens and terraces will offer a pleasing contrast to the dense urban milieu. Construction is slated to begin in early 2012, with completion scheduled for 2016.

Project **Campbell Sports Center**  
 Location **New York City**  
 Architect **Steven Holl Architects**

Columbia University hosted a groundbreaking event on October 15 for the Campbell Sports Center, a five-story facility scheduled to open in fall 2012. Designed by Steven Holl Architects, the 48,000-square-foot building will house an auditorium, workout areas, offices, and study rooms. Inspired by action on the playing field, the architects designed elevations that appear to “push and pull.”



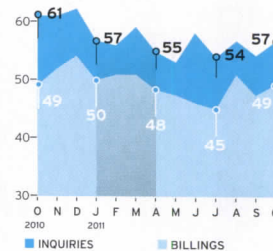
## World's Best Building of the Year



Media-TIC, a commercial facility in Barcelona designed by the local firm Cloud 9, was named Building of the Year at the fourth annual World Architecture Festival, held November 2–4 in Barcelona. This year's event drew more than 1,300 attendees. In addition to five grand prizes, awards were given in 17 categories: civic/community, culture, display, future projects (with 10 subcategories), health, holiday, house, housing, landscape, learning, new and old, office, production/energy/recycling, shopping, sport, transport, and villa. View a slide show online.

## AIA Database Aims to Jump-Start Delayed Projects

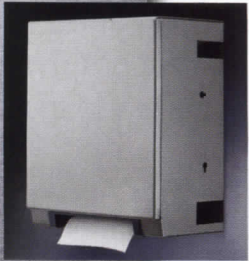
On November 7, the AIA unveiled an online database of stalled projects in need of investors ([www.aia.org/stalledprojects](http://www.aia.org/stalledprojects)). The service is designed to help architects and their clients find a solution to the “primary issue plaguing the design and construction industry—access to credit,” says the AIA. “We’ve decided to do something that could create more jobs and help grow the economy,” explains AIA president Clark Manus. The institute also recently released a study that found that 20 percent of shelved projects have financing problems. The report is based on data compiled by McGraw-Hill Construction (which publishes *RECORD*) and Reed Construction Data.



## Billings Climb

After slipping to 46.9 in September, the national Architectural Billings Index jumped to 49.4 in October. The inquiries score also rose, from 54.3 to 57.3. Regional and sector indices, calculated using three-month averages, were: **Northeast, 51.7; South, 49.1; Midwest, 47.7; West, 43.5; commercial/industrial, 53.5; residential, 51.3; institutional, 47.3; and mixed, 42.0.** A bellwether for construction activity, the indices are produced by the AIA based on firm surveys.





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The architecture and design profession lost many notable figures in 2011. We profile some of the leading minds who left an enduring mark on the community and the world at large.



**RAY ANDERSON**, the founder and chairman of Interface who passionately advocated the business case for sustainability, died at his Atlanta home on August 8 after a 20-month-long battle with liver cancer. He was 77 years old. Born in Georgia, Anderson founded his company in 1973, producing the nation's first free-lay carpet tiles. After reading Paul Hawken's *The Ecology of*

*Commerce* in the 1990s, he embarked on a crusade to drastically lessen his company's environmental impact through the use of recycled products and renewable energy. Anderson received innumerable honors and was oft-referred to as the "greenest CEO in America."



**LARRY BOGDANOW**, a New York City restaurant designer known for creating cozy yet elegant spaces, died from a brain tumor on June 29 at the age of 64. Born in Houston, Bogdanow earned degrees from Washington University in St. Louis and Pratt Institute. In 1978, he established his own firm, New City Designs, which evolved into Bogdanow Partners Architects. A nature lover, Bogdanow had a knack for creating

stylish spaces out of inexpensive materials and often incorporated salvaged elements. His notable projects include Union Square Cafe, City Hall Restaurant, and the Wild Blue, which was located on the 107th floor of World Trade Center and was destroyed on September 11, 2001.



**BERNARD CYWINSKI**, a founding principal of Bohlin Cywinski Jackson, died on March 2 in Philadelphia, his longtime home, after fighting cancer for more than a decade. He was 70 years old. Raised in Trenton, New Jersey, Cywinski earned his undergraduate and master's degrees at Columbia. He was lauded for his exemplary drawing skills and his philosophy that

architecture is the work of many people, not one individual. His portfolio includes the Liberty Bell Center in Philadelphia and buildings at the University of Pennsylvania, Temple University, and Haverford College.



**DOUGLAS GAROFALO** passed away at his Chicago home on July 31, the day before his 53rd birthday and five years after being diagnosed with an inoperable brain tumor. Born in Schenectady, New York, Garofalo earned architecture degrees from the University of Notre Dame and Yale. He was known as an unassuming architect with tremendous vision and talent,

and was among the first in the United States to employ digital design technologies. In 2000, ARCHITECTURAL RECORD named Garofalo Architects a Design Vanguard firm. His notable projects include the Korean Presbyterian Church in Queens, New York (with Greg Lynn and Michael McInturf), and the Hyde Park Art Center in Chicago.



**RALPH LERNER**, 61, former dean of Princeton's architecture school (1989–2002), died of brain cancer on May 7. Lerner earned degrees from the Cooper Union and Harvard. His firm, established in 1975, gained attention in 1986 for winning the competition to design New Delhi's Indira Gandhi National Centre for the Arts (still in construction). A discerning leader, Lerner elevated the status of Princeton's architecture program through revamping its curriculum and recruiting esteemed professors. In 2008, he became dean of the University of Hong Kong's architecture department; he stepped down in April.



**SYLVIA HARRIS**, a civic-minded designer revered for her serene spirit, generous nature, and visionary ideas, died of heart complications on July 24 at the age of 57. Harris, a Virginia native, studied graphic design at Yale in the late 1970s. Shortly after graduating, she and two classmates founded the multidisciplinary firm, Two Twelve Associates. In the 1990s, she branched out

on her own to establish an eponymous firm, later rebranded as Citizen Research & Design. Harris also served as the director of the AIGA national board and helped establish the Public Policy Lab, a Brooklyn-based nonprofit organization.



**DETLEF MERTINS**, a renowned professor of architectural history and theory at the University of Pennsylvania, passed away on January 13 at the age of 56. The cause of death was cancer. Born in Germany, Mertins earned a B.Arch. from the University of Toronto and a PhD in architecture from Princeton. He taught for many years in Ontario before serving

as chair of PennDesign's architecture department from 2003 to 2008. Known for his encyclopedic memory and razor-sharp intellect, Mertins wrote several books, including *The Presence of Mies* (1996). His latest, *G: An Avant-Garde Journal of Art, Architecture, Design, and Film, 1923–1926*, was published in December 2010.

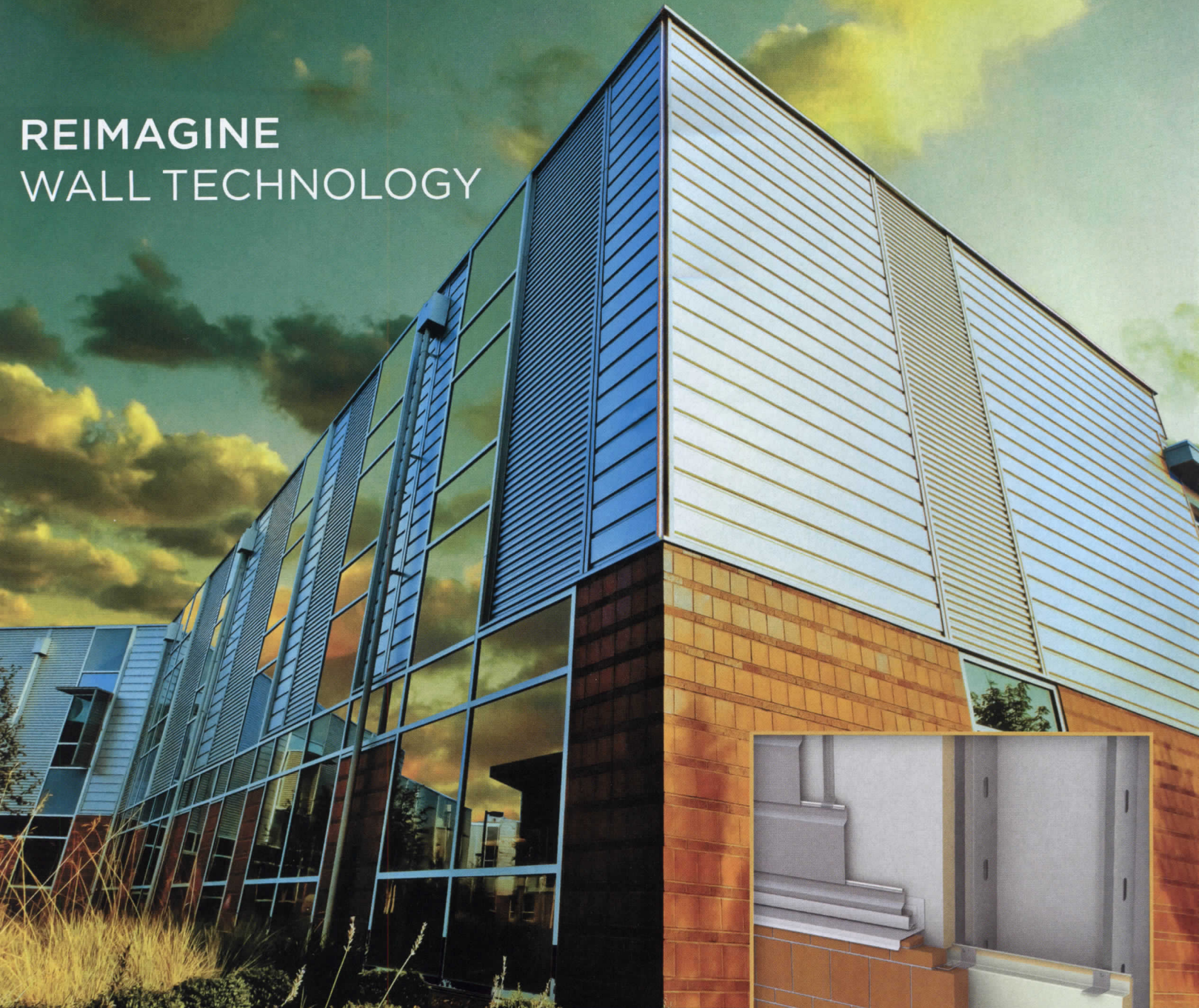


**LAURETTA VINCIARELLI**, a distinguished artist and professor, died on August 3 at her New York home following a long battle with cancer. Born in 1943 in Italy, Vinciarelli studied architecture at the Sapienza University of Rome and moved to New York in 1980. She is revered for her masterful watercolor paintings of imagined spaces composed of form and light. Her

work is in the permanent collections at the Museum of Modern Art and SFMOMA, among other institutions. A much-admired professor, Vinciarelli taught at City College, Pratt University, and Columbia's Graduate School of Architecture, Planning and Preservation.



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## Design as Key to Competition

In a global market, efficiency and speed are not enough.

**THE ECONOMIC** downturn of 2008 signaled the beginning of a dramatic period of global economic realignment in the future of architecture practice. Not only has China become the most vibrant market for architecture, but the demands placed on practitioners in various developing markets have also fundamentally begun to change the way architecture is designed and delivered at home and abroad.

Technologies, such as building information modeling and integrated-product delivery, have enabled architecture firms to design better buildings and deliver them more quickly and more efficiently. Yet in today's fiercely competitive global marketplace, efficiency and speed alone are not enough to guarantee market viability. The real differentiator is design—as an engine of innovation and a productive force for creating economic value.

"Starchitects" dominated the early years of this realignment by focusing on design marked by a national identity and a signature style. Since 2008, a new breed of global architecture practitioner, unencumbered by style or national identity, has begun to redefine the vanguard of global design practice. A number of these new practitioners seem to have found the conditions in Hong Kong suitable to their ambitions, including 10 Design, a medium-size architecture and planning firm whose partners, all from RMJM (formerly known as Robert Matthew, Johnson-Marshall & Partners) joined together last year to focus (first) on Asia.

Perhaps the most successful of these new practitioners, however, is architect Andrew Bromberg, who trained in the United States, but moved to Hong Kong 10 years ago to work for Aedas. Bromberg was hired specifically to elevate the design profile of the global

architecture giant, founded in 2002, and has been extremely successful. So far his 40-member design team has completed a significant number of buildings in the Emirates and China, including the 83-story Ocean Heights residential tower (2010) in Dubai and the North Star mixed-use development in Beijing (2009).

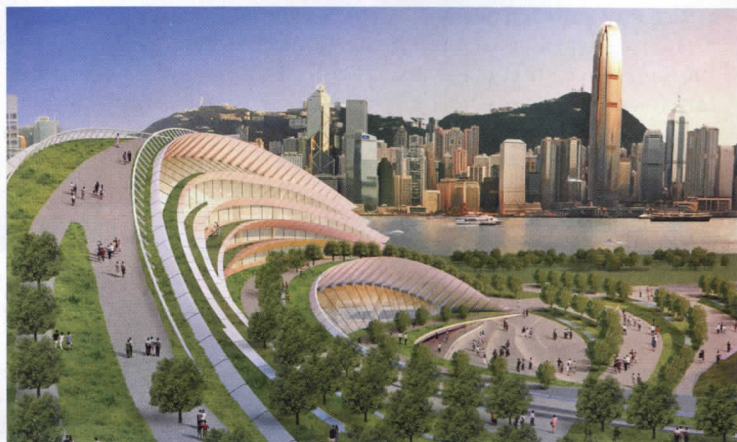
Unlike star architects who import and apply the same signature style everywhere, Bromberg's designs change with—and are



ABOVE: DavidClovers' solid-surface wall and window prototype was exhibited in Los Angeles in 2010.

TOP: Andrew Bromberg of Aedas is designing the West Kowloon Terminus by Victoria Harbour, Hong Kong.

changed by—each project. His designs respond to the specific demands of the sites and clients, yet depend on knowledge created in previous projects. Bromberg's many early successful competition experiences in China gave him a way to think about design and buildings as prototypes, so new design knowledge would help him to design the next project more quickly and skillfully. Bromberg also thinks about designs parametrically, a skill he honed with the many towers he designed and built in the Emirates. He has a



## A new breed of global practitioner is operating out of Hong Kong.

remarkable ability to see dozens of design moves ahead, which allows him to rapidly produce the one design idea seemingly immune to the shifting demands of the client and the marketplace. With Bromberg, these two ways of approaching design are mutually reinforcing.

DavidClovers is a 10-person architecture and design firm established two years ago in Hong Kong by David Erdman (formerly of servo in Los Angeles) and Clover Lee (formerly of plusClover in Houston). From Los Angeles and Houston, they brought an extensive digital design and fabrication research agenda. Focused on patterns, surface manipulation, and interior massing, it has permitted them to design across a variety of scales, from furniture to interiors to facades. In the United States, Erdman and Lee's work stayed based in experiment and research, but in Hong Kong the two have been able to exploit their research for real projects.

The two architects have often partnered with developers and other clients who need high-level

design expertise, but who do not want to import it. Being in Hong Kong has given them a distinct competitive advantage over similar types of firms based in the United States.

In just two years, DavidClovers has found a steady stream of high-end residential and commercial projects, such as a 52-room hotel tower interior and facade retrofit. Recently the firm began to take on larger-scale projects, like the design of a 55-acre parking garage and associated pavilions for a residential project in Zhuhai, China, slated for completion in 2013.

Design will continue to be the most valuable economic asset architects have at their disposal—for small research and design offices, ateliers within larger firms, or full-service practices. It is the single factor that will continue to give them a favorable position on the new frontiers of global modernization. ■

Michael Speaks, a RECORD contributing editor, is dean of the College of Design at the University of Kentucky.



## HOUSE OF THE MONTH

### INGRID SPENCER

A HOUSE IN JAPAN BY JUN IGARASHI ENGAGES IN INTERIOR THEATRICALS WHILE SNUBBING ITS NEIGHBORS.

**LIKE AN** introverted person, the House of Trough, designed by architect Jun Igarashi in the Kato-gun district of the Hokkaido prefecture in northern Japan, focuses inward. This is not surprising considering that dreary neighboring buildings surround the house, with an industrial yard to the south.

But for Igarashi's clients, a young couple, the neighborhood was just right, since the 2,240-square-foot plot abutted the property of parents. For Igarashi, the situation was also ideal, owing to the couple's adventurous design tastes and simple programmatic requests.

The clients wanted a large living space where they could relax and entertain, a clutter-free environment with a minimum of furniture, and a bit of hidden storage. These desires, coupled with the bleak surroundings and the region's freezing temperatures, led Igarashi to include what he describes as a "windbreak room"—an extension to a house's entrance that keeps cold air out of its main body. The architect divided the interior into two voids extending across the north and south sides of the 1,060-square-foot structure.

"If you see this type of space as a buffer zone you realize it shares similarities with the traditional Japanese-style *engawa*, or verandas, meant to physically and mentally connect the interior to the exterior," says Igarashi. Buffer zones, he adds, also provide a physical distance between the true outside and the central living and dining spaces of the house.

With lookout mezzanines of varying heights

accessible by ladders or stairs, these two functional zones receive a constantly changing show of light and shadow from openings strategically placed to minimize unwanted views. To the south, the zone comprises four spaces—the entrance, staircase, master bedroom, and guest bedroom sunk into a partial basement. The north zone accommodates a laundry area, storage, and a study.

Igarashi designed most of the furniture using inexpensive painted plywood, and then installed translucent white organdy curtains that are pulled across the inner edges of peripheral areas to enclose the main living spaces. They can also remain open, permitting family members and guests to view the action in the courtyard "trough" from various perches.

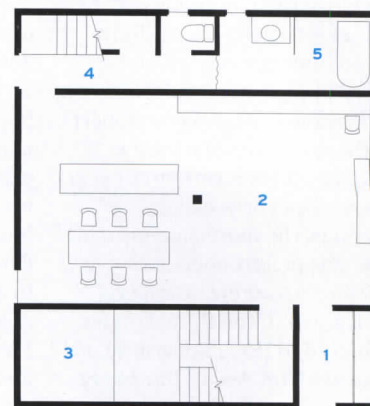
The wood-frame structure includes an 18.5-foot-high pillar which divides the central space. While there's a playfulness in the way the catwalks are assembled, and a feeling of comfort sitting in the "valley" of the central space looking up to other parts of the house, there's also a sense of danger.

Couldn't someone lean a little too far from one of the upper promontories and plummet downward? Perhaps. The architect has strung up thin, almost invisible, wire ropes across the highest platforms as a gesture to safety. But one wonders if the homeowners ever plan to raise a child in this house. Evidently they'll cross that more-precarious-than-usual bridge later. For now, they enjoy life in their introverted residence that is hardly short on drama. ■



2

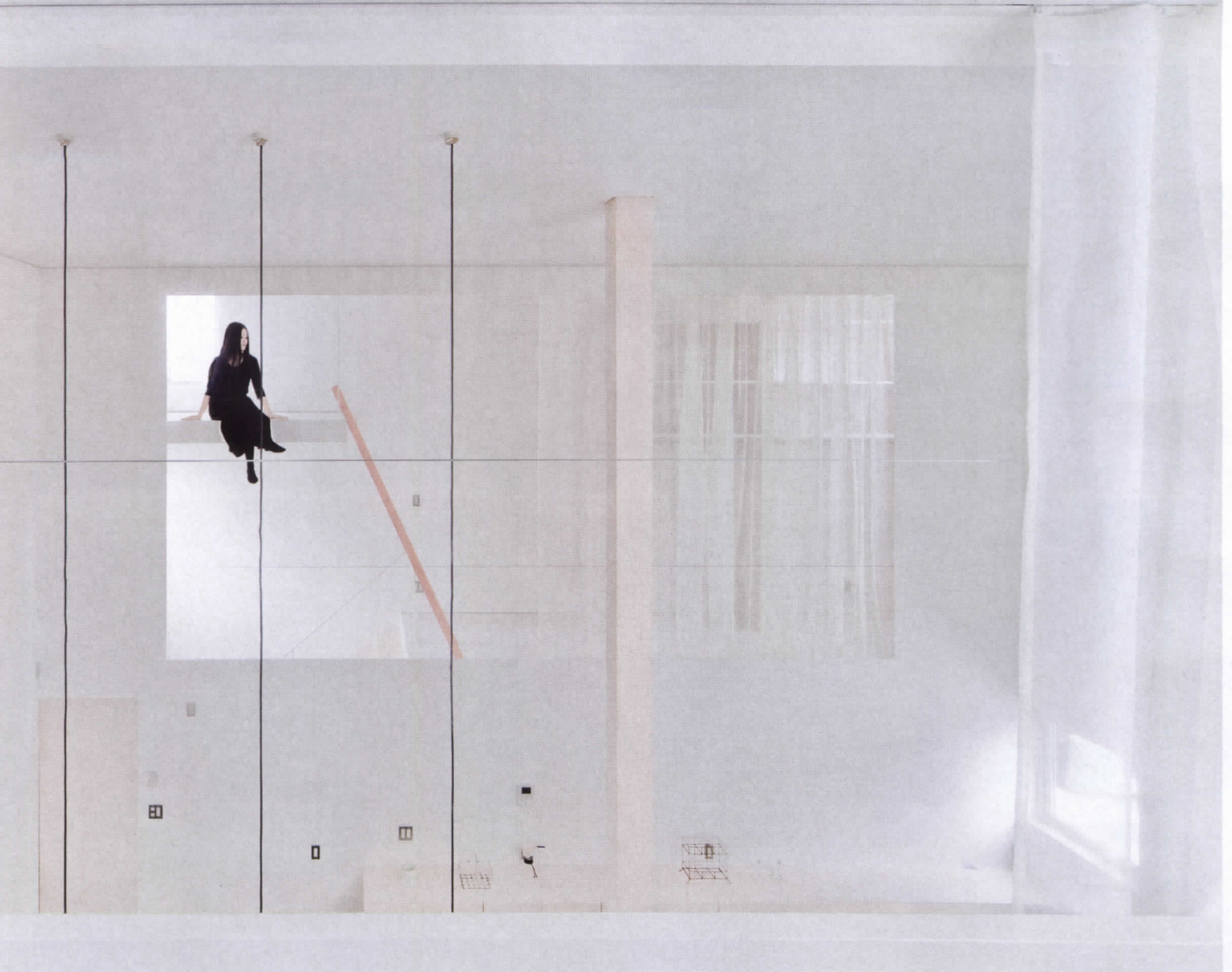
- |               |        |
|---------------|--------|
| 1 ENTRANCE    | 4 HALL |
| 2 LIVING AREA | 5 BATH |
| 3 BEDROOM     |        |



GROUND FLOOR

0 3 FT.  
1 M.





1. An industrial yard offers undesirable views on the house's south side.
2. Catwalks and platforms accessible by ladders make the voids on the north and south sides of the house a sort of false exterior—bringing the focus to the central living zone where an 18.5-foot-high column penetrates the space.
3. Light from the “buffer zones” enters the central living area, which can be isolated by closing translucent white organdy curtains hanging on either of the space's long sides.
4. A staircase with treads of unpainted laurel wood leads from the ground level's concrete floor to the mezzanine levels above.



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**Gloria Lee and Nathan Swift**, Swift Lee Office, Los Angeles, USA at the Holcim Awards ceremony for North America in Washington, D.C.

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# OCCUPIED SPACES

In cities across the globe, public plazas have become platforms for vocal—and visible—political dissent.

By Mohamed Elshahed

**THE OCCUPATION** of Cairo's Tahrir Square earlier this year has become a global symbol for citizen activism and peaceful resistance against oppression. Like Tiananmen Square in 1989 and the National Mall in Washington, D.C. during the civil rights movement, the square was transformed into a visual and spatial representation of a people's struggle. Egyptians had been fighting the Mubarak regime's oppressive policies for two decades with little success. But the media image of an anonymous critical mass of protesters occupying an open urban space galvanized international media in ways that the atrocities of the regime and its record of torture failed to accomplish.

In the last year, protests have erupted in public spaces around the globe. In Boston, demonstrators held placards that read "Walk like an Egyptian," and in London, protesters renamed Trafalgar Square "Tahrir Square." From Puerta del Sol in Madrid to Rothschild Boulevard in Tel Aviv to Syntagma Square in Athens, people have been using public spaces as platforms to voice their displeasure with government policies, to discuss political futures, and to criticize the current economic system. Most of the protest movements this year were restricted to North Africa, the Middle East, and Europe—until the Occupy Movement commenced across America this fall.





OPPOSITE: Tahrir Square, Cairo, in early 2011. ABOVE: Hundreds gather in New York City's Zuccotti Park in the fall.

Occupy Wall Street in New York's Zuccotti Park began in September and became a hugely successful media event, with its symbolic value due to its proximity to the financial district. Tahrir Square and Zuccotti Park hardly seem comparable: Tahrir Square is a vast space the size of several football fields while Zuccotti Park is small, tucked into the dense fabric of the city. And while Tahrir Square is the geographic and symbolic center of Cairo, Zuccotti Park isn't a well-known civic plaza. Zuccotti Park's symbolic value is in the making, whereas Tahrir Square has more than a century of historical symbolism as a space of resistance. Most significantly, Zuccotti Park differs from Tahrir Square for being publicly accessible yet privately owned.

Present-day Tahrir Square is actually a traffic circle with several isolated spaces for public gathering. The area was home to army barracks when it was still well outside the city in the 19th century. By 1902, the Egyptian Museum opened, creating a northern edge to the square, and the modern city expanded, transforming the area into a tourist and civic center. Tahrir Square was never designed; rather, it is the result of a series of partially implemented urban plans. The heart of the square, previously a parade ground, was transformed in 1955 into a grassy public park with a large fountain, benches, and a few trees. Beginning

in the 1970s, parts of the park gave way to a bus station and parking. Massive antiwar protests, started by university students, erupted in the early 1990s against Mubarak's supportive stance for the American-led Iraq War. These events posed a significant challenge to Mubarak's presidency. The park was closed (and later sold to a development company) as part of the regime's crackdown. (Today, traffic dominates the square, with a few isolated gathering areas on the periphery.)

In addition to limiting civic space, the Mubarak regime enacted legal limits on public assembly under the so-called Emergency Law, an Orwellian set of rules that almost entirely banned public protest. These physical and legal limitations on public space raised the popularity of privately owned parks such as Azhar Park. The city's shopping malls, rather than the city's streets, became spaces for promenading. Political dissent went to the Internet.

Zuccotti Park was meant for passive use, a representative of the owner Brookfield Properties stated. It is not limited by rules for the city's public parks—which close at night—which made its 24-hour occupation possible. On November 15, city police swept protesters from it, at least temporarily, citing health and safety concerns. (Right before this, Brookfield posted new rules for the park prohibiting camping there.)





Zuccotti Park, 2008.

Another major difference between New York and Cairo is that Zuccotti protesters had direct access to the park, whereas Cairo authorities completely sealed off Tahrir Square on January 28, 2011, once they knew a major protest was planned. By that evening, after intense fighting between protesters and the police, the public regained the square as a political space, not simply a plaza to be used passively.

Tahrir Square and Zuccotti Park each test the relationship between the public and authority when it comes to political uses of the city. Tahrir Square unlocked a regime's grip on civic space, while the protest in Zuccotti Park escalated the complex relationship among the public, the authorities, and private enterprise. The idea of privately owned public space emerged decades ago in New York as a means for developers to get permission to build higher than the code allows, by providing a public amenity. Protesters at Zuccotti Park, formerly Liberty Plaza Park, which opened in 1968, effectively exploited the system: Not only has their use of the park been unrestricted by public-park policies, but their protest didn't even require the normal process of getting a police permit—a mechanism which undermines the notion of challenging the status quo.

Despite the differences among Tahrir Square, Zuccotti Park, and similar sites of political activism around the world, there are commonalities to be celebrated. Protests in Cairo and New York have empowered citizens. The global Occupy movements have avoided the cult of personality, making them resilient.



Tahrir Square, 2004.

Urban spaces have become symbolic of protest rather than casual, recreational use.

Mubarak's authoritarianism was manifest in horrid economic policies that allowed the top 1 percent of the population to control and monopolize the country's resources and wealth: Economic injustice is at the heart of Egypt's uprising. Regardless of the politics of design in the United States and across world capitals, city dwellers are giving new political meanings to city squares as they rally for economic justice. Demonstrators in New York refer to Zuccotti Park by its former name, Liberty Park. There's

**The global Occupy movements have avoided the cult of personality, making them resilient. Urban spaces have become symbolic of protest rather than casual, recreational use.**

a fine irony in the notion that corporate greed and political influence have been protested on a plaza that was created as a zoning swap to increase the fortunes of Brookfield. Despite variations in civil liberties from one country to the next, public space has proven to be a common denominator, transforming quiet urban oases into dynamic places where people protest oppression in all its forms. ■

*Mohamed Elshahed is a doctoral candidate at NYU's Middle East Studies Department. He blogs about Cairo at [CairObserver.com](http://CairObserver.com).*



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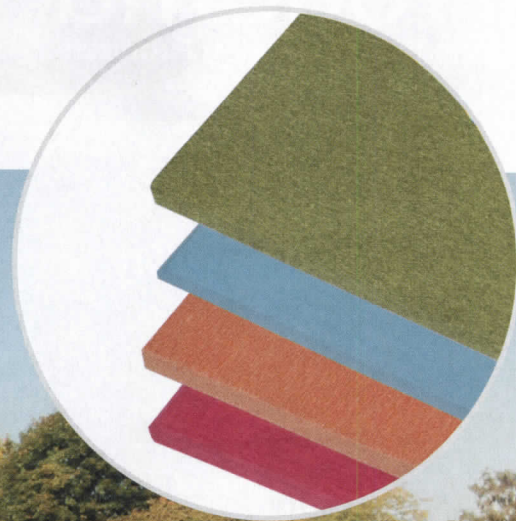
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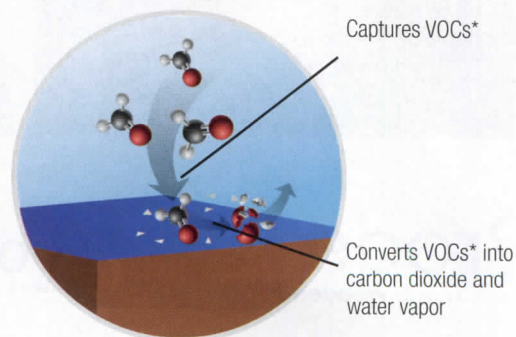


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# SHAPELY PAIR ADDS NEW TWIST

Residents begin to move into the first of MAD's two convention-busting apartment towers near Toronto.

By Joann Gonchar, AIA

INSTEAD OF the boxlike apartment and commercial towers in cities everywhere, architect Yansong Ma, principal of Beijing-based MAD, prefers structures that are “organic and soft.” In his 2006 competition-winning entry for a residential high-rise in Mississauga—a municipality of 734,000 people about 16 miles west of downtown Toronto—Ma proposed a 56-story tower that has since been nicknamed the “Marilyn” for its sensuous and curved form. The building, part of the five-tower, 11-acre Absolute City Centre condominium complex, has elliptical floor plates that rotate around a central core to create a subtly twisting and sculptural profile. The unusual geometry is emphasized by the edges of floor slabs that project beyond floor-to-ceiling window walls, providing wraparound terraces and vantage points for residents to take in views of Lake Ontario and the Toronto skyline.

The strategy has proved a commercial success. The tower sold out just days after plans for its 427 apartments were put on the market in the summer of 2007. Response was so enthusiastic that the site's owners, Cityzen Development Group and Fernbrook Homes, immediately decided to develop an adjacent parcel, commissioning the then relatively unknown architects for a second tower. According to Ma, the clients simply asked for a carbon copy of Marilyn, but his firm created a slightly simpler scheme for a 50-story, 453-unit building whose floor plates are each rotated one degree in relation to the floor below (the rotation of the taller structure's

floor plates varies, giving it a more voluptuous shape). “The two are subtly different, but are members of the same family,” says Ma.

The shorter tower is now nearing completion while residents are already moving into its more curvaceous sibling. Both feature poured-in-place, flat-plate construction typical for the region. Although the floor slabs are relatively conventional, realizing the twisting geometry required columns that corbel and a different structural design for every level, notes Sigmund Soudack, principal of an eponymous structural engineering firm based in Toronto. Mitigating the heat loss through the cantilevered balconies also provided a key challenge, according to Soudack, who helped devise a method of reducing so-called “cold bridging” between the interior and exterior portions of the slabs—one that was more cost-effective than proprietary thermal break systems from Europe.

The \$180 million buildings' curves and twists are not without liabilities, such as some small and awkwardly shaped rooms that could make arranging furniture problematic. However, buyers seem undeterred. The most recently sold condo in the MAD buildings garnered \$470 per square foot, well above the Mississauga average, say the developers. Apartment shoppers who do not want a bedroom with a triangular or trapezoidal plan, but who are enamored of the towers' contours might consider units in the more prosaic high-rises nearby that offer views of the sculptural buildings. According to some sources, those apartments are also fetching a premium. ■



The 56-story “Marilyn” tower (foreground) and its slightly shorter sibling, both designed by Beijing-based MAD, contrast sharply with their more ordinary neighbors.



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# 2011 Design Vanguard

A FAULT LINE RUNS through the architectural profession separating academics from practitioners, thinkers from doers, those who imagine from those who build. Straddling this line, and connecting the realms on either side, are emerging architects who both teach and practice. It's a difficult balancing act to pull off, but it often spurs an exciting form of creativity shaped by tension and risk-taking. Many of the architects in this year's Design Vanguard epitomize this kind of back-and-forth career, combining academic research with the nuts and bolts of delivering real buildings to real clients. From Berkeley to Barcelona, and Glasgow to Winnipeg, partners in many of this year's firms have established a fluid relationship between intellectual exploration and-making projects happen. In doing so, they enrich both spheres of work. Firms shown here are bridging other types of divides, too, crossing national boundaries, for example, and connecting eras by tapping the spirit of traditional buildings in works of modern design. *Clifford A. Pearson*

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LEONG LEONG  
KOJI TSUTSUI & ASSOCIATES  
NORD (ROBIN LEE/ALAN PERT)

## CONTRIBUTING WRITERS

FRED A. BERNSTEIN, New York journalist  
CLARE JACOBSON, Shanghai-based writer and editor  
JAMES S. RUSSELL, FAIA, architecture critic for *Bloomberg News*  
EVA HAGBERG, Berkeley-based writer and the author of *Dark Nostalgia*  
NAOMI R. POLLOCK, AIA, Tokyo-based RECORD correspondent  
DAVID COHN, Madrid-based RECORD correspondent  
TRACY METZ, Amsterdam-based RECORD correspondent

THIS PAGE: PAVILION 16,  
OLD SLAUGHTER HOUSES,  
BY IÑAQUI CARNICERO



# Johnsen Schmalming Architects Milwaukee

An enterprising duo explores materials and context in a series of projects that make big statements on a small scale.

