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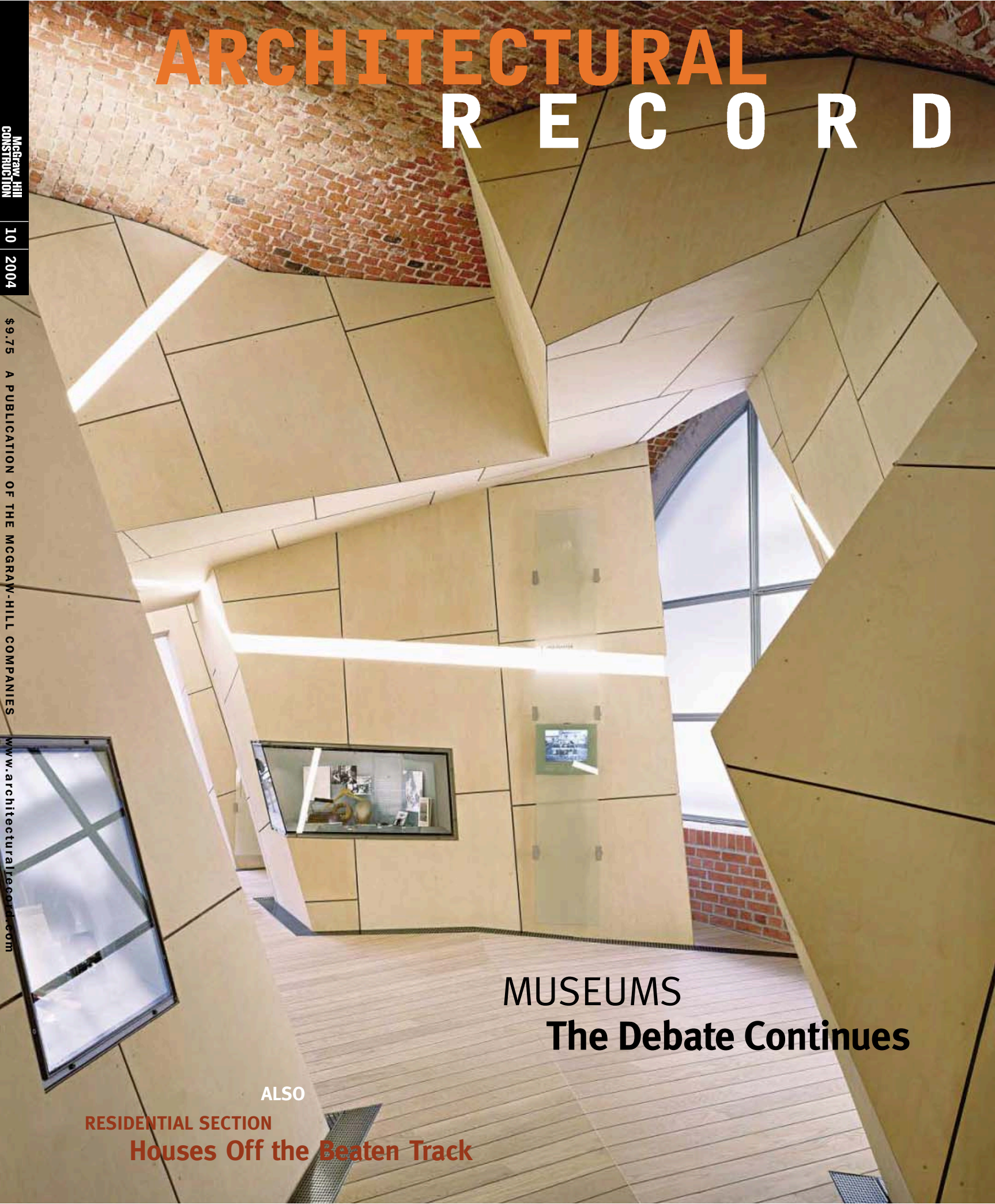

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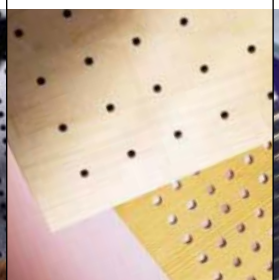

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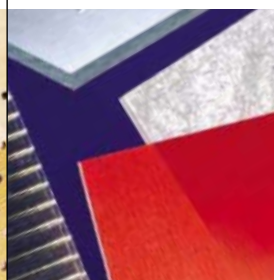

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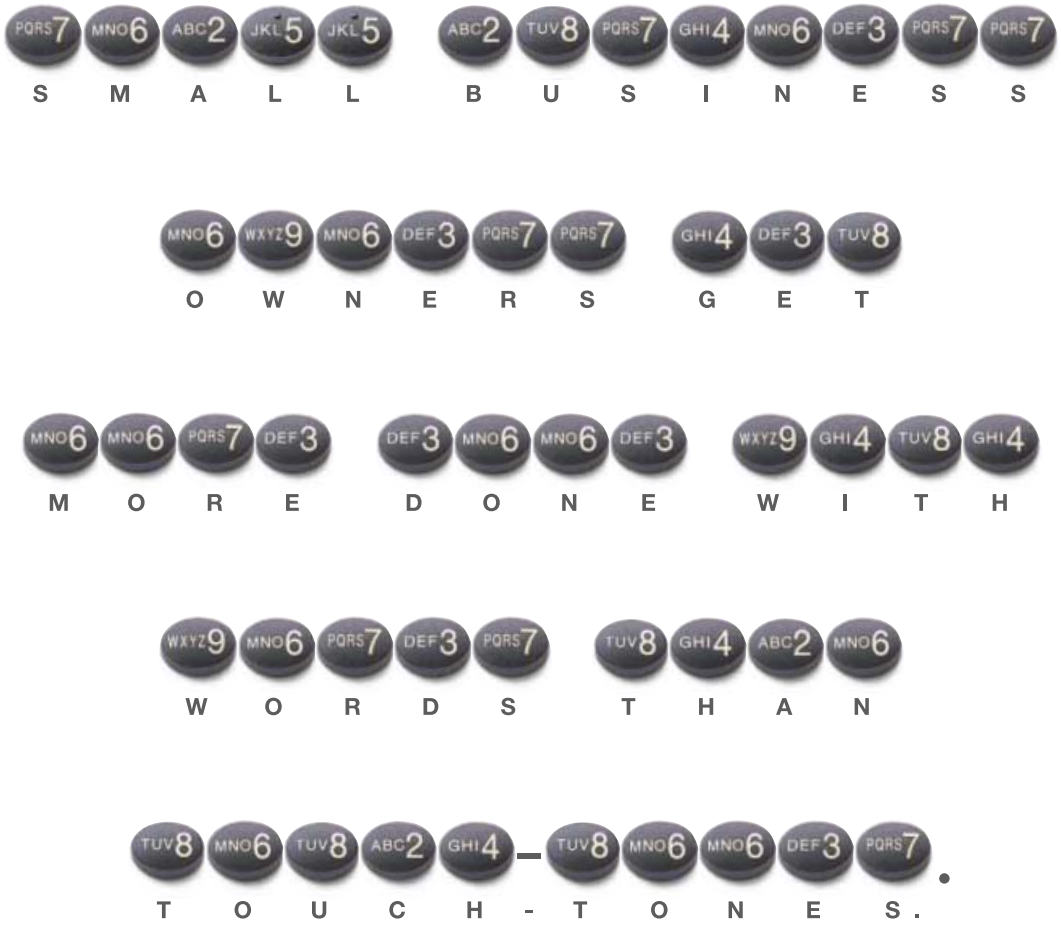

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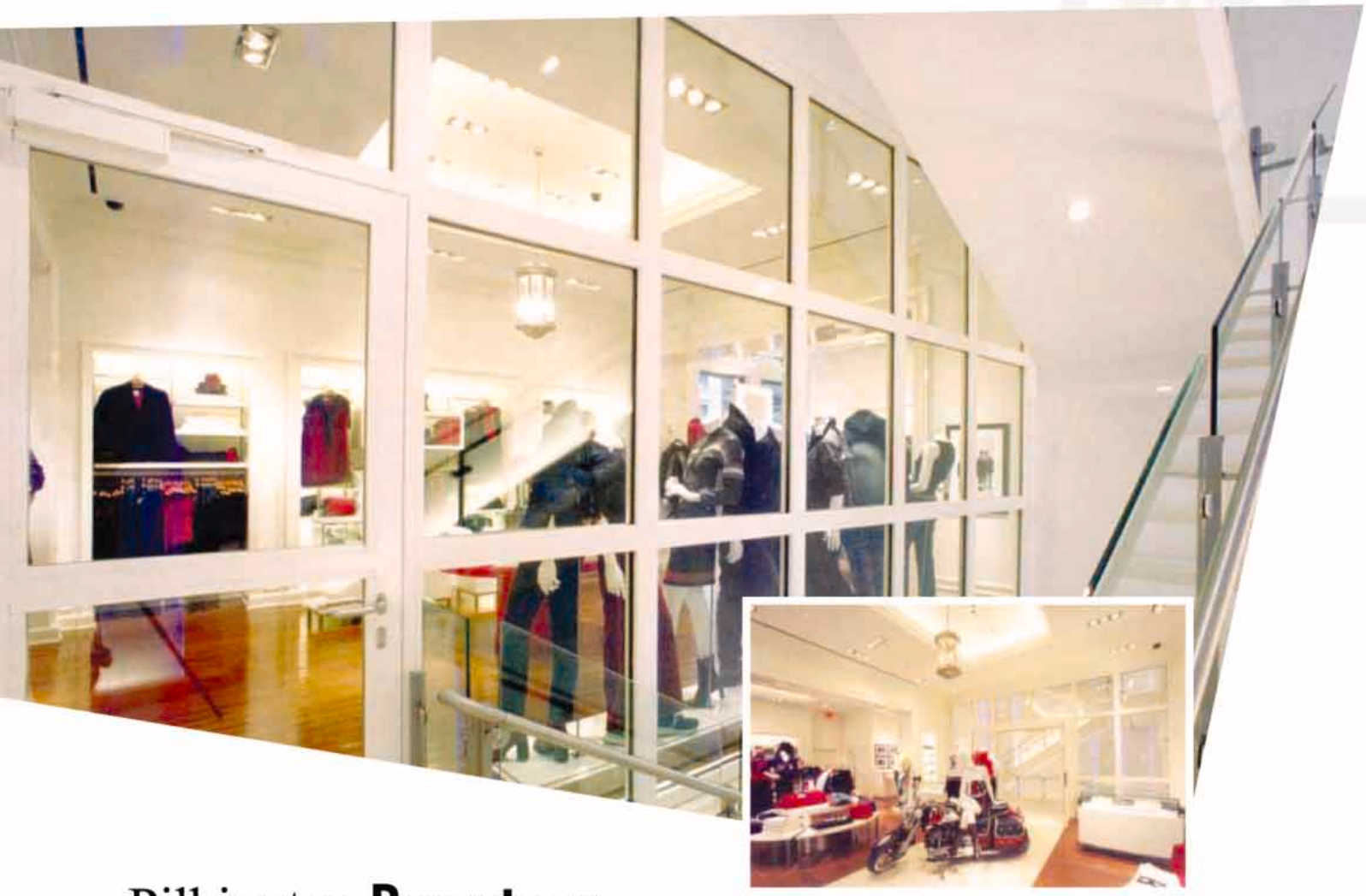