## FOUNDED 2003

## DESIGN STAFF 4

**PRINCIPALS** Sebastian Schmalming;  
Brian Johnsen

**EDUCATION** Schmalming - Harvard GSD, MAUD, 2002, University of Wisconsin-Milwaukee, M.Arch., 1996. Johnsen - University of Wisconsin-Milwaukee, M. Arch., 1997, and BSAS, 1994

**WORK HISTORY** Schmalming - Vetter Denk, Milwaukee, 1996-2000, 2002-03. Johnsen - Vetter Denk, Milwaukee, 1997-2002

**KEY COMPLETED PROJECTS** Studio for a Composer, Spring Prairie, Wi., 2011; OS House, Racine, Wi., 2010; Layton Pavilion, Greenfield, Wi., 2010; Downtown Bar, Milwaukee, 2008; Ferrous House, East Troy, Wi., 2008; The Blatz, Milwaukee, 2007; Camouflage House, Green Lake, Wi., 2007

**KEY CURRENT PROJECTS** Topo House, Blue Mounds, Wi., 2012; Hilton Cafeteria, Milwaukee, 2012; Cube House, Delafield, Wi., 2012; Mountain Retreat, Big Sky, Mt., 2013; Q House, Merton, Wi., 2013

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# S

ebastian Schmalming and Brian Johnsen describe their studio's work as being "informed by a reading of site and terrain." But don't call it a philosophy. "We've always been suspicious of grandiose philosophical statements that can't be backed up by an equally grandiose body of work," says Schmalming. And grandiose the duo's work is not. Since founding their four-person practice, Johnsen Schmalming Architects, in Milwaukee in 2003, Johnsen, 39, and Schmalming, 40, have made a name for themselves by designing buildings of near-monastic simplicity. Proportion, material, and setting reign supreme in the twosome's

work, rather than showmanship or formal flamboyance. The result is a collection of buildings with a sense of place and an unfussy precision.

The two met in 1995, while in graduate school at the University of Wisconsin-Milwaukee. After eight years of working together for a Milwaukee-based firm, they decided to become business partners at their own firm. "We wanted more control over the design process," Johnsen explains, "and to focus our attention on a set of architectural issues that we were interested in exploring more seriously." Those issues include how materials age and how built work relates and responds to its context. In their work, the "context" is generally a suburban one: The firm's Ferrous House, which rethinks the classic ranch, and its linear OS House both ask the old residential typology to do new tricks, creating open and transparent spaces inside and more direct connections to the outdoors.

Much of the studio's work has thus far consisted of private residences and other small-scale projects. "Architectural significance transcends particular programs and building types. We've never felt that there's a particular correlation between the scale and the quality of a project," Schmalming says. Indeed, for a 300-square-foot musician's studio, the pair packed a lot of program into a tight plan. The tiny, rectilinear structure has a soundproof studio, below-grade storage, a covered porch, and a casing of weathered-steel panels that wouldn't look out of place on a much larger building for a cultural institution. "We think an architecture based on restraint is more appropriate now than ever," Schmalming says.

In the years to come, Schmalming and Johnsen will finish a series of projects, such as sustainable infill housing in Kansas City, Missouri, and a residence that takes its stepped form from Wisconsin's hilly Blue Mounds region. They also hope to increase the time they spend teaching and lecturing. Both have been adjunct professors at their alma mater, the University of Wisconsin-Milwaukee, and visiting professors at the University of Toronto and the University of Oklahoma. "We started our office without a grand business plan or any far-fetched goals, except to create relevant architecture and survive while doing so," Johnsen says. "We hope to keep working on projects that let us experiment, without partaking in the breathless competition for instant architectural gratification." *Asad Syrkett*

## Studio for a Composer

For a country-music composer, the duo created a 300-square-foot studio and retreat. The project sits atop a concrete plinth carved into the hilly landscape. Soundproof interiors are contained in a weathering-steel envelope that receives some of its aesthetic charm from natural forces: The effects of gradual oxidization produce a marbled pattern on the facade. Light enters the open space through large windows on either end of the boxlike volume, and a covered porch on the studio's southern end creates an outdoor room for casual music composition.











## OS House

The architects designed this 1,948-square-foot LEED Platinum house, built on an infill lot in a historic neighborhood in Racine, Wisconsin, for a young family. Completed in May 2010, it employs a series of sustainable strategies, including PV panels on the roof and in the backyard. Because the structure is sited along the shores of Lake Michigan, Johnsen and Schmalig set out to emphasize the visual and spatial relationship between the house and the water, creating a transparent, glazed main level and a protruding window box on the second floor. They also cut a series of outdoor spaces from the building volume, creating an open-air entry court, a ground-level terrace, and a second-story patio fronted in slender aluminum columns. Windows are framed in punchy, colored steel, adding to the graphic aesthetic of the facade.



## Ferrous House

This 2008 project, named for the Cor-Ten steel panels that wrap around it, is a 1,450-square-foot residence for a young couple and their daughter. The house, which repurposes the original foundation and perimeter walls of a 1970s ranch, sits on the edge of a Wisconsin nature preserve. Exposed metal and engineered-lumber trusses support a canted roof, the angle of which adds height and light to the house's interiors. Johnsen and Schmalig aimed to maximize transparency, so they punched vertical slots in the entrance facade and used large windows along the back. As happens in many of their works, the surrounding environment influenced the final design. The nighttime glow emitted by local dairy barns, for example, inspired the band of windows under the house's angled roof.







## Camouflage House

Autumn foliage inspired the polychrome facade of Camouflage House, a private residence for a family of four. Situated on a lakeside property, the 2,700-square-foot home sits lightly on a forested cliff. The facade, comprised of untreated cedar and colored, laminated-wood veneer, was designed with the elements in mind; over time, weathering will turn the cedar panels from brown to silver to match the tone of the stands of trees around the house. Collages of apertures along the house's northern and southern facades, and large windows on either end of the intersecting volumes, allow in daylight. Inside, seating clusters near these glazed areas, which permit views out to the landscape. The living/dining space can be extended or retracted, according to the wants of the user, by folding a glass door that separates the main living spaces from the screen porch.



## Layton Pavilion

In 2008, the duo was commissioned to create a 315-square-foot entry pavilion for a suburban strip-mall parking lot. Their client, who owns a nearby burger joint and a custard stand, had purchased the adjacent lot once occupied by a gas station: a suburban trinity. The black, cast-in-place concrete pavilion sits in sharp contrast to the mostly beige commercial architecture around it. A small garden beside the structure collects rainwater, allowing a bit of green to thrive in a largely asphalt field. Vertical slots along one side of the building frame views of nearby stores. The aim, the architects say, was to offer respite from the sterility of the pavilion's surroundings.





# Arquitectura Barcelona

After winning a number of design competitions, a young firm develops a body of work that responds to its rugged but rich context.

## FOUNDED 2006

## DESIGN STAFF 9

**PRINCIPALS** Josep Camps and Olga Felip Ordís

**EDUCATION** Camps - Universitat Politècnica de Catalunya, Diploma of Advanced Studies, 2004, and B.Arch., 2000. Felip - Universitat Politècnica de Catalunya, Diploma of Advanced Studies, 2009, and B.Arch., 2005

**WORK HISTORY** Camps - Javier Sanjosé Arquitecto, 1998-2002. Felip - Estudio Carme Pinós, 2004

**KEY COMPLETED PROJECTS** Visitor Center and Museum of Energy, Ascó, 2011; Cultural Center, Tortosa, 2010; Apse Square, Tortosa, 2009

**KEY CURRENT PROJECTS** Health Center, Aldea, 2011; House, Caldes de Malavella, 2012; Law Court, Balaguer, 2012; Peace Center, Ascó, 2012; Public Library, Caldes de Malavella, 2013

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cluster of windblown branches sprouts from a tree stump in front of a museum in Ascó, Spain. The tree is sufficiently battered that I wonder why architects Olga Felip and Josep Camps kept it. “Our landscape doesn’t have a lot of character. But it does have lots of history,” said Felip. That little tree looks like it has seen plenty.

Felip, 30, and Camps, 36, are the two partners of Arquitectura, a nine-person firm in Barcelona, which won a competition to design the Balaguer Law Court just five months after it started in 2006. The partners, who are married to each other, look for cues in the landscape or locale to imbue ordinary building programs with a haunting power. Both hail from Catalonia, a semi-autonomous region within Spain that retains its own language and culture. Asked if their Catalan status gives them a unique outlook on architecture, Felip answers, “Absolutely. We studied at the Barcelona School of Architecture and had very strong leaders in Carlos Ferrater and Elias Torres. They have what I consider a Catalan way of doing architecture—in how they consider the site, understanding all of its historic layers and trying to feel the context.”

Their ascetic minimalism seems ubiquitous among young Spanish firms, in Catalonia and elsewhere. Their powerful, geometric forms respond in a dignified way to the centuries-old towns they’ve worked in. When working with historic structures or contexts, she says, “We try to bring a new view, but emphasize the most important original elements to reveal their power.” History figured deeply in the design of a tiny plaza that wraps the outside of a Gothic church’s apse in Tortos, following the site’s original contours and evoking the town’s ancient roots. Similarly, the partners stripped down a public market building in Tortosa to convert it to a cultural center. The challenge, says Felip, is to figure out what to keep and what to remove.

The museum in Ascó, which acts as a visitor center for a nuclear power plant, reveals another key source of expression: The way site characteristics can—and often should—distort an ideal resolution of the building program. For this project, the partners started with a neatly gridded plan, then cut out a pair of sweeping curves to open distant views rather than focus on a characterless foreground.

Arquitectura’s simple geometric forms and limited range of materials work well for tight public-building budgets. In a pair of future projects (for a school and a public library), overlapping and colliding forms create broad overhangs and intimate courtyards, strategies that suit places where sun is relentless and shade is welcome. Felip and Camps bring a brooding yet compelling monumentality even to small projects in small towns, intensifying the effect with tough materials like steel fins and concrete and bold contrasts of color and texture. The two partners’ accomplishments so far suggest that they will succeed in scaling up their approach as they mature. *James S. Russell*





## Cultural Center

Felip and Camps contrasted the horizontal, navelike form of a restored market building in Tortosa with a vertical addition on angled pylons. The addition gently pulls away to form an entrance court and glass lobby, while the pylons evoke a dancer's pose. A rainscreen of perforated-metal fins contrasts with the sand-colored market, but the addition matches the prevailing cornice line of older buildings. Inside, white-painted wood fins line a space for exhibitions, talks, and musical events while concealing sound-absorbing material.

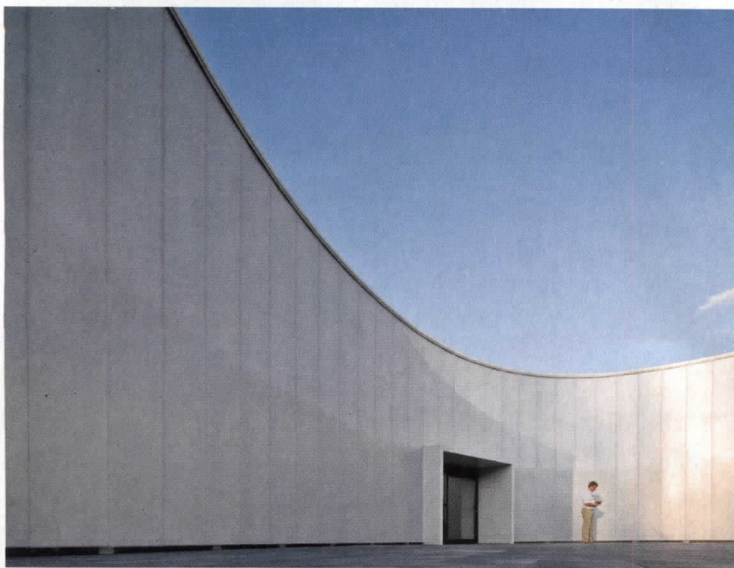




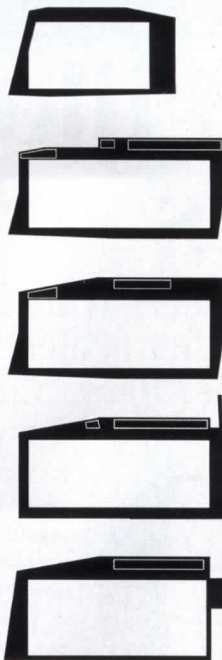


## Visitor Center and Museum of Energy

The architects scooped sensuously curved courtyards out of a prismatic, dark-steel volume that houses a visitor center in Ascó for a power plant operated by ANAV, Spain's nuclear power utility. A high-windowed central volume for stairways and services divides the plan into two basic areas. A reception space, which can be divided into smaller rooms, opens from a tightly curved entry court on one side of the building. On the other side, the broad curved wall of an exhibition space frames views of the power plant through a second, external courtyard.





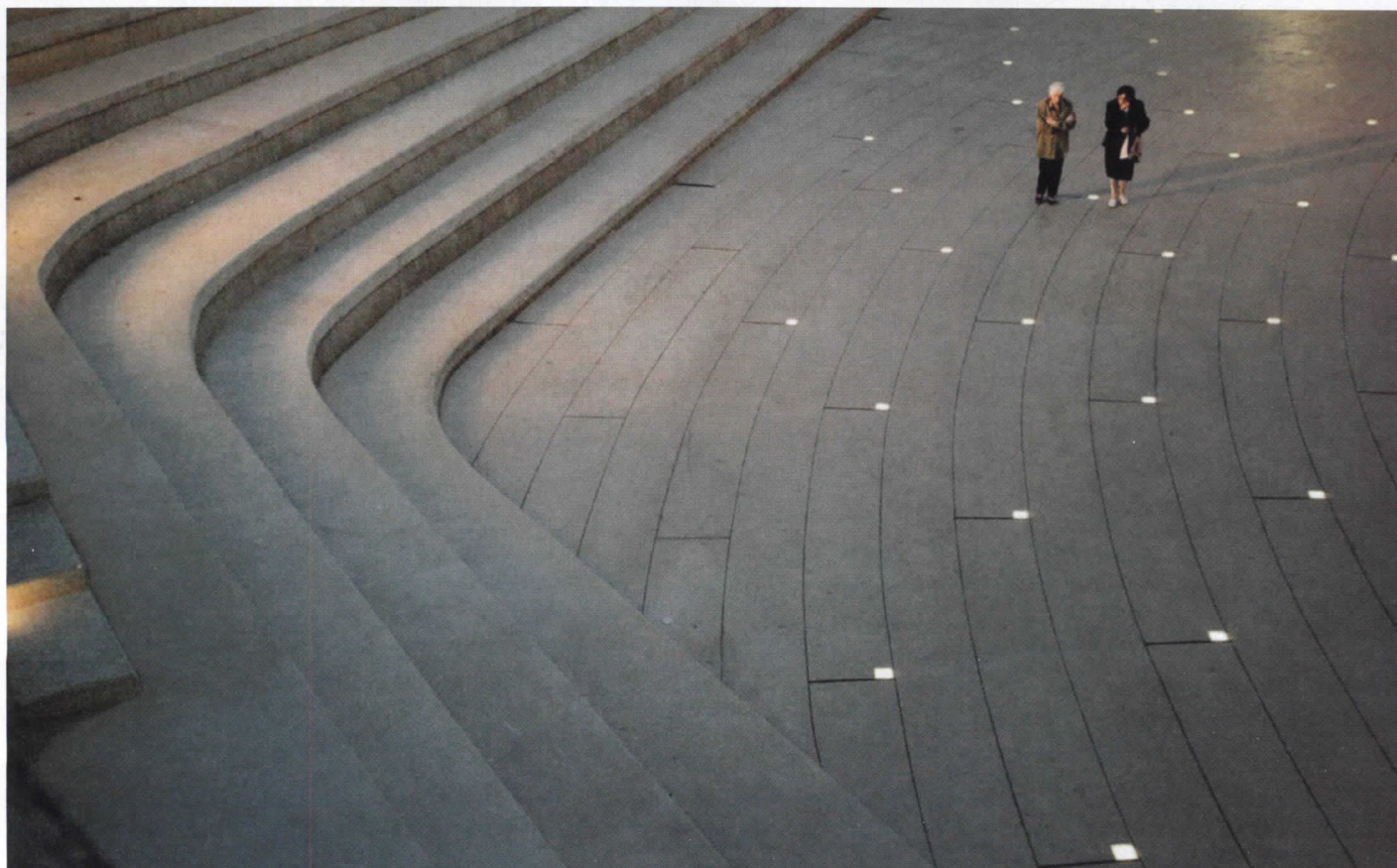


## Law Court

The site for this project demanded that the building squeeze tightly within the narrow medieval streets of Balaguer. “Two meters away from where judges would be working an old lady might be cooking,” explains Felip. Perforated weathering-steel panels wrap the building, bending to follow the street walls while veiling the rectangular glass and metal volume within. Depending on the light and point of view, people walking by can see through the metal scrim to the main stair that ascends within the residual space between the wall layers. The project is under construction and scheduled to be completed in 2012.

## Apse Square

To improve a dank sunken plaza wedged in by narrow stairs, Arquitectura turned the triangle of space behind the apse of a Gothic cathedral in Tortosa into wide concrete stairs that form an amphitheater. This new “stage” behind the church now hosts festivals and other public events.





# Doepel Strijkers Architects Rotterdam

Duzan Doepel and Eline Strijkers transform sustainable into desirable with, among other projects, a garage-turned-house and a green tequila distillery. *Salud!*

## FOUNDED 2007

## DESIGN STAFF 10

**PRINCIPALS** Duzan Doepel, Eline Strijkers

**EDUCATION** Doepel - Rotterdam Academy of Architecture, M. Arch., 1999; University of the Witwatersrand, B. Arch, 1995. Strijkers - Willem de Kooning Academy, B.A.A., 1995; Ichthus Hogeschool, Design and Communication, B.Comm, 1992

**WORK HISTORY** Doepel - MVRDV, 1996-2002. Strijkers - MVRDV, 1994-99

**KEY COMPLETED PROJECTS** Korea National Housing Corporation Office, South Korea, 2010; HAKA Recycle Office, Rotterdam, 2011

**KEY CURRENT PROJECT** NAI Climate Square, Rotterdam, 2012

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# D

oepel Strijkers Architects is revving up to conquer the world, starting with the first-ever sustainable, socially minded, zero-waste tequila factory. Organic tequila, mind you.

Doepel Strijkers is the Rotterdam-based firm of architect Duzan Doepel (born in South Africa in 1971) and interior architect Eline Strijkers (born in the Netherlands in 1969). They met while working at MVRDV in the 1990s, and in 2007 joined forces. They now

employ nine people. Both have won the AM NAI Public Prize for young talent and a Dutch Design Award. Both also teach, he as a lecturer on sustainable architecture and urbanism at the Research Institute for Sustainable Solutions and she at the Academy of Architecture.

So what is their take on the generic term "sustainability"? "We want to make sustainability into business as usual, but also link it to top design. In order to get mass culture behind you, you have to create an element of desire. It has to look good," says Doepel. "In light of the resource and energy crises we are facing, sustainability has to be about reconfiguring and repurposing the buildings we already have."

For the 2012 International Architecture Biennale Rotterdam, Doepel Strijkers is exploring how to double the inhabitants in the city's center. "In a vibrant city, about 10 percent of the inhabitants live in the center," says Doepel. "In Rotterdam it's 5 percent." The firm is looking at densification strategies such as converting empty offices into housing, building on water, adding floors to existing buildings, and infilling.

An example of the latter is their project Parksite, the conversion of a former ambulance garage on the edge of a secluded park into a single-family home. Another is the 1930s Haka building in the old Rotterdam harbor area, which is being resuscitated as an incubator for start-ups dealing with climate, energy, and water. "It was only logical," says Strijkers, "that the interior be made of waste materials harvested from demolition sites."

And then there is the tequila factory in the Mexican state of Jalisco. Everything Doepel Strijkers stands for comes together in this design. A closed production cycle, for example: The fibers from the agave cactus will be turned into clothes and furniture, and waste from the production process will be used to generate energy. "The building has a circular metabolism; that means that all waste streams are put to use. In addition to tequila, honey and furniture are made from the agave fibers. And as part of the energy strategy, the organic waste is fermented to make bio-gas," says Doepel. In addition to the factory, the complex is designed to house a hacienda with a school, a library, offices, a museum, a chapel, studios for artists in residence, and housing.

The design is bioclimatic: The movement of the sun determines the massing, orientation, and the shape and size of the windows. "This is an aesthetic that is derived from the climate, the location, and the local vernacular," Doepel says. As if to prove their dedication to this philosophy, they are (small) project shareholders. No wonder Doepel and Strijkers are called "design activists." Tracy Metz



## Parksite

Doepel Strijkers transformed a former ambulance garage into a single-family home. By replacing the back wall with sliding-glass doors, they brought in both daylight and a view of the secluded park, hence the name.





# HAKA Recycle Office

This office is on the ground floor of a 1930s harbor storage and distribution facility in Rotterdam, which stood empty for decades. The facility is now being repurposed as an incubator for startups dealing with climate, water, and energy. The architects used existing materials to furnish the office, café, and auditorium, including old doors and greenhouse frames. The acoustic panels are made of rags sorted by color by ex-convicts on parole. "Working with unskilled labor made it necessary to streamline and simplify the production process," says Strijkers. "There was one thing we hadn't taken into account: Some of the guys sorting the rags were color-blind."



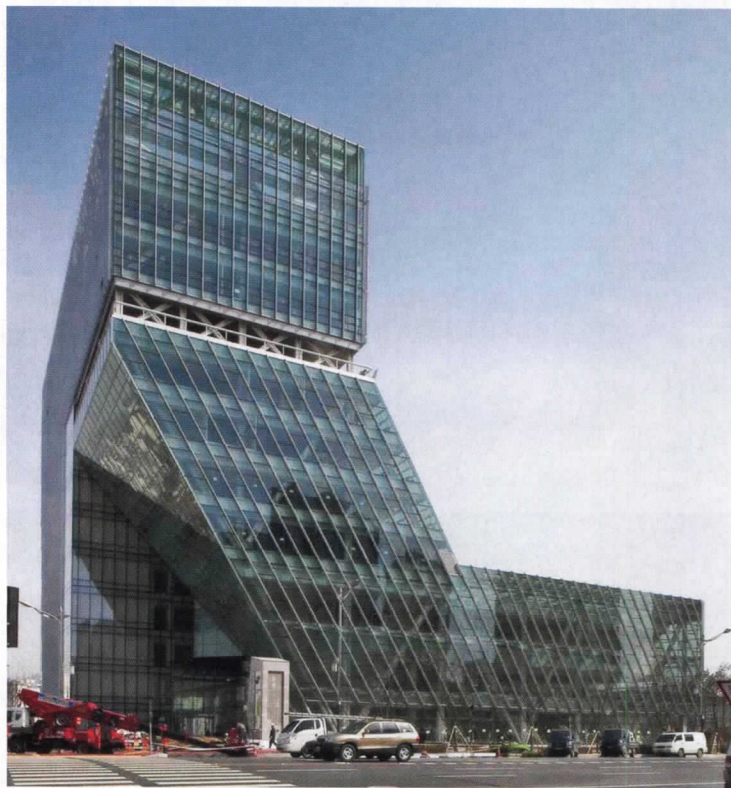
(RECYCLE OFFICE)





## Lensvelt Expo Farm

Doepel Strijkers converted former farm buildings in Meer, Belgium, into a compound for a furniture designer and artist. The new complex includes a residence, showroom, theater, guest lodging, and a bathhouse. The architects removed floors to create open spaces and used extensive glass on the main building's eastern facade to take advantage of views. This building is not only the client's residence, but also can be used as a theater or showroom.



## Korea National Housing Office

A building for the Korea National Housing Corporation in Jeonju, South Korea, consists of offices (220,000 square feet) and a cultural center (80,000 square feet). Rather than restricting the cultural area to the ground floor, as is common, it flows up and into the office building. By turning the cultural leg of the building in the direction of an adjacent park, two public spaces are connected.





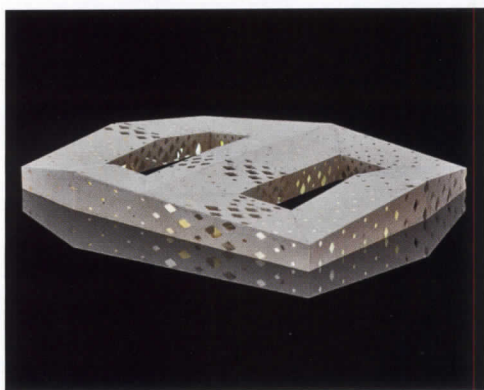
## Macuil Tochtli Hacienda

The architects created this scheme for an organic tequila distillery in Jalisco, Mexico, as a modern-day interpretation of the hacienda. The plan includes using waste from the production process to generate energy for the factory. One of the two halves of the building will be dedicated to a chapel, a library, artists' studios, and housing for the workers and their families.



## Lute Restaurant

The restaurant is located in what was once a dairy stall on land owned by the former Royal Dutch Gunpowder Factory in Ouderkerk on the Amstel, the Netherlands. The current owner gained permission to build an additional 2,000 square feet, leaving the main space entirely available for the restaurant. The expansion consists of a corrugated metal building for the bathrooms, a wooden building for the dishwashers, and a greenhouse for private parties.





# Atelier Deshaus Shanghai

This busy firm embeds traditional principles of Chinese architecture in the DNA of its modern buildings.

## FOUNDED 2001

## DESIGN STAFF 12

**PRINCIPALS** Liu Yichun, Chen Yifeng

**EDUCATION** Liu - Tongji University, M. Arch., 1997; Tongji University, B. Arch., 1991. Chen - Tongji University, M. Arch., 1998; Tongji University, B. Arch., 1995

**WORK HISTORY** Liu - Tongji Architectural Design Institute, 1997-2001; Guangzhou Design Institute, 1991-94. Chen - Tongji Architectural Design Institute, 1998-2001

**KEY COMPLETED PROJECTS** Spiral Gallery, Jiading, 2011; Kindergarten, Jiading, 2009; Plot 6 of Jishan base in Jiangsu Software Park, Nanjing, 2008; Xiayu Kindergarten, Qingpu, 2004

**KEY CURRENT PROJECTS** Youth Activity Center, Qingpu, 2012; Studio of Yue Minjun, Jiading, 2012

**WWW.DESHAUS.COM**

**I**n a country where globalization's impact can be seen almost everywhere, Shanghai-based Atelier Deshaus wants to keep traditions alive. "China has changed very fast," says partner Liu Yichun. "In many places the traditional poetic culture is becoming just a memory. We want to represent this memory in our architecture." This doesn't mean he wants to design pagodas or roofs with old clay tiles. For Liu and his partner Chen Yifeng, architecture isn't based on form. "It's based on the relationship between different kinds of space, between the building and the context, and between the building and nature."

This approach can be seen in Deshaus's 2005 Xiayu Kindergarten, where spatial relationships follow those of a well-known local model. "In traditional Chinese residential developments there are always two parts," Liu explains. "One is the housing where there's a lot of activity. The other is the garden, with small buildings in it." This mix of high and low densities appears in Xiayu as a cluster of ground-floor classrooms and a more open plan of rooftop nap rooms. In a kindergarten in Jiading, the firm turns that duality 90 degrees; the dense layer and open layer meet in boxes side by side instead of bottom to top.

Deshaus interprets a different spatial model in a house and studio for artist Yue Minjun, currently under construction. "Traditional residences follow a rhythm of building, yard, building, yard," says Liu. "The structure of the building is like an image of the family: The grandparents live at one end, then the parents, then the children." The architects twist the traditional linear form into a complex plan that mimics Yue's paintings of labyrinths—echoing the pattern of open and enclosed spaces but breaking the hierarchy.

Liu (born in 1969) and Chen (1972) founded Atelier Deshaus in 2001 (with Zhuang Shen, who left the firm in 2009). They adopted the German word Deshaus, because Liu had studied German in college and the term means "of the house." It also sounds similar to the firm's Chinese name, *Da She*, which means "big house."

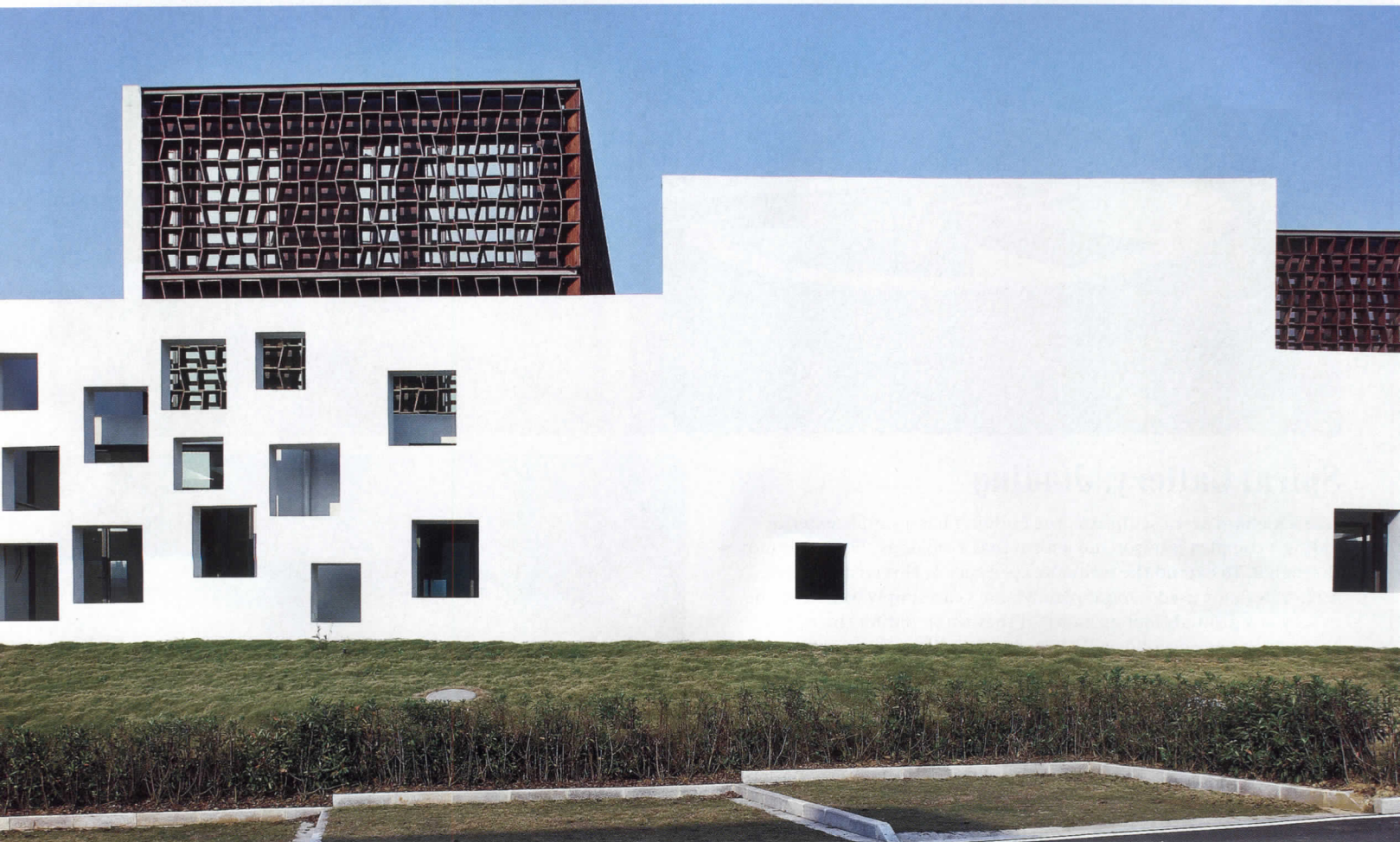
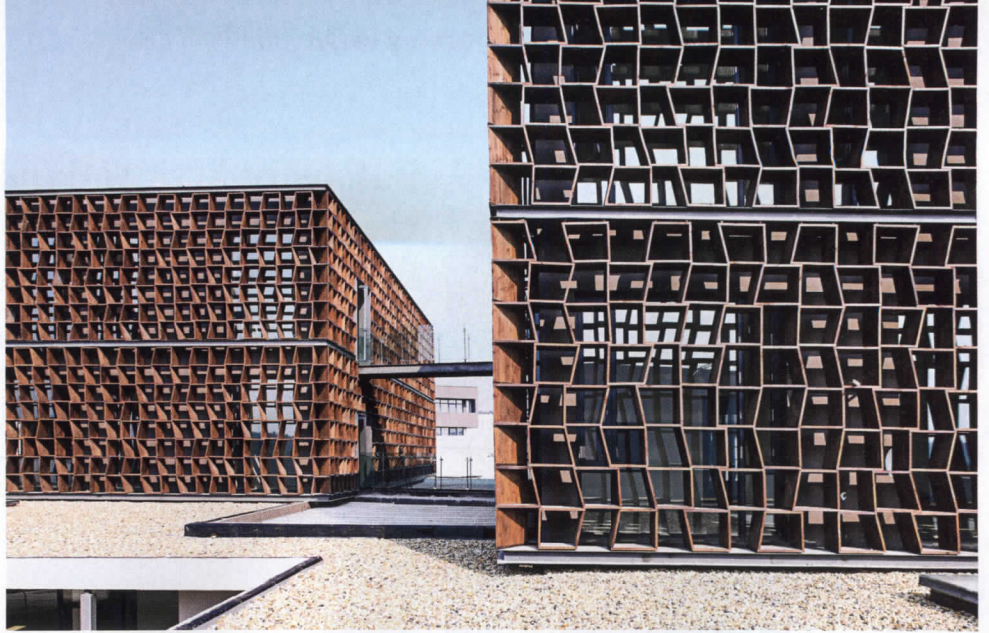
Surprisingly, the firm's most innovative projects have been in the suburbs, in Shanghai's Qingpu and Jiading districts. The government there, in particular District Mayor Sun Jiwei (who trained as an architect), has given Liu and Chen excellent opportunities. Jiading commissioned the Spiral Art Gallery, a striking concrete-and-aluminum structure that expresses both a 21st-century form and a much older idea of enclosure (seen in its narrow stair to the roof) and exposure (the rooftop itself). "Poets walking in the landscape prized this kind of rhythm—from enclosed to open spaces," says Liu. Local visitors find familiar places behind Deshaus's modern facades. But those who read architecture as sets of forms may need to squint to see the Chinese references. "Representing is not just repeating traditional things," says Liu. "We use a modern way to represent our traditions." *Clare Jacobson*



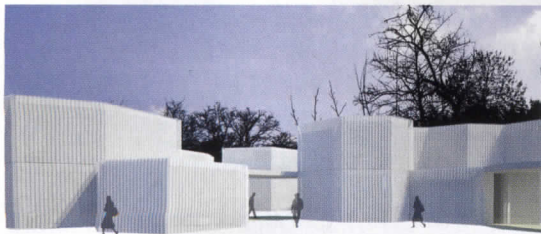


## Plot 6 of Jishan Base

The client for this suburban office park requested it be built in a “new Chinese style” that offered a modern story about traditional China. Many architecture firms would have responded by incorporating in their design familiar Chinese patterns of brickwork, windows, and other such elements. But Atelier Deshaus focused instead on creating traditional spaces. These include interior courtyards, dense lower floors, and open upper floors that provide multiple views of the hilly landscape surrounding the software park in Nanjing. Whitewashed walls reflect light into the courtyards and between buildings, while shelflike wooden screens in front of glass curtain walls create a decidedly modern take on traditional Chinese wooden architecture.

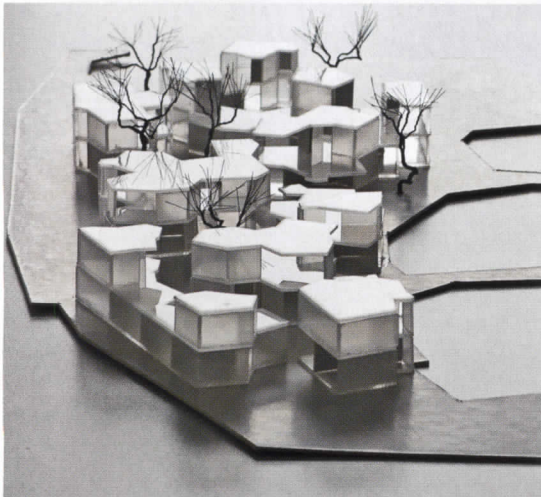






## E Hotel in Xixi Wetland Art Village

With this hotel in the middle of a wetland park, Atelier Deshaus wanted to minimize the project's impact on the site. So the firm developed a plan that evokes a cluster of cells or a group of bubbles. The arrangement not only allows rooms to meander around existing trees, but also suggests the natural growth of traditional Chinese settlements. Unlike the typical Chinese home that faces in one direction, these polygonal units are multidirectional and allow many views to the wetlands. Corrugated, perforated aluminum facades manage the light in the rooms and give the exteriors a certain ambiguity as they change in different weather conditions.



## Spiral Gallery, Jiading

Like a Richard Serra sculpture, the building has a simple exterior hiding a complex interior and a form that unfolds as the viewer moves through it. To extend the visitor's experience at this small gallery, Atelier Deshaus used a spiral plan. Visitors can simply walk into the gallery at a ground-floor entrance, if they want. But for the full experience, they need to walk up a set of winding stairs with high concrete walls framing the sky. On the roof they can enjoy views of the surrounding park, then head down to a courtyard and back into the gallery. The curved path continues within the gallery space, whose walls are lit by a glass enclosure softened by an aluminum screen.







## Kindergarten, Jiading

In the kindergarten, two parallel structures play in opposition to each other. A formidable concrete block encloses the circulation ramps for the school, while a punctured block with perforated aluminum panels, irregularly placed windows, and indoor/outdoor play spaces houses the classrooms. The facades, though, fool expectations—with the closed concrete box hiding a large vertical space, and the open facade masking a tight arrangement of classrooms. A mix of clear- and colored-glass windows brings warm light into the building during the day and produces a rich glow on the exterior at dawn and dusk when parents drop off and pick up their children. The kindergarten sits in a new town outside a historic center, which presented an opportunity to the architects. “The image of a building in the suburbs is totally different from one downtown,” says partner Liu Yichun. “We think this offers a chance to find a way to represent our poetic tradition.”







## Office Building for Fuel Gas Station, Jiading

Surrounded by roads and vacant lots on three sides, the site for this building has just one notable feature: A river that runs along its north side. On its short sides, the building appears as a pair of heavy boxes—one clad in Cor-Ten steel and the other made of raw concrete. But on the long north side, it breaks into a series of smaller boxes, as if responding to the pull of the river. These weathering-steel boxes hold special function rooms and create interior courtyards as they move apart.





## Office Building, Qingpu

The site of this office building was initially designated to be open green space. So instead of designing the building as an intrusion on its surrounding park, Atelier Deshaus wanted the park to intrude on the building. The firm raised the offices one story above the ground and let the park's green space slide underneath them. It also carved out a courtyard in the center of the plan and landscaped it with a reflecting pool. Blurring indoors and out, the architects wrapped the building with a glass screen that blocks noise from a nearby highway and creates a buffer zone that is protected but not totally enclosed.



## Xiayu Kindergarten, Qingpu

Fifteen classrooms, dining rooms, and courtyard play spaces nestle together in a long white band that follows the curve of an adjacent river. Fifteen corresponding nap rooms painted in bright colors seem to pop up through the roof of this band. Raised wooden walkways link these rooms in groups of three to create a sort of mini-village on the roof. Xiayu Kindergarten is one of three kindergartens that Atelier Deshaus has designed, and partner Chen Yifeng sees an opportunity in this. "In China the kindergarten is a special project because education is so important here," he says. "We feel that children need the designer to provide a very magical space for them."





# Iñiqui Carnicero Architecture Madrid

With rough, sensuous materials and simple geometries, a team charts new courses while employing the basic principles of Modernism.

**FOUNDED** 2006

**DESIGN STAFF** 6

**PRINCIPAL** Iñiqui Carnicero

**EDUCATION** Higher Technical School of Architecture, Polytechnic University of Madrid, M.Arch., 1998

**WORK HISTORY** ICA Arquitectura, with Ignacio Vila and Alejandro Vírveda, 2002-06

**KEY COMPLETED PROJECTS** Pavilion 16, Old Slaughter Houses, Madrid, 2011; Social Housing, Vallecas, Madrid, 2011; House 1+1=1, Madrid, 2009; Arab Tower Restoration, Guadalajara, 2004; Don Bosco High School, Albacete, 2003; Polytechnic School, CEU, San Pablo University, Madrid, 2002

**KEY CURRENT PROJECTS** Office of the District Attorney, Madrid (suspended); 300 Units of Experimental Housing for VIVA, Madrid (suspended); Garment Museum, Madrid (suspended)

[WWW.INAQUICARNICERO.COM](http://WWW.INAQUICARNICERO.COM)

## Office of the District Attorney

This competition-winning project in Madrid forms part of a campus of 18 round buildings (now on hold), which include designs by Foster + Partners, Zaha Hadid, and Richard Rogers. Working with his former associates, Ignacio Vila and Alejandro Vírveda, Carnicero fit the different elements of the complex program together like “pieces of a puzzle.”

**I**n the house that Iñiqui Carnicero has built for himself in Madrid’s rolling northern suburbs, the architect declares allegiance to a classic Modernist discipline, following a Madrid tradition that leads back to one of his influential teachers, Alberto Campo Baeza, and to Alejandro de la Sota and other pioneers of a renewed Spanish Modernism in the 1950s. Carnicero’s design reinterprets Corbusian prototypes—the strip window, the crisp rectangular volume raised on pilotis, the double-height interior living space overlooked by balconies and a sculptural stair (made of aluminum and crafted by artist Eduardo Cajal). But he also addresses contemporary concerns, including principles such as thermal inertia and passive airflow.

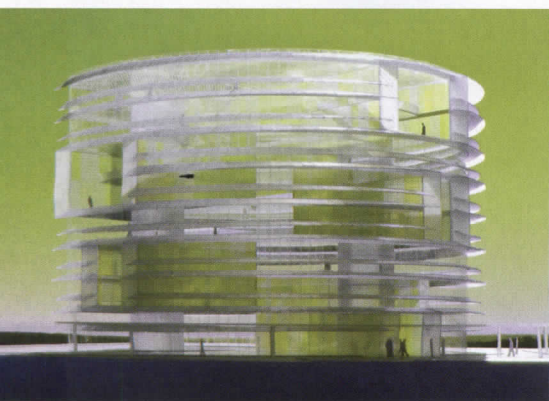
“It’s very simple in section,” he explains. “A podium resolves the problem of the steep terrain. The living area opens to the landscape to the south, and the overhanging upper floor keeps out the sun in the summer but not in the winter.” The long structure actually comprises two dwellings, with a shared swimming pool on the southern terrace. The architect pooled his savings with a friend, and, with a budget that could have bought only a couple small studios in Madrid, built this elegant formalist statement in board-formed concrete.

Carnicero, 38, recently moved his studio into the house, where he works with three or four collaborators in an ample glazed space under the podium. A large, gentle man and Madrid native, he graduated from the Higher Technical School of Architecture at Madrid’s Polytechnic University in 1998, and has taught design there since 2000, working first under Campo Baeza. He won a scholarship to the Spanish Academy in Rome in 2008, where he studied the Roman sojourns of Louis Kahn and Robert Venturi. The influence of Rome on his own work can be found in his interest in rough, sensuous materials and simple, direct geometries. At the same time, he takes a stand against an overly assertive formalism, favoring, in his own words, “works in which the hand of the architect isn’t too much in evidence. Instead of the grand statement, architects today must look to more limited interventions, using what’s readily available.”

Nevertheless, his designs often feature an intriguing complexity, like a three-dimensional puzzle, developed through combinations of simple elements. For an addition to a high school on a tight site in the small southern city of Albacete, for example, each of the three floors has a strikingly different layout, creating a complex weave of open and closed spaces around a central courtyard. And for the competition-winning building for the district attorney’s office in Madrid’s City of Justice (designed with Ignacio Vila and Alejandro Vírveda before Carnicero established his independent practice), the facade of a round volume is pierced by a series of garden patios that are staggered in position and level to create dynamic diagonal cross-views through the interiors.

In other projects, concepts from Carnicero’s house design reappear, as in the proposal for a library and day center for senior citizens in the town of Torrelavega in northern Spain, where the architect raised the pentagonal library volume on columns to create a shaded public plaza below. The elongated, elevated form of the house echoes, at a completely different scale, one of his first commissions for the CEU San Pablo University in Madrid (with Vírveda and Miguel Ángel Cámara): a miniature city of classrooms, offices, laboratories, and public spaces where the linear organization has allowed for the building’s expansion in phases over time.

Despite Carnicero’s declarations of formal modesty, his work is by no means without a strong architectonic character. Though he has returned to the basic principles of Modernism, he discovers rich new territories to explore using the familiar formulas of structural logic and functional form. *David Cohn*

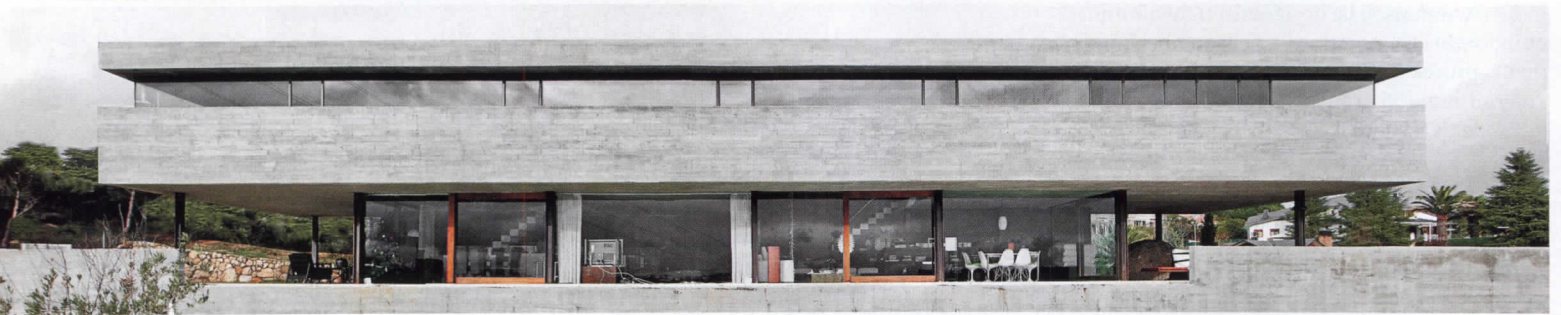






## House 1+1=1

The building comprises two residences, one for Carnicero himself and the other for a friend, as well as the architect's studio. The house, outside of Madrid in Torrelodones, is raised on an ample podium over a steep slope to take in sweeping views to the south, across the Pardo Nature Reserve to the city skyline beyond. The upper volume of board-formed concrete shades the glazed living areas in the summer. Inside, the double-height living space includes a single piece of built-in furniture incorporating a sofa, bookcase, and kitchen countertop.







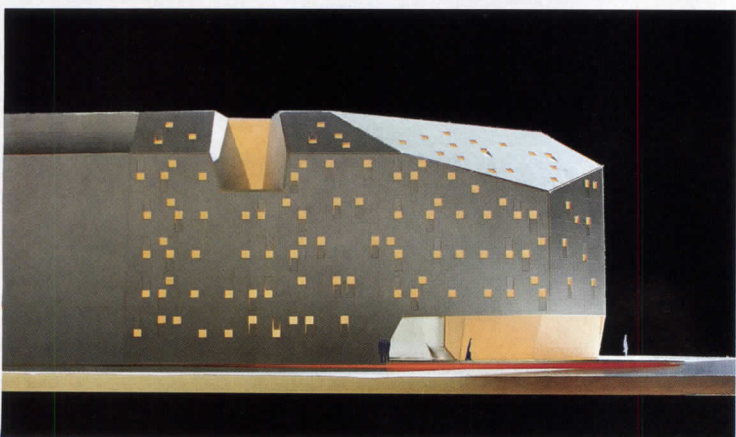
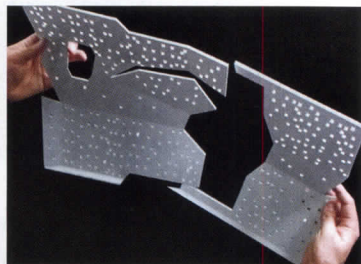
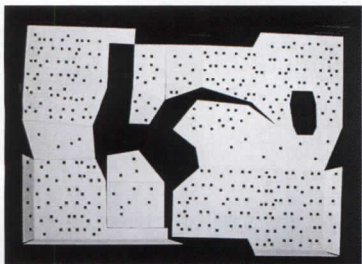
## Watchtower Restoration

For over 1,000 years, this tower in Guadalajara has guarded a strategic mountain pass. Carnicero rebuilt ruined sections of the walls using stone from the site and traditional techniques, separating his intervention with a line of tile markers. Working with the sculptor Eduardo Cajal (creator of the aluminum stair in his own house), he designed a light aluminum footbridge as part of a new approach path that captures the best views over the valley. The railings and arched deck work together to increase the stiffness and strength of the span.



## Public Housing

Starting with urban design guidelines that called for a chamfered corner and top-floor setbacks, Carnicero and his associates Alejandro Vírveda and Ignacio Vila decided to transform the beveled edge into a general sculptural strategy. Their aim was to give the small, 29-unit building, which is under construction in Vallecas, Madrid, greater scale and presence. To increase its resemblance to a monolithic crystalline volume, they divided glazed areas into multiple small openings, although the built project incorporates more traditional windows, as demanded by the city housing authority.







## Pavilion 16, Old Slaughter Houses

Carnicero's most recently completed project is a renovation of a 50,000-square-foot pavilion in a cultural center being created out of a complex of former slaughterhouses in Madrid. To subdivide the immense space without compromising its flexibility, and to control the entry of daylight from its upper level, the architect inserted continuous rows of steel doors, which hinge and pivot in pairs to create different spatial arrangements. The pavilion is used for exhibition and artists' studios, and can be converted into a theater or an auditorium.



# IwamotoScott

## San Francisco

A husband-wife team finds ways of merging the virtual with the actual, while creating compelling visions of an architecture for the future.

### FOUNDED 2000

### DESIGN STAFF 5

**PRINCIPALS** Lisa Iwamoto, Craig Scott

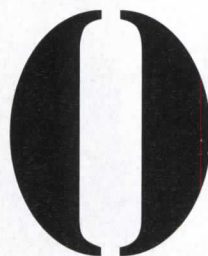
**EDUCATION** Iwamoto - Harvard GSD, M. Arch., 1993; University of Colorado, B.S. Engineering, 1986. Scott - Harvard GSD, M. Arch., 1994; Syracuse University, B.Arch., 1986

**WORK HISTORY** Iwamoto - Schwartz/Silver Architects, 1994-95; Thompson and Rose Architects, 1993-94; RoTo Architects, 1992; Morphosis, 1991. Scott - Brian Healy Architects, 1995-97; RoTo Architects, 1991-92; Morphosis, 1990-91

**KEY COMPLETED PROJECTS** Kauai House, Hawaii, 2011; Obscura Digital Headquarters, San Francisco, 2010; Lightfold at One Kearny Lobby, San Francisco, 2010; PS House, San Francisco, 2010

**KEY CURRENT PROJECTS** SourceBits US Offices, San Francisco, 2011; Monaco Loft, San Francisco, 2012; Mobile Immersive Performance Venue, 2012

[WWW.IWAMOTOSCOTT.COM](http://WWW.IWAMOTOSCOTT.COM)



One thing that describes our firm is that we're caught between generations," says Lisa Iwamoto. She's on speakerphone with her partner—in work and life—Craig Scott, and the two are tag-teaming a conversation, trying to figure out how to explain their practice. They're both professors—she at UC Berkeley (disclosure: where this writer is pursuing her PhD) and he at California College of the Arts. Both graduated from Harvard's Graduate School of Design in the early 1990s. Most important, they were trained in non-computational

architecture: Iwamoto with Rafael Moneo and Mohsen Mostafavi and Scott with Rem Koolhaas. That education, under what she describes as "professors who were very building-oriented," might seem to be irrelevant given their current work, which relies heavily on the computer. But Iwamoto and Scott see their background—as well as her training as a civil engineer—as elements that strengthen their creative positions.

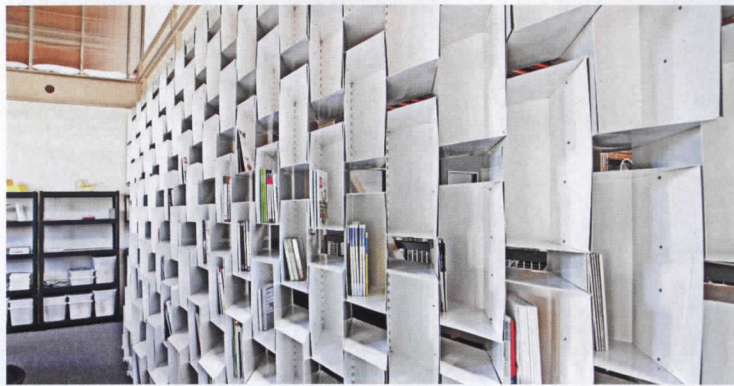
While Iwamoto's specialty at Berkeley is digital fabrication, she sees her teaching as intimately intertwined with her firm's design work. "Teaching keeps it fresh," Iwamoto explains. "We're constantly pushing students to think about how to be innovative, or coming up with project types for coursework that blurs the boundaries of a discipline." Challenging students in the studio helps the two challenge each other in the office.

Scott's focus at CCA is more "on space-making strategies and emergent technologies." But both partners are interested in what new technology can bring to the design table. It's that focus on making space, even when they're designing a temporary installation, that brings the firm's work out of an ephemeral paper realm and down to the real world of dirt and drywall.

The partners have known each other for 20 years, having met at Berkeley between undergraduate and graduate studies. Scott then took a Los Angeles detour to work with Thom Mayne, whose inventive formalism shines through the pair's focus on spatial relationships. "We were a couple before we were a practice," Iwamoto says. Before starting their firm in 2000, the pair worked together on projects such as the unbuilt Marin County hilltop Fog House and a faculty resource room at the University of Michigan, where they both taught.

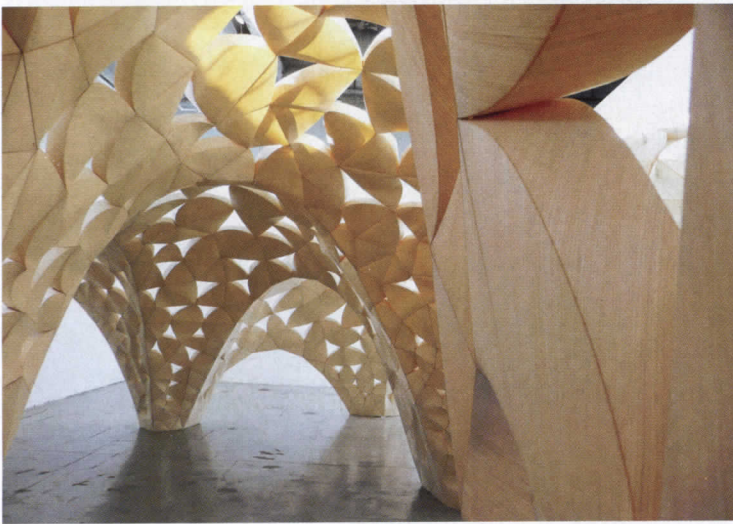
"We're really happy we're getting our stuff built now," Iwamoto says. In the process, they are connecting the three strands of their practice—the pedagogical, theoretical, and practical—in projects like a twisted coffered ceiling for a San Francisco office building and a Hawaii guesthouse that dodges and weaves its way around a hillside. "Some of the ideas and strategies from one project make their way across into the others," Scott says. From reclaiming a typically Classical architectural move—like the coffer—for the digital age to folding a house in and over itself, the two usually deal with multiple possibilities at one time. In their most ambitious project, "SF 2108: Hydro-Net," they envision an urban and infrastructural landscape that brings together algae-rich, aquaculture-inspired towers, hover cars, and fog-collecting "flowers." The project, which won a History Channel competition, weaves together research and civil-engineering know-how with flashes of science fiction to create a compelling vision of the city's future. *Eva Hagberg*





## Obscura Digital

Iwamoto and Scott renovated a 1940s warehouse in San Francisco and reused it as a digital media company's headquarters, as well as home base for their own firm. The 36,000-square-foot project encompasses two stories (including a double-height first floor) and was left mostly open. It features a multifunction divider that the architects call the BookCaseScreenWall, made from laser-cut and powder-coated sheet metal to look like a hallucinatory cross between a pile of pixels and a skewed bookshelf. A jewel box of a conference room, sheathed in black bamboo, overlooks the first floor and provides a well lit, straightforward counterpoint to the BookCaseScreenWall's complexity and contradiction.



## Voussoir Cloud

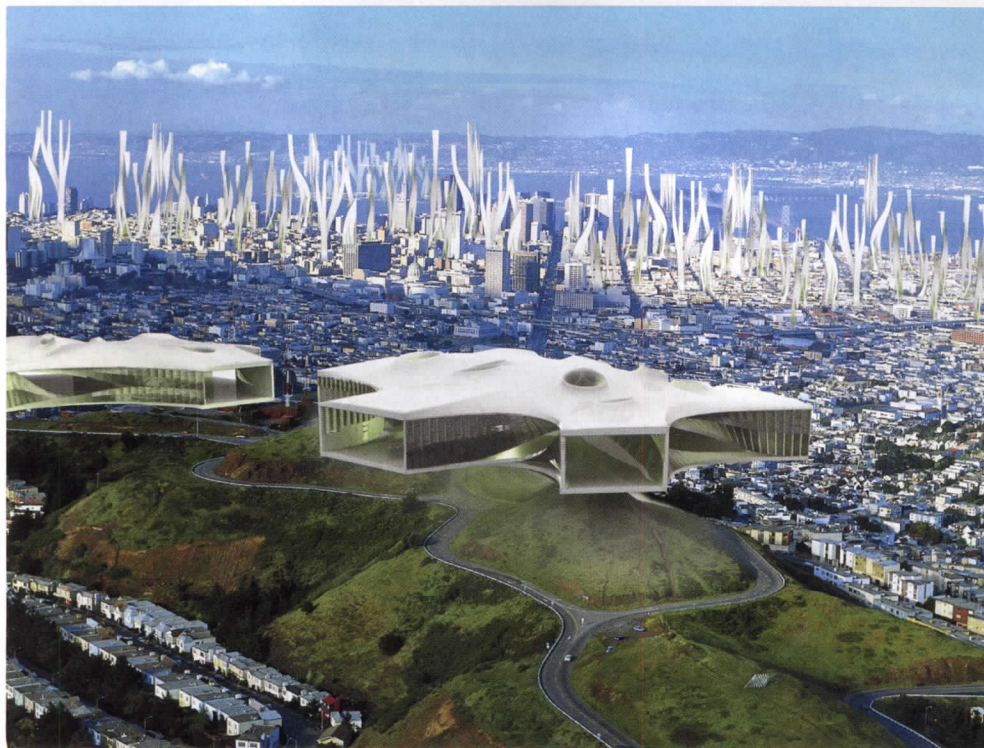
Part student project, part emerging technology experiment, part historical adaptation, the Voussoir Cloud was exhibited at the SCI-Arc gallery for a month and a half in 2008. Inspired by the voussoir—a wedge-shaped block forming part of the structure of an arch—IwamotoScott and their collaborators (including SCI-Arc students and Buro Happold) built a series of laminated-wood modules folded along curved seams. These three-dimensional blocks were then inserted onto and over each other, and held in place by a combination of internal surface tension and their placement between gallery walls.



## Lightfold

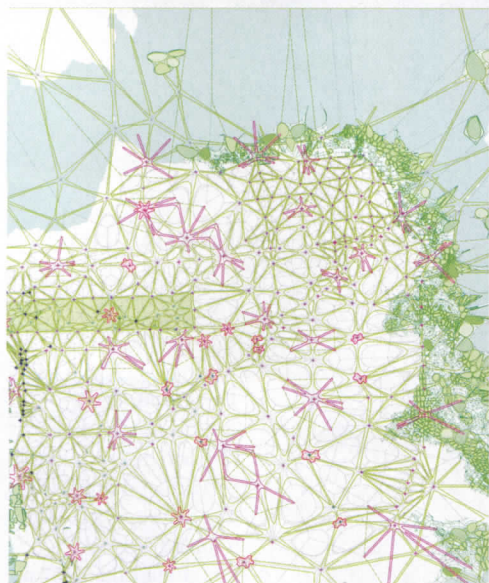
Built in a San Francisco commercial development's lobby and funded by a One Percent for Art Program, Lightfold operates as both architecture and public art. The architects created a folded wooden chandelier by using a software that stretched, pushed, and pulled what would otherwise have been traditional ceiling coffers (common elements in early-20th-century Bay Area buildings). A planar reception desk provides an angular counterpoint to the womblike warmth of the reimagined coffers' glow.





## SF 2108: Hydro-Net

San Francisco's grand-prize winner for the History Channel's City of the Future competition held in 2008, Hydro-Net posits a speculative solution to the incipient problems of an increase in people and a simultaneous decrease in resources. Described by the architects as "symbiotic and multi-scalar," the project is conceived as both infrastructural and architectural—as an organizational framework that controls the flow of people and resources, and as a freshwater-, energy-, and fuel-collecting system. Underground circulation (for hydrogen-fueled hover cars) complements a series of aboveground housing structures and "urban caves, reeds, and outcroppings."







## Edgar Street Towers

Part of the Greenwich South design study commissioned by New York City's Downtown Alliance, this plan for a pair of Manhattan towers brings IwamotoScott's interest in digital fabrication and its formal sensitivity to a grand scale. An open passageway at the base reconnects Greenwich and Washington Streets in Lower Manhattan, while the interior structure winds together the towers' two feet (which straddle the street) to create a central atrium lit by a fiber-optic array. A program that includes space for living, working, art, performance, retail, and a public library is proposed as a way of bringing vibrant new life to downtown New York.



# 5468796 Architecture Winnipeg, Canada

What's in a name? A Canadian firm connects its collective identity to its practice and projects.

## FOUNDED 2007

## DESIGN STAFF 12

**PRINCIPALS** Johanna Hurme, Sasa Radulovic

**EDUCATION** Hurme - University of Manitoba, M.Arch., 2002; B.Env.D., 1999. Radulovic - University of Manitoba, M.Arch., 2003; B.Env.D., 1999

**WORK HISTORY** Hurme - Cohlmeier Architects Limited, 2002-07; Office of Architecture, City of Helsinki, 2000. Radulovic - Cohlmeier Architects Limited, 1996-2007

## KEY COMPLETED PROJECTS

BGBX, 2011 (Phase 1); OMS Stage, 2010; Webster Cottage, 2010; Welcome Place, 2010

**KEY CURRENT PROJECTS** Guertin Boatport, 2012; *Migrating Landscapes*, Venice Architecture Biennale, 2012; YouCube, 2012

[WWW.5468796.CA](http://WWW.5468796.CA)

# J

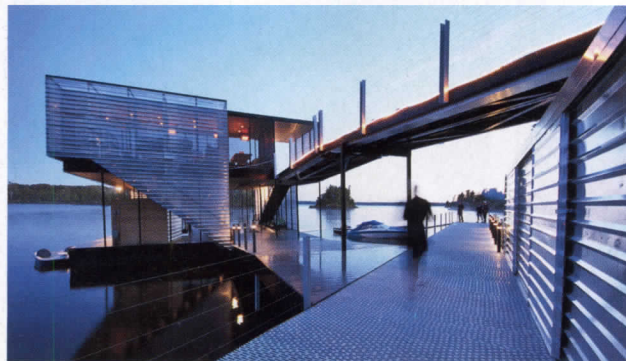
ohanna Hurme and Sasa Radulovic had just finished filing the legal paperwork when they decided to name their minutes-old architecture firm after its new corporate identification number. While 5468796 Architecture presents some branding problems in an age when most people don't even commit their closest friends' phone numbers to memory, it fit the partners' desire to project a collective approach to design. "Instead of attaching our names to the firm or coming up with something cute, we wanted the name to show that we are working together as a group," says Hurme.

Four years later, the firm's 12 full-time staff members all work around a 40-foot-long table in their Winnipeg office. Their portfolio ranges from retail spaces and a public-art pavilion to houses and multifamily residential projects—thanks to a Canadian real-estate market that has largely avoided the meltdown that disrupted so many other economies. Even as it has grown, 5468796 has kept the ideas that informed its unusual name at the forefront of its practice. The firm's work consistently considers how design reflects and shapes identity on a personal, urban, and even national scale.

Both Hurme and Radulovic immigrated to Canada in the early 1990s. She grew up in Helsinki; he arrived from Sarajevo, a refugee from the Balkan wars. They met as undergraduates at the University of Manitoba and went on to win several student competitions together. Both designers worked for Cohlmeier Architects before Hurme goaded Radulovic into starting their own practice. They have been friends and collaborators for more than 15 years and have a habit of finishing each other's sentences.

The firm recently completed a new facility for Welcome Place, an organization that provides temporary housing and other services for newly arrived refugees. When asked how their experiences as immigrants influenced the design, Hurme interjects that Radulovic had lived in housing provided by Welcome Place during his first weeks in Canada. Their project's 23 connected units can house up to 120 people and be combined to accommodate large families or subdivided for individuals. The living spaces feel protected, but they also open onto a series of common areas. The shared spaces were not part of the original program, but the firm pushed for them based on Radulovic's experiences meeting other recent arrivals in common areas when he immigrated. "Even if they're not from the same part of the world, they're going through the same experiences and changes," he says. "They're all trying to find a way of becoming Canadian."

The firm recently won the competition to design Canada's pavilion for the 2012 Venice Architecture Biennale, with a project that aims to elicit thought about contemporary Canadian identity in a country that has one of the highest immigration rates in the world, with a net migration rate of 5.65 per 1,000 people. In collaboration with designer Jae-Sung Chon, they devised an abstract landscape formed of wooden blocks, and then held a competition, asking Canadian designers under the age of 45 to submit models for residential projects to populate its blank topography. The firm also asked for three-minute videos explaining how the designers' backgrounds informed the residences that they submitted. "Diversity is a quintessential Canadian condition," says Radulovic. "We want to translate that to the work we're doing."  
*William Hanley*



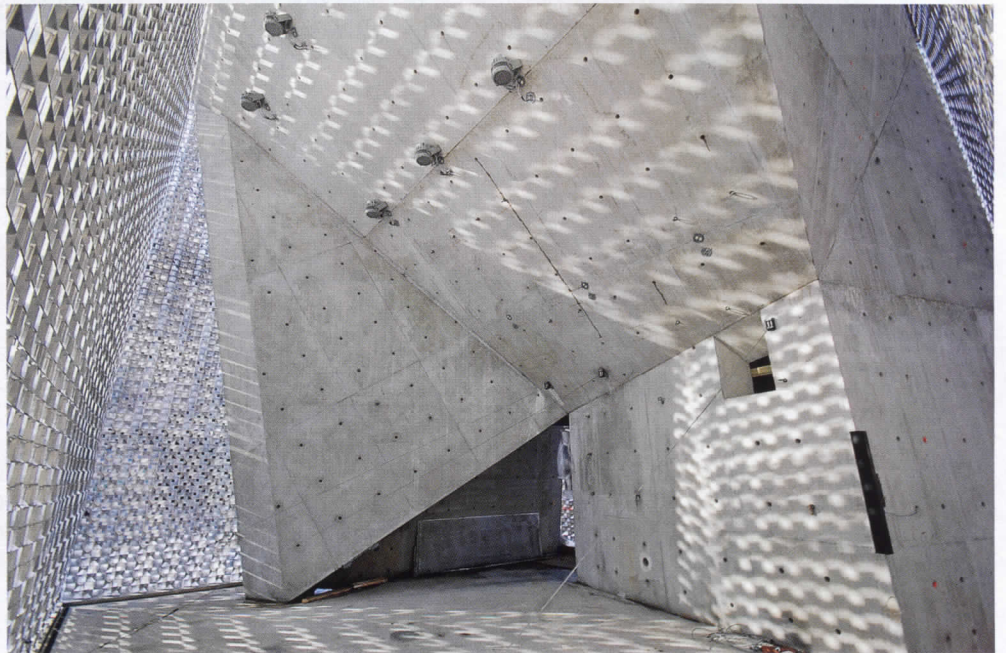
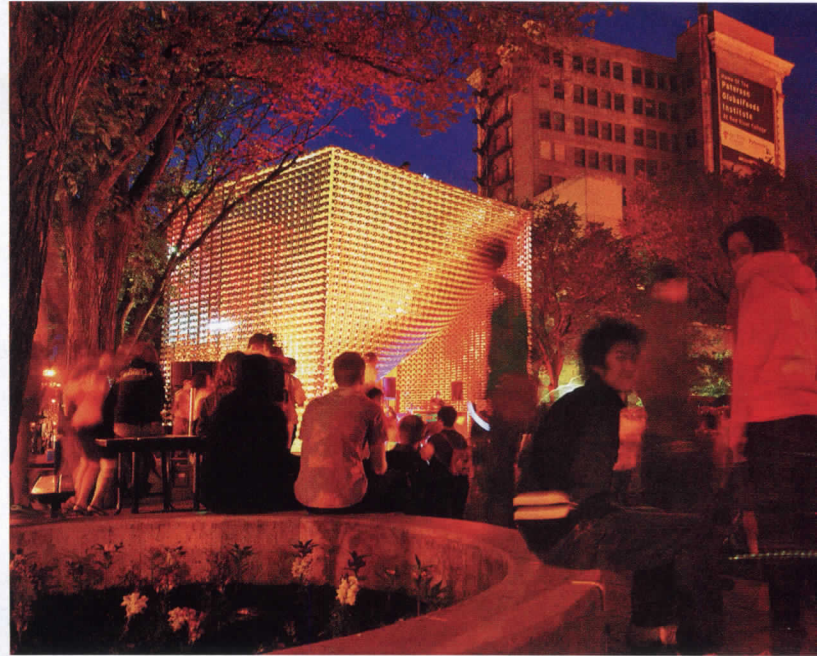
## Guertin Boatport

Designed for a private client, 5468796's floating dock uses reflective materials to catch ripples of light ricocheting off Long Bow Lake on the far western side of Ontario. The project's 3,000 square feet includes a boardwalk made from aluminum planks, a boat launch enclosed by perforated cladding, and an elevated viewing platform.



## Mitchell Copp Building

The firm's unrealized plan to adapt an early-20th-century bank building in downtown Winnipeg to accommodate offices and a restaurant took advantage of the structure's narrow footprint and high ceilings by inserting a suspended interior box. The architects increased the drama of the entry by opening the ground floor to the basement, creating 40 feet of vertical space just behind the historic facade. They suspended three levels of offices from a truss system attached to the existing bearing walls and placed the restaurant's dining area on the lowest level, directly beneath the hanging volume.



## OMS Stage

Located in Winnipeg's Old Market Square, the OMS Stage is an open-air performance space in a public plaza designed by landscape firm Scatliff+Miller+Murray. In the city's frequently freezing climate, the outdoor theater season lasts for only a few months. To give the pavilion a year-round presence, the firm wrapped a concrete stage in a perforated metal skin, which opens during performances and closes to create an illuminated sculptural cube. The form anchors the surrounding plaza and provides a glowing landmark that has come to characterize the neighborhood where 5468796 has its office.