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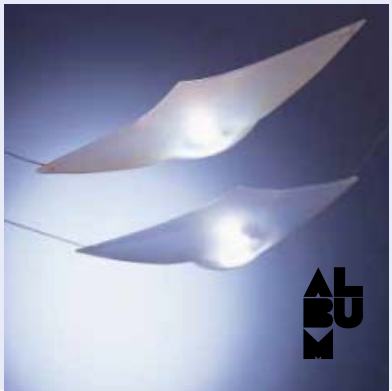

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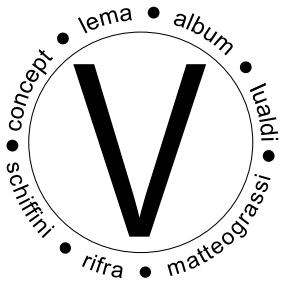

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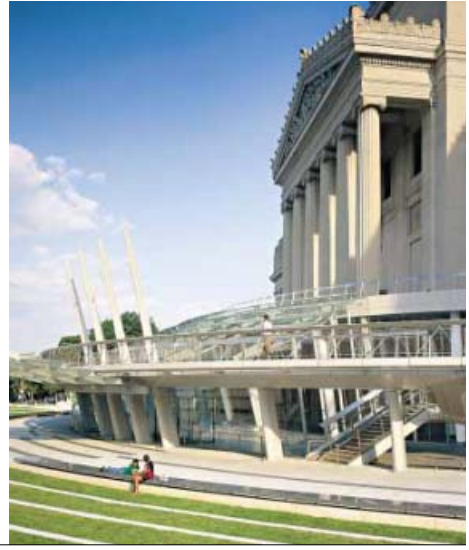

On the Cover: *Danish Jewish Museum, by Studio Daniel Libeskind. Photograph by Bitter Bredt*
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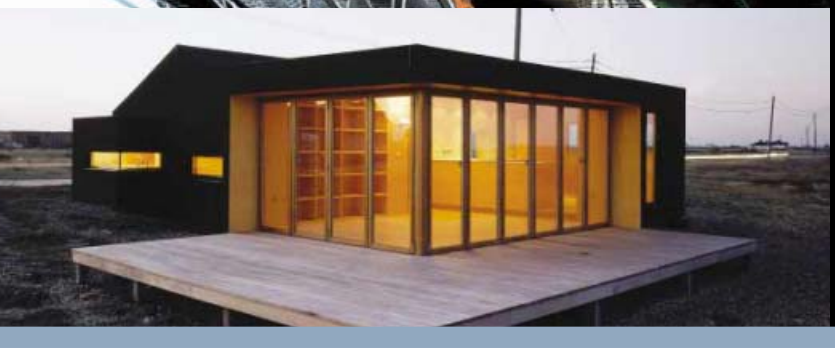

Venice Biennale

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Residential

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Bottom: Vista House, Dungeness, Kent, England Photography: © Chris Gascoigne

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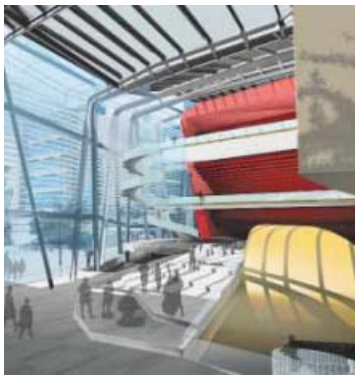

Montreal Cultural and Administrative Complex, 2003
Image: Courtesy NOMADE

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The Canadian firm, NOMADE, has an all-inclusive style in urban design. Integrating ideas from many sources is what brands this young firm. Also, a new program, New York Designs, gives young designers a foothold in a very competitive market.

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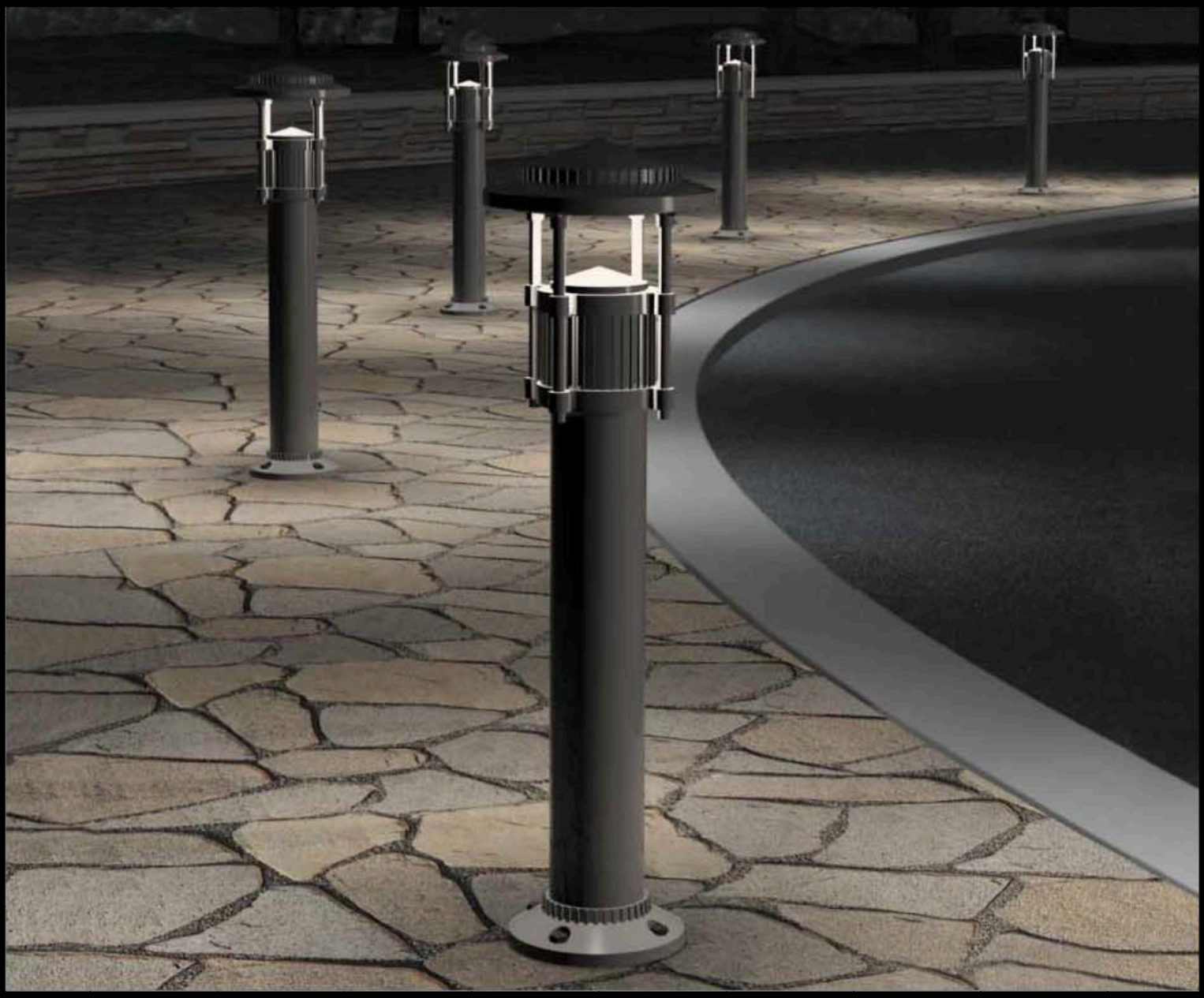

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A Man Called Fay

Editorial

By Robert Ivy, FAIA

In an architectural world freaked out on speed and hype, Fay Jones stood apart. His residences, chapels, and pavilions form a discernible body of work as singular and distinctive as their maker. In a sense, Jones ennobled and quickened Arkansas, an emerging region near America's core, and the place shifted from near-frontier to the kingdom of Thorncrown, a wonderland of natural gifts and shifting light. We saw this focused world anew through his eyes.

The press has eulogized his personal qualities, including his forthright, democratic manner, his dignity, his energetic awareness, his role as an inspiring teacher, and his professional alliances with great minds, including Frank Lloyd Wright and Bruce Goff. (Who else worked with and learned from both?) Jones's greatest lesson for subsequent generations, however, lies outside the so-called "Ozark style," characterized by wood and stone; instead, his real legacy lies within his work and its relationship to language. Fay Jones thought and spoke most eloquently in three dimensions, a lesson at the core of architectural meaning. Few have mastered it more completely.