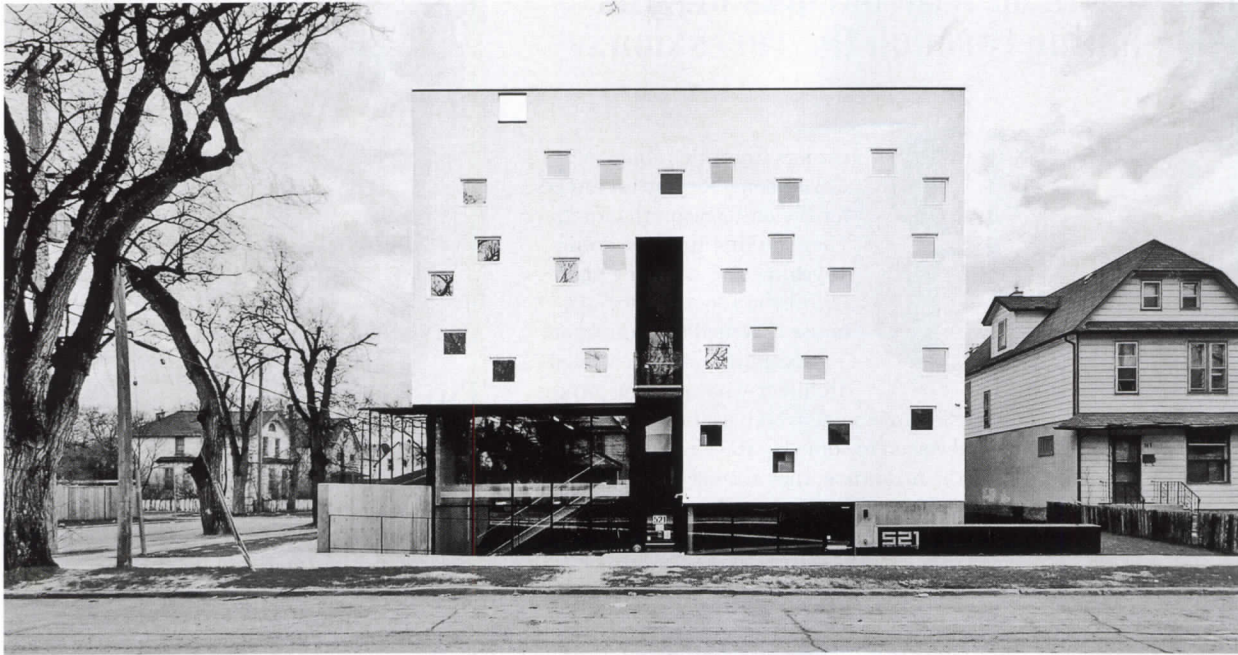
## Webster Cottage

A family of four wanted to build a year-round retreat along the western shore of Lake Winnipeg, about an hour north of the city. In response, the firm designed an L-shaped house with outdoor living spaces connecting the building to the landscape in the summer. The architects blanketed the entire project with a folded roof line, which wraps a double-height primary living space in the foot of the L, before narrowing to enclose a secondary bedroom and a carport in the stem. Where the house bends in response to its site, a two-story sawtooth wall continues the line of the stem through the main volume. Panels in the jagged wall open to the entry, a utility closet, a bathroom, and a bedroom. The organization allows the client to close off secondary spaces during the Manitoba winter.



## Welcome Place

5468796's facility for Welcome Place needed to include, under one roof, 23 units of transitional housing for recent immigrants and offices providing services to them. The firm pushed the project's footprint to the maximum buildable area on a small lot and placed the entry below grade to accommodate a series of connected public spaces. The simple structure and cladding system helped the firm stay within the client's budget while providing large windows and outdoor spaces that introduce residents to the city.



## Bloc10

The firm designed 10 expansive condominiums for a young Winnipeg developer who wanted a project with a loftlike feel. Each apartment consists of three open-plan spaces set on separate levels. The firm staggered each unit's component volumes in plan to create meandering vertical circulation between floors. Outside, wooden louvers add privacy while giving the project a dynamic street presence.





# Leong Leong

## New York City

Two architect brothers sought different mentors, then opened their own firm. With budgets big and small, they are designing through the recession.

### FOUNDED 2009

### DESIGN STAFF 7

**PRINCIPALS** Christopher Leong, Dominic Leong

**EDUCATION** Christopher - Princeton University, M.Arch., 2006; University of California, Berkeley, B.A., 2000. Dominic - Columbia University, MSAAD, 2003; California Polytechnic State University, B.Arch., 2001

**WORK HISTORY** Christopher - SHoP Architects, 2006-09; Leong Architects, 2001-03; Gluckman Mayner Architects, 2000-01. Dominic - PARA-Project, 2006-09; Bernard Tschumi Architects, 2003-07

**KEY COMPLETED PROJECT** 3.1 Phillip Lim Flagship Store, Seoul, 2009

**KEY CURRENT PROJECT** ZD Winery, Napa, California, 2012

[WWW.LEONG-LEONG.COM](http://WWW.LEONG-LEONG.COM)

# B

rothers Dominic Leong and Chris Leong became architects for the only reason that matters: They couldn't imagine doing anything else. Growing up in California's Napa Valley in a house designed by their father—a computer scientist-turned-architect—they saw the pitfalls

of the profession, as well as its possibilities, and vowed to someday start a firm together. In the meantime, they acquired different mentors: Dominic worked for Bernard Tschumi, while Chris apprenticed at SHoP Architects.

When Dominic (now 33) presented a scheme to Tschumi, the reaction was likely to be, "How does this advance the history of architecture?" (Tschumi was the longtime dean of Columbia's architecture school.) And when Chris (who's 34) presented a scheme to the SHoP partners, they were likely to ask, "How does this advance architectural practice?" (SHoP's founders are expanding their role beyond architecture and into development and construction.) When they left their employers to form Leong Leong, in 2009, the brothers combined approaches, showing they could be both formally inventive while devising new ways to make a project a reality.

Determined not to become paper architects while waiting out the recession, they have thrown themselves into small projects, even doing some of the construction work themselves. And at a time when ground-up commissions are elusive, they have avoided being typecast as interior architects by treating interiors as landscapes, with distinct "indoor" and "outdoor" spaces. That's true of their

4,000-square-foot store in Los Angeles for the Cambodian-American fashion designer Phillip Lim. There, they installed undulating walls that suggest a shopping street, under a ceiling—a light-diffusing PVC membrane—that could be a sky. While many fashion brands have trademark colors or logos, the Leongs are giving Lim a trademark texture, using custom concrete tiles, with bulbous profiles, on the facades of the two stores. The brothers are currently designing Lim's 13,000-square-foot office in Lower Manhattan.

Right now the Leong brothers are making a name for themselves even without big budgets. Recently, they designed the annual Beaux Arts Ball organized by the Architectural League of New York. The location was the Brooklyn Army Terminal, an intermodal transit hub in Brooklyn, designed by Cass Gilbert in 1918. With just \$15,000 to spend and acres of enclosed space to work with, they shrink-wrapped groups of plastic milk crates to create stations, which they call "mutant" objects, that encouraged gathering and socializing. All of it was easily recyclable, giving the architects a chance, Chris says, to make the project sustainable "while exploring aesthetic and cultural experiences rather than green clichés." *Fred A. Bernstein*



## Turning Pink

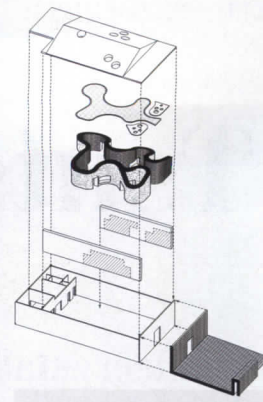
With graphic designer and officemate Jiminie Ha, the brothers opened a pop-up space on the Lower East Side called Turning Pink. They used slabs of rigid insulation (which will be reused) to create what, from the outside, seemed to be a 60-square-foot box, but, from the inside, dissolved into a kind of endless landscape.

## Siki Im Concept Store

In Siki Im's pop-up store, under the High Line in New York City, customers moved around a concave platform made from a soy-based spray foam. Clothes were tucked around the structure so "you had to really look for them," says Dominic.

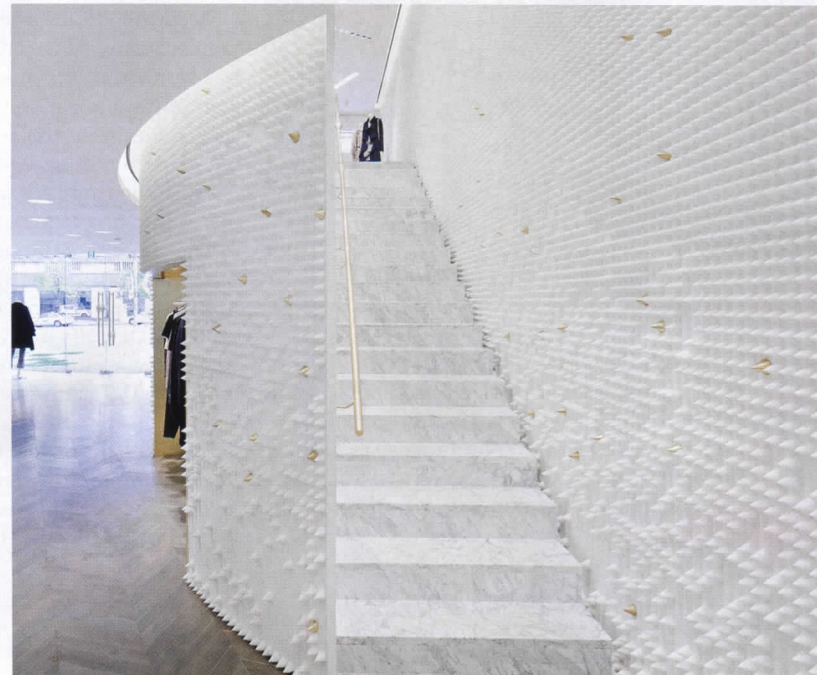






### 3.1 Phillip Lim Stores

Dominic Leong, working with his previous firm, PARA-Project and Office Giancarlo Valle, turned a 5,000-square-foot warehouse-style building in Beverly Hills (above) into a boutique for the fashion designer Phillip Lim. For their second Phillip Lim store, in Seoul (at right and below), Leong Leong “cropped” the Los Angeles plan into a smaller footprint. Picking up on themes introduced in California, they covered interior walls with foam panels that erode into a constellation of brass stars. Exterior walls of custom-made concrete tiles form a gradient from bulbous to flat.





# Koji Tsutsui & Associates

## San Francisco/Tokyo

A Japanese architect establishes a modest global practice and develops adaptable design concepts that play across national and economic boundaries.

**FOUNDED** November 2004

**DESIGN STAFF** 5

**PRINCIPALS** Koji Tsutsui

**EDUCATION** University College London, the Bartlett, M.Arch., 2004; Tokyo University, B.Arch., 1995

**WORK HISTORY** Koji Tsutsui & Associates, 2010–; Mark Cavagnero Associates, 2007–2009; Koji Tsutsui & Associates, 2004–2006; Tadao Ando Architect & Associates, 1995–2001

**KEY COMPLETED PROJECTS**

InBetween House, Karuizawa, Japan, 2010; Industrial Designer House, Tokyo, 2007; School & Home for HIV Orphans, Uganda, 2007

**KEY CURRENT PROJECTS** Yutenji

House, Tokyo, 2012; Case Study Biotope Housing, California, 2012; Housing for Tohoku Earthquake, 2012

[WWW.KT-AA.COM](http://WWW.KT-AA.COM)

**F**or newly minted architects eager to see the world's great buildings, international travel is a rite of passage. For Koji Tsutsui, it's a way of life. Born and bred in Japan, educated in England, and having built his defining work to date in Uganda, the 39-year-old architect divides his time between offices in Tokyo and San Francisco. And he has no intention of changing his peripatetic style. Playing in multiple locations is a source of stimulation for him, as well as a strategy for coping with the economic downturn afflicting

the United States and Japan.

These days Tsutsui spends just 10 to 14 days a month at home in Tokyo with his wife and young child. Yet 70 percent of his work is in Japan, where he is working on private residences in the Tokyo area and a center for the elderly in Aomori Prefecture. An NGO also hired Tsutsui to develop housing in Hokkaido for a neighborhood of homes devastated by the March 11 earthquake. To foster a sense of community and encourage growth, Tsutsui's plan consists of fractal clusters of individual homes, which he hopes will be donated by prefab housing manufacturers.

Tsutsui is no stranger to earthquake relief. After receiving his undergraduate degree in 1995, he intended to go abroad. But when the Kobe earthquake struck, he went to Osaka. There he worked for Tadao Ando on housing reconstruction for 1,000 families in central Kobe. Six years later he left for London to attend graduate school at the Bartlett School at University College London, followed by a stint in Dijon, France. When jobs in Japan beckoned, he began moving between continents. "Bicontinental" projects followed: the Industrial Designer's House in Japan and the School & Home for HIV Orphans in Uganda.

According to the architect, "they were basically the same concept, but contrasting site conditions called for different approaches." Located in a residential Tokyo neighborhood, the house is a steel-skinned box containing a pile of rectilinear rooms bound by interstitial, communal spaces. Similarly, the orphanage in Africa is a collection of rectangular, one-room buildings with in-between spaces for play, rest, or gathering. Because the rural site was devoid of restrictions, Tsutsui arranged the pieces in a ring to allow for continued growth.

The concept of the Ugandan project—an architecture that expands to meet changing client needs—translated equally well to American soil. After two years in Tokyo, Tsutsui hit the road again, this time to the United States. His first U.S. project, Biotope Housing, is a private residence with a multicellular structure that anticipates future expansion.

"In the U.S., I am freer in terms of design and materials," Tsutsui says. Yet he feels it's easier to build in Japan: construction quality is high, permits are cheap, and consultants are the contractor's responsibility. Given his volume of work, he can maintain parallel practices with the help of a licensed partner in California and support staff in Japan. For Tsutsui, two offices is the best of both worlds. *Naomi R. Pollock, AIA*



### Earthquake housing

This project, temporary housing for victims in northern Japan, consists of building clusters ringing courtyardlike communal spaces. The site plan is based on fractal geometry that can accommodate the community's future growth.







## School & Home for HIV Orphans

Situated on an open plain in Uganda, the 2,000-square-foot Annular Orphanage opened in 2007. Because the vast site was devoid of any man-made infrastructure elements, it forced Tsutsui to literally think outside of the box. Designed for children orphaned by AIDS or HIV, it consists of eight huts loosely encircling a tree. The one-room buildings contain the various programmatic pieces but also define interstitial outdoor spaces for gathering, playing, and teaching. In the absence of urban site plan constraints, Tsutsui created a set of design rules for the master plan and individual buildings that will also facilitate future growth.







## Industrial Designer House

Located in a quiet residential neighborhood in Tokyo, and completed in 2007, this house consists of a series of rectangular rooms piled inside a steel box. Linked by stairs, all of the habitable spaces relate to the living-dining area at the core of the house. While a steel-frame structure secures the building, windows and wall openings create ambiguous boundaries between rooms and forge connections between inside and out.



## Mission in Haiti

A multifunctional facility for a religious missionary group in Haiti, this two-part project consists of the construction of a church followed by a school and orphanage. The church will occupy the center of the project while fractal clusters, containing either housing or classrooms, will propagate outward. Each unit will contain six small, square buildings capped with pitched roofs and located at 45-degree angles in relation to each other. Each dormitory will house two foster parents and 20 children.



## InBetween House

Located in Karuizawa, a resort community northwest of Tokyo, InBetween House blends with the hilly topography and the local building culture. A full-time residence for a couple in their forties, the house is a collection of small, pitched-roof buildings unified by an enclosed interstitial space containing the home's communal rooms. InBetween House is a 2011 Record Houses and 2011 winner of the Villa Category at the World Architecture Festival.



# NORD (Robin Lee/Alan Pert)

## Glasgow, London, Dublin

Taking its cues from the rugged contexts of Scotland and Ireland, a firm explored notions of form-making before its partners split earlier this year.

### FOUNDED 2002

**DESIGN STAFF** 4 (Robin Lee Architecture); 14 (NORD)

**PRINCIPALS** Robin Lee, Alan Pert

**EDUCATION** Lee - Glasgow School of Art, PG Dip., 1993; Mackintosh School of Architecture, M.Arch., 1991; Mackintosh School of Architecture, Dip. Arch., 1990; Mackintosh School of Architecture, B.Arch., 1988. Pert - University of Strathclyde, M.Arch., 1993

**WORK HISTORY** Lee - Zoo Architects, Glasgow, 1996-2002. Pert - Zoo Architects, 1996-2002; GMW & Partners, Berlin, 1993-95

**KEY COMPLETED PROJECTS** Wexford County Council Headquarters, Wexford, Ireland, 2011 (completed as Robin Lee Architecture); Primary Substation, London, 2009; Destiny Church, Glasgow, 2005; East End Sawmills, Glasgow, 2004; Bell House, Strathblane, Scotland 2004

**KEY CURRENT PROJECTS** Lee - National Sculpture Factory, Cork, Ireland, 2012. NORD - WASPS Artists Studios, Gallery and Bookshop, Glasgow, 2011; Govanhill Swimming Pool, Glasgow, 2012; SWG3 Gallery and Studios, Glasgow, 2012; Furniture Galleries for the Victoria & Albert Museum, London, 2012; Prince & Princess of Wales Hospice, Glasgow, 2014

**WWW.ROBINLEEARCHITECTURE.COM**

**WWW.NORDARCHITECTURE.COM**

**G**lasgow's industrial heritage and roll-up-your-sleeves building traditions informed the work of Robin Lee and Alan Pert when they launched their firm NORD (Northern Office for Research & Design) in 2002. The city's old factories, its history of craftsmanship, and its cold, wet climate encouraged the architects to think carefully about materials and how buildings are made—lest their projects leak, or dishonor the spirit of Charles Rennie Mackintosh. In May 2011, Lee and Pert dissolved their

partnership, with the former establishing Robin Lee Architecture in London and Dublin and the latter working as NORD in Glasgow and London.

"The notion of making was essential to our work," says Pert, 40, who grew up in Scotland and remembers visiting Crichton Castle as a boy and being fascinated by the 16th-century building's courtyard walls studded with massive diamond-shaped stones. Lee, 45, was born in the Channel Islands (between Britain and France) but grew up in Scotland. After earning a degree in architecture, he went back to school to study sculpture—an experience that shaped his perspective on form, materials, and the value of limited means. "Architects today can do anything with form," states Lee. But the freedom unleashed by computer-aided design holds little appeal to him: "I want to develop a position in terms of form that has rigor to it. I love the way artists like Carl Andre and Richard Serra take a material as it's found and use it."

In the firm's largest project, the Wexford County Council Headquarters (completed by Robin Lee Architecture) in Ireland, the design exploits the nature of stone and glass—emphasizing the solidity of one and the transparency of the other. But instead of putting the stone on the exterior of the building and glass inside, the architects did just the opposite. By inverting the typical arrangement, they subverted expectations while remaining true to the character of each material.

Starting with Bell House, their first project, Lee and Pert searched for the essence of architecture by stripping away as many elements as possible. So the house's windows are flush with the brick envelope, and mullions, lintels, and other forms of articulation are eliminated. "We wanted to minimize or obliterate things like gutters and flashing to get to a singularity," says Lee. In doing so, the architects reinterpreted the local vernacular, echoing familiar residential forms but making them appear distinctive by taking away certain details.

In all of their projects, Lee and Pert treated materials honestly but in ways that make people see them in a new light. "I like to take a mundane material such as lumber or brick and give it a sense of dignity. I try to maneuver within that material's building tradition, while pushing it forward," says Lee. "Our buildings reflect their material context, and, in the early work, that was Glasgow," says Pert. Now that Lee and Pert have gone separate ways, it will be interesting to see if they take different paths in their work and their practices. *Clifford A. Pearson*

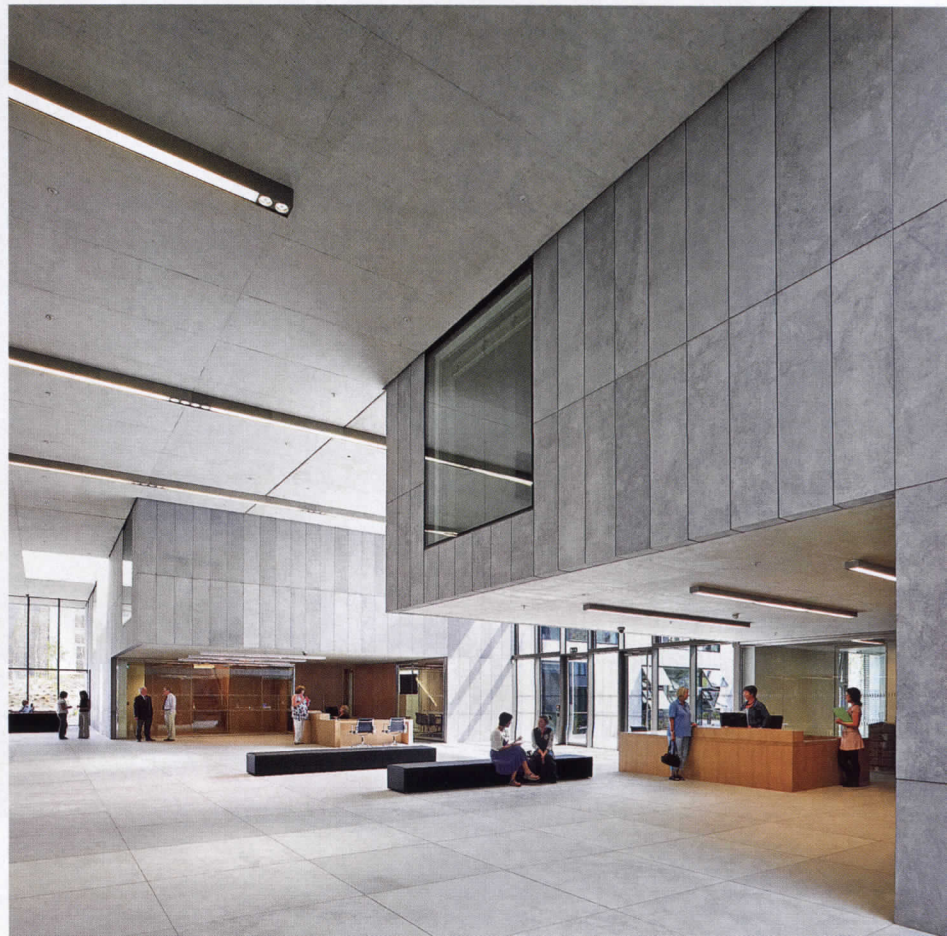






## Wexford County Council

This 125,000-square-foot project in Ireland (completed in 2011 by Robin Lee Architecture) brings together offices for all of the county's departments and services. Set on the outskirts of town, the building acknowledges Wexford's old masonry architecture, in its use of Irish blue limestone, while reaching out to the area's estuary landscape in a series of terraces. Robin Lee, the partner in charge, designed the complex as a set of six blocks gathered around a central "civic forum" that can be used for special events and presentations. Lee also inserted a series of courtyards with native plantings and reflecting pools that help bring daylight inside. A glass skin around the building creates a light-filled buffer and offers a pleasing contrast to the solidity of the stone elements.







## East End Sawmills

An addition to an existing warehouse in Glasgow, this project provides a showroom and offices, and serves as a kind of billboard advertising the sawmills. The architects used timber components machined and pre-fabricated in panels and then assembled adjacent to the building site. The firm applied its minimalist approach to the project's materiality. "When you use multiple materials with lots of junctures and elements, you lose the power of the material," states Lee. "Instead, we wanted to make a building that's just about lumber."







## Bell House

In adding to a simple house in Strathblane, Scotland, Lee and Pert followed the pattern of local farms that expand by erecting new buildings wherever they are needed. The architects echoed the form of the existing house in their addition, but eliminated mullions and most other articulation to emphasize the homogeneous character of the brick envelope. While the addition's exterior alludes to vernacular architecture, its interior looks to urban lofts for inspiration.



## Destiny Church

Asked to renovate an unremarkable 1970s annex to a church in Glasgow, the architects wrapped the building in black cement boards to provide a clear, flat contrast to the stone architecture next door. Inside the annex, they lined a large multipurpose hall and other spaces with oak boards that refer to the wood used inside the church, and work as a new interior skin discrete from the old building fabric.





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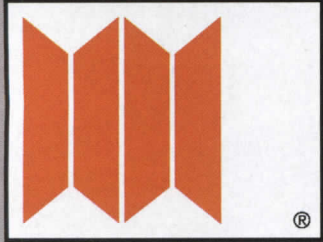
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# Sheraton Milan Malpensa Airport Hotel & Conference Centre

Italy | King Roselli Architetti

A Rome-based firm fuses architecture and industrial design to create a fitting gateway to Milan and a welcome upgrade for its high-traffic airport. [By Linda C. Lentz](#)



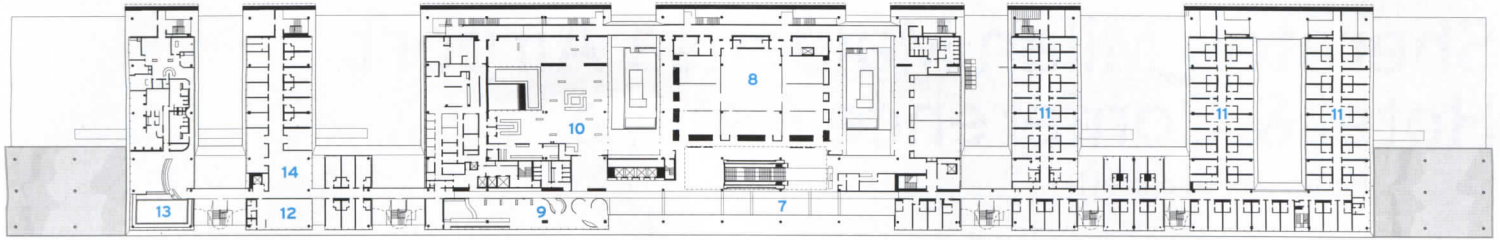
**AIRPORT HOTELS** are rarely, if ever, listed in travel guides as “worth a visit.” Typically built on formulaic models, they’re geared to captive travelers and conference planners in need of convenient accommodations. But in 2006, SEA, the Milan Airport Authority, collaborated with Italian builder Degennaro Group (DEC) and Starwood Hotels and Resorts to develop a singular destination at the city’s Malpensa Airport that not only redefines the genre through architecture, but changes the face of an increasingly important transportation hub.

Part of a greater Malpensa-improvement initiative, SEA’s invited competition challenged integrated groups of developers, operators, and architects to devise a building plan that would hide the airport’s Terminal 1 from the adjacent highway. That 1998 structure, designed by

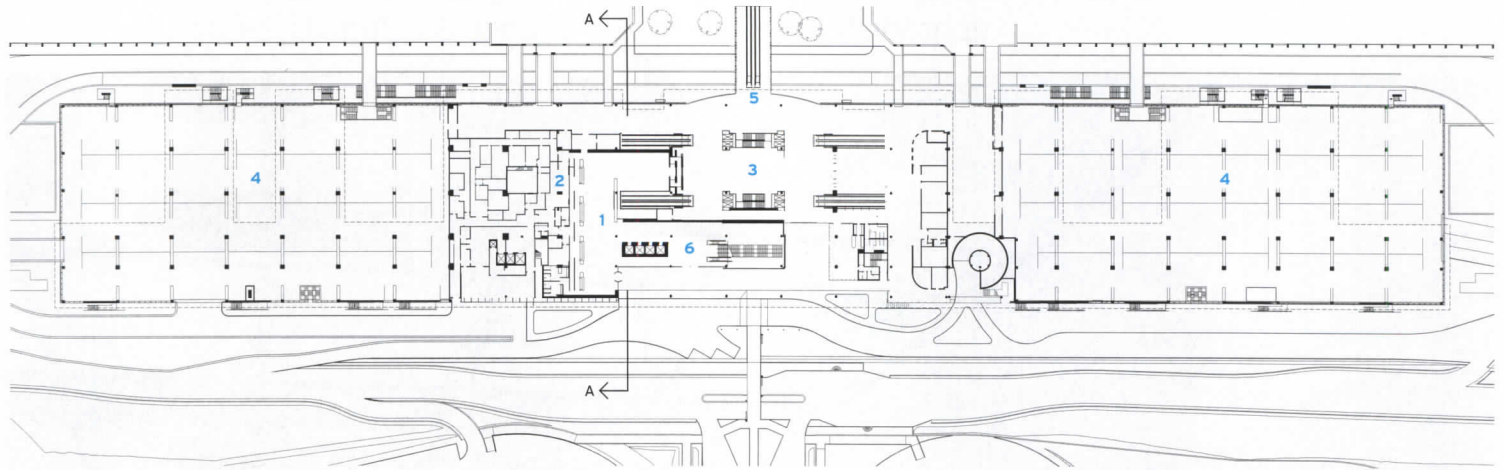
The hotel faces Terminal 1 with a taut fiberglass skin. The architects maintained this clean continuum on the roof by inserting the mechanicals within the curves of the modules.

[View additional images online.](#)

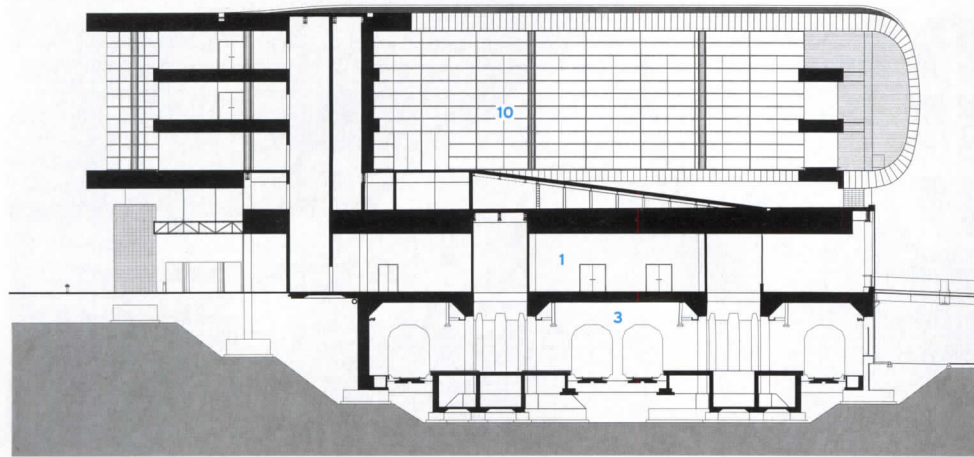




FIRST FLOOR



GROUND FLOOR



SECTION A-A

- |                       |                        |
|-----------------------|------------------------|
| 1 LOBBY/LINK@SHERATON | 9 BAR/LINK@SHERATON    |
| 2 BACK OFFICE         | 10 RESTAURANT          |
| 3 TRAIN TERMINAL      | 11 GUEST ROOMS         |
| 4 CAR PARK            | 12 FITNESS AREA        |
| 5 AIRPORT BRIDGE      | 13 SPA                 |
| 6 ATRIUM              | 14 OFFICES/GUEST ROOMS |
| 7 CONVENTION LOBBY    |                        |
| 8 CONFERENCE CENTER   |                        |

RIGHT: The complex project involved building the new hotel over an existing parking facility and train station, which are sandwiched between access roads. Graceful porticos frame the building at each end and feature shallow reflecting pools.







**TOP:** The Sheraton stretches along the entire length of the airport terminal, so that its elongated west facade is what drivers see from the road.

**ABOVE:** Guest rooms are configured in the curved modules to prevent direct views of the airport. The window grid has operable sections for natural ventilation. Contrasting spans of clear glass and roof openings lighten the structure inside and out.

the authority's technical office, has interiors by the late Milanese architect Ettore Sottsass but lacks the bravura of Madrid-Barajas or Beijing.

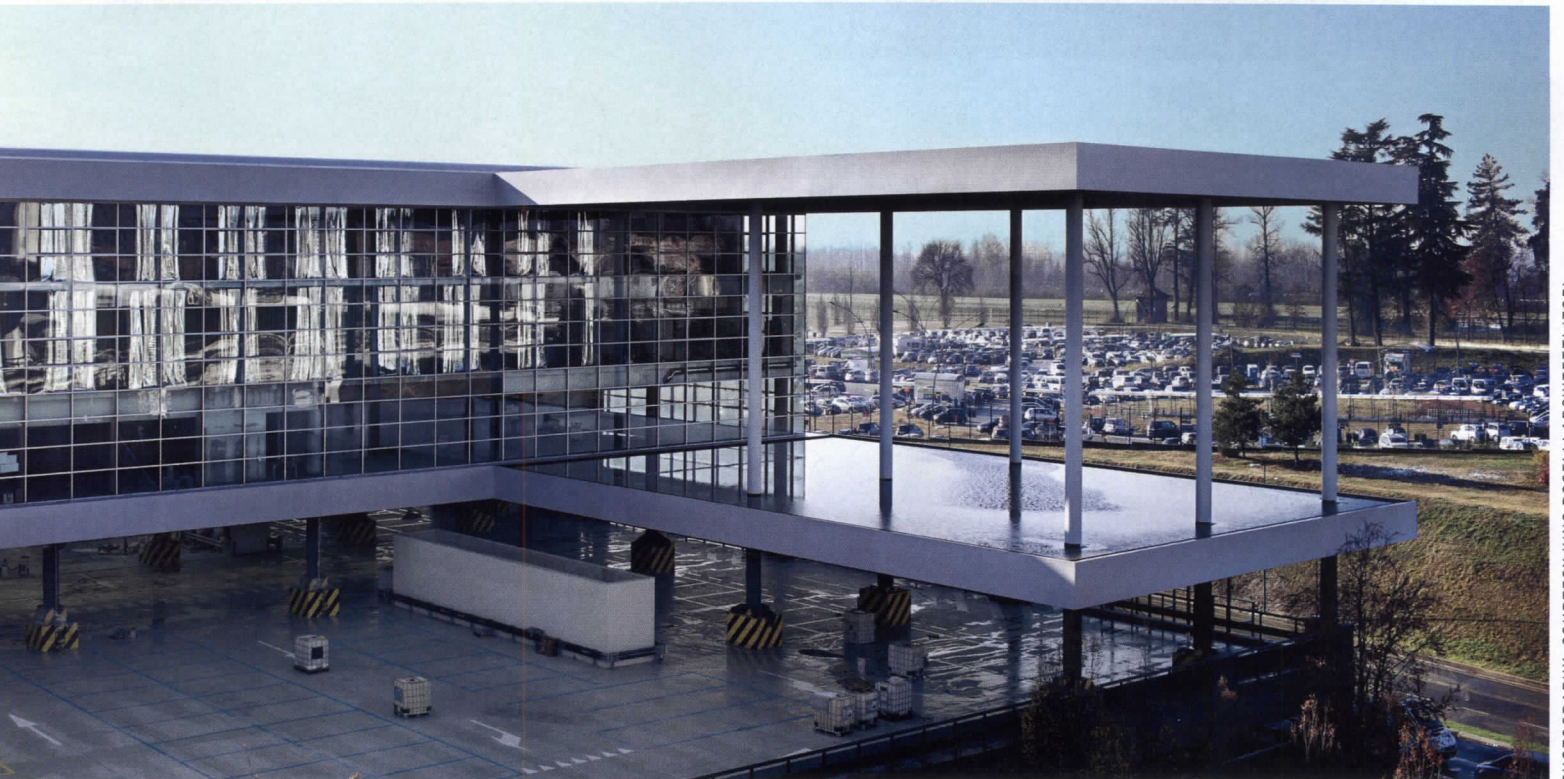
The brief stipulated that the existing parking and rail facilities be integrated with a full-service hospitality venue for tourists and business travelers—including attendees of Milan's annual Salone del Mobile. The winning proposal, with a scheme for the core and shell by King Roselli Architetti (RECORD, Design Vanguard 2005), considers the rich legacy established by Sottsass and his avant-garde compatriots, blurring the lines between architecture and industrial design in its use of methods and materials.

"Since Milan is the design capital of Italy, our aim was to make a very large-scale object," says project architect Arianna Nobile. The Rome-based King Roselli team, headed by principal Riccardo Roselli, approached the design process as if creating a product, exploring the idea of a distinct shell that envelops the concrete-and-steel-frame structure.

Wrapped in a taut fiberglass skin, the Sheraton Milan Malpensa Hotel & Conference Centre is a striking counterpoint to the rugged Alps around it. The 538,196-square-foot volume spans nearly 210 feet wide by 1,400 feet long on a site opposite Terminal 1 and over the car park and train station. It can't be missed from the terminal or road, as its dynamic 72-foot-high elevations conceal one from the other.

The building is a study in contrast and fluidity. The firm devised a comblike shape with alternating room modules and external courtyards that link to an elongated spine housing lounge and circulation areas. This rhythm interrupts the vastness of the footprint, and provides ample daylight and flexible spatial arrangements. Once the architects determined the form, they explored options for the skin.

Roselli and his colleagues chose white "pultruded" fiberglass, a pliable, pulled, and extruded membrane used in such applications as prefabricated emergency housing. It is fire-resistant, waterproof, and has a low thermal-expansion coefficient, says Nobile. In addition, the manufacturer was able to deliver 82-foot-long, 4-foot-wide interlocking strips on time at a reasonable cost. "We wanted to reduce vertical joints," Nobile explains, so that the entire surface is uniform and smooth, even the roof. To that end, King Roselli tucked mechanicals in the outer curves of the modules, leaving the roof plane unobstructed.



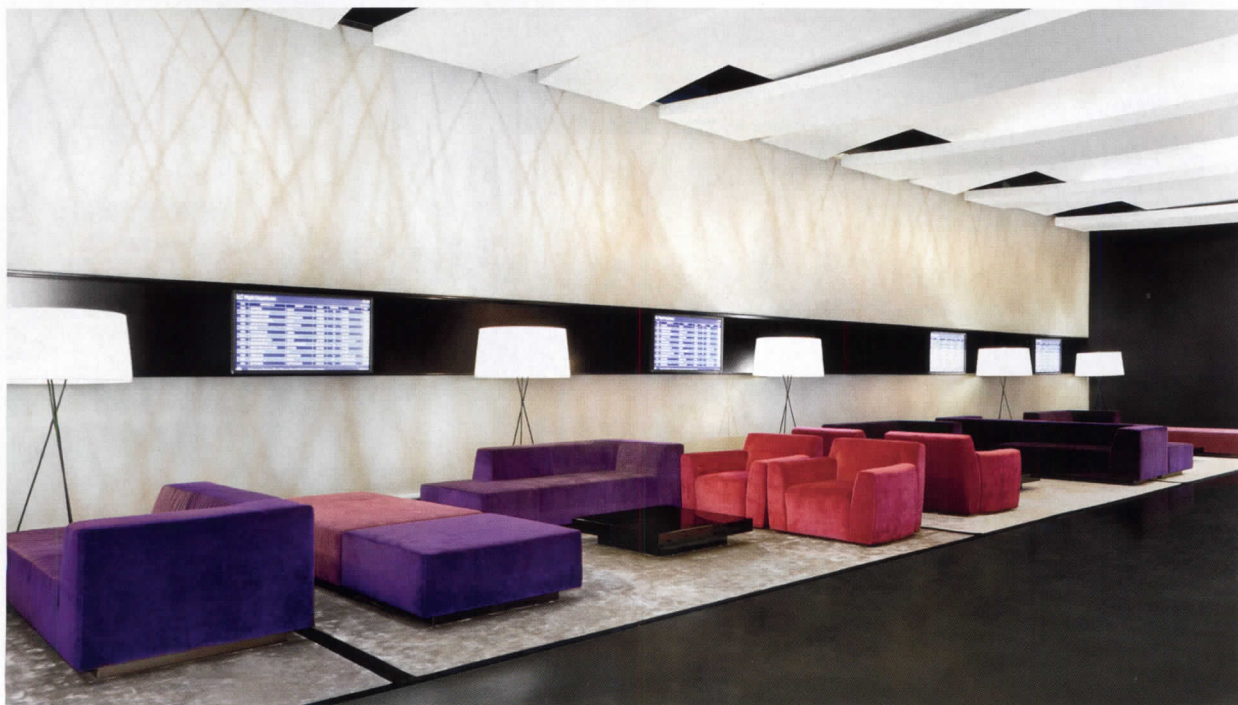




**LEFT:** An expansive atrium cuts through to the grade-level lobby with a grand stair/escalator that provides secondary access to the guest rooms, conference center, restaurants, bars, and Link@ Sheraton business kiosks. Finished white joists and curvilinear ribbons of plasterboard over steel echo the fiberglass strips wrapping the building.

**BELOW:** Cool and serene, the lobby features bamboo-backed shadow walls made of soft PVC panels, and King Roselli-designed furnishings. Wall-mounted flight boards keep guests in touch with the adjacent airport, and nearby Link@ Sheraton kiosks provide equipped spaces to work.

**ABOVE:** Designed by Saporiti Hotel Design, the guest rooms—for overnight or day use—are extremely quiet and comfortable, with luxurious baths. **OPPOSITE:** The architects carried their bold gestures for the exterior into reception. Ceilings and wall bands undulate, and dramatic composite terrazzo desks flow up from the floor with mirrored sides that emphasize an aura of fluidity and light.







Orthogonal skylights and curvilinear air vents give the overhead plan a bar-code-like graphic when viewed from the air. And the curtain wall—sections of continuous glazing bisected by “pixelated” window grids revealing silvery PVC draperies—plays with light and transparency, emphasizing the building’s horizontality. The overall effect resembles a sleek *étagère* Roselli might have designed for a high-end atelier.

The hotel is easily reached through an enclosed bridge from Terminal 1. While its three main floors float above the levels of parking, the entrance acts as a pedestal at grade. Inside, King Roselli carried its bold gestures into the public areas, using arcing ribbons of plaster-board across ceilings and around walls that

recall the facade’s fiberglass strips, and penetrating the hotel’s core with a soaring atrium.

As with many innovative projects this one was not without compromise. According to Nobile, value engineering nixed elements like a steel mesh grill around the car park. The existing structure compelled the architects to place the elevators at the building’s center, a long walk to the rooms and spa at the far ends. And though Sheraton took risks with such a bold building, the company was less adventurous with guest quarters, so the 519 rooms and suites by Saporiti Hotel Designs are too cautious, though comfortable, well tailored, and quiet.

That said, this Sheraton is an architectural leap above the usual airport hotel—an elegant gateway to Italy’s most urbane city. ■

#### CREDITS

**ARCHITECT:** King Roselli Architetti – Riccardo Roselli, partner in charge; Arianna Nobile, Andrea Ricci, project architects; Mario Augusti, Fabrizio Bonatti, Giandomenico Florio, Daniele Del Prete, Katia Scarioni, design team

**ENGINEER/CONTRACTOR:** DEC SpA Degennaro Group

**INTERIOR DESIGN:** King Roselli Architetti (public areas); Saporiti Hotel Design (guest rooms, spa, dining and conference areas)

**CLIENT:** SEA (Milan Airport Authority)

**SIZE:** 538,196 square feet

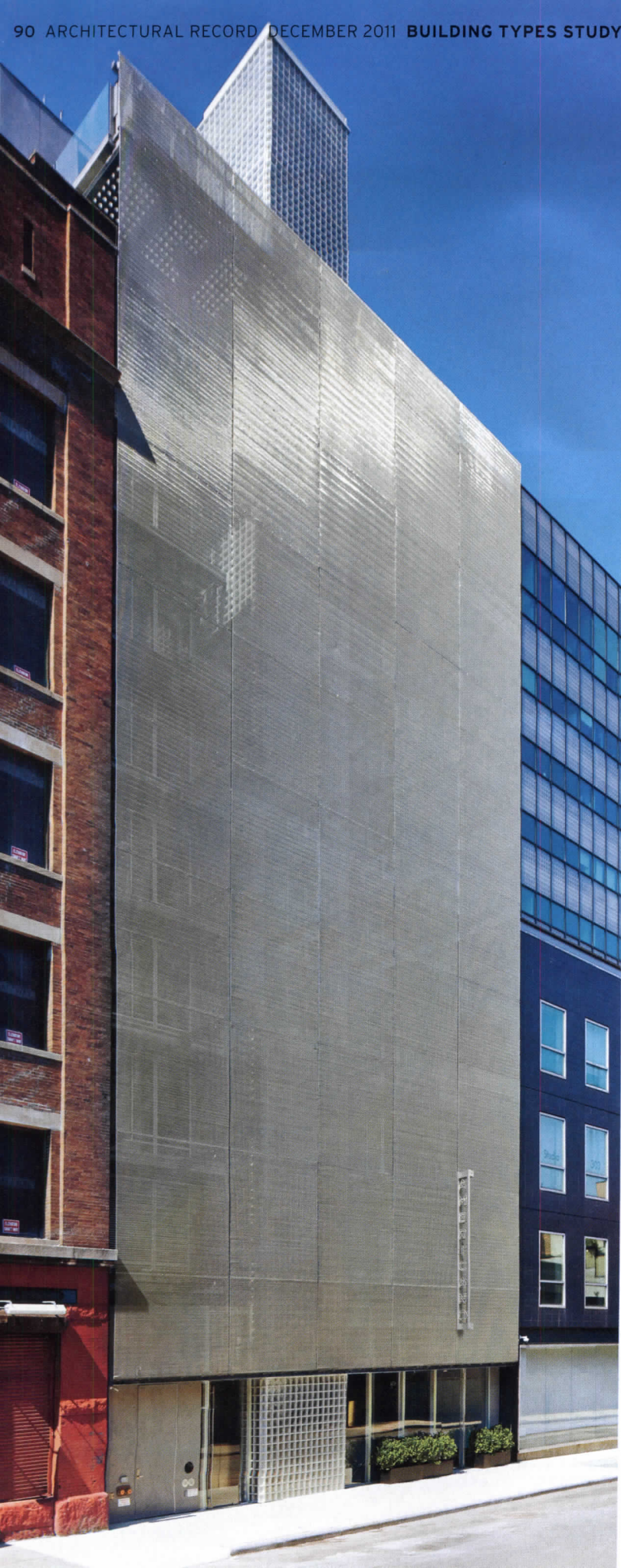
**COST:** \$89 million

**COMPLETION DATE:** October 2010

#### SOURCES

**FACADE:** P.C.R. Srl (fiberglass); Sipam (glazing)





# HôtelAmericano

New York City | Enrique Norten/TEN Arquitectos

A sleek boutique hotel in the Chelsea area of Manhattan's West Side combines calm and camaraderie.

By Suzanne Stephens

**WITH ALL** the glitzy-hip hotels opening in New York City these days, you could get very tired of the boutique approach that went into full throttle after Ian Schrager and Steve Rubell opened Morgans Hotel in 1984. While that first one was minimal (designed by Andrée Putman), the clever imitations that ensued from the commercial-chain crowd are not.

So it's a relief to discover the sleek and trim 56-room HôtelAmericano next to the High Line in the thick of the Chelsea district in Manhattan. Its industrial-Modernist architecture brushed with touches of luxe fits in well with both the former warehouses containing art galleries and the edgy new apartment buildings nearby. Fortunately, Americano's soigné yet comfortable ambience lacks the desperation and raucousness of so many recent hotel arrivals. The low-decibel sleekness of its architecture by Enrique Norten/TEN Arquitectos of Mexico City and New York and the interior design by MCH (Arnaud Montigny) of Paris could explain why the 10-story caravansary is becoming a casual hangout for artists, architects, and fashion types.

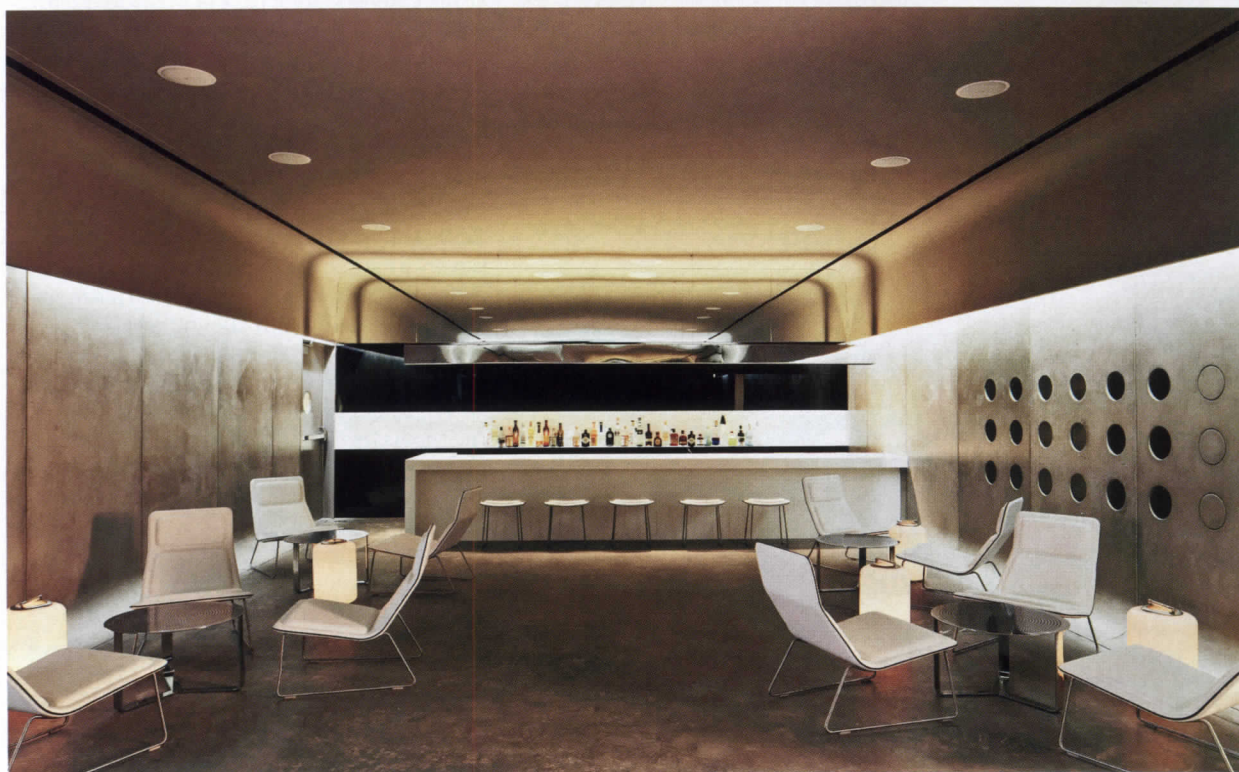
The developer, Mexican hotelier Grupo Habita, found a small 50-by-99-foot lot just west of the High Line, on the site of a former garage, for its first U.S. outpost. The company, founded in 2000 by three brothers—Moisés, Rafael, and Jaime Micha, with their friend Carlos Couturier—had hired Norten as the architect for its first hotel, Habita in Mexico City [RECORD, March 2001, page 106]. Norten's conversion of a former apartment building into a luminously glass-wrapped volume won a *BusinessWeek/Architectural Record* award in 2003.

For Norten's reprise in New York, Habita brought in Montigny to design the interiors. Ordinarily such a division would make you fear that architecture would be relegated to mere skin and bones, while the interiors would be plumped up by festoonery and furbelows. Luckily, Montigny, who worked with Japanese architect Kengo Kuma on the *Jugetsudo*, a tea house in Paris, brings a lean but chic sensibility to the hotel's furnishings and finishings that fits well with Norten's scheme. "The clients were very careful about decisions made to integrate the interior design and the architecture," says Norten.

Norton's evocation of the district's gray urban grit features a shimmering metal screen hung on a steel armature for the north-facing entrance facade. The south-facing elevation, a straightforward, glazed wall, overlooks a trimly designed outdoor terrace. Inside, concrete floors and columns, along with wood paneling and black and white glass walls in the lobby, café/bar, and restaurant, form a tailored backdrop for Mid-Century modern furniture. Tucked beneath the ground floor are a separate bar and a private club; a rooftop garden offers more opportunities to socialize. Here too is a lap pool—now something of a signature for the hotel group after Norten installed one on the roof of the Habita.

On the Americano's roof, Norten took advantage of the views by

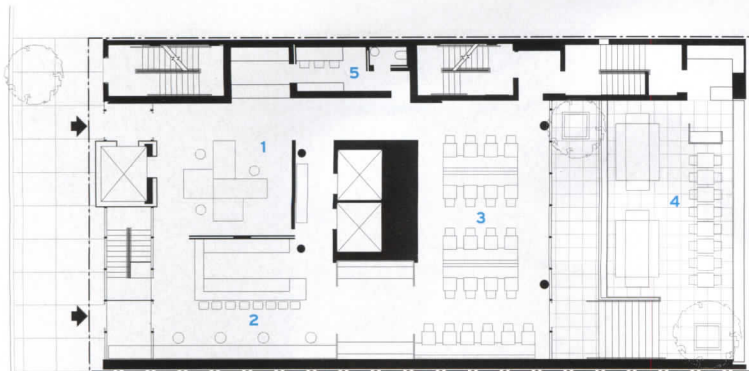




OPPOSITE: Norten fitted an industrial metal screen to a steel armature to create a shimmering facade and address zoning requirements for a street wall.

ABOVE: The restaurant at the rear of the ground floor receives daylight through a large window wall abutting an elevated dining terrace. LEFT: Below the main floor is Bar Americano, where concrete walls provide a tough-slick setting for wiry, 1950s-style furnishings and cove lighting.

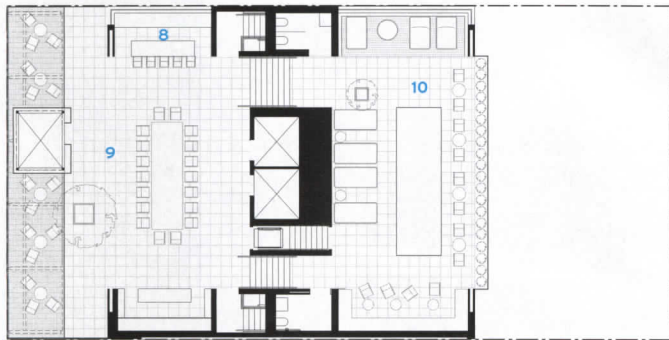




ENTRY FLOOR



SECOND-EIGHTH FLOOR



NINTH FLOOR

- 1 LOBBY
- 2 CAFÉ
- 3 RESTAURANT
- 4 OUTDOOR CAFÉ
- 5 RECEPTION
- 6 SUITE
- 7 GUEST ROOMS
- 8 ROOF BAR
- 9 OUTDOOR DINING
- 10 POOL



ABOVE: Some guest rooms feature beds entirely enclosed in larchwood, a move inspired by Japanese inns.

OPPOSITE TOP: In the back of the hotel an elevated, secluded patio enclosed by rectilinear planters adjoins the restaurant.

OPPOSITE BOTTOM: The roof terrace features views to the north and east, including framed ones of the Empire State Building.

creating open-air rooms with post and lintel dividers evocative of Le Corbusier's roof terraces at the Villa Savoye. On a balmy night, guests can sit at the bar or by the pool gazing at the Empire State Building to the east with views dramatically framed by these architectural elements.

Norten connected the public areas at the hotel's base and roof with a glass-brick elevator shaft that rises along the north face, so that visitors can easily hop from one venue to another without bothering hotel occupants. The elevator is concealed behind the metal screen, as are the guest rooms, which are recessed 8½ feet behind the scrim. This permeable architectural wall allows the rooms daylight and views while still permitting them a sense of intimacy and privacy, Norten notes. Montigny heightened that intimacy within the rooms by placing the beds on larchwood platforms and, with the suites, encasing them in wraparound wood enclosures. The Japanese-inn effect subtly subdivides the spaces to give the rooms scale.

The various design moves afford the hotel a cosmopolitanism combined with both a sense of contemporaneity and of history. If, at a glance, the glass block around the elevator shaft appears to be a 1970s retro gesture, the aura that permeates the hotel is International Style, but one that is part of the 21st century. ■





#### CREDITS

**ARCHITECT:** Enrique Norten/TEN Arquitectos – Enrique Norten, principal in charge

**INTERIOR DESIGNER:** MCH (Arnaud Montigny)

**OWNER:** Blackhouse Development

**ENGINEERS:** Gilsanz Murray Steficek (structural)

**CONSULTANTS:** Delux (lighting); Robert A. Hansen Associates (acoustical)

**CLIENT:** Grupo Habita

**SIZE:** 36,256 square feet

**COST:** \$18.8 million

**COMPLETION DATE:** September 2011

#### SOURCES

**METAL SCREEN:** Cambridge Architectural

**PRECAST-CONCRETE PANELS WITH GLASS**

**PAVERS (ROOF TERRACE):** Circle Redmont

**BLACK AND WHITE ART GLASS WALLS:** Hunda Glass

**BED PLATFORMS:** Propylaea Millwork



# Park Hotel Hyderabad

Hyderabad, India | SOM

A trapezoidal structure wrapped in a jewellike screen offers an adventurous yet serene ambience.

By Uttiya Bhattacharya



**ABOVE:** At the Park Hotel, SOM designed the recreational spaces, such as the infinity-edge pool, atop a three-level podium at the open corner of the trapezoidal volume.

**WHILE INDIA'S** Park Hotel group has forged a reputation over its 44-year history for boutique luxury establishments, its brazenly sculptural, 270-room hotel in Hyderabad is the first it has built from scratch. Priya Paul, who heads the hotel group as part of her family's conglomerate, Apeejay Surrendra, wanted to make a bold architectural statement in the center of the city on a tight site (2¼ acres) that exemplifies the dualities of India: It is across the street from a busy, noisy railroad station, but overlooks the serene Hussain Sagar Lake.

Although Hyderabad, in southern India, is known as a software development hub, Paul felt the design should express the city's centuries-old tradition of crafted jewelry associated with its pre-Independence Nizam rulers. "She considers jewelry making the essence of Hyderabad," says Roger Duffy, of

Skidmore Owings & Merrill (SOM)'s New York office, the architect for the hotel. Similarly, the client suggested to the architects that the building's opulent interiors reflect the contributions of local artisans and artists.

Paul turned to SOM to take on this assignment, notes Duffy, because she was convinced that American architects would make sure the project would be constructed with more attention to quality than has often been the case with newly built Indian hotels.

In response to zoning and height restrictions, SOM designed a trapezoidal volume, placing the six floors of guest rooms on top of a three-story podium containing shops and offices. (Parking is located in three levels below grade.) The architects then carved out the center of the trapezoid so that the third level of the podium would have an open court-





yard—for a veranda and swimming pool—and be surrounded by the main lobby, lounges, and restaurants. Three sides of the trapezoidal volume wrap around the courtyard, protecting it from strong winds in the monsoon season, but allowing its veranda to benefit from lake breezes in hot weather. The infinity-edge swimming pool atop the podium takes advantage of the height: Not only are visitors shielded from the dust and noise of the railroad station, but the pool seems to stretch eternally into the lake and the city beyond.

The building's reinforced-concrete frame structure is supplemented with two long-span steel trusses to afford column-free spaces—one in the banquet hall; the other to enable a block of rooms to cantilever over the podium where it shields parts of the open areas from the sun.

To reduce solar gain and glare, and to address Paul's wishes, SOM employed a layering approach and looked at the local metalworking tradition for the design of a jewellike exterior skin of perforated and embossed aluminum. The metal-panel screen is installed in front of laminated, insulated, low-E glass windows with acoustical properties. The skin not only affords privacy for the guest rooms, but the architects shaped its openings to allow occupants to have spectacular views of the city and the lake. By night, LED panels inserted between the

**ABOVE:** Solar gain is reduced by an aluminum screen filigree, and insulated glass units are recessed behind the metal skin. The cantilevered portion of the carved-out volume also acts as a canopy for the courtyard and pool that sit atop a three-story podium.

**LEFT:** A vehicle entry leads to underground parking.



- 1 LOBBY
- 2 BAR
- 3 RESTAURANT
- 4 RUBY LOUNGE
- 5 POOL
- 6 VERANDA
- 7 GLASS-ENCLOSED WALKWAY
- 8 KITCHEN
- 9 BOOKSTORE
- 10 BUSINESS CENTER
- 11 BANQUET HALL
- 12 PARKING
- 13 GUEST ROOM
- 14 PRIVATE DINING COURT

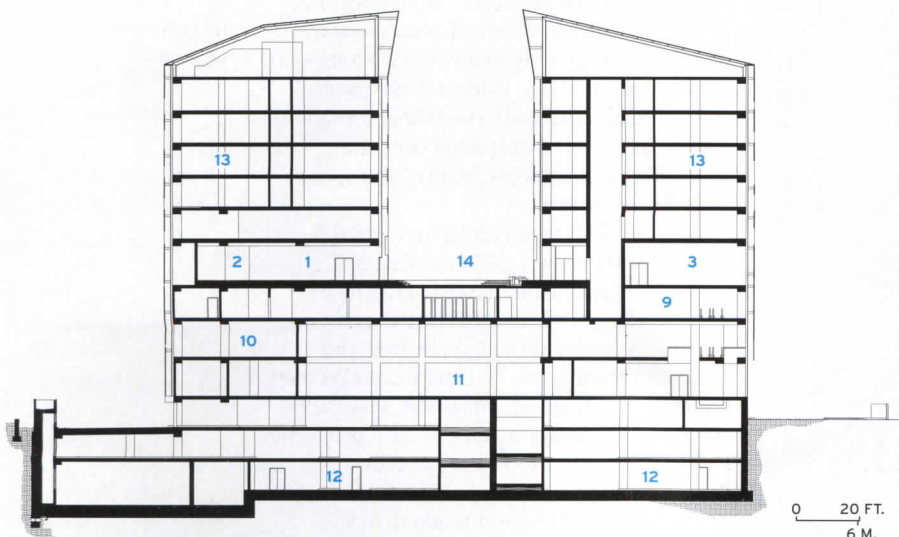


TYPICAL FLOOR



THIRD FLOOR

0 20 FT.  
6 M.



SECTION A-A

0 20 FT.  
6 M.



glass and the screens illuminate the building with vibrant hues.

The presence of the courtyard and veranda allude to India's colonial architecture; the restaurants, bars, clubs, spa, and guest rooms represent a striking mix of efforts by international design firms, including Conran & Partners, and local artisans who created such items as the glittering chandeliers and luminous furnishings. SOM concentrated on the interior design of the street-level and main lobbies, banquet halls, shops, and the podium's lounges, veranda, and swimming pool.

The orientation of the building on its site and the design of the metal screen have reduced energy needs of the hotel by almost 30 percent, say the architects. Because of such strategies, in late 2010, the Park Hotel became India's first LEED Gold certified hotel.

To come into the hotel is to leave behind the bustle, sprawl, and dust of the city and enter a magical, beautifully crafted space. The nuanced gestures of the design connect the





**ABOVE:** The podium-level courtyard accommodates outdoor dining, which is enlivened by the changing colors of LEDs behind the aluminum screens.

**LEFT:** The main lobby, located on the third level, features leather panel walls, floors of Australian white marble with silver metallic tile (in the center), and a custom glass chandelier.

**OPPOSITE:** SOM designed an area rug for a lobby lounge. A "splash table" by Rajiv Saini reflects the Charminar-inspired chandelier by Preksha Baid.

#### CREDITS

**ARCHITECT:** Skidmore, Owings & Merrill – Roger Duffy, design partner; Peter Magill, managing partner; Stephen Apking, interior design partner; Mark Igou, managing director; Thomas Behr, project manager; Peter Lefkovits, senior design architect; Eric Van Epps, senior technical architect; Kwong Yu, technical architect; James Kraus, technical architect; Madeleine Deschamps, senior materials coordinator

**ENGINEERS:** SEMAC Private Limited (structural); Spectral (m/e/p)

**CONSULTANTS:** ILD (lighting); Cerami & Associates (acoustical); Environmental Design Solutions (energy simulation)

**CLIENT:** Apeejay Surrendra Park Hotels

**SIZE:** 531,550 square feet

**COST:** withheld

**COMPLETION DATE:** April 2010

#### SOURCES

**CURTAIN WALL:** Permasteelisa (India)

**GLAZING AND SKYLIGHTS:** CSG Architectural Glass





ABOVE: In the Ruby Lounge, a semicircular banquette in macassar ebony wood with red velvet upholstery is enclosed by antiqued mirror glass with motifs similar to those seen in 18th-century Indian paintings. The ceiling features Kalamkari fabric panels by Preksha Baid.

LEFT: Windows that peek through the bands of the perforated aluminum screens in certain guest rooms permit views of Hussain Sagar Lake to the east. The interior design firm for the rooms, Chhada Siembieda Australia (CSA), based in Sydney, opted for jewel-tone accents on a light-colored backdrop.



inside to the outside, the building to the city, and the site to the lake. The translation of the diverse challenges of energy savings, climate, privacy, and symbolic allusions to place have resulted in a singular work. The hotel's success in responding to its environmental and cultural contexts can be attested by the reaction of the client: Paul has enlisted SOM to design another Park Hotel in Calcutta. ■

*Uttiya Bhattacharya is a founding partner of Design-Business Collaborative [D+B]c and is based in New Delhi.*





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CIRCLE 22



# INDUSTRIAL EVOLUTION

A move toward more comprehensive and accessible data on the environmental and health impacts of building products gains momentum. [By Joann Gonchar, AIA](#)

**DESIGNERS ARE** inundated with claims of sustainability from building-product manufacturers. These claims—some substantiated, some not—make material evaluation and selection a perplexing task. But the industry seems poised on the cusp of transformation, from one that is nearly opaque to one where robust and verifiable data are readily available.

At play are a number of factors, including a push for more transparency in both government and corporate operations. Deborah Dunning, president of the Green Standard, an organization dedicated to sustainable product development and purchasing, cites an executive order signed by President Obama in October 2009 requiring federal agencies to collect and report data on their environmental performance. She also points to an early 2010 move by the Securities and Exchange Commission to require publicly traded companies to disclose their climate-change-associated risk to investors.

Within the design and construction world, anticipation of the next version of the U.S. Green Building Council's (USGBC) rating system, LEED 2012, is playing a major role. The document isn't due to be finalized until November of next year, but if the draft that was released for public comment late in the summer is any indication, the rating system will have a revamped materials and resources section with credits that provide incentive for manufacturers to disclose more information about product contents and their environmental impact. The goal, according to Brendan Owens, USGBC vice president of LEED technical development, is to "fuel the decision-making engine" and create a "virtuous cycle where products are continually improving."

The proposed credits rely heavily on life-cycle assessment, or LCA, an in-depth, data-intensive evaluation of a product's *environmental* impact from raw material extraction through manufacturing, transportation, and installation, and ultimately to disposal or recycling. The methodology accounts for the contribution of the products

to impacts such as global warming, ozone depletion, and abiotic depletion (the exhaustion of nonorganic resources like minerals).

A handful of North American building materials manufacturers have begun providing their LCA information through environmental product declarations, or EPDs. These multipage documents, already used extensively in the European Union and Japan, summarize LCA results and present them in a more accessible format. They typically outline product components, describe the manufacturing process, and include information about water use, energy use, and other factors. They provide "comprehensive, third-party-verified disclosure

**One of the goals of LEED 2012 is to "fuel the decision-making engine" and create a "virtuous cycle where products are continually improving," says Owens.**

of a product's environmental impacts," explains Heather Gadonniex, an EPD specialist with UL Environment. One of the services UL offers is that of "program operator," overseeing the EPD process for manufacturers.

The protocol for creating an EPD (see diagram, opposite page) has been set by the International Organization for Standardization (ISO). At the foundation of the process is the product category rule (PCR), which defines the scope and methodology for LCA data collection for a given type of material. It is what ensures a level playing field among manufacturers and allows specifiers to compare the environmental performance of like products. Once the EPD is compiled, its contents are verified by an independent reviewer. And, finally, the document is made available to specifiers, designers, and other interested parties, often on the program operator's website.