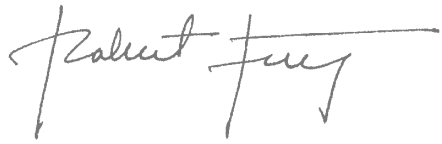
In fact, he bristled at the world "style." "I never sought to ring the universal bell," he said, eschewing trendy developments. He felt that the word style conveyed too much of superficial, temporal fashion, when his goal was the development of a body of thought, conveyed through drawings, models, and completed buildings. He never acknowledged this notion of architectural language as articulation, if he ever consciously held it. However, the work proclaims it as physical proof. He dreamed and made a world using a consistent architectural syntax, spending a lifetime pursuing its realization.

With some exceptions for the chameleonlike Wright, who lived to explore a variety of media, consistency of means has characterized other great careers. Consider how the late Mies van der Rohe (steel) or today's Tadao Ando (concrete) deploy a limited range of architectural materials complementary to their individual visions. In the predigital age, that is.

In Jones's case, he accepted the Wrightian, even Emersonian, notion of the relatedness of language at all scales. Thus, famously, "the whole is to the part as the part is to the whole." The truth (for there was a sort of truth) of the architecture lay in its relationship to the natural world, to its immediate surroundings and topography, to the materials and systems that it comprises, and to the details that constitute its fundamental spirit. Details, in this cosmology, take on tremendous weight, for in them we can see, as Blake proposes, "a World in a grain of sand." The senses drink it all in.

With typical economy of expression, Jones would have scoffed at the term "theory." Yet he explored ideas. While consciously drawing meaning from history, Jones was working out a personal worldview that drew on wellsprings within his own psyche, in which rational and intuitive elements are conjoined. Characteristically, he called such motives "caves and tree houses." Thus, wet stone walls, curving and womblike, form the bases of early works, which simultaneously rise high into the tree line, admitting light and air.

At its highest expression, at Thorncrown Chapel or Pinecote Pavilion, his work coalesces into an architecture that fully expresses complex thought, blinding our attention to the pieces and parts. At the critical moment in both instances, the literal linchpin has been replaced with a steel void, an oculus he called the "operative opposite." Light pours through this structural ring, forming a perspective that snaps these highly engineered constructions into focus, at once blurring our understanding and dazzling our sight. Do we see building or art, a real place or another realm? Using the simplest things, whether humble materials, pattern, or light, Jones synthesized the components into a coherent, expressive architectural idiom. In his lifetime, Fay Jones did what other architects have tried to do, but they could only jabber: He spoke most effectively without uttering a single word.



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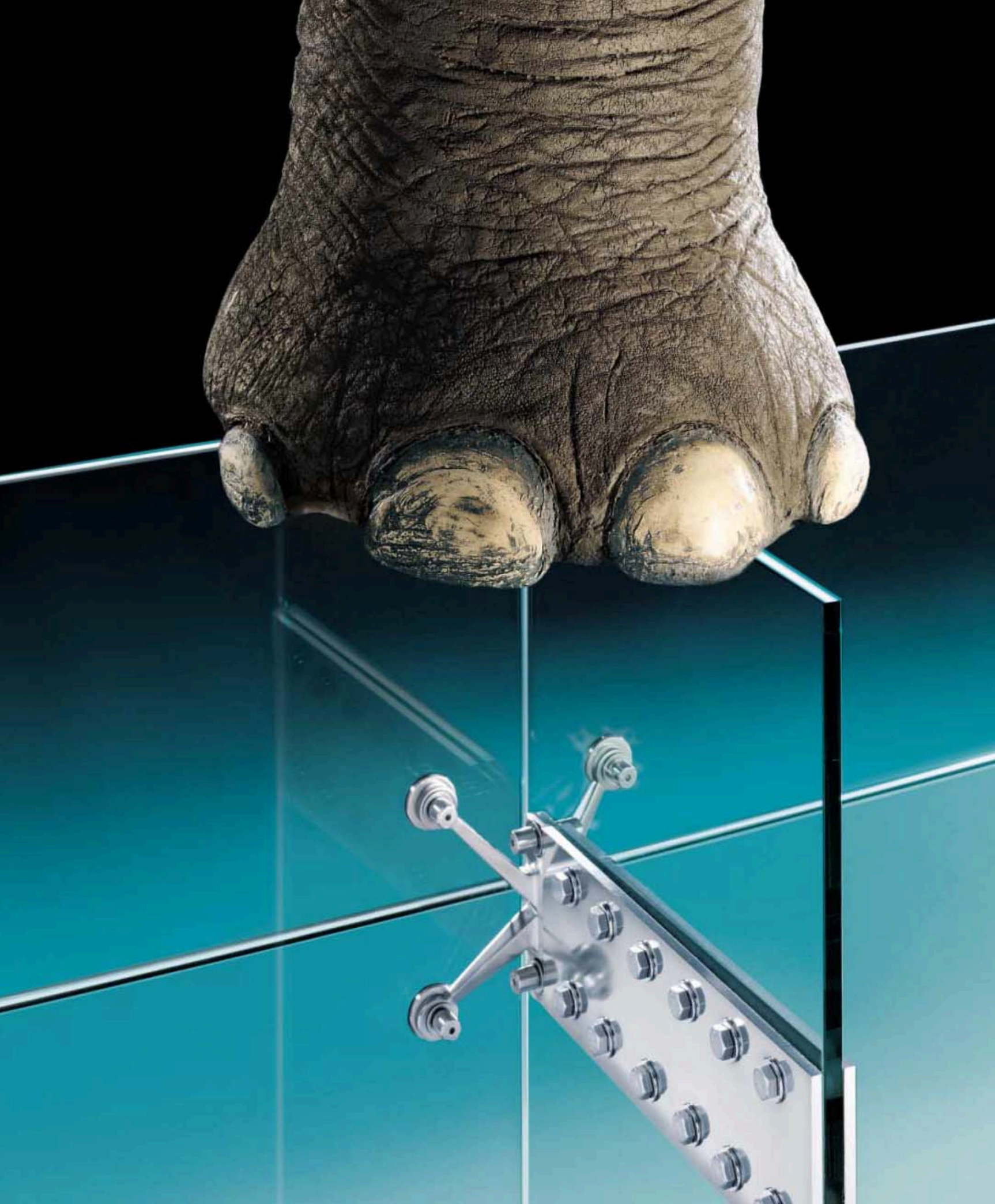

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Letters

Ode to Fay

At the beginning of the 1980s, I was an architecture student fortunate enough to start my professional career in Fay Jones's five-person office [News, "Architect Fay Jones Dies," archrecord.com]. Fay's strongest belief was that great architecture was usually a result of a firm set of architectural principles. To that he would add: "Don't be timid." Simple comments, but profound to the ears of a young architect struggling to understand the Postmodernism of the day.

Fay Jones, and Samuel Mockbee as well, are viewed partially through the veil of being southern, rural, soft-spoken, and likable. Let's also honor the underlying struggles it took, personally and professionally, for their bodies of work to become a valuable part of the American landscape.

Gregory Uekman, AIA
Uekman/Architects
Bethesda, Md.

College education

Nancy Levinson's article "Campus Planning Is Breaking New Ground" [August 2004, page 86] was well constructed, with input from many informed sources around the country. However, several of the featured projects that followed the story blatantly disregard this latest thinking in college campus development.

How, for instance, does Frank Gehry's Stata Center at MIT, which looks as if it has already been severely damaged by an earthquake, show "a vision that integrates the physical campus with the identity of the institution"? Certainly, Will Alsop's Sharp Centre in Toronto (a ridiculous "pencil box" supported by a dozen of its contents) is evidence of Vassar president Frances Daly Fergusson's assertion in Levinson's article that "even the most beautifully situated campus can be ruined by poorly located buildings and bad open space." And how on earth does Jensen & Macy's CCA Graduate Center in San Francisco, a common warehouse that was turned into a bland warehouse, display an "interplay between memorable architecture and distinctive landscape that makes a good campus"?

Of all the campus buildings being constructed "at a prodigious pace and impressive scale," you have selected examples for their shock value rather than for the manner in which they respect the serious planning and thought explicit in Levinson's piece. What an opportunity missed!

David A. Lunde
Retired Director of Campus Planning, University of Georgia
Athens, Ga.

Architects at arms

American embassies [Commentary, July 2004, page 67] have been forced to move from architects' preferred emphasis on openness to the overpowering priority of security because of failed American foreign policy. The government's current attempt to dominate global politics and the world economy fuels anger and

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resentment against us, as does its transparent double standard on human rights used to evaluate allies versus opponents in the so-called "War on Terror."

As the new Standard Embassy Design will do little to reverse these trends, and as architects seem to be increasingly shut out of advising the government, perhaps architects should find ways to be more active in advocating for a new foreign policy that will allow us to practice the best in embassy design again.
Raphael Sperry
San Francisco

Girl from Curitiba

As a Brazilian architect living and working in North America since 2000, I'm always looking for Brazilian or South American news in your magazine. When I picked up the July issue, I was excited to see news about one of my heroes: Oscar Niemeyer. Even better, my hometown—Curitiba—was mentioned [News, page 38]. I hope you keep writing all the great articles you do, and thanks for more Brazilian architecture on your Web site in August.
Leticia Amaral
Via e-mail

Represent, don't invent

In the week after the new Seattle Central Library opened on May 23, I spent hours in the building, exploring every floor and making use of every function. That said, I hope some day to visit the building photographed by Timothy Hursley in the July issue [page 88]. No one who has used the library can fail to see that Hursley's photographs reveal an ignorance of how the building actually works.