The push for EPDs in North America is still in its infancy, but the first companies to tackle

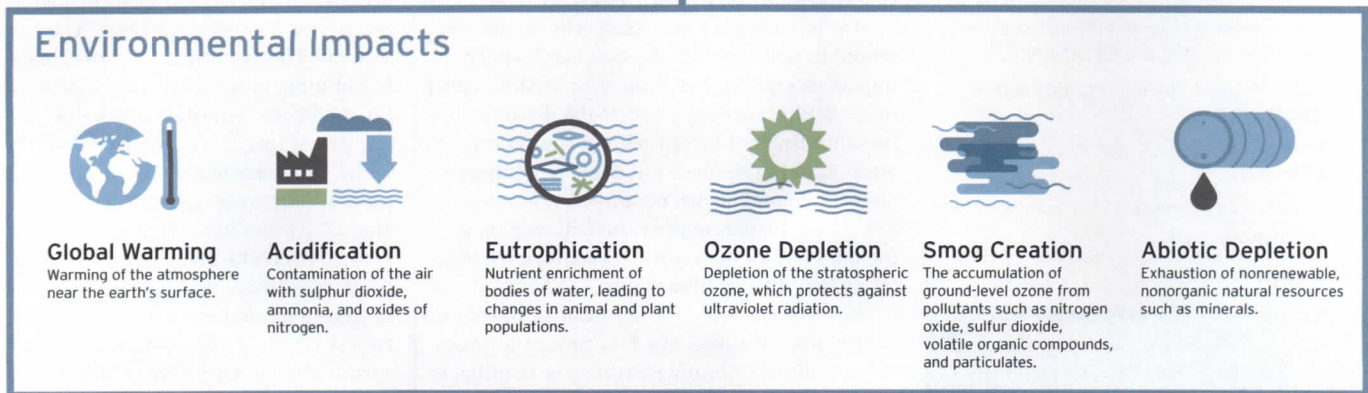
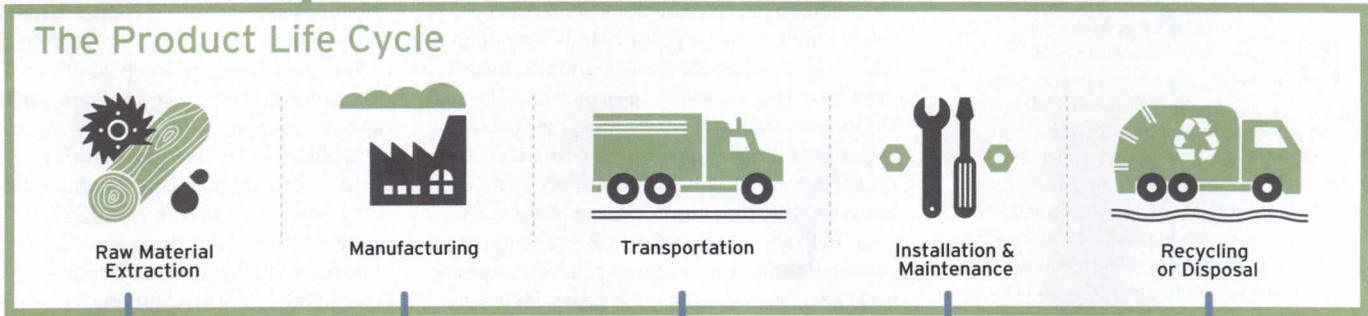
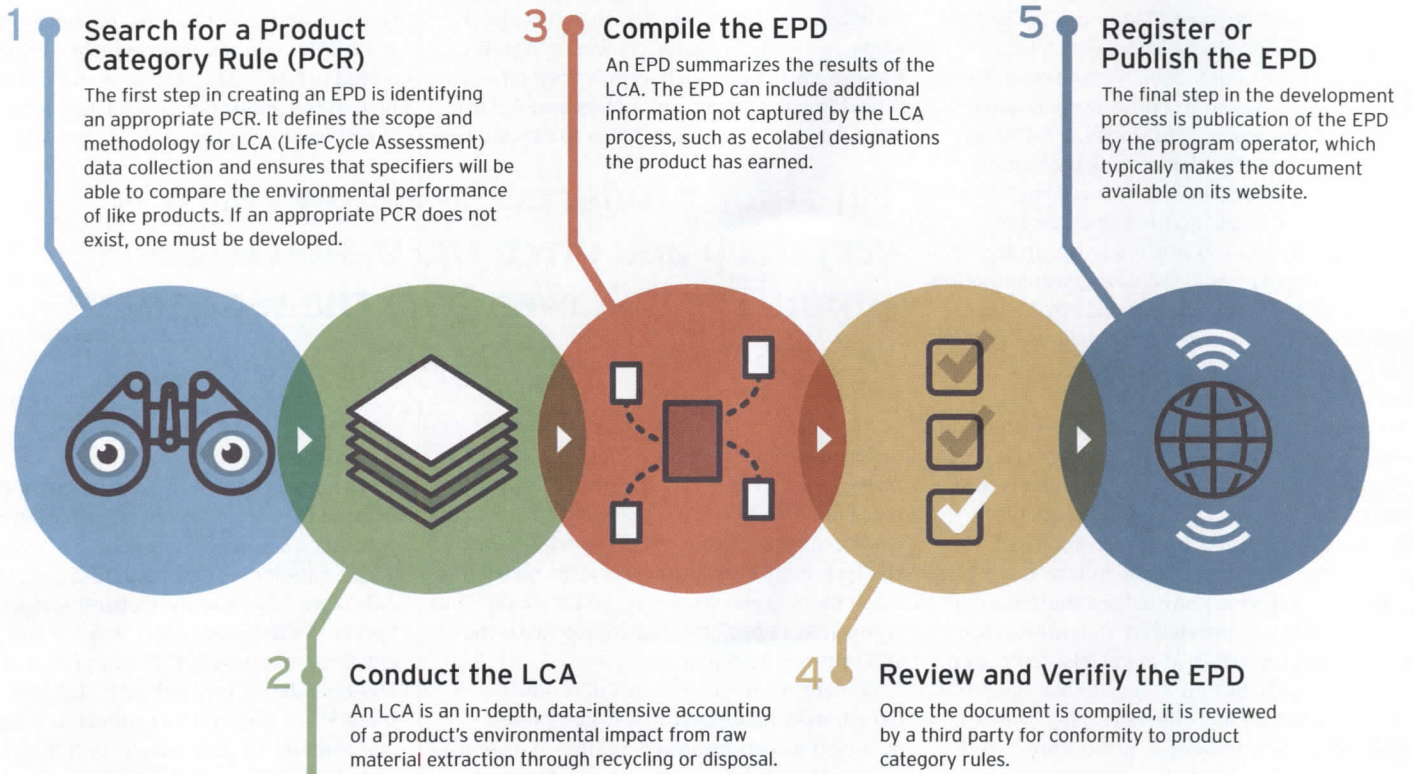
the information gathering and disclosure process tout its benefits. For example, carpet company Interface registered its first EPD for a product line in 2009 and expects to have completed EPDs for all its products in 2012. As a result of compiling the documents and conducting the underlying LCAs, the company learned that most of its products' impacts were incurred before the raw materials even reached its factories. The information "completely drove our strategy to close the loop," says John Wells, president and CEO of Interface Americas, referring to an initiative to replace the virgin material in its carpet with reclaimed carpet fibers and other recycled content.

In addition to helping manufacturers identify operational inefficiencies or areas where ecological impacts can be reduced, an EPD can send a message to customers. "Creating one demonstrates a level of commitment," says Jack Draper, managing director of the Western Red Cedar Lumber Association. The organization released EPDs for cedar siding and cedar decking in April. The documents "tell purchasers that we want to clearly define our products' environmental attributes and we want to do it in a way that is credible," he says.

Despite the obvious function of an EPD as a communications tool, even boosters of the disclosure method point out that the declarations are not seals of approval. Unlike other types of "ecolabels," an EPD does not certify that a product meets certain performance standards—for, say, low levels of volatile organic compounds or high percentages of recycled content. "An EPD isn't a value judgment," says Scot Case, UL market development director.



# The Environmental Product Declaration (EPD) Process







“Like a nutrition label, it simply provides information,” allowing objective comparisons among products.

Manufacturers could be seeing more demand for EPDs from specifiers and designers as the nonprofit Architecture 2030 ramps up its 2030 Challenge for Products. The organization, which had previously been focused on reducing carbon emissions from building operations, launched the products initiative in February with the interim goal of cutting the carbon embodied in construction materials by 30 percent by 2014 and an ultimate target of halving it by 2030. According to the group, up to 8 percent of annual U.S. energy consumption and associated emissions can be attributed to building products and the construction process. As a prerequisite for adopting the challenge, manufacturers will be required to have LCAs for their products, though EPDs are preferred, says Francesca Desmarais, director of the 2030 Challenge for Products. “The ambition is to have more products with data and then get serious about comparing one to another.”

Despite the rigor of the life-cycle methodology, one of its widely acknowledged shortcomings is an inability to provide enough information to evaluate the effect of materials’ choices on human health. But for many clients, potential toxins in building products is a key concern. One such client is Google. In November 2010,

the company committed to ridding its renovated and newly constructed office spaces in North America of substances identified on the so-called “red list” that is part of the stringent building certification system called the Living Building Challenge. The list includes many materials and chemicals commonplace in building products, such as polyvinyl chloride, added formaldehyde, and halogenated flame retardants. The company plans to expand the

declarations (HPDs), with which manufacturers could disclose product-content information. The group of experts crafting the format, led by HBN and sustainable building information provider BuildingGreen, released a draft in October, and next plans to conduct a pilot phase with eight manufacturers who have volunteered to test it. The standard will be free and held in the public domain. “There is no vision that it would be proprietary,” says Bill Walsh,

**“For some products the supply chain is very deep and often the manufacturers’ suppliers don’t even have the requested information,” says Davidge.**

program to its international offices in 2012. “Google wants to create the healthiest workplace possible,” says Mary Davidge, a Los Gatos, California-based consultant working with the tech giant’s real estate services division to implement green strategies. So far, Google has completed 13 projects that comply with the self-imposed restrictions.

To determine the contents of products, Google asks manufacturers to complete a survey. It has encountered a range of responses. Some manufacturers are easy to work with, says Davidge, but many vendors are unwilling or unable to provide the desired data. “For some products the supply chain is very deep and often the manufacturers’ suppliers don’t even have the requested information,” she says. Other manufacturers are simply confused by requests from multiple design firms and certifying organizations for similar information but with differing requirements or formats.

To help specifiers and others evaluate the potential toxicity of building products, several tools have emerged in recent years, including the subscription-based service Pharos, launched by an environmental advocacy group, the Healthy Building Network (HBN), in 2009. Pharos has a library of construction materials scored in several environmental and health impact categories. The same year, Perkins+Will made its Precautionary List—a database that lists building product types and the chemicals often found in them—available free of charge on its website. The just-revamped resource, found at [transparency.perkinswill.com](http://transparency.perkinswill.com), now includes additional information about asthma triggers and flame retardants.

One recently announced initiative that could greatly improve access to data about the potential toxicity of building materials is an effort to create a standardized format for health product

HBN executive director.

Although most of the disclosure efforts are focused primarily on the information needs of specifiers, some of the recent endeavors target a wider audience. One initiative is an ingredients label, which manufacturer Construction Specialties debuted in October for an entrance-mat product. The approximately 1-by-12-inch tag, created with Perkins+Will, is intended to stay on the product as long as the mat remains in place in the building. It contains basic information about material makeup and directs people online for general information regarding product attributes, such as water and energy use during manufacturing, packaging makeup, and recyclability. According to the two companies, the label is the construction industry’s first such on-product disclosure, devised to answer the questions of installers, maintenance staff, and demolition workers, as well as specifiers. “It is based on the premise that the people who handle the material will also want information,” says Peter Syrett, Perkins+Will associate principal.

Regardless of the target audience, or whether the reporting tool is an EPD, HPD, or an on-product label, the overarching goal of the recent disclosure initiatives is the same, say sources. The ambition of all of these efforts is to put more easily evaluated data about building materials and their impact on people and the planet into the hands of those who need it, while simultaneously providing an incentive for manufacturers to improve their products. Manufacturers like Kingspan Insulated Panels, which recently published an EPD, are convinced that a new level of disclosure will soon be a necessary part of doing business. As Paul Bertram, its director of environment and sustainability, says, “We’re simply positioning ourselves for the future.” ■



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#### Learning Objectives

- 1 Discuss current environmental disclosure initiatives in the building-product sector.
- 2 Discuss how these initiatives could improve product performance.
- 3 Outline the environmental product declaration process.
- 4 Describe the strengths and shortcomings of life-cycle analysis.

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# HIGH-PERFORMANCE GLAZING SYSTEMS

MAKING THE CHOICE BETWEEN STOREFRONT,  
CURTAIN WALL AND PRE-GLAZED WINDOWS

Sponsored by Manko Window Systems, Inc.

In this low-rise building, the field-assembled curtain wall system provides superior performance compared to other choices.

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Use the learning objectives below to focus your study as you read **High-Performance Glazing Systems**. To earn one AIA/CES Continuing Education Hour (CEH), including one hour of health safety welfare credit, answer the questions on page 109, then follow the reporting instructions or go to [ce.architecturalrecord.com](http://ce.architecturalrecord.com) and follow the reporting instructions.

### Learning Objectives

After reading this article, you should be able to:

- Identify and recognize the attributes and features of high-performance windows as defined by national standards including energy and thermal performance.
- Assess the strengths and limitations of common storefront window systems in meeting high-performance criteria.
- Investigate and compare the differences between storefront systems and curtain wall window systems related to performance criteria.
- Explore the types of applications where pre-glazed windows may be the preferred choice for optimum performance in non-residential buildings.

By Peter J. Arsenault, FAIA, NCARB, LEED-AP

Photo courtesy of Manko Window Systems, Inc.



Virtually every building has window systems of some type, and architects spend a fair amount of time during the design process discerning the best choices for a particular project. Selecting and specifying windows and glazing certainly has a significant impact on the overall design and aesthetic of a building but equally important is the overall quality of the window system in terms of durability, weather resistance and physical integrity.

Further, in this energy-conscious era, the thermal performance of windows has become a major design consideration as well. Assessing all of these variables, particularly in commercial, industrial and institutional buildings usually comes down to three fundamental choices: storefront glazing systems, curtain wall systems or pre-glazed manufactured windows. Of course, there are also further variations to consider within each related to appearance, cost, customization, fabrication and installation.

Understanding the differences between these three choices and their respective strengths and weaknesses will allow architects to choose the most desirable and best performing system for an individual building design.

### CHARACTERISTICS OF HIGH-PERFORMANCE WINDOWS

By definition, high-performance windows need to perform better than conventional window systems. This applies in several ways. First their inherent internal structure must be adequate and appropriate to the installation and the wind, water, and other loading stresses it will encounter. Building codes usually dictate minimum performance requirements in this regard, but there can be many instances where a higher level of structural performance is required to provide greater protection against natural forces such as hurricanes or earthquakes or against man-made forces such as blast resistance.

Second, high-performance windows need to exhibit superior thermal control related to heat transfer, solar transfer and air infiltration. Energy codes and ASHRAE 90.1 are quite commonly known for helping to establish minimum energy performance but buildings that are pursuing certification or demonstration of superior energy performance



Photo courtesy of Manko Window Systems, Inc.

The National Institute of Building Science (NIBS) identifies ways to make windows in buildings truly high performing.

will need windows that perform beyond the minimum. The National Institute of Building Sciences (NIBS) produces the Whole Building Design Guide (WBDG). Within it they suggest a number of strategies to improve energy performance in buildings, including installation of high-performance windows. They define this strategy further by several specific tactics:

- Specify frame and sash materials fabricated with low thermal conductivity
- Specify windows with a whole-unit U-factor less than 0.49 (greater than R-2.1). Go to the next level with super-windows that have a whole-unit U-factor less than 0.25 (greater than R-4.0)
- Avoid divided-lite windows to reduce edge losses

In selecting and specifying high-performance window systems, it is appropriate to use recognized national standards to establish benchmarks and targets for achieving the desired results. There are two very important organizations that provide a great deal of insight and direction in this regard:

#### The American Architectural Manufacturers Association (AAMA)

By their own definition, "AAMA is the source of performance standards, product certification and educational programs for the fenestration

industry. AAMA's membership is comprised of window, door, skylight, curtain wall and storefront manufacturers, suppliers and test labs." Among the standards developed by AAMA, the performance-based and material-neutral North American Fenestration Standard or NAFS (AAMA/WDMA/CSA 101/I.S.2/A440), is referenced in current International Building Codes as the basis for third-party testing and certification of windows, doors and skylights. This standard identifies four Performance Classes which each contain their own set of performance requirements related to use and location within a building. Within each class, a specific Performance Grade is identified corresponding to a design pressure range expressed in pounds per square foot (psf) or pascals (Pa) of pressure exerted during testing. This testing simulates the effect of wind and rain pressure on a window system when it is installed in a building. To qualify for a given performance grade (PG), a representative specimen of a manufactured product must pass all required performance tests for the following:

- a) Operating force (if applicable)
- b) Air leakage resistance
- c) Water penetration resistance
- d) Uniform load deflection test
- e) Uniform load structural test
- f) Forced-entry resistance (if applicable)



Note that each Performance Class is identified by “entry level” or “gateway” minimum Performance Grade levels to simplify the task of matching window system performance to project requirements. These AAMA Performance designations are as follows:

- R class (Residential)—commonly used in one- and two-family dwellings and designed to withstand pressures of at least 15 psf (720 Pa)
- LC class (Light Commercial)—commonly used for low- and mid-rise multifamily dwellings or other buildings where larger sizes and higher loading requirements are expected and designed to withstand pressures of at least 25 psf (1200 Pa)
- CW class (Commercial)—commonly used in low- and mid-rise buildings where larger sizes, higher loading requirements, limits on deflection and heavier use are expected and designed to withstand pressures of at least 30 psf (1,440 Pa)
- AW class (Architectural)—commonly used in high-rise and mid-rise buildings to meet increased loading requirements and limits on deflection and in buildings where frequent and extreme use of the fenestration products is expected and designed to withstand pressures of at least 40 psf (1,920 Pa). This class of window system in particular is most able to achieve the status of “high-performance” windows due to the higher capabilities.

When selecting a particular Performance Class, there is also the option to specify the pressure requirements above the minimum gateway requirements listed above (in increments of 5 psf) up to 100 psf maximum except in category AW which has no stated maximum (practical limits exist). So, for example, a light commercial system could be specified at the minimum Performance Grade level with the designation class LC-PG25 or an optional increased level of performance as class LC-PG35 indicating that passing a pressure test of 35 psf is required. The designation may also additionally include the size tested and any specific product type related to operable or fixed-in-place windows.

Beyond structural performance, there is another significant factor associated with these tests for performance, namely water management. All window systems are designed

to resist water penetration, and the higher the Performance Grade, the more wind-driven rain they should be able to resist. But no system is perfect and some water seepage is certainly possible, meaning planning for it is very important. Vertical sheets of glass will obviously cause rainwater to run straight down their faces.

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### Beyond structural performance, there is another significant factor associated with these tests for performance, namely water management.

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The design issue becomes how to manage the water once it hits a window framing member, particularly a horizontal member. Sealants and gaskets plus the shape of the horizontal member are usually the first line of defense.

However, depending on the type of window system selected, a secondary system is included to capture and drain away any water that does intrude. Choosing a system that does not allow for this contingency properly, or choosing a system that is exposed to more than it is designed to handle can spell serious problems if water does back up and then leak into the building. At a minimum, it can create an unsightly appearance but worse, it can cause deterioration and failure of other materials. Under the right conditions, it can also lead to problems with mold, mildew and other indoor environmental quality issues. All of this can be avoided by selecting the right system to match the installation and environmental requirements of the building.

Also within AAMA, the Aluminum Material Council exists to focus on standards related specifically to window systems fabricated from aluminum. Since it is estimated that as much as 65% of non-residential buildings use some type of aluminum window system, this is also an important resource for guidance on window design and specification preparation. Recently, hurricane and blast criterion have come to the forefront of fenestration requirements, and the council, in concert with AAMA, has provided particular standards and information in these areas as well.

### The National Fenestration Rating Council (NFRC)

NFRC describes itself as “a non-profit organization that administers the only uniform, independent rating and labeling system for the energy performance of windows, doors, skylights and attachment products.” Their goal is to provide fair, accurate and reliable energy performance ratings so that architects, code officials, contractors and others can compare different products and make informed product choices. Manufacturers, government agencies, designers and others have recognized the NFRC as the primary resource for energy efficiency ratings that look holistically at a complete window system product. They accomplish this through their signature Component Modeling Approach (CMAST) product certification program which generates whole product energy ratings by testing the components of a particular product or system. Specifically, the three separate components that are tested include the window framing, the glazing and the spacer between multiple layers of insulated glazing.



*Photo courtesy of Manko Window Systems, Inc.*

Incorporating a window system into a building needs to take into account the rest of the design. Here, the windows and entry are protected with a sheltering overhang that reduces the amount of wind and rain that the system is exposed to, helping to enhance its performance.



Each manufacturer can provide NFRC testing on established product sizes and configurations to provide information needed to determine how well a product will perform regarding building thermal performance and condensation resistance. By using the information contained on the NFRC test reports, a reliable comparison can be made between one product and another. All energy performance values represent the rating of a window as a whole system taken together and list at a minimum the following values:

**U-Factor:** The rate of heat loss is indicated in terms of the U-factor (U-value) of a total window assembly. U-factor ratings generally fall between 0.20 and 1.20. (The lower the U-value, the greater a window's resistance to heat flow and the better its insulating value.)

**Solar Heat Gain Coefficient (SHGC):** The SHGC is the fraction of incident solar radiation admitted through a window (both directly transmitted and absorbed) and the amount subsequently released inward. SHGC is expressed as a number between 0 and 1. (The lower a window's solar heat gain coefficient, the less solar heat it transmits.)

**Visible Transmittance:** The visible transmittance is an optical property that indicates the amount of visible light transmitted. VT is expressed as a number between 0 and 1. (The higher the VT number, the higher the amount of light that is transmitted.)

In addition to these values, manufacturers have the option of testing for and displaying values for two other significant factors:

**Air Leakage (AL)** is indicated by a rating expressed as the equivalent cubic feet of air passing through a square foot of window area (cfm/sq ft). Since significant heat loss and gain can occur by infiltration through cracks or joints in the window assembly it is often very appropriate to specify a maximum AL rating for a window assembly. The lower the AL rating the lower the amount of air that passes through the window assembly. While the NFRC lists this as an item to report, it should be noted that this testing protocol has not yet been fully implemented, particularly in commercial windows. AAMA ratings are currently more relevant for this characteristic.



Photo courtesy of Manko Window Systems, Inc.

Single-story storefront system used in a common light commercial retail setting

**Condensation Resistance (CR)** measures the ability of a product to resist the formation of condensation on the interior surface of that product. The higher the CR rating, the better that product is at resisting condensation formation. NFRC notes that "while this rating cannot predict condensation, it can provide a credible method of comparing the potential of various products for condensation formation." CR is expressed as a number between 0 and 100.

With these standards as a basis we can look in more detail at specific window system types and how they can meet high performance criteria.

## STOREFRONT WINDOW SYSTEMS

Storefront systems take their name from retail settings, where they are commonly used for large, single floor height openings of glass. These systems were designed for light commercial single-story retail viewing and readily incorporate entrances for quick access to interior product displays. They are often used on interior applications such as shopping malls or schools as well as exterior light commercial applications. They typically span floor to floor or floor to head condition without passing in front of any intermediate anchorage conditions. Most storefront designs utilize small, non-obstructive, aluminum framing shapes that present "flush glass appearance" where glass seems to disappear into the framing system. Factors influencing the selection of this type of system include the following:

**Storefront Structural Performance:** As a light commercial system, storefront systems are typically limited to a maximum height of 12 feet due to the limited capacity of the framing and glazing system. Since the primary attachment is at the top and bottom (i.e. head and sill), the width of a properly designed system can theoretically stretch on indefinitely. The wind load resistance or Performance Grade of storefront systems generally cannot withstand more than 40 psf, so specifying anything higher class will not likely be attainable. Note that AAMA has established performance tests designed for storefront systems that are intended to simulate expected field use which are very similar to tests used for pre-glazed windows. However, there are notable differences that make a direct comparison difficult. For example, storefront test sizes are typically larger (144 in. wide by 120 in. tall) than pre-glazed windows (1/3 – 1/2 storefront test size). Further, storefront test pressures are generally limited and can be expected to be less than those available on many CW and AW pre-glazed windows. Hence testing does not support specifying storefront systems with a high-performing CW or AW class rating, rather LC class would be more appropriate.

► **Continues at [ce.architecturalrecord.com](http://ce.architecturalrecord.com)**

*Peter J. Arsenault, FAIA, NCARB, LEED-AP, is an architect and sustainability consultant based in New York State.*

See Quiz on the Next Page or  
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Program title: “High-Performance Glazing Systems” (12/11, page 105). AIA/CES Credit: This article will earn you one AIA/CES Continuing Education Hour (CEH) of health, safety, and welfare (HSW) credit. (Valid for credit through December 2013). **Directions:** Refer to the Learning Objectives for this program. Select one answer for each question in the exam and fill in the box by the appropriate letter. A minimum score of 80% is required to earn credit. **To take this test online and avoid handling charge, go to [ce.architecturalrecord.com](http://ce.architecturalrecord.com)**

1. **The National Institute of Building Science (NIBS) identifies high-performance window systems as those that achieve a minimum U-Factor that is:**
  - a. less than 0.25 (greater than R-4.0).
  - b. less than 0.29 (greater than R-3.45).
  - c. less than 0.40 (greater than R-2.5).
  - d. less than 0.49 (greater than R-2.1).
2. **The AAMA class of window that is most able to achieve a high performance rating and endure more than 40 psf (1920 pa) of test pressure is:**
  - a. R (Residential) Class.
  - b. LC (Light Commercial) Class.
  - c. CW (Commercial) Class.
  - d. AW (Architectural) Class.
3. **The NFRC Component Modeling Approach takes into account each of the following window components EXCEPT:**
  - a. the window framing.
  - b. the installation method
  - c. the glazing.
  - d. the spacer between multiple layers of glass.
4. **Storefront performance testing does not support specifying storefront systems with a high-performing CW or AW class rating, rather LC class would be more appropriate.**
  - a. True
  - b. False
5. **Storefront water management is based on:**
  - a. very tightly sealing every opportunity for water penetration.
  - b. wet seal caulking.
  - c. allowing some water to enter, be channeled, and then weep out.
  - d. only allowing water to enter the vertical members.
6. **Appropriate applications for storefront systems include:**
  - a. upper floors in mid- to high-rise buildings.
  - b. ground floor installations.
  - c. stacking storefront systems on top of each other.
  - d. All of the above
7. **Curtain wall systems can either be field fabricated (“stick built”) or pre-fabricated in a factory (“unitized”).**
  - a. True
  - b. False
8. **Curtain wall systems usually achieve ratings of:**
  - a. R (Residential) Class.
  - b. LC (Light Commercial) Class.
  - c. CW (Commercial) or AW (Architectural) Class.
  - d. Any of the above
9. **Pre-glazed window systems are installed by:**
  - a. securing the unit to the top (head) and floor (sill) of the story.
  - b. anchoring into openings in the exterior wall construction.
  - c. attached directly to the building structural system.
  - d. isolating window loads from the building structure.
10. **The thermal performance of pre-glazed windows is capable of being:**
  - a. superior, similar to curtain wall systems.
  - b. the same as storefront systems.
  - c. less than other systems.
  - d. better than any other system.

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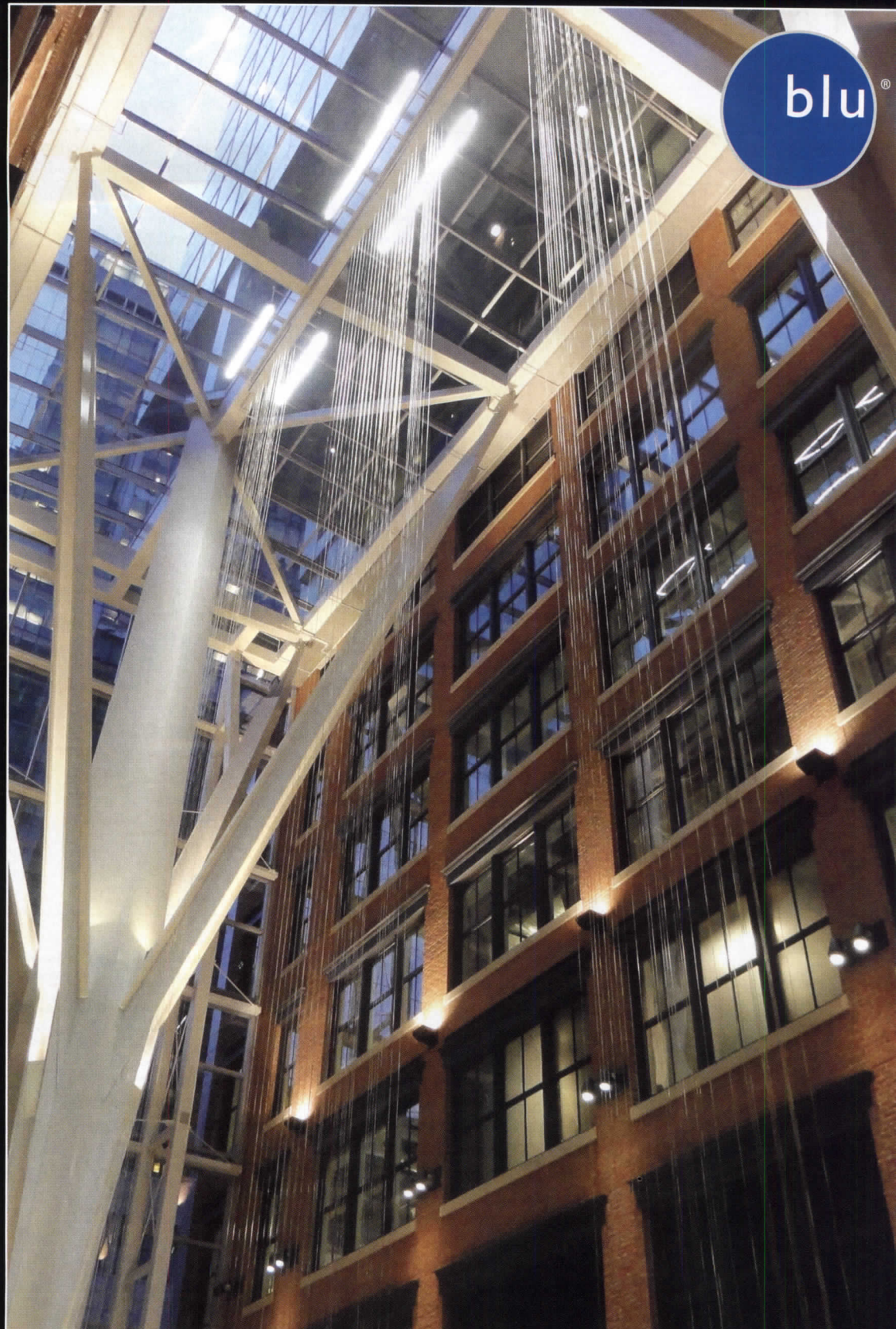
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CIRCLE 25

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# 2011 Product Reports

PAGE 116

Edited by **Rita Catinella Orrell**

Juror portraits by **Axel Dupeux**

**D**uring my time as products editor for ARCHITECTURAL RECORD, I've seen thousands of new building products enter the market. While many of these designs are still in demand, others have disappeared for various reasons: They were too expensive to be practical on a large scale; they could not adapt to changing standards; or they simply failed to deliver what they promised. The main goal of our annual Product Reports issue is to highlight—with the help of an experienced jury—those products that we expect to stick around for years to come because they offer improved performance, an attractive design, or fill a gap in a certain category, from a game-changing carbon-negative cement to an elegant magnetic glass marker board.

This year, sustainability continued to be a major topic for the jury, and they were pleased by the number of new green products in the mix. Juror Gina Bocra (who gets special recognition for delivering her son two weeks after the meeting) felt encouraged by the number of manufacturers addressing a broad set of environmental criteria and working to improve thermal performance. "They're getting beyond simple ideas like recycled content and looking at reductions in carbon footprint and embodied energy," she noted. It's not surprising, then, that despite some sexy materials in the Finishes category, two of the winners were simple wall and ceiling materials designed to improve indoor air quality.

Thanks again to our 2011 jury and the manufacturers and designers that entered this year. If you'd like to stay up on the latest building product and architecture news, please follow me on Twitter at @RitaOrrell. R.C.O.

**TOP  
PICK**

This button identifies the jury's favorite product in each category. Furnishings and Finishes both had ties for Top Pick.

114	<b>FURNISHINGS</b>
116	<b>ELECTRICAL</b>
119	<b>PLUMBING &amp; HVAC</b>
120	<b>FINISHES</b>
122	<b>SPECIALTIES</b>
125	<b>CONCRETE &amp; EXTERIOR IMPROVEMENTS</b>
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## Jurors All jurors based in New York City, except where noted.

### Stephan Jaklitsch

Jaklitsch is an architect, designer, and founding principal of Jaklitsch/Gardner Architects, a studio focused on urban-scale projects, buildings, interiors, and objects. Throughout his career, Jaklitsch has completed over 300 built projects worldwide, including a new freestanding building in Tokyo for fashion designer Marc Jacobs that recently won an American Architecture Award from the Chicago Athenaeum Museum of Architecture and Design.

### Jason Neches

Neches is office director of L'Observatoire International Lighting Designers and Consultants. A project manager and lighting designer on a variety of public and private projects, Neches is experienced in all phases of the design process, including design, fixture selection, architectural layout and detail coordination, mock-ups, and focusing. His recent work includes collaborations on the High Line and Lincoln Center projects in New York City.

### Maureen Moran

As the owner and managing principal of Washington, D.C.-based MCLA Architectural Lighting Design, Moran leads her team in the design of historic preservation, parks, museums, universities, offices, sites, and facades worldwide. Her portfolio has been honored with numerous international design awards and widely published in leading design journals.

### Adam Zimmerman, LEED AP

Zimmerman has nearly a decade of experience working on projects around the world for offices such as Renzo Piano Building Workshop in Paris, VOA Associates in Chicago, and Kohn Pedersen Fox in New York City. Currently, he is the principal of Zimmerman Workshop in Brooklyn.

### Robert I. Luntz

Luntz is a founding partner of RESOLUTION: 4 Architecture, a firm he established with Joseph D. Tanney in 1990 that is experienced in the practice of prefabricated housing, corporate interiors, and green building. Since 2004, Luntz has been an adjunct assistant professor of architecture at Columbia University GSAPP. Formerly, he was with the New York offices of Perkins+Will, Gwathmey Siegel, and Beyer Blinder Belle.

### Paulette Pascarella

Pascarella is a New York City-based interior designer focused on the design of residential, commercial, and institutional interiors. Working independently or as part of a larger project design firm, such as Pelli Clarke Pelli Architects, Paulette creates and curates significant interiors in new buildings and private residences.

### Gina Bocra, LEED AP BD+C/ID+C

Bocra is an associate and director of sustainability at Ennead Architects. While Bocra has been practicing in the field of architecture and environmental design for over 15 years, she is also trained as an urban and environmental planner. She has participated as a design team member or consulting advisor on nearly five dozen LEED-Certified or -registered projects.

Kelvin LED lamp  
from Flos (top left);  
Piana folding chair  
from Alessi and  
Lamm (left and  
shadow background).



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## Furnishings

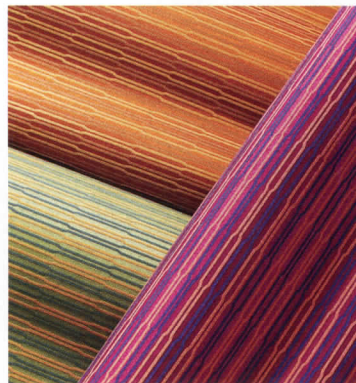
Window Treatments | Office Furniture | Seating | Fabrics

Judges: Robert Luntz, Paulette Pascarella, Stephan Jaklitsch & Adam Zimmerman



### Piana

The Piana folding chair, designed by architect David Chipperfield for Italian design factory Alessi and produced by Italian furniture manufacturer Lamm, is composed of 100% recycled polypropylene, with fiberglass reinforcements. The chair folds to a compact width of less than 3 inches for easy storage and handling. Piana was recently added to the permanent collection of the Museum of Modern Art. [alessi.com](http://alessi.com) CIRCLE 200



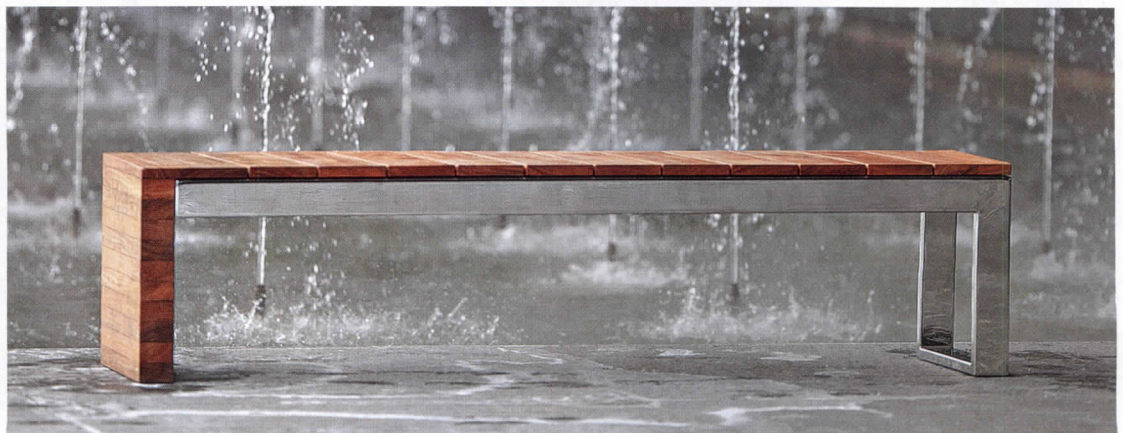
### Spring-Summer Collection

HBF Textiles, a division of HBF, presents its Spring-Summer Collection, a set of vivid contract fabrics made of recycled polyester threads. The collection comes in three patterns and a variety of colors, offering a modern, vibrant alternative to standard contract upholstery. The versatile fabric can be used to cover both furniture and interior walls.