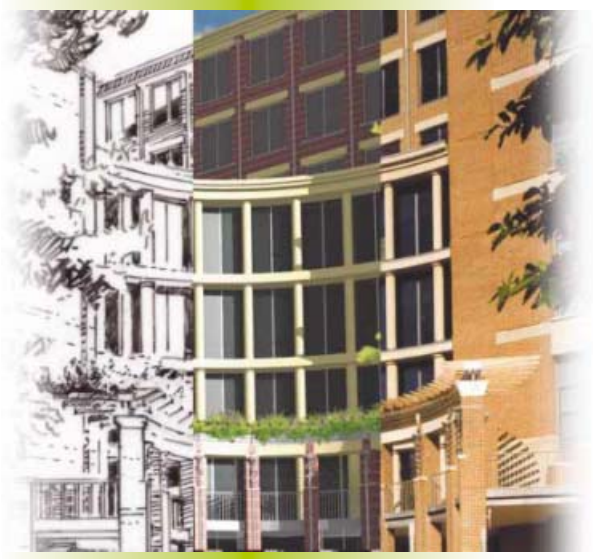
OMA/LMN's building is certainly among the most eloquent of libraries, one that's more than able to speak for itself. Hursley fails to recognize this, however, and presumes to supplant the building's narrative with his own, inventing when he should strive to represent. With a few noteworthy exceptions, his images do the building a considerable disservice, creating angles where there are none, engineering views that do not exist, and reimagining spaces that need not be reimagined.

Every good photographer necessarily leaves a particular imprint on his or her work, but Hursley goes to extremes. It seems sometimes as though he has designed a building of his own and then set out to photograph it. While Hursley's photographs are often dizzying and occasionally beautiful, they rarely reflect the building Seattle is coming to know and love.
Jacob Brogan
Seattle, Wash.

Corrections

The August news item [page 23] on the new Hollywood Bowl by Hodgetts + Fung Design and Architecture (with executive architect Gruen Associates) suggests that the structure was renovated and altered; in fact, it is completely new, built from the ground up. A July News item [page 38] misspelled the name of the Brazilian town where the Oscar Niemeyer Museum is located—it is spelled Curitiba. The curtain-wall contractor was incorrectly listed in a July story on Baltimore's Brown Center [page 127]. The contractor is Harmon. A September News Brief [page 42] incorrectly identified Suzanne Stephens's role in the book *Imagining Ground Zero*. She is the lead author. The same item misidentified the publisher of Paul Goldberger's book *Up From Zero: Politics, Architecture, and the Rebuilding of New York*. It is Random House.

Write to rivy@mcgraw-hill.com.



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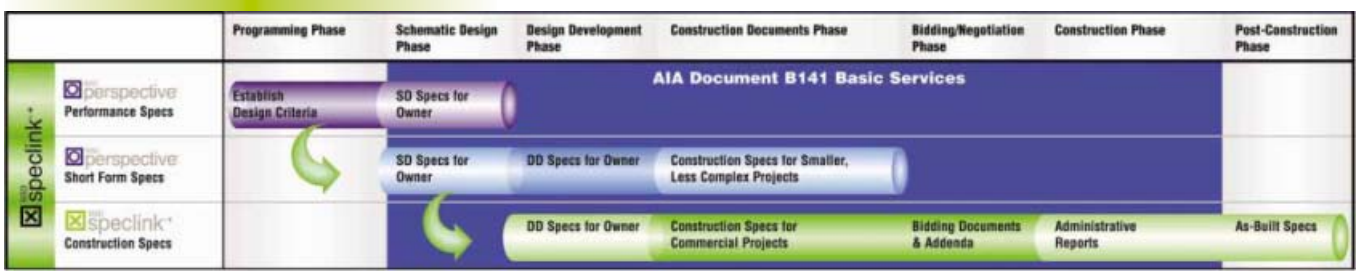

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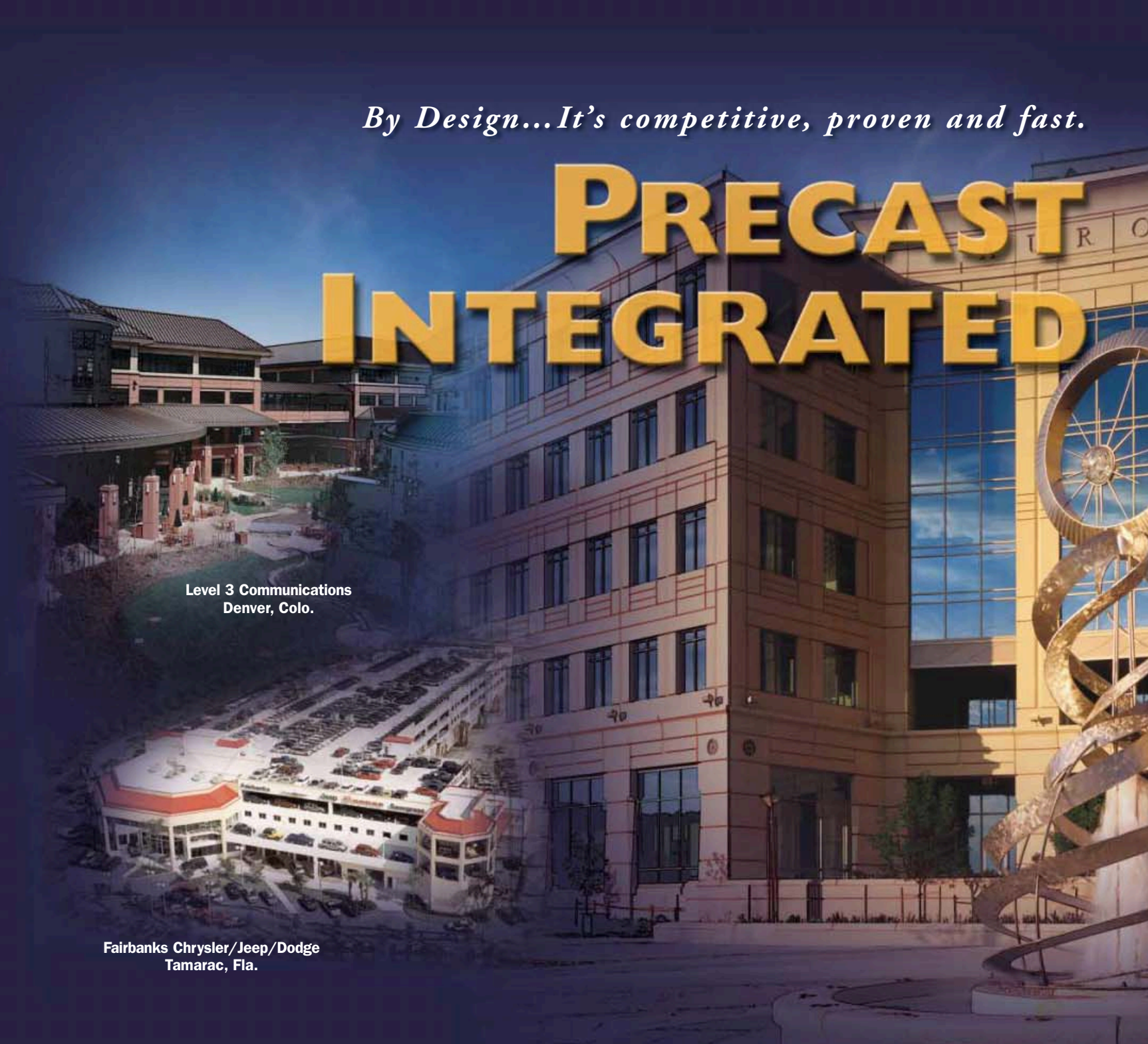

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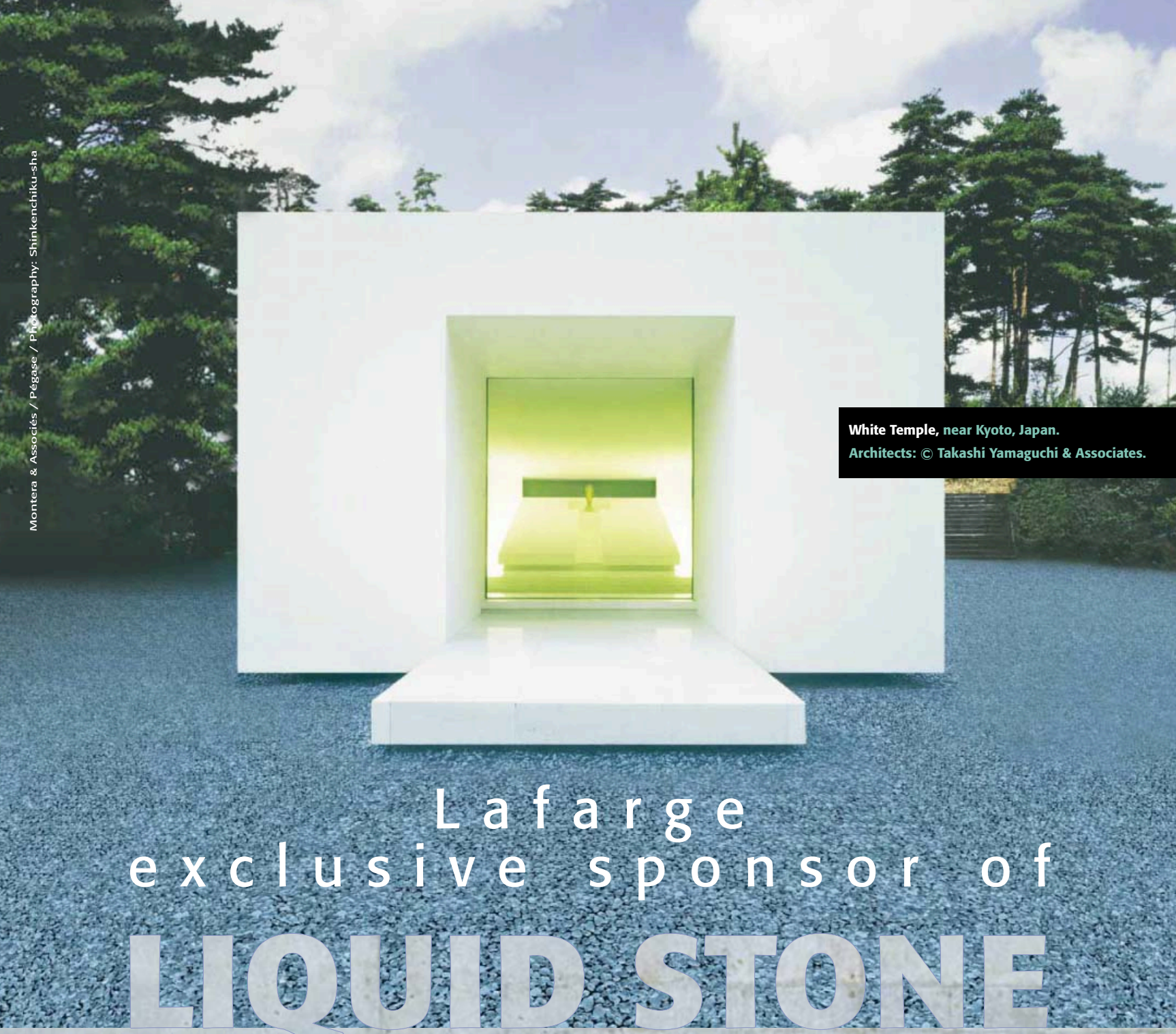

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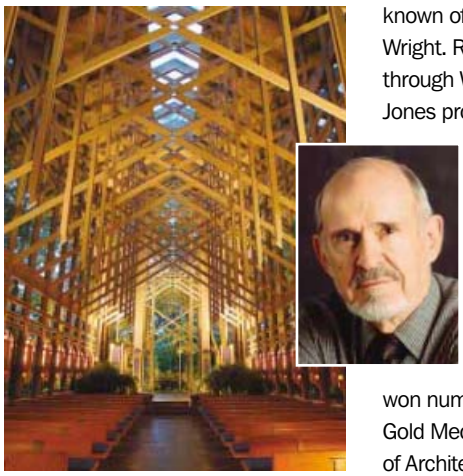
Record News

Highlights Big-name skyscrapers in Milan p. 34
Decker out at National Building Museum p. 34
LAB Architecture in Beijing p. 40
New African-American cultural buildings p. 44

Fay Jones Dies; architecture says goodbye to several notables



Thorncrown Chapel by Jones (right).

E. Fay Jones, FAIA, whose houses and chapels won architecture's highest honors and international acclaim, died August 30 at his home in Fayetteville, Arkansas. He was 83.

Jones was perhaps the best known of the students of Frank Lloyd Wright. Relying on precepts traced through Wright to Louis Sullivan, Jones produced a large body of work tied to the concept of organic architecture. His designs, which typically use cedar, stone, glass, and creative lighting, can be seen from the Atlantic to the Pacific. Most are in the Arkansas Ozarks. He won numerous awards, including the Gold Medal of the American Institute of Architects in 1990.

His most famous building is Thorncrown Chapel in the small Ozarks town of Eureka Springs, Arkansas, which is nestled in the woods and supported by an intricate, rhythmical overhead cross-lattice system. In 2000, the AIA voted the chapel the fourth-best building of the 20th century. In 1991, the AIA ranked Jones among the 10 most influential architects of the time.

His career spanned more than half a century, beginning in 1953 with summers at Wright's Taliesin teaching compounds in Wisconsin and Arizona. A comment by Les Krantz in his book *American Architects* is typical of the praise Jones inspired: "His work expresses the natural process of 'organic unfolding, or blossoming,' as he puts it, and encourages us to explore and meditate upon man's relationship with nature."

Jones designed 135 residences and 15 chapels and churches in 20 states. Other projects included fountains, gardens, pavilions, and commercial buildings.

Euine Fay Jones was born January 31, 1921, at Pine Bluff, Arkansas, and he grew up in El Dorado, Arkansas. He studied engineering at the University of Arkansas, then earned a degree in the university's architecture program in 1950. He received a master's degree in 1951 at Rice University in Houston.

Jones taught architecture at the University of Oklahoma from 1951 to 1953. He then taught for 35 years at the University of Arkansas, and became its architecture school's first dean.

Jones had little of the flamboyance of his mentor, Wright, practically refusing to utter the first-person pronoun when discussing his designs. But his views could be expressed firmly. He once told an interviewer, "When someone off the street with no architectural background walks into a structure and is captured by a sense of awe, that's architecture with a capital *A*." *Roy Reed*

In Memoriam

Chicago Museum of Contemporary Art; Avery Fisher Hall; Columbus's St. Peter's Lutheran Church; Barnes's Haystack.

Josef Paul Kleihues, renowned German architect and educator, died on August 13. He was 71. He taught architecture and urban planning in Germany at the University of Dortmund and the Academy of Arts in Dusseldorf, and at New York's Cooper Union. Kleihues's theory of "poetic rationalism" sought to enliven the functionalist aesthetic of Modernism, and he helped champion Berlin's "critical reconstruction," filling in the gaps left by wartime destruction with buildings that followed scale but used new construction methods. A notable Berlin work was the elegant and historicist Hamburger Bahnhof rail station, now a museum. His first and only American commission was Chicago's Museum of Contemporary Art, which opened in 1996. *Tony Illia*

Max Abramowitz, FAIA, architect of many of New York City's most iconic midcentury Modernist buildings, died September 12 at the age of 96. A partner of Wallace K. Harrison, Abramowitz designed the Philharmonic Hall, later renamed Avery Fisher Hall, which opened in 1962 as part of Lincoln Center. With Harrison, he also designed the last Rockefeller Center skyscrapers, including the Time-Life and McGraw-Hill buildings. Harrison and Abramowitz oversaw the United Nations project in New York from 1945 to 1952. *John E. Czarnecki*

J. Irwin Miller, who helped transform Columbus, Indiana, into a modern design capitol, died on August 16. He was 95. Miller led the Cummins Engine Company to prominence, and in 1954 he started a foundation to subsidize architecture in Columbus. It has since paid $13.7 million in design fees for 42 projects, including an I.M. Pei library, a Kevin Roche post office, and a Cesar Pelli shopping center. Columbus now ranks with New York and Chicago as a U.S. center for design innovation. *T.I.*

Edward Larrabee Barnes, FAIA, the New York architect known for his clear, original designs, died on September 21. He was 89. His 1962 Haystack Mountain School of Crafts on Deer Island, Maine, a villagelike collection of simple shapes that broke from Modernism's increasingly sculptural forms, won the AIA's 25-Year Award in 1994. His firm won the 1980 AIA Firm Award and designed the I.B.M. headquarters in New York, Dallas Art Museum, and Walker Art Museum in Minneapolis. *S.L.*

PHOTOGRAPHY: COURTESY THORNCROWN CHAPEL (TOP); UNIVERSITY OF ARKANSAS (TOP INSET); CHICAGO MUSEUM OF CONTEMPORARY ART (BOTTOM LEFT); LINCOLN CENTER FOR THE PERFORMING ARTS/AVI MB (BOTTOM CENTER LEFT); © CORBIS (BOTTOM CENTER RIGHT); COURTESY HAYSTACK MOUNTAIN SCHOOL OF CRAFTS (BOTTOM FAR RIGHT)

OFF THE RECORD

The Institute of Classical Architecture & Classical America is opening a new national headquarters office at 20 West 44th Street in Manhattan.

G. Holmes Perkins, founder of the Graduate School of Fine Arts at the University of Pennsylvania, died on August 25.

The National Parks Service is accepting proposals for a Flight 93 Memorial, to honor those who died in the plane crash in Shanksville, Pa., on 9/11.

New York–based Asymptote, founded by Hani Rashid and Lise Anne Couture, has received the fourth Austrian Frederick Kiesler Prize for Architecture and the Arts, a biannual award.

London's Victoria and Albert Museum (V&A) and the Royal Institute of British Architects (RIBA) have announced they are joining forces to open a new Architecture Gallery at the museum in November 2004.

Finalists for London's Stirling Prize include 30 St. Mary Axe by Foster and Partners, the Imperial War Museum North by Studio Daniel Libeskind, the Kunsthaus Graz by Peter Cook and Colin Fournier, the Phoenix Initiative by MacCormac Jamieson Prichard, the Spire of Dublin by Ian Ritchie and Associates, and the Business Academy of Bexley by Foster and Partners.

Architect Peter Eisenman, FAIA, received the Venice Biennale's Golden Lion for Lifetime Achievement Award at a ceremony that took place on September 10.

Stantec, an Edmonton, Canada–based engineering firm, is acquiring Dunlop Architects, one of the Canada's top design firms.

New York–based Gruzen Samton Architects is opening a new office in Newark, New Jersey.

Documenting recovery, one day at a time

Six months after the fall of the World Trade Center towers, a documentary filmmaker began filming time-lapse movies of the site from 35-millimeter cameras placed atop buildings around the area. There are now six of them, each shooting one frame every 5 minutes. When they have been filming for 10 years, the length of the project, the resulting images will be compiled into a 20-minute film.

The project is called Project Rebirth, and the documentary filmmaker behind it is Jim Whitaker, who is also the president of Imagine Entertainment, the film production company started by Brian Grazer and Ron Howard.

The six cameras are contained in specially designed boxes that protect them from the weather and from tampering. One sits at ground level, directed at the site across the cemetery at St. Paul's Chapel. Another camera is located in the American Express building, which was damaged when the towers fell. The floor where the camera sits was undergoing renovations when it was installed. Whitaker notes, "Tom Lappin, our director of photography, installed the camera when the floor was an open-air platform in the sky. When he returned to check the camera, he had trouble finding the closet amid all the finished office space."

Project Rebirth uses time-lapse photography to capture the rebuilding of the World Trade Center. The site went from a hole (top left) to a construction zone (bottom right).

In September, Project Rebirth launched its own Web site, www.projectrebirth.org, which is a project in its own right in several ways. In addition to information about the film, the site provides an interactive timeline, interviews with important figures in the rebuilding process, and information about the architecture, urban planning, and engineering that is going into the rebuilding.

The site also contains a history of the World Trade Center, but according to Joan Ockman, the site's architecture editor, history is not the real intent of the program. "The 'Rebuild' portion of the site is a behind-the-scene lens to the ongoing process, not the past," she says, referring to one of the site's four main sections.

For example, under the heading "Architecture," the site introduces the WTC team, and includes entries on SOM, Michael Arad, Santiago Calatrava, the master plan, 7 World Trade Center, the Freedom Tower, and other individual projects. The interview section began recently with a talk with Kevin Rampe, the president of the Lower Manhattan Development Corporation.