[hbftextiles.com](http://hbftextiles.com) CIRCLE 201

### Duo Bench

The Duo Bench is a 6' seating unit from architectural products manufacturer Forms+Surfaces. The seat, made of Forest Stewardship Council-certified hardwood, is framed in stainless steel and has an oiled finish for use indoors or outdoors. The steel frame is finished in a low-VOC powdercoat. [forms-surfaces.com](http://forms-surfaces.com) CIRCLE 202





TOP  
PICK**Halina**

Halina, by Creation Baumann for Carnegie, is a line of lightweight draperies and curtains. Made of flame-retardant fabrics, Halina provides an alternative to standard sheer drapery. Jurors noted the line's color combinations and texture as particular virtues. A multistep process of weaving, pleating, and cross-embossing achieves the product's appearance of three-dimensionality. [carnegiefabrics.com](http://carnegiefabrics.com) CIRCLE 203

"Halina is a lightweight, interesting alternative to a sheer fabric for windows."  
*Paulette Pascarella*

**Naked Nylon**

Naked Nylon is made of 100% recycled, dyed nylon fibers and comes in five patterns. The fabric, from Momentum Textiles, is recyclable and bleach-cleanable and qualifies for the LEED Commercial Interiors and New Construction ratings systems and for LEED health care units. It is also GreenGuard certified. [memosamples.com](http://memosamples.com) CIRCLE 204

**Costa Table Series**

HBF's Costa Table Series is a line of modular conference tables that come in a variety of configurable shapes and sizes. The nesting feature and tilt-top options provide a quick transition to storage, while the rectangular tables can be ganged or combined with any of the six additional connector shapes to form different configurations. The tables are made of 87% recycled wood and recyclable aluminum. Seven veneers are also available for further customization. [hbf.com](http://hbf.com) CIRCLE 205

**QMotion Roller Shades**

These battery-operated shades, from manufacturer Homerun Holdings Corp., offer a wireless alternative to traditional window coverings. The shades can be operated manually or by remote control, eliminating wiring. Made of aluminum, GreenGuard-certified fabrics, and steel, the shades are 100% recyclable. [qmotionshades.com](http://qmotionshades.com) CIRCLE 206

**111 Navy Chair**

The 111 Navy Chair gets its name from the number of recycled Coca Cola bottles from which it is constructed. The beverage company teamed up with Emeco and chemical company BASF to produce the chair, which is made of 65% recycled plastic and 35% glass fiber and pigment. The first chair from recycled plastic to meet BIFMA and CA 133 standards, it comes in six punchy hues. [emeco.net](http://emeco.net) CIRCLE 207





# Electrical

Interior Lighting | Exterior Lighting | Bulbs

Jurors: Jason Neches & Maureen Moran

TOP PICK

### Kelvin LED

Designed for Flos by Antonio Citterio (with Toan Nguyen) and chosen as a Top Pick in this category, the Kelvin LED task lamp features 30 LEDs at 2700K, producing a total of 270 lumens (approximately equal to a 40-watt incandescent). The jury liked this task lamp for its great color and output and elegant design (note the double arm with fixed pantograph and adjustable head), and also cited the fixture's innovative technology, heat management, and user-friendly features.

[flosusa.com](http://flosusa.com) CIRCLE 208

"We selected the Kelvin LED as grand winner because the manufacturer and designer have solved many issues associated with quality LED lighting all in one fixture. It has great color and output, elegant design, innovative technology, heat management, and is human-centric."

Jason Neches & Maureen Moran



### eW Burst Powercore

This high-output exterior-rated LED fixture from Philips Color Kinetics is designed for accent and site lighting. Architectural and landscape versions deliver high-quality white light output in a warm 2700K and a neutral 4000K, as well as four solid colors (red, green, blue, and amber). The jurors felt this was an affordable workhorse with great performance and excellent flexibility in the field.

[colorkinetics.com](http://colorkinetics.com) CIRCLE 209

### LED Edge Lighting

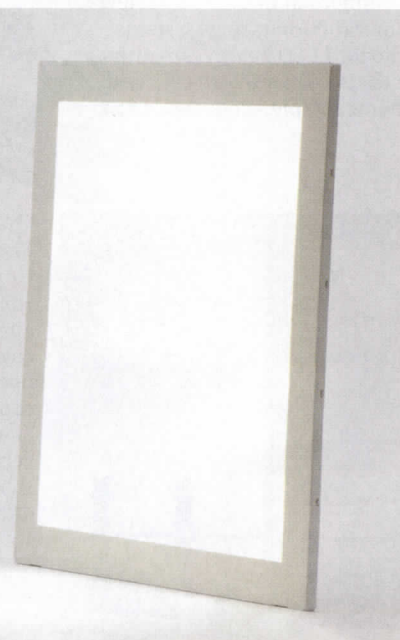
GE's expanded LED Edge Lighting offering now includes 2' x 2' and 1' x 4' troffers, a 2'-round suspended fixture, and linear fixtures with a variety of lengths and mounting options. The troffer and suspended fixtures offer a balance of refined appearance and superior efficiency. The linear fixture has an ultrathin profile. The jurors applauded this family of luminaires for a product design "specific to the light source."

[geliftingsolutions.com](http://geliftingsolutions.com) CIRCLE 211

### AmbientLED Bulb

Philips Lighting developed the first LED replacement for a 60-watt incandescent bulb that is also the first to earn Energy Star qualification. This 12.5-watt bulb lasts 25 times longer and uses 80 percent less energy than a 60-watt incandescent, boasts 806 lumens, a color temperature of 2700K, and a color rendering index (CRI) of 80. One juror noted that, out of many options, the AmbientLED was the best design to replace the standard A-lamp.

[lighting.philips.com](http://lighting.philips.com) CIRCLE 210





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## Plumbing & HVAC

Residential Plumbing Fixtures | HVAC Cleaning Devices

Jurors: Robert Luntz, Paulette Pascarella & Gina Bocra



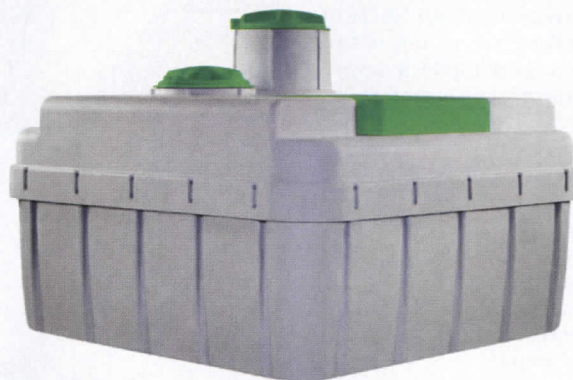
**TOP PICK**

### Ava with Coolfix

Most single-lever faucets in a straight-ahead “6 o’clock” position offer a hot/cold water mix, even if users prefer only cold, wasting water and energy. With KWC’s Ava Coolfix technology, the 6 o’clock position is designed “full cold” so no hot water is wasted. The faucet’s aerator cartridge also reduces water flow to 1.5 gallons per minute (gpm), a 40% savings over conventional 2.5-gpm faucets. [kwcamerica.com](http://kwcamerica.com) CIRCLE 212

“The KWC Ava seems like such a no-brainer! How much energy is wasted by the normal mix at the 6 o’clock position? If it really makes a difference, other manufacturers should pay attention.”

*Gina Bocra*



### AQUS HMA-7000 Water Reuse System

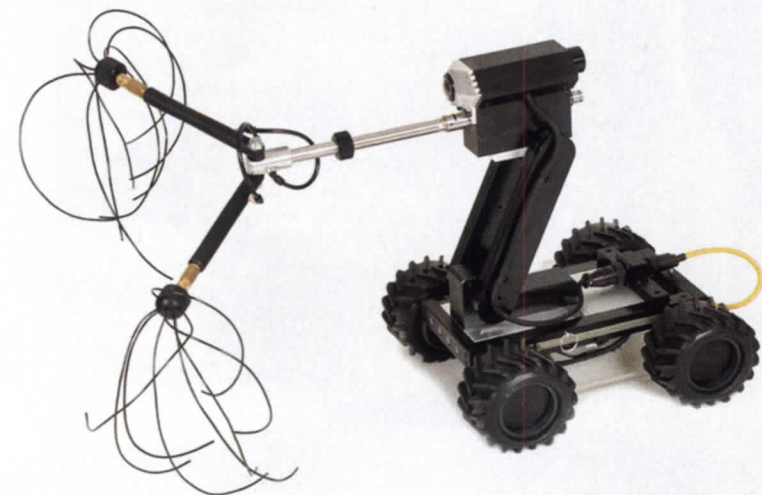
Sloan’s under-lav water-reuse system collects water that goes down the bathroom sink, filters and disinfects it, and uses it to flush the toilet. In a typical residential bathroom, AQUS collects and reuses about 9 to 14 gallons of water daily for an annual average savings of about 6,000 gallons.

[sloanvalve.com](http://sloanvalve.com) CIRCLE 213

### ISAAC HVAC Robotic Cleaning System

According to one juror, “Many existing buildings could see energy and indoor air quality benefits from this little guy doing his thing.” The Inspection, Sealing, and Advanced Cleaning Robot (ISAAC) HVAC Robotic System from Carlisle HVAC Products is a solution to cleaning and sealing inaccessible ductwork. Eliminating the need for employees to crawl through ductwork and cut access holes, this robot can inspect, seal, coat, or remove debris in ductwork in a single pass.

[carlislehvac.com/isaac](http://carlislehvac.com/isaac) CIRCLE 214



### DuraPlan

DuraPlan is a family of flush-fitting shower trays with height-adjustable frames. The frame consists of 14 sanitary acrylic shower trays with an extremely low installation height, resulting in a completely watertight finish. Final installation takes place after tiling, reducing the chance of damage during install. Available either in white or chrome with an antislip finish.

[duravit.us](http://duravit.us) CIRCLE 215



## Finishes

Gypsum Board | Tiling | Ceilings | Countertops | Flooring

Jurors: Gina Bocra, Stephan Jaklitsch, Paulette Pascarella & Adam Zimmerman

TOP  
PICK

### Barz Linear Ceiling System

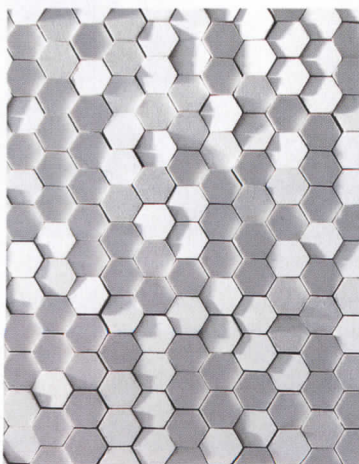
With the Barz system, one of two products tied for Top Pick, any size and spacing of slats, struts, strips, boards, beams, and other linear components can be preassembled into panels weighing as little as 1.5 pounds per square foot. Providing integration with the HVAC systems and access to the ceiling, the system is made of aluminum with steel support members in finishes including real wood veneers and simulated wood.

[ceilingsplus.com](http://ceilingsplus.com) CIRCLE 216



### Volvic Lava Stone Countertop

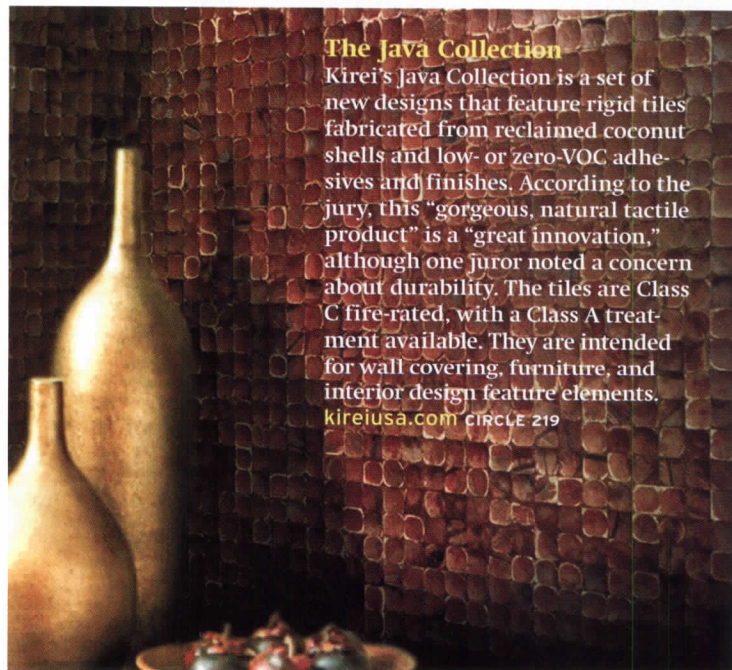
While the jury had concerns over affordability, the Pyrolave volvic lava stone was a winner for its practicality, beauty, and uniqueness among other countertop options. Volvic lava stone is extracted from the heart of volcanic craters in France. Skilled engineers then coat the stone with richly hued enamels and fire them at high temperatures, giving the surface a distinct crackle finish. The resulting surface can withstand high temperatures, acids, and corrosive cleaning products. There are 16 matte and 16 glossy colors in the line. [pyrolave.com](http://pyrolave.com) CIRCLE 217



### Phenomenon

Mutina Ceramiche's Phenomenon ceramic tile, by Tokujin Yoshioka, creates the visual effect of patterns found in nature, such as honeycombs, snow flakes, icicle formations, and plant cells. Intended for floor and wall covering, it is suitable for high-traffic areas and comes in three colors and two textures. "So many submittals are using technology to mimic nature," said one juror. "This product takes a different approach based on design."

[www.mutina.it](http://www.mutina.it) CIRCLE 218



### The Java Collection

Kirei's Java Collection is a set of new designs that feature rigid tiles fabricated from reclaimed coconut shells and low- or zero-VOC adhesives and finishes. According to the jury, this "gorgeous, natural tactile product" is a "great innovation," although one juror noted a concern about durability. The tiles are Class C fire-rated, with a Class A treatment available. They are intended for wall covering, furniture, and interior design feature elements.

[kireiusa.com](http://kireiusa.com) CIRCLE 219





"I've seen and specified the Barz Ceiling system. It can provide integration with HVAC systems and access to the ceiling. It's a nice product, if used well."  
**Stefan Jaklitsch**



### AirRenew

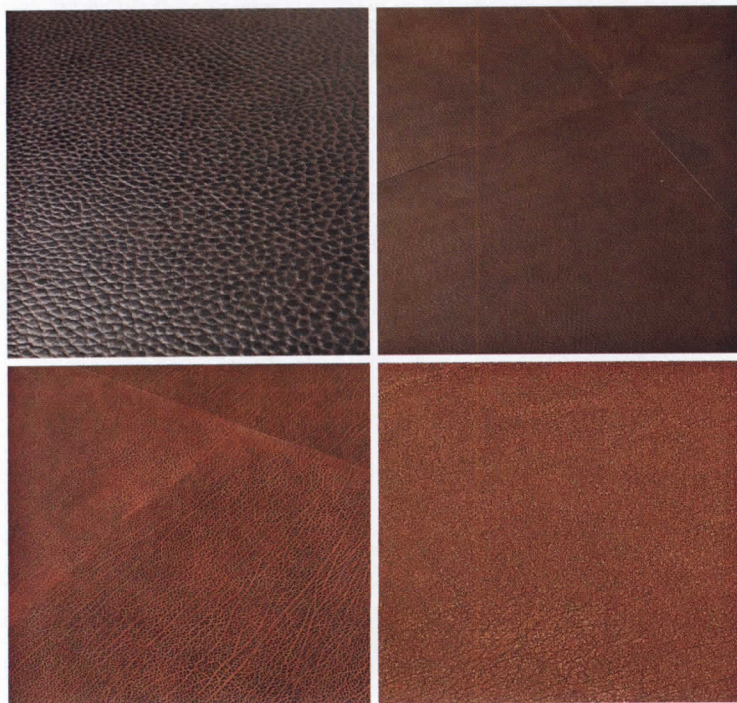
One of the two products tied for Top Pick, the AirRenew indoor air-quality gypsum board is the industry's first and only wallboard to permanently reduce VOCs circulating indoors. "An interesting innovation that is needed not just in special environments," said one juror, "but to clean the air we all breathe." AirRenew actively helps clean the air by capturing VOCs and converting them into inert compounds that safely remain within the board for 75 years.

[certainteed.com/airrenew](http://certainteed.com/airrenew) CIRCLE 220

### Ultima with AirGuard Coating

Ultima with AirGuard Coating is the first ceiling tile that actively removes formaldehyde in indoor air. The AirGuard coating technology converts naturally occurring and man-made formaldehyde in interiors into an inert substance permanently captured by the ceiling. Tests show it eliminates 90% of formaldehyde during the first year of use. Made of a mineral fiber substrate, the tile is UL-Certified, is listed on CHPS High Performance Products Database for low-emitting materials, and has a high recycled content of 71%.

[armstrong.com/airguard](http://armstrong.com/airguard) CIRCLE 221



### Rinascita

Milliken's Rinascita is a group of recycled leather tiles with reclaimed and recycled carpet backing. Noted as a "warm and beautiful flooring option," the collection was developed in collaboration with leather supplier Spinneybeck and is composed of 95% recycled content (85% recycled-leather composite and 10% natural rubber). The finished face substrate is made of postindustrial content from the leather manufacturing process while the cushioned felt backing is made of postconsumer carpet that has been reclaimed and recycled.

[millikencarpet.com](http://millikencarpet.com) CIRCLE 222

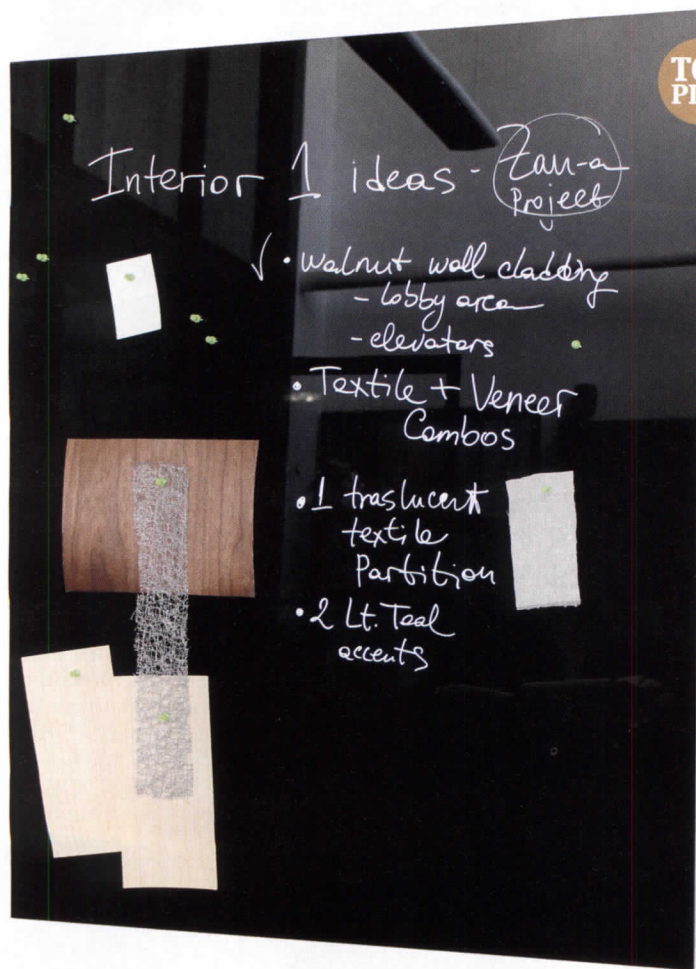




## Specialties

Markerboards | Exterior Sun-Control Devices | Vehicle-Charging Stations

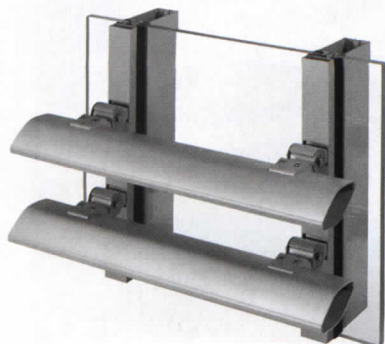
Jurors: Stephan Jaklitsch, Robert Luntz & Adam Zimmerman



### Magnetic Glass Marker Boards

The new Bendheim safety-laminated magnetic glass marker boards allow for two distinct aesthetics (i.e., one side of the glass can be white, the opposite black). They can be used as writable wall cladding or opaque glass partitions. Standard dry-erase markers make cleanup easy without ghosting or permanent staining. Powerful magnets allow a variety of materials to be “pinned” to the boards.

[bendheim.com](http://bendheim.com) CIRCLE 223



### Versoleil SunShades

Pre-engineered for multiple Kawneer curtain wall systems, these aluminum sunshades can be oriented horizontally or vertically, mounted perpendicular to the facade or tilted to specific angles, and are available in various depths from 6” to 14”—all to maximize energy-saving potential, reduce solar heat gain, and increase occupant comfort.

[kawneer.com](http://kawneer.com) CIRCLE 225

“Versoleil SunShades by Kawneer are a nice ‘right-out-of-the-box’ solution. Interesting that they integrate with existing Kawneer products and can be installed either vertically or horizontally based upon orientation.”

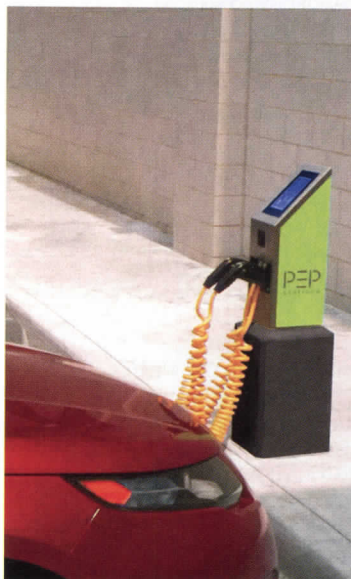
Robert Luntz



### Outrigger Sunshade

This solar-management solution from GKD-USA features the Omega 1510 sunscreen and a specially designed outrigger-attachment system. The top and bottom arms of the outrigger are used as the primary anchor support while smaller intermediate supports stabilize at every floor plate. The manufacturer claims that this provides solar control at every floor level.

[gkdmetailfabrics.com](http://gkdmetailfabrics.com) CIRCLE 224



### Level 2 Commercial Dual-Port Electric-Vehicle Charging Station

PEP Stations introduces commercial charging stations that can charge two electric vehicles simultaneously. The jury liked the attractive design, which is easily identifiable by the stainless steel exterior and yellow coiled cords. Each PEP Station has an 8” color touch-screen user interface and a built-in card reader to allow configuration for either access cards or credit cards. All PEP stations require Internet access.

[pepstations.com](http://pepstations.com) CIRCLE 226



dri-design VMZINC® series

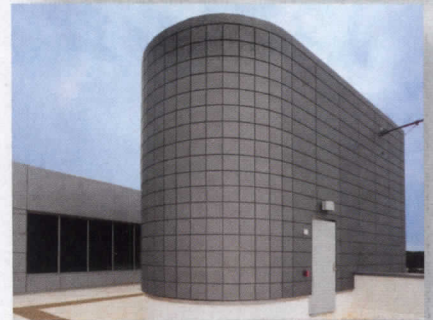
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CIRCLE 18





## Concrete & Exterior Improvements

Cement | Precast Concrete | Site Furnishings | Tree Grates

Jurors: Gina Bocra, Robert Luntz, Adam Zimmerman & Paulette Pascarella



TOP  
PICK

"This product [Novacem Carbon Negative Cement] has the potential to make a big impact on the construction industry as a whole. Truly carbon-negative products, performing at the same levels as their carbon-burning predecessors, should become the new standard."  
Adam Zimmerman



### Carbon Negative Cement

"This could really be a game-changer," is what one juror said about Novacem's Carbon Negative Cement. A winner of Material Connexion's Material of the Year, Novacem replaces calcium carbonates used in typical cement formulation with magnesium silicates and uses a lower temperature production process that runs on biomass fuels. While the cement is still in development, the manufacturer is already achieving strengths of up to 80 MPa. According to Novacem, a commercial rollout of the cement is currently planned for 2014–2015.

[novacem.com](http://novacem.com) CIRCLE 227



### Piceno Tree Grate

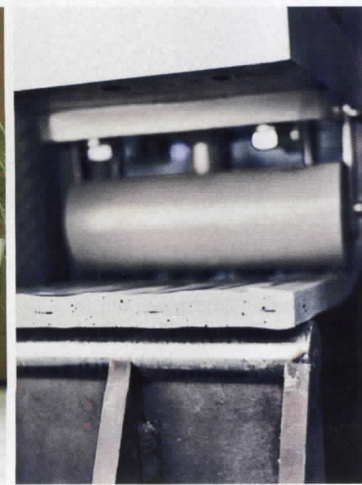
Manually cast by artisans in Germany, the Piceno cast-iron tree grate is another product from Hess America "with high function and high aesthetics," according to the jury. Piceno features a sculptured pattern and cast-in treads for enhanced slip resistance. Made of 100% recycled content, the grate comes in two sizes to meet most scale requirements.

[hessamerica.com](http://hessamerica.com) CIRCLE 228

### TAKTL

TAKTL's eponymous ultra-high-performance concrete (UHPC) outperforms glass-fiber-reinforced concrete in compressive, tensile, and flexural strength and can be cast in virtually any shape, texture, or pattern. These improvements, along with the capability to custom-color the material, transform this UHPC from a technical construction material into a group of multidimensional interior and exterior wall elements and panels, as well as site furnishings such as benches, receptacles, and planters.

[taktl-llc.com](http://taktl-llc.com) CIRCLE 229

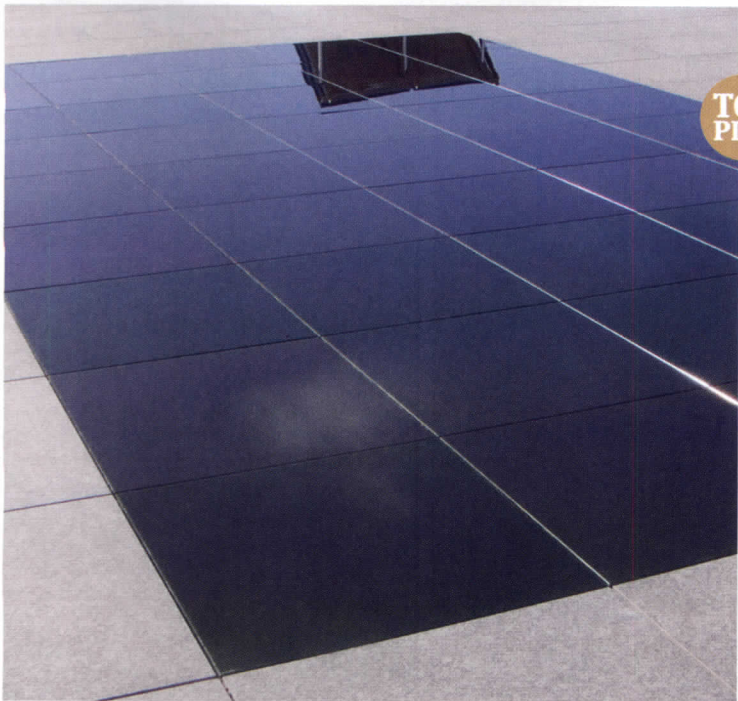




# Thermal & Moisture Protection

Roof Tiles | Thermal Insulation | Vegetative Roofing Systems

**Jurors:** Gina Bocra, Stephan Jaklitsch & Adam Zimmerman



“Fiberglass insulation is such a widely used category that this product [Owens Corning EcoTouch] has a huge potential impact.”  
*Stephan Jaklitsch*



## Onyx Photovoltaic Walkable Roof

Spanish manufacturer Onyx Solar offers building-integrated photovoltaics specifically designed to replace traditional construction materials in roofs, skylights, windows, or building facades. The photovoltaic properties allow the glass to generate electricity even in buildings where the orientation and inclination are not optimal. Still in development, this walkable roof system (shown) features a-SI glass, a material ideal for extended periods of exposure. Our jury appreciated the product’s versatility in generating power while also facilitating daylighting.

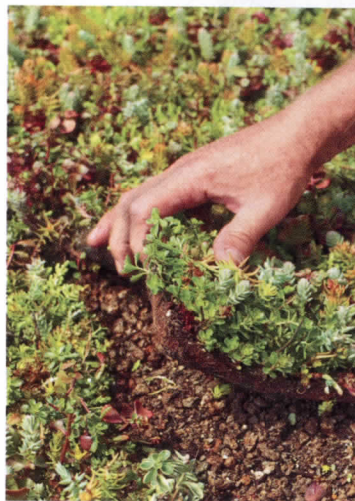
[onyxsolar.com](http://onyxsolar.com) CIRCLE 230



## Smog-Eating Roof Tile

The first of its kind in the United States, Boral Roofing’s smog-eating roof tile contains a specially prepared catalyst embedded in the upper part of the tile body that, when exposed to sunlight, speeds up the oxidation process and reduces pollution. The titanium dioxide coating on the surface of the tile’s micro-mortar makes it mold- and algae-resistant and less porous than conventional color-through tile.

[boralna.com](http://boralna.com) CIRCLE 232



## SkyScape Vegetative Roofing System

SkyScape is a vegetative roofing system from Firestone Building Products featuring patented, double-interlocking trays that are easy to install and maintain. The system is available in extensive modular trays and as an intensive multilayered system. Both designs feature a protective root barrier, drainage and filtration layers, a water-retention reservoir for stormwater metering, growing media, and the plants themselves. SkyPaver composite roof pavers and SkyDrain drainage mats from Firestone complement the system.

[firestonebpc.com](http://firestonebpc.com) CIRCLE 231



## EcoTouch Insulation

According to the jury, while Owens Corning EcoTouch insulation looks like the same old fiberglass insulation, it can have “a huge potential impact” on residential and commercial projects. Verified to be formaldehyde-free, EcoTouch is certified by Scientific Certifications Systems to have over 50% recycled content, including a minimum of 30% postconsumer recycled content. The high-performance insulation is also Greenguard Children & Schools Certified, meeting stringent standards for indoor air quality.

[owenscorning.com](http://owenscorning.com) CIRCLE 233





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## Materials

Metal Specialties | Metal Railings | Decorative Metal | Wood Framing

Jurors: Gina Bocra, Stephan Jaklitsch & Robert Luntz



"My top picks were based either on real innovation in performance with sleek-looking design (BrightShelf), wide applicability in the market (TJ-insulated products), or pure beauty and seductive appeal (Crystal Titanium)." *Gina Bocra*



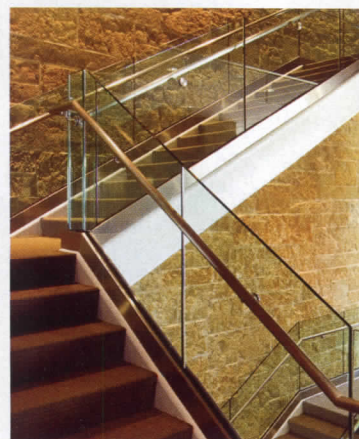
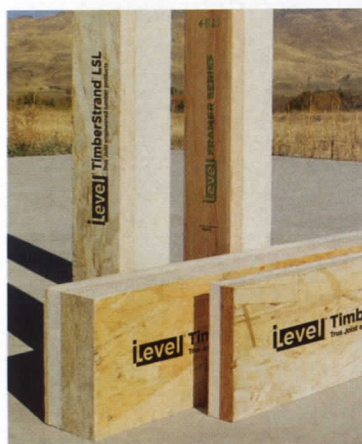
### Crystal Titanium

The jury liked the "beautiful, organic surface" of Crystal Titanium, a proprietary product developed by Architectural Titanium that is produced by physically "growing" the titanium crystals in a highly controlled and specialized vacuum chamber. Made of Grade 2 titanium, the finish is an intrinsic part of the metal (rather than a surface finish) and can be used for roofing, exterior wall cladding, interior wall cladding, ceilings, and decorative details (see bar, left). [architecturaltitanium.com](http://architecturaltitanium.com) CIRCLE 234

### CRI TAPER-LOC

The CRI TAPER-LOC from C.R. Laurence is a tempered laminated glass railing system (shown below and right) for interior and exterior applications. The patented systems are Miami/Dade County tested and approved and are safe for use in high-rise buildings. They support  $\frac{9}{16}$ ",  $\frac{11}{16}$ ",  $\frac{27}{32}$ ", and  $1\frac{1}{16}$ " thick tempered laminated glass, and are claimed to install 50% faster than traditional wet glaze systems, resulting in significant labor savings.

[crlaurence.com](http://crlaurence.com) CIRCLE 235



### Trus Joist TJ-Insulated Products

This line of structural framing materials from Weyerhaeuser is designed to help building professionals meet 2011 Energy Star for Homes standards and 2009 International Energy Conservation Code (IECC) requirements. The collection features integrated, preassembled headers, rim board, and corners that offer more consistent R-values and reduced thermal bridging than traditional framing methods. Sized to fit conventional 2x6 framing, the line features TimberStrand LSL, Weyerhaeuser Frammer Series Lumber, and Dow Thermax insulation. It is currently available in the northeastern United States. [trusjoist.com](http://trusjoist.com) CIRCLE 245



### Port Authority Mediamesh Installation

The world's largest transparent media screen is located on the corner of 42nd Street and Eighth Avenue on the facade of New York City's Port Authority Bus Terminal. GKD-USA installed 6,000 square feet of Mediamesh, a stainless steel metal mesh fabric with integrated LED profiles, to generate electronic billboards and light displays on 16 panels on the facade. The material's transparency allows it to use fewer LEDs, without sacrificing views, airflow, or ventilation. In August, the screen was put to the test when it delivered public safety messages while sustaining 65 mph winds during Hurricane Irene.

[gkdmetailfabrics.com](http://gkdmetailfabrics.com) CIRCLE 236



# Openings

Light shelves | Glazing | Window & Door Hardware

Jurors: Gina Bocra, Stephan Jaklitsch, Robert Luntz & Adam Zimmerman



TOP PICK

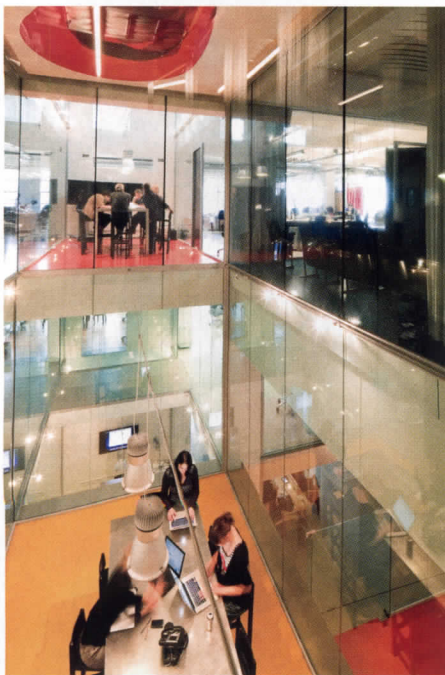
## BrightShelf

Hunter Douglas Contract's BrightShelf light shelf system features a patented ogee curve designed to work with the sun, catching light at various angles throughout the day to distribute it further and more evenly into the room for an ambient glow and an evenly lit space. BrightShelf is made of 100% recyclable material and is sold as a prefabricated system for easy installation. The jury appreciated the "sleeker look of this light shelf" and cited it as a "beautiful daylight-enhancement solution."