"I don't think the lay public or the architectural community has even been allowed into a building project this closely and on this scale," says Ockman. "I'm trained as an architect, but even for me, becoming this aware of every minute of the development has been quite a revelation."
Kevin Lerner

Massachusetts school: Design committee or competition?

The Boston suburb of Newton is wrestling with how to choose an architect for its new $100 million Newton North High School: either open the project to a design competition or stick with the city's existing system, under which the mayor chooses from a shortlist of firms culled by a designer-selection committee. A group led by local architect Anatol Zuckerman is pushing for a design competition open to all Massachusetts-registered architects, arguing that it would yield a more creative design and save money. Separately, the Newton Board of Aldermen is considering an ordinance to mandate a design competition for projects valued at more than $90 million. If the city opts against a competition, advocates will aim for a referendum in November, according to Zuckerman. The vast majority of public school architects in the U.S. are chosen through selection committees, according to Jim Dyck, chair of the AIA Committee on Architecture for Education. "I think there's an economic case to be made for competitions," he says. "Given the tiny percentage of first costs, what you spend to get the best person to do the job has a significant effect on the life of the building." Newton director of communications Jeremy Solomon says a design competition might not tap an architect familiar with the community or allow for adequate citizen input, but added that the mayor was "committed to keeping our lines of communication open." The school is expected to be complete by the end of 2008, says Solomon. ***Ted Bowen***

PHOTOGRAPHY: COURTESY PROJECT REBIRTH

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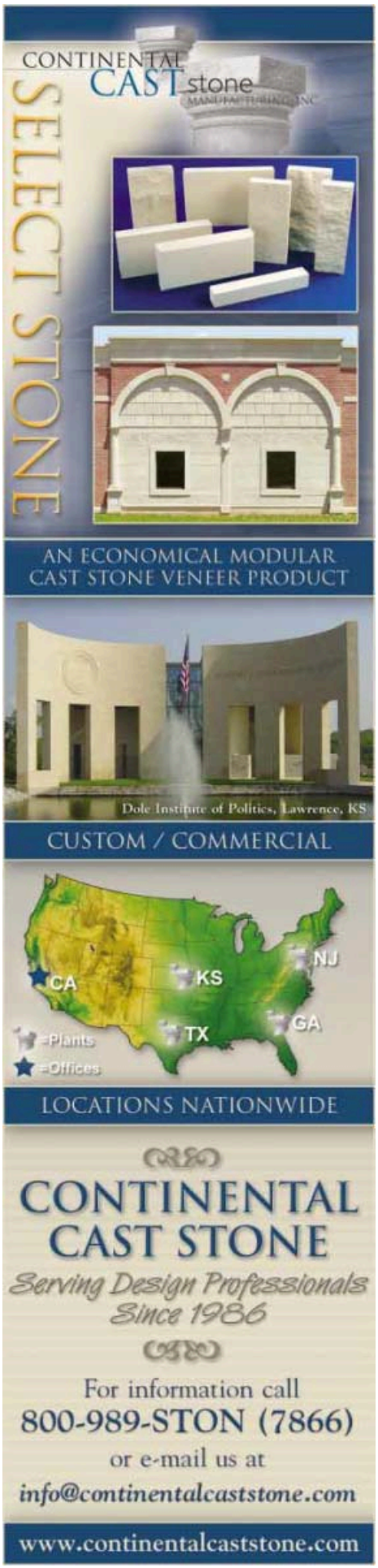

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Record News

Libeskind, Hadid, Isozaki designing towers in a growing Milan

At the beginning of August, the city of Milan announced the selection of an international architectural "dream team" to redevelop the soon-to-be-abandoned exhibition fairgrounds in the city. The team includes Daniel Libeskind, Zaha Hadid, and Arata Isozaki, each of whom will design a skyscraper on the plot. They are joined by Italian architect Pier Paolo Maggiora, of Turin.

The story began two years ago when Fiera Milano, which organizes the city's seemingly limitless rotation of fashion and design exhibitions, announced that it would relocate the exhibitions outside of the city, to an area under design by Massimiliano Fuksas. To assuage criticism that it was abandoning the city, Fiera promised that it would also redevelop the old fairgrounds. Instead, with the blessing of the city, it has sold the space for $608 million to an insurance consortium under the banner of City Life. The City Life proposal, with a master plan by Libeskind, will encompass about 15 city blocks. Initial plans call for significant green space surrounding three skyscrapers, each designed by a different architect. Isozaki's tower will be the tallest at 689 feet, dwarfing Milan's (and Italy's) tallest building, the concrete Pirelli tower (415 feet), designed by Gio Ponte in 1967.

The redevelopment of the former Fiera grounds is just the latest in a string of new projects getting under way in Milan, which is experiencing a renewal in building confidence unparalleled since political scandals wracked Italy in the 1980s and all but halted large-scale real estate development. Besides Fuksas's new, $910 million Fiera fairgrounds, to be completed in April 2005, a master plan by Cesar Pelli for a "city of fashion" was just approved. In April, Pei Cobb Freed and Partners, with Italian Paolo Caputo, was selected to build a new seat for the Lombardy regional government. The project will include a 525-foot skyscraper.

The proposed Milan towers.

Milan's city boosters laud the fairground project as bringing a global vision to the city. But not everyone concurs. Says Giulio Barazzetta, principal of SBG Architetti in Milan and a member of the Ordine degli Architetti della Provincia di Milano (the local architect's league), "It's global for global sake: three-star architects who are working side-by-side, but not together. Each tower is fine as a work of architecture, but in terms of providing a space that works for the city, I don't think it does that." *Paul Bennett*

Decker resigns as chief curator of National Building Museum

Howard Decker has left his post as chief curator at the National Building Museum in Washington, D.C. The museum abruptly announced Decker's resignation in early September; his final day was September 3.

Museum director Chase Rynd, who has been with the museum for about a year, says he encouraged the resignation because he wants to replace the chief curator role with a format in which various curators report directly to him. "The position is not necessary right now," says Rynd. The resignation, notes Rynd, is part of museumwide changes to restructure management and encourage growth. The museum's board passed an ambitious new strategic plan this summer. Rynd says that the museum will now begin a search for an experienced curator specializing in architecture and design.

While he acknowledged that the move came quickly, Decker professed no hard feelings, pointing to Rynd's and the museum's desire to move in a new direction. "This gives them an opportunity to reallocate resources at the museum," he says. Decker had been chief curator for the past four years, arranging about 40 exhibitions and publishing five books. Prior to joining the museum, he was a founding principal at DLK Architecture in Chicago. Now, he says, he hopes to "catch my breath and see what challenges lay ahead." The new path will likely be in the design field, he adds. ***Sam Lubell***

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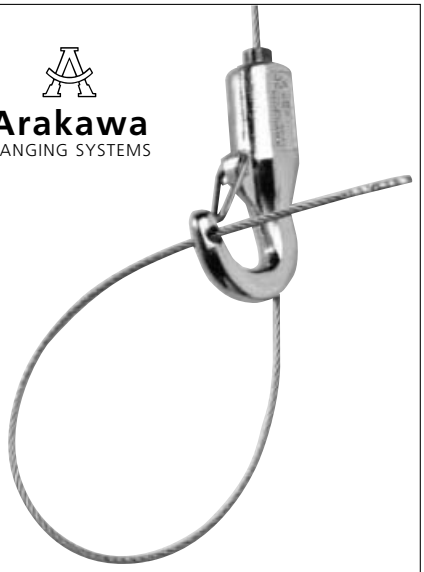

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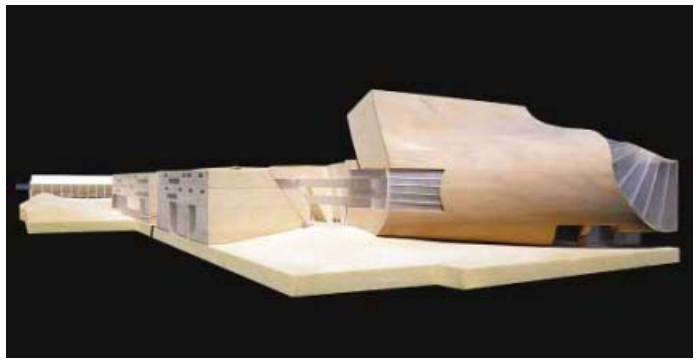


Reality catches up with technology at the Venice Biennale

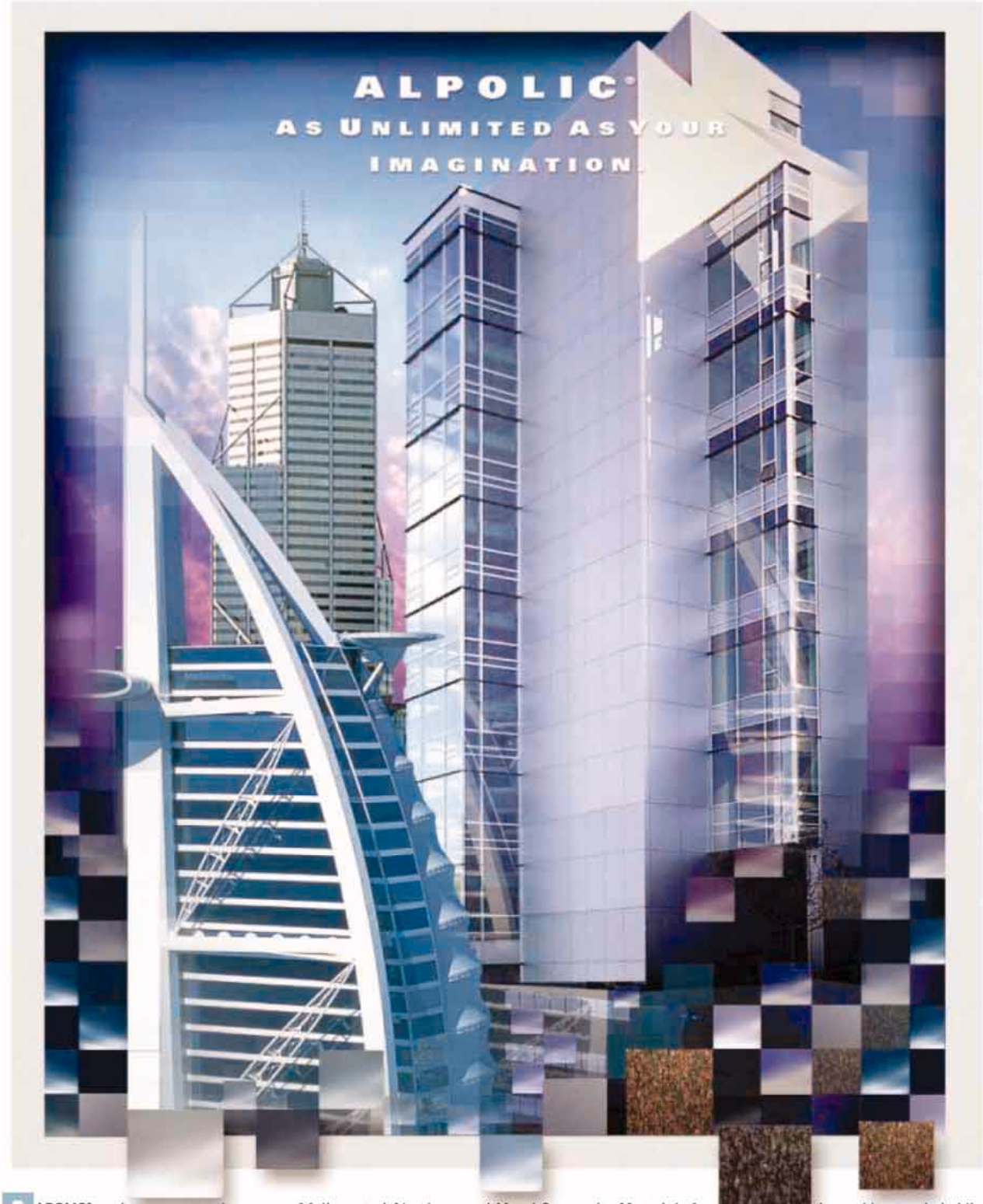
More than 80 years ago, in his book *Alpine Architecture*, Bruno Taut proposed buildings inspired by the crystalline structure of mountains, while Russian Constructivists sought to escape the tug of gravity. Those dreams are beginning to take concrete form in *Metamorph*, the title Kurt W. Forster gave to the exhibition of revolutionary buildings and projects he assembled in Venice as the centerpiece of this year's Architecture Biennale. Forster has chosen a specific future: a world of dynamic complexity, fusing figure and ground, and creating or responding to topography. New York firm Asymptote has installed the models on boatlike whiteboard platforms, their ends tilted up at different angles along the Corderia, the basilicalike space in the Arsenale. Texts, plans, and pictures are displayed on vertical panels to either side. Here, in a space that evokes past glories, a brave new world is taking shape.

It's hard not to be stirred by the energy and originality of the best of these projects, though most are displayed as sculptural objects, unrelated to the context. Other exhibitions—there are more than a dozen national pavilions—seek to overcome this limitation by emphasizing the urban or natural setting. Beyond the Corderia, in the basin of the Arsenale, is a floating pavilion that shows how cities around the world are reinventing their waterfronts, switching from industry to leisure, from shipping to housing. A major exhibition in the Italian Pavilion explores some of the best new concert halls—notably Plot's project for Stavenger in Norway, where two auditoriums bracket an amphitheater that flows organically out of their walls.

More than a dozen national pavilions expand on the core exhibitions. In the U.S. Pavilion, six emerging firms have each explored the potential of a common building type, from the highway interchange to the shopping center. The Dutch provide a historic overview of how their land has been transformed into a fusion of city and countryside. *Too Perfect: Nine New Denmarks* offers an escape from the trap of good taste and proposes radical ways of rebranding the country—one of which is to ship fresh water from Greenland to Africa. One of the more delightful surprises is an exhibition from Estonia of creative rural outhouses, one of which is shaped like a horse, with its tail serving as handrail to the access ramp. The Biennale remains on view through November 7.
Michael Webb

Projects for the Biennale by (clockwise, from top left) Asymptote, Kengo Kuma & Michitaka Hirose Niwa, Eric Owen Moss, and Predock_Frane.

IMAGES (CLOCKWISE, FROM TOP LEFT): COURTESY ASYMPTOTE; KENGO KUMA; ERIC OWEN MOSS; PREDOCK_FRANE



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Chinese "architectural village" remakes masterpieces

A remake of Le Corbusier's Ronchamp houses squatters.

They like to copy things in China. Walk down the streets in any city and there are fake things everywhere: DVDs, Prada bags, Nike shoes, and even a Greek temple every so often. In Zhengzhou, the dusty capital of China's interior Henan province, one can run across Le Corbusier's Notre Dame du Haut chapel. The original stands in Ronchamp, a small town in eastern France. Somehow, an exact replica found its way here.

The reconstructed chapel, which is empty inside, forms part of a street of reproductions of notable works in Western architecture. Termed an "architectural village," the thoroughfare lies within a special economic zone of Zhengzhou. The zone's coordination committee commissioned the street about 10 years ago in the hope that it would be a tourist attraction for the large, but largely anonymous, city. The church—built by the Zhengzhou Institute of Planning and Design—has been standing in obscurity for most of the past decade.

Is this Venice? Vegas? No, China.

The majority of the replica buildings here lie idle, though a few now serve as theme hotels. The poorly reconstructed structures reflect a particular emphasis on Italian, French, and Japanese architecture. A miniature of the Campanile at Venice's Piazza San Marco (pictured, center) and a distorted version of the Acropolis's Erechtheion, for example, neighbor Zhengzhou's Ronchamp. Surrounding the "architectural village" are Stalinist apartment and office blocks, creating a juxtaposition that is both lively and risible. "Most of the street is deserted, and there is no one in charge of it now," says an official at the coordination committee of Zhengzhou's Special Economic Zone, who refused to give her name. "They've forgotten about it."

A small group of migrant workers live inside Zhengzhou's Ronchamp, explains Lao Wang, one of the building's residents. Wang is currently looking for work. Aside from serving as the backdrop for a CCTV (Chinese State TV) documentary, the building has received scant coverage in the Chinese press. But the whole scheme has been a subject of controversy on Chinese architecture Web sites, one of the few venues here where dissatisfaction is voiced. "Only the church is worth looking at," assures a Chinese architecture blogger, who visited the site while it was under construction.

For those familiar with architecture in today's China, the idea of a fake Corbusier alongside a reproduced Piazza San Marco is not all that surprising. The combination of China's building craze, rapid economic growth, and a national obsession with being of "international standard" is producing an architecture with very familiar results. In Beijing, Shanghai, and Shenzhen, for example, large-scale residential subdivisions are springing up that look eerily like suburban Florida; these subdivisions often have names like Yosemite, MOMA, or DBC (Dreaming Bright California). So, it was only a matter of time before a street like Zengzhou's appeared in the trenches of China's relentless development. Thanks to poor building materials and planning, these structures often fall into disrepair and become blights on the built landscape. But that doesn't seem to be stopping the wave of developments that mimic Western architectural styles, both traditional and modern, which often replace traditional vernacular Chinese buildings.

Many wonder whether copying foreign architecture is wise. In an architectural Web discussion, one aficionado used an old Chinese proverb to caution his countrymen: "If you try to draw a tiger, you will get a dog," he warns.

Daniel Elsea

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LAB Architecture to design $1 billion Beijing project

Lab Architecture Studio of Melbourne, Australia, will design a new, 1.8-million-square-foot office, apartment, and retail development at the western edge of Beijing's Central Business District. The new development, called SOHO Shang Du, will be adjacent to Beijing's famed Landau Department Store, and will cost an estimated $1 billion.

SOHO Shang Du will comprise three towers built on neighboring city blocks. Two taller towers are on one block, while a smaller one is across an adjacent busy city street. The two elements are connected to the rest of the complex by a large, oblique bridge. The main towers will house loftlike office space and will be held together at their base by a commercial arcade; the third tower will be a retail galleria. The proposed design has a faceted image, with forms inspired by crystals. Peter Davidson, a director at Lab and SOHO Shang Du's lead architect, explained that the building's design was influenced by the radicals of fractal geometry. "Architecture is about geometry and life," says Davidson, who hopes SOHO Shang Du will be a new urban icon for Beijing.

Towers inspired by fractal geometry.

The project's developers are SOHO China, led by husband-and-wife team Shiyi Pan and Xin Zhang, whose projects include work by Shigeru Ban and Hong Kong's Rocco Yim. Their most recent development, Jianwai SOHO [RECORD, March 2004, page 90], has become one of Beijing's most sought-after properties. Pan and Zhang—who have emerged as patrons of high-quality architecture in an environment where developers often pay scant attention to building design—are working with Zaha Hadid to develop a large residential subdivision in Beijing.

"My mission is to find beautiful things and bring them to China," says Zhang, who was initially drawn to Lab because of its design of Federation Square in Melbourne, which is also clad in labyrinthine geometric facades.

Despite a recent downturn in China's overheated construction market, construction is set to begin in October and end by late 2006. *D.E.*

Will number crunching fix architecture's diversity crisis?

Ted Landsmark, AIA, chair of the AIA Diversity Committee, is—like most in architecture—miffed at why long-employed methods aimed to address the profession's notoriously low minority and female participation, such as internships and scholarships, have had so little impact over the past 30 years.

"Before we pour significant resources into these programs, we have to know what works," says Landsmark. "Otherwise, we're just promoting programs that make us feel good, without effectively changing the demographics of the profession. We can do better than that."