[hunterdouglascontract.com/solarcontrol/lightshelves](http://hunterdouglascontract.com/solarcontrol/lightshelves)

CIRCLE 237

"Fire-resistant partitions are often clumsy and cumbersome. Contraflam provides a well-detailed, elegant solution."  
Adam Zimmerman



## SRT Film

When laminated between two panes of glass, this PVB film from Pleotint enables a window system to continuously adapt its visible light transmission in response to the amount of sunlight incident on the window. Windows can therefore provide both an expansive view and diffuse daylighting, along with solar control and glare reduction—all without wiring, sensors, or control systems. The system is shown here in a composed photo demonstrating the glass in different light conditions.

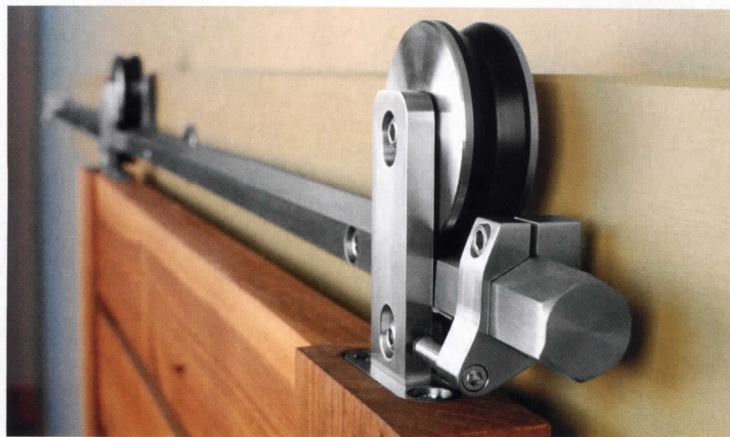
[pleotint.com](http://pleotint.com) CIRCLE 238



## Contraflam Structure 120

Vetrotech Saint-Gobain's new fire-rated glass wall was lauded by jurors for being a uniquely well-detailed and elegant solution in a field where products are often clumsy and cumbersome. This product offers 120-minute fire resistance with protection against radiated heat while visually providing a continuous unbroken expanse of mullion-free glass. Contraflam Structure 120 is made of clear tempered safety glass with intumescent interlayers.

[vetrotechusa.com](http://vetrotechusa.com) CIRCLE 239



## Hex Bar Sliding Hardware System

The modern style of this solution from Real Carriage Door Company stems from its unique hexagonal shape. Manufactured from brushed 304 stainless steel, the Hex Bar smoothly and silently glides along the track of sliding doors in residential and commercial applications. The jury felt the product offered a counterpoint to the typical roundbar hardware in barn-door track systems.

[realslidinghardware.com](http://realslidinghardware.com)

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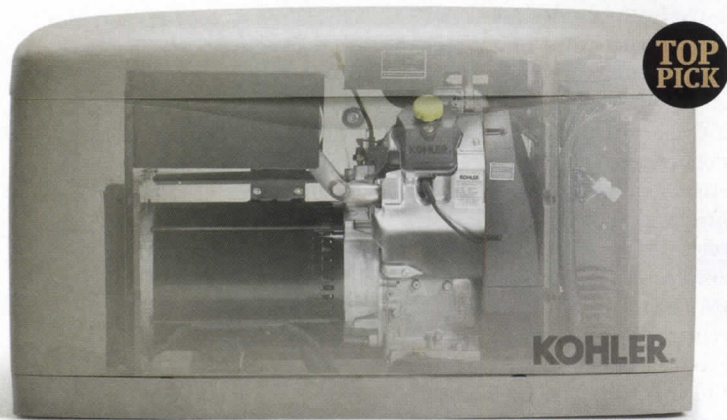
CIRCLE 31





## Equipment

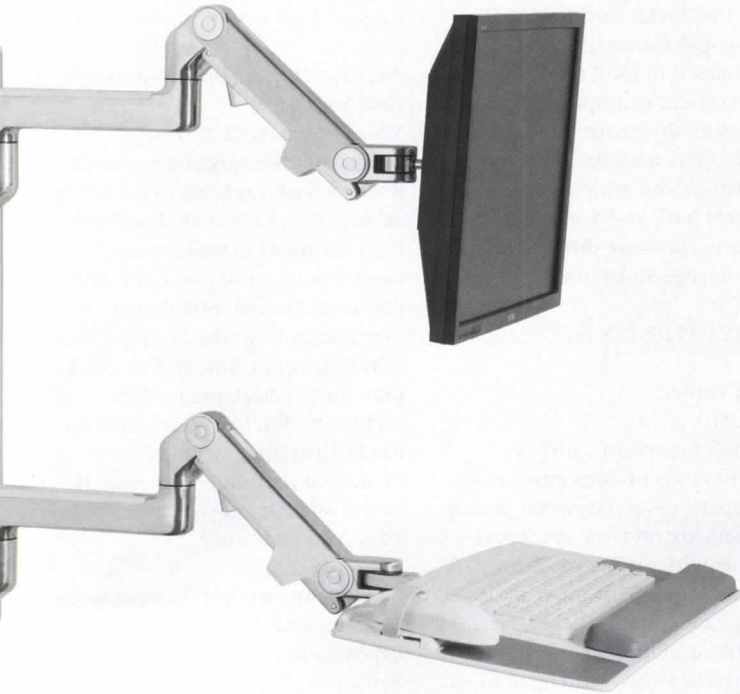
Residential Appliances | Health-Care Equipment | Unit Kitchens  
 Jurors: Robert Luntz, Paulette Pascarella & Adam Zimmerman



### 14kW and 20kW Residential Home Generator

Kohler's new generators feature significant enhancements to power, reliability, and overall design. The higher power range allows home-owners to run powerful household items such as heating and cooling systems. The outer shell is made of a dense, rugged composite material, making it corrosion-proof, and the generators can be fueled by natural gas or propane. The jury cited the generators for their clean, compact design.

[kohlersmartpower.com](http://kohlersmartpower.com) CIRCLE 241



### V6 Wall Station

An ergonomic solution for caregiver computer users in health-care environments, Humanscale's new V6 Wall Station offers a space-saving design with a track width of less than 5" and a customizable track length. It supports a monitor and keyboard and may be wall-mounted in either sitting or standing positions. The V6 is designed to limit surface areas for easier cleaning.

[humanscale.com](http://humanscale.com) CIRCLE 244

"The 14kW & 20kW residential home generator updates a product that has become increasingly in demand for our practice. A composite shell that is corrosion-proof is appropriate for coastal areas especially prone to power loss."  
 Robert Luntz



### 2060 Series Refrigerator

Liebherr's 36" Single Door 2060 series offers nearly 20 cubic feet of capacity and expansive shelving. It includes a dual-refrigeration system with separate efficient variable-speed compressors, and double-freezer drawers mounted on telescopic rails offering 6 cubic feet of storage space. The series is available in freestanding, fully integrated, and stainless integrated designs. All Liebherr products meet or exceed Energy Star guidelines.

[liebherr-appliances.com](http://liebherr-appliances.com)  
 CIRCLE 242

### S3

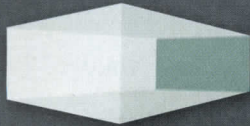
The latest addition to SieMatic's line of handle-free kitchens, the S3 offers clean, vertical lines; taller, wider cabinets; and 1-centimeter-thick countertops. S3 is constructed of newly engineered Select-Surfaces (an eco-friendly, durable alternative to wood veneer and lacquer) and is available in 22 finishes with matte and gloss options. It features an integrated dust-seal on a full U-shaped channel.

[siematic.us](http://siematic.us) CIRCLE 243





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## DATES & EVENTS

### New and Upcoming Exhibitions

#### Re-Cycle, Strategies for Architecture, City, and Planet Rome

December 1, 2011–April 29, 2012

Re-Cycle will display the work of contemporary architects and artists such as Lacaton & Vassall's Plus program, the High Line by James Corner and DS+R, and the Alvéole 14 in Sainte Nazaire by LIN. The focus of recycling in architecture will also be represented through the recycling of history, ruins, ideas, words, media, and music production. At MAXXI. For more information, visit [fondazionemaxxi.it](http://fondazionemaxxi.it).

#### Guided Architecture Tour of The Kreeger Museum

Washington, D.C.

December 17, 2011

Designed in 1963 by Pritzker Prize-winning architect Philip Johnson along with Richard Foster, the Kreeger Museum is also the former residence of David and Carmen Kreeger. Completed in 1967, the Kreeger is an excellent example of Johnson's Classical Modernism filled with 19th-, 20th- and 21st-century paintings and sculptures, a concert hall, and a sculpture terrace. For more information, visit [kreegermuseum.org](http://kreegermuseum.org).

### Ongoing Exhibitions

#### Real Venice

London

Through December 11, 2011

Photographs of Venice by 14 internationally renowned photographers are on view at Somerset House, with artists including Lynne Cohen, Philip-Lorca diCorcia, Antonio Giralés, Nan Goldin, and more. For the project, the artists were challenged to document the city's iconic and modern architecture, the everyday life of its inhabitants, and the ravages wrought by mass tourism and the rise of water levels. For more information, visit [somersethouse.org](http://somersethouse.org).

#### Design with the Other 90%: CITIES

New York City

Through January 9, 2012

This is the second in a series of themed exhibitions that demonstrate how design can be a dynamic force in transforming lives. The exhibition will explore design solutions addressing the challenges created by rapid urban growth. At the United Nations. Visit [cooperhewitt.org](http://cooperhewitt.org).

#### Muntadas

New York City

Through January 16, 2012

Antoni Muntadas, who was born in Barcelona and has lived and worked in New York since 1971, is best known for his multimedia works and public art installations that address social and political issues. The works included in this exhibition at the Bronx Museum focus on the relationship between public and private space; the media; how information is conveyed, interpreted, and manipulated; and the way that public opinion is shaped. Visit [bronxmuseum.org](http://bronxmuseum.org).

#### Architecture as Environment

New York City

Through January 22, 2012

This exhibition highlights Kevin Roche's contributions to the fabric of New York City, including the Ford Foundation building and more than four decades of master-planning, design, renovations, and new additions at the Metropolitan Museum of Art. One of America's most influential and prolific architects, Roche is acclaimed for his skillful integration of man-made and natural environments. At the Museum of the City of New York. Visit [mcny.org](http://mcny.org).

#### Landscape Futures: Instruments, Devices, and Architectural Inventions

Reno

Through February 12, 2012

This exhibition travels the shifting terrains of architectural invention, where new spatial devices on a variety of scales—from the inhabitable to the portable—reveal previously inaccessible dimensions



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CIRCLE 16

## DATES & EVENTS

of the built and natural environments. Guest-curated by Geoff Manaugh—the man behind BLDGBLOG—the exhibition is on view at the Nevada Museum of Art. For more information, visit [nevadaart.org](http://nevadaart.org).

### **No Object Is an Island: New Dialogues with the Cranbrook Collection**

Bloomfield Hills, Michigan

*Through March 25, 2012*

This exhibition reopens the expanded and renovated Cranbrook Art Museum at the Cranbrook Academy of Art. Inside and around the landmark building designed by renowned Finnish architect Eliel Saarinen, the exhibition will pair the work of 50 leading contemporary artists and designers with an equal number of objects from Cranbrook's outstanding permanent collection of 20th- and 21st-century art and design. Visit [cranbrookartmuseum.org](http://cranbrookartmuseum.org).

### **Pacific Standard Time: Art in L.A. 1945–1980**

Los Angeles

*Through April 1, 2012*

Set to be the largest cultural collaboration in Southern California's history, *Pacific Standard Time* consists of exhibitions and programs that encompass a broad range of developments, including Modernist architecture and design; African-American artistic networks; Mexican-American and Chicano artists and movements; craft, including ceramics, woodwork, fabric art, and glassblowing; photography; and performance and public art. At various venues. Visit [pacificstandardtime.org](http://pacificstandardtime.org).

### **Unbuilt Washington**

Washington, D.C.

*Through May 28, 2012*

The National Building Museum's exhibition explores the many serious—and sometimes not-so-serious—proposals that would have dramatically altered the architectural character of Washington, D.C. The exhibition includes rare original drawings by Benjamin Henry Latrobe, Robert Mills, and even Thomas Jefferson,

as well as digital renderings of innovative projects by contemporary architects. For more information, visit [nbm.org](http://nbm.org).

## Lectures, Conferences, and Symposia

### **Joseph Siry Lecture and Book Signing**

Elkins Park, Pennsylvania

*December 11, 2011*

Leading American architectural historian and professor in the Department of Art and Art History at Wesleyan University Joseph Siry will discuss and sign his new book *Beth Sholom Synagogue: Frank Lloyd Wright and Modern Religious Architecture* at the synagogue, the only one designed by the architect, built in 1954. Visit [bethsholomcongregation.org](http://bethsholomcongregation.org)

## Competitions

### **International Parking Institute's 30th Annual Awards of Excellence**

*Entry Deadline: December 16, 2011*

Recognizing outstanding achievement in parking facility design, these awards are open to public agencies, jurisdictions, institutions, organizations, and corporations which own parking facilities completed or renovated since January 1, 2009. For more information, visit [parking.org](http://parking.org).

### **Regional Wood Design Awards**

*Entry Deadlines: December 23, 2011*

*(East Region); January 15, 2012*

*(West Region)*

Although the entry deadline for the Central Region has passed, WoodWorks, an initiative of the Wood Products Council, is still accepting nominations for these awards, which will be presented at Wood Solutions Fairs across the country. The awards recognize excellence in wood design and construction, as well as innovative projects that showcase wood's strength, beauty, versatility, and cost-effectiveness. For more information, visit [woodworks.org](http://woodworks.org).





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## DATES & EVENTS

### **Open Call: Exhibition on Contemporary Architecture and Engineering in the Middle East**

*Deadline: January 13, 2012*

In the spring of 2012 the Center for Architecture will host the U.S. debut of the exhibition "City of Mirage: Baghdad, 1952–1982, From Wright to Venturi." Submitted projects must be located in the Middle East, but this is not a competition—all submissions will be included. In addition to commissioned projects in design, under construction, or recently completed, unbuilt competition entries will also be accepted. All constructed projects must have been completed after January 1, 2000. Visit [aiany.org](http://aiany.org).

### **Folly**

*Deadline: January 16, 2012*

Socrates Sculpture Park, in Long Island City, Queens, and the Architectural League invite emerging architects and designers to apply for the opportunity to build and exhibit a full-scale project around the theme of an architectural folly. By definition a fanciful architectural form, built to lend interest to a view or serve as a conversation piece, the folly serves as an ideal launching point for a dynamic exploration of architectural form and its relationship to sculpture. The winner will receive a \$5,000 production grant to fund the project, as well as full access to the resources and fabrication facilities of the park's outdoor studio during a two-month residency. Visit [archleague.org](http://archleague.org).

### **2011 Open Architecture Challenge**

*Registration Deadline: March 31, 2012*

Decommissioned military installations leave their mark on the global landscape—symbols of triumph, pride, pain, and the unforeseen consequences of military aggression. This design competition seeks to envision the future of decommissioned military space. The design and construction community is asked to identify retired military installations in their own backyards, collaborate with local stakeholders, and reclaim these spaces for social, economic, and environmental good. For more information, visit [openarchitecturenetwork.org/competitions/unrestrictedaccess](http://openarchitecturenetwork.org/competitions/unrestrictedaccess).

*E-mail information two months in advance to [recordevents@mcgraw-hill.com](mailto:recordevents@mcgraw-hill.com). For more listings, visit [architecturalrecord.com/news/events](http://architecturalrecord.com/news/events).*

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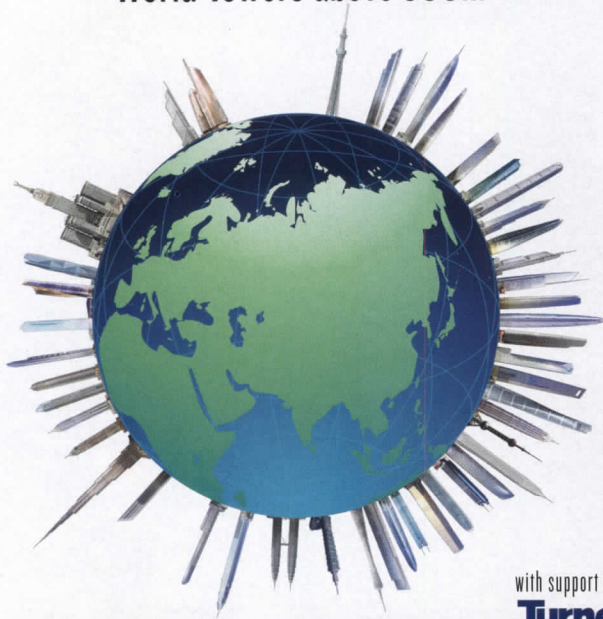
To learn more and to download the official entry form, visit [architecturalrecord.com/call4entries](http://architecturalrecord.com/call4entries). Email questions to [arcallforentries@mcgraw-hill.com](mailto:arcallforentries@mcgraw-hill.com). **SUBMIT YOUR ENTRIES BY 12/15/2011.**



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CIRCLE 01



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Proposal for the Lincoln Memorial by John Russell Pope, 1912. National Archives and Records Administration, Washington, DC  
Main elevation of Capitol competition entry by James Diamond, 1792. Courtesy of the Maryland Historical Society, 1976.88.51

Original photo by Scott D. Spagnoli

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CIRCLE 45

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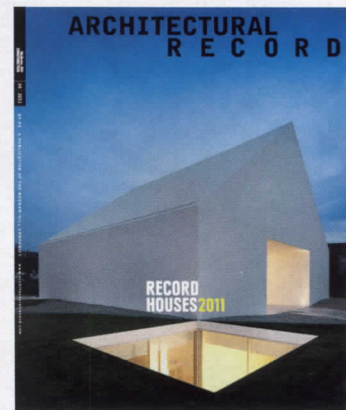


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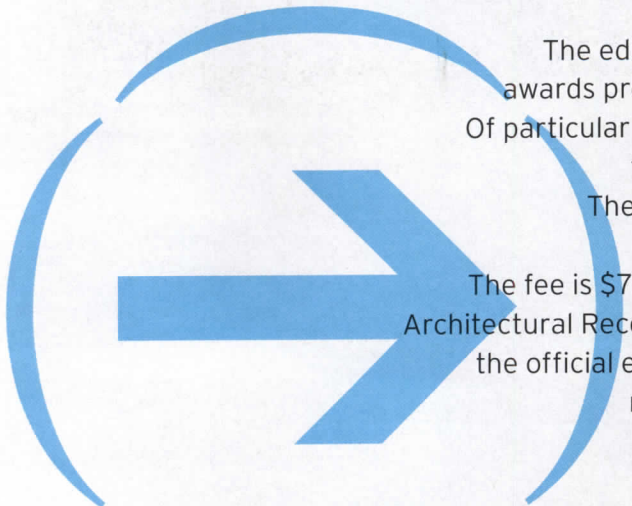
CIRCLE 32

# 2012 CALL FOR ENTRIES Record Houses



The editors of ARCHITECTURAL RECORD announce the **2012 Record Houses** awards program. Entry is open to any architect registered in the U.S. or abroad. Of particular interest are projects that incorporate innovation in program, building technology, materials, and form. Projects must be built and inhabited. They may be new construction or renovated and adaptive reuse projects.

The fee is \$75 US per submission; please make checks or money orders payable to Architectural Record (sorry, we cannot accept credit cards or wire transfers). Download the official entry form at [architecturalrecord.com/call4entries](http://architecturalrecord.com/call4entries). Email questions to [recordhouses@mcgraw-hill.com](mailto:recordhouses@mcgraw-hill.com). **SUBMIT YOUR ENTRIES BY 12/1/2011.**







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Library

**Otis Elevator Company**

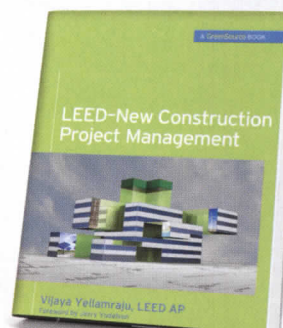
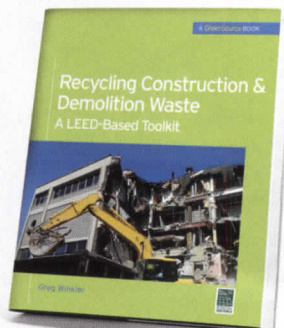
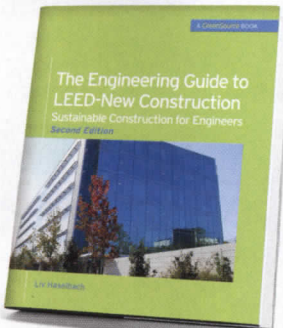
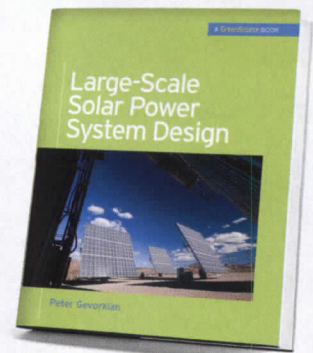
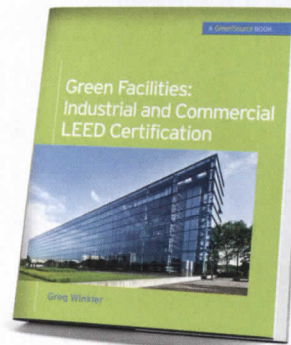
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14 20 00 Elevators

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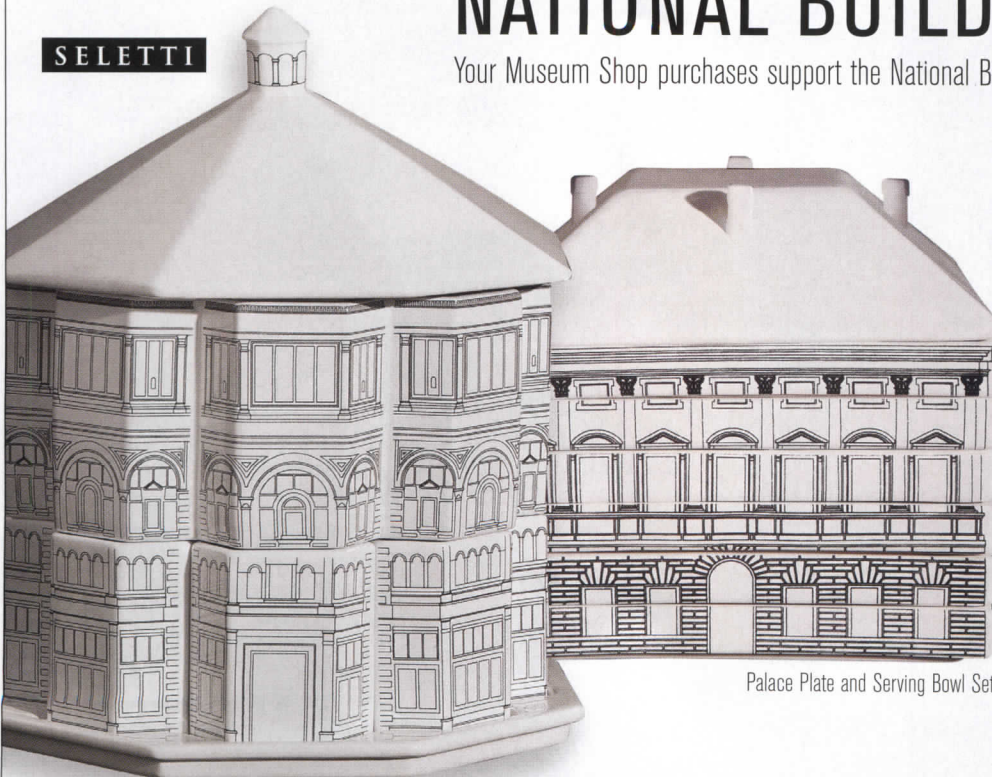
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212.599.5177

Circle 150

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\$\$\$ | WR

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##### Performance Data:

- Avail. prehung, lock cutouts, fire rated, finished, bullet resistant, any shape, size, wood, design



www.pinecrestinc.com  
800.443.5357 | Contact: Russ Underdahl Jr.

Circle 151

### DOORS, WINDOWS

#### SLIM LIFT & SLIDE SLIDING DOOR

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▲ Panda manufactures and distributes fine custom door and window systems.

##### Product Application:

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www.panda-windows.com  
702.643.5700 | Contact: Cooper Buranen

Circle 152

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#### ARCHITECTURAL CEILING FANS & LIGHTING

G

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##### Product Application:

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- Other finishes available
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- Lifetime warranty



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Circle 153

### INTERIOR FINISHES, FURNISHINGS

#### CAST METAL PANELS

WR | G

##### The Gage Corporation, Int.

▲ Gagecast® is a cast metal wall surfacing material suitable for a variety of interior applications.

##### Product Application:

- Palm Beach Motor Cars, West Palm Beach, FL
- Lowe's Corporate Headquarters, Mooresville, NC
- Microsoft Corporate, Redmond, WA

##### Performance Data:

- Durable, low-maintenance dimensional surfacing
- Cost-effective installation systems



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608.269.7447, 800.786.4243

Circle 154

### INTERIOR FINISHES, FURNISHINGS

#### FIBERGLASS/MINERAL FIBER CEILINGS

\$\$\$ | G

##### CertainTeed Ceilings

▲ CertainTeed Adagio ceilings combine superior noise control, beauty, and durability. They are the ultimate solution for acoustical comfort and privacy.

##### Product Application:

- Professional private office; medical treatment room; conference room

##### Performance Data:

- Unique composite offers optimum acoustical performance
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Circle 155

### INTERIOR FINISHES, FURNISHINGS

#### RAISED ACCESS FLOOR PANEL

\$\$ | G

##### Lindner USA

▲ NORTEC: a calcium sulphate panel with 99% recycled content.

##### Product Application:

- International Finance Center, 15 mil. ft., Hong Kong, China; Dubai Convention Center, 300,000 ft., Dubai, United Arab Emirates; Total Gas and Power North America Inc., 16,000 ft., Houston, TX

##### Performance Data:

- Lowest air-leakage rates, acoustic value up to 58 dB; wood, stone and terazzo factory-applied finishes available



www.lindnerusa.com  
770.414.5054 | Contact: Francisco Santiago

Circle 156

### INTERIOR FINISHES, FURNISHINGS

#### VINYL FLOORING

\$ | G | NEW

##### FLEXCO

▲ Natural Elements Premium Wood Vinyl Plank and Luxury Vinyl Stone Tile offer commercial-grade resilient vinyl flooring that's FloorScore® certified.

##### Product Application:

- Nazareth Nursing Home, Louisville, KY

##### Performance Data:

- 18 wood designs, 8 stone colors
- 50% recycled content, no waxing required



www.flexcofloors.com  
800.633.3151 | Contact: Melissa Quick

Circle 157



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### MATERIALS

#### ARCHITECTURAL NATURAL STONE

\$\$\$ | G

##### Vermont Structural Slate Company

▲ Quarrier and fabricator offering select slates, quartzites, sandstones, marbles, limestones, granites and basalts.

##### Product Application:

- St. Thomas More Chapel, Yale University, New Haven, CT
- Architect: Pelli Clarke Pelli Architects
- Unfading Green Slate flooring



www.vermontstructuralslate.com  
802.265.4933 | Contact: Craig Markcrow

Circle 158

### MECHANICAL SYSTEMS, HVAC, PLUMBING

#### LINEAR SHOWER DRAIN SYSTEMS

WR | NEW

##### Infinity Drain

▲ As functional as it is sleek with a grate that's 1 in. wide, the FFAS 25, nicknamed "The One," melds seamlessly into the shower.

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Circle 159

### ROOFING, SIDING, THERMAL & MOISTURE PROTECTION

#### OPERABLE SKYLIGHTS & RETRACTABLE ROOF ENCLOSURES

WR | G

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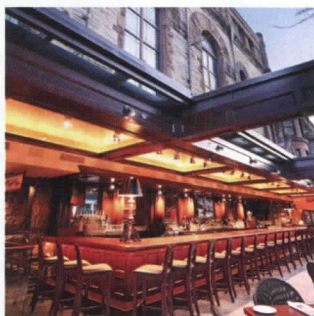
▲ Beautiful custom structures that open up to the sun, air, and stars. Retractable roof provides year-round usage, lower energy and operating costs, reduces HVAC needs, improves daylighting, and draws crowds.

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- Restaurants, hotels, shopping malls, aquatic, office atriums, community centers, waterparks, and more

##### Performance Data:

- Custom designs open up 100%
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- LEED, lower life-cycle costs



www.openaire.com  
800.267.4877 | Contact: sales@openaire.com

Circle 160

### ROOFING, SIDING, THERMAL & MOISTURE PROTECTION

#### THERMAL & VAPOR BARRIER PANEL

G

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▲ HPCI Barrier™ insulated metal panel is an air, water, thermal, and vapor barrier panel that can be used behind any type of facade.

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877.585.9969

Circle 161

### SPECIALTY PRODUCTS

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▲ Melton Classics provides the design professional with an extensive palate of architectural columns, balustrades, cornices, and millwork. They invite you to call their experienced product specialists to assist you with the ideal products for your design, application, and budget. Columns are available in fiberglass, synthetic stone, GFRC, and wood. Their 80+ durable maintenance-free balustrades feel substantial yet have reduced weight. Also, ask about their low-maintenance fiberglass and polyurethane cornices and millwork.



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800.963.3060 | Contact: Mike Grimmert

Circle 162

### SPECIALTY PRODUCTS

#### BATHROOM ACCESSORIES

\$ | G | NEW

##### Brey-Krause Manufacturing Co., Inc.

▲ The S-4017-SS Soap Dish/Toothbrush Holder conveniently combines two products in one to save on space. Its high-quality, contemporary design makes it a versatile piece for any application.

##### Product Application:

- Commercial, institutional, residential, assisted living facilities, military barracks

##### Performance Data:

- 18-gauge Type 304 stainless steel
- Powder coating available in white, oil rubbed bronze, etc.



www.breykrause.com  
610.867.1401 | Contact: Matthew Thierer

Circle 163

### SPECIALTY PRODUCTS

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\$\$\$ | G

##### AWV Solar Shading Systems

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##### Product Application:

- Papago Gateway Center, Tempe, AZ
- One River Terrace, Battery Park, New York, NY
- New York Times Building, New York, NY

##### Performance Data:

- Deters solar heat gain and lowers energy cost while providing daylighting solutions
- Available in a variety of materials including metal, glass, photovoltaic cells, textiles, wood, etc.



www.awv.com, www.shadinglouvers.com  
419.865.5000 | Contact: Richard Yarges

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### SPECIALTY PRODUCTS

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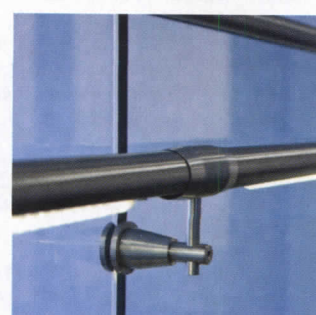
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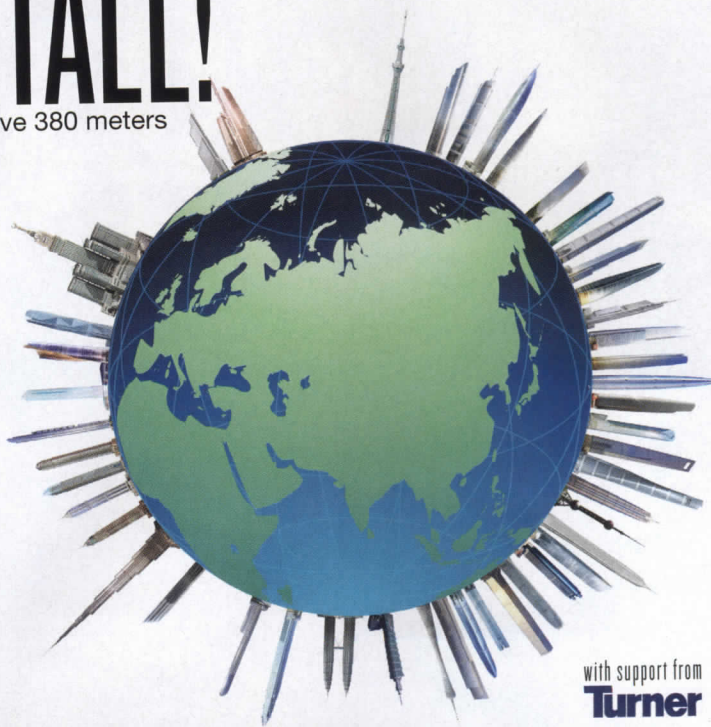
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Diane Soister at Tel: 212-904-2021/Fax: 212-904-2074  
Email: [diane\\_soister@mcgraw-hill.com](mailto:diane_soister@mcgraw-hill.com)

Ruthann Lubrano at Tel: 212-904-2815/Fax: 212-904-2074  
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PROJECT FOREST PAVILION  
 LOCATION GUANGFU, HUALIEN, TAIWAN  
 DESIGNERS NARCHITECTS

IN 2004, NEW YORK CITY-BASED nArchitects transformed the courtyard of MoMA PS 1 with *Canopy*, a soaring grid of arched bamboo poles. This commission was the team's most prominent at the time, and helped lead to its selection that year as a RECORD Vanguard firm. Seven years later, nArchitects has revisited the project with its *Forest Pavilion*, a robust, lacy structure in Taiwan's Da Nong Da Fu Forest Park. "It's a first cousin of *Canopy*," notes principal Eric Bunge. Created as a focal point of the Masadi Art Festival (organized to raise awareness of the nearby forest that is threatened by development), the pavilion was central to its opening and closing ceremonies and served as a pulpit from which President Ma Ying-jeou delivered an address. Bunge describes the 60-foot-diameter, 22-foot-tall structure as an "almost building" that provides a sense of enclosure while being open and inviting. Referring to the growth patterns of trees, 11 parabolic vaults fashioned of green bamboo rise in two rings around a circular steel-and-wood deck and are lashed together with stainless steel wire. The local Amis tribe, which has a tradition of building with bamboo, helped with construction and became so taken by this new way of using the material that they intend to incorporate it into their own time-honored building methods. *Beth Broome*







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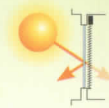
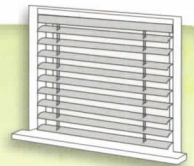
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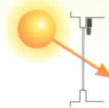
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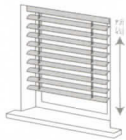


**Winter Days:** open blinds to let sunlight warm the room, saving heating costs

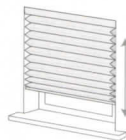


**Winter Nights:** close blinds to keep heat in

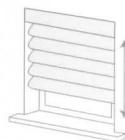
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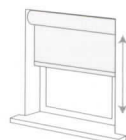
Venetian Blinds



Cellular Shades



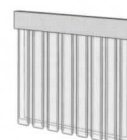
Roman Shades



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