To help turn things around, Landsmark contributed to a resolution, ratified by the AIA board in September, to spur diversity in the profession. The resolution takes a new approach: number crunching. The AIA (with the help of a to-be-hired consultant) plans to obtain extensive figures about minority and female access to the profession, helping paint a clearer picture of why so few of these groups enter and stay in architecture, and laying the groundwork for future changes.

"We need to find out what these problems are," says Elisabeth Casqueiro, managing director of Alliances at the AIA, who points to low salaries and long-standing biases as reasons for architecture's diversity gap, but concedes causes for the issue remain largely a mystery. Outside of cursory data obtained from its Firm Survey—which shows 1 percent minority membership and 11 percent female membership—the AIA's data on minority representation is "disconnected and incomplete," says Landsmark.

The consulting firm will also carry out focus groups, explore models in other professions, such as law and medicine, and compare data with architectural organizations such as the American Collegiate Schools of Architecture (ACSA), the National Collegiate Accreditation Board (NCARB), the National Accreditation Board (NAB), and the National Organization of Minority Architects (NOMA). *S.L.*

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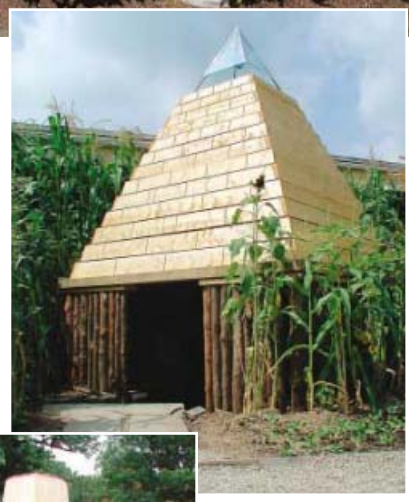
Writers serve as muses for architects' projects in Princeton

Architects are not known for their writing expertise. But no one said they couldn't be inspired by great writing. Such is the impetus for a Princeton, New Jersey, project called "Writers Block," in which architects and builders have created small pavilions dedicated to the works and spirit of some of the many writing luminaries in the area, including Joyce Carol Oates, Cornel West, Peter Benchley, and Fran Lebowitz.

Established by Princeton-based landscaper and self-professed "pseudo academic" Peter Soderman, with local architect Kevin Wilkes, AIA, the project includes 10 architect/builder teams and 10 pavilions, or "follies," as the two call them. What is a folly? "A garden element somewhere between whimsical and impractical," explains Wilkes.

The projects—unrefined works in a very refined town—are settled in a 15,000-square-foot, bucolic landscape of newly planted corn stalks, sunflowers, and zinnias on what used to be a temporary parking lot. The goal, says Soderman, is to find new forms, provide places for contemplation, and encourage writers to give readings inside. Few have made the trip so far, except Oates, who visited her folly in August. It is a jumble of spruce beams with a tin roof created by local architect Gil Rampy, who was moved by Oates's direct insights into life's often "unvarnished" difficulties, and her claim that she is inspired by running, when "imagination is set into motion."

The teams, which immersed themselves in the subjects' books (or lectures, in Rampy's case) for ideas, designed the structures in May, began building in late June, and finished in late August. The results are an interesting experiment in design inspiration, says Wilkes. "Most of us architects are interested in novelty, and it becomes harder and harder to find," he notes. His own folly, built for Princeton Civil War historian James McPherson, includes two fluted tuscan wood columns from a home Wilkes renovated, representing the patrician South, and two columns made of galvanized metal culvert pipes from an old solar house, representing the industrial North. The two opposing sides support the structure, to signify unity. Wilkes, who was raised in New York by a mother from Georgia, says the experience helped him begin to come to terms with his upbringing, in which North and South played often competing roles. "I was able to look at the war from a new perspective and let some personal issues sit in the structure rather than in my mind," he says.



A folly for James McPherson by Kevin Wilkes, AIA (top); a pyramid-shaped folly for Paul Krugman, by Gil Rampy (center); and one for Cornel West, by Jon Nastasi and Sharon McHugh (left).

Other follies include a cedar and oak pyramid with a glass eye on top, mimicking the back of a dollar bill, for left-leaning writer Paul Krugman, and a parabolic form for writer Cornel West by architects John Nastasi and Sharon McHugh, made of synthetic, expanded honeycomb material. The flexible structure's geometry both distorts and projects peoples' images, which Nastasi points out "is all about breaking through barriers," like those of race.

When the program ends in late October, the follies will be auctioned off to help recoup construction costs, and the space will be used by a local developer to build condominiums. But Soderman hopes to begin a tradition. "Hopefully, this will become part of this town's culture." He adds, "In a culture of homogeneity, people are clinging to real, concrete things." *S.L.*

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The Underground Railroad Freedom Center features undulating forms (left) and a reconstructed slave pen (below).

Freedom Center headlines growing list of African-American cultural centers

The story of the culture and history of African-Americans is now finding a home in more than 25 museum buildings either newly constructed or planned in the United States. The most recent is the centerpiece of Cincinnati's billion-dollar waterfront redevelopment, the National Underground Railroad Freedom Center, which opened in late August on the shores of the Ohio River—the symbolic dividing point between the South and the North. Designed by Blackburn Architects of Indianapolis, lead architects with design consultants BOORA Architects of Portland, Oregon, the $110 million museum powerfully portrays the slaves' struggles for freedom.

Clad mainly in copper and travertine, the museum is composed of three sculptural pavilions housing a lobby and welcome hall; a large, multiuse theater; and exhibition space. The museum also includes smaller theaters, educational facilities, a research institute, and public roof garden. Curving pathways between the pavilions symbolize the slaves' circuitous routes to the north. Inside, a reconstructed wooden slave pen serves as a focal point in the exhibition area.

The design team was selected in the late 1990s. According to his widow, Alpha Blackburn, who is now the C.E.O. of Blackburn Architects, the design reflects the vision of the firm's founder, Walter Blackburn, an African-American architect who died in 2000. "We knew this building could transform people's opinions," she told RECORD.

Other upcoming African-American cultural buildings include the California African American Museum in Los Angeles (Huff + Gooden Architects), the Martin Luther King, Jr. National Memorial in Washington, D.C. (ROMA Design Group), the African-American Cultural Center of Greater Pittsburgh (Ai), and the National Slavery Museum in Fredericksburg, Virginia (Pei Partnership).

The Freelon Group of Raleigh-Durham, North Carolina, is designing several such projects to be completed in 2005, including the Museum of the African Diaspora in San Francisco, the Reginald F. Lewis Museum of Maryland African-American History and Culture, in Baltimore (with RTKL), and the International Civil Rights Center & Museum in Greensboro, North Carolina. The increased number of such projects is in part due to "the baby boom generation looking back and contemplating our history and wanting to see that expressed in tangible ways," notes firm president Philip Freelon, FAIA. *J.E.C.*

Ai's African-American Cultural Center of Greater Pittsburgh (above), and Freelon's Museum of the African Diaspora in San Francisco (right).

IMAGES: COURTESY BLACKBURN ARCHITECTS (TOP TWO); AI ARCHITECTS (LOWER LEFT); THE FREELON GROUP (BOTTOM)

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University of Michigan museum turned inside out

On the heels of its recently completed Contemporary Art Museum in St. Louis, Oregon-based Allied Works Architecture has designed a $35 million, 57,000-square-foot addition and renovation to the University of Michigan Museum of Art.

A critical factor in the design, which will double the museum's current space, is its connection to the university and to Ann Arbor, Michigan, says museum director James Steward. "One of our central goals has been to turn the museum inside out, to make it dramatically more accessible to our students and the broad community," says Steward. Allied Works' design achieves this interplay through strategically placed transparent facades that allow for controlled views in and out of gallery spaces and public areas. At night, light emanating from the glass will make the addition a recognizable beacon. "The expansion will serve as a catalyst for new activities and experiences," says firm principal Brad Cloepfil, AIA.

The materials and scale will be sympathetic to the Beaux-Arts Alumni Memorial Hall, the museum's existing facility, slated to receive systems upgrades and restoration. The proposal will add gallery space, public gathering areas, an auditorium, and an outdoor gallery, among other elements. Ground will be broken in 2006, with an expected completion date of 2008. *Audrey Beaton*

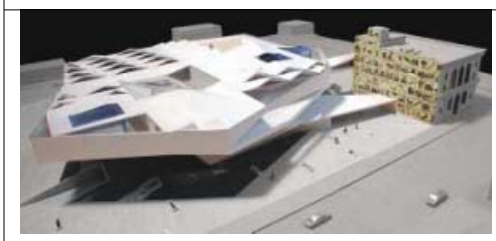
San Diego Railway baggage building to become new galleries

San Diego's historic central train station will soon house an interesting new element: a museum. New York–based Gluckman Mayner is converting the Mission Style station's former baggage building into the San Diego Museum of Contemporary Art.

The 13,000-square-foot building will contain large-scale installations, a black-box area, and a small-scale exhibition space, says principal Richard Gluckman, FAIA. Its rooms, he adds, will be highly flexible and will sit under lofty, 38-foot-high ceilings lit dramatically with clerestory windows.

The station's former Railway Express Agency, located adjacent to the museum, will be the site of a roughly 15,000-square-foot support space housing offices, meeting rooms, and educational facilities. The red building, called the "caboose" for its location and color, will maintain a contemporary style, thanks in part to simple geometries and vertical bands of channeled glass.

Local firm Heritage Architecture and Planning is performing the seismic upgrading of the baggage building's shell and its exterior renovation. The product is scheduled for a 2006 completion. *S.L.*



Maltzan's "floating spaceship" design for Fresno

Michael Maltzan's design for a Fresno Metropolitan Museum addition has received board approval. The octagonal-shaped, 75,820-square-foot building, which resembles a low, hovering spaceship, will be perched 30 feet above the ground atop a grid of two-way steel trusses and a network of scaffolds.

The design cantilevers nearly 100 feet over a plaza and has extensive glazing, three double-height floors, and an articulated wave roofline that features an outdoor auditorium. It will house 30,000 square feet of art and science galleries, a media center, learning labs, offices, an observatory, café, and store.

The museum is now housed in a 71-year-old Beaux-Arts building in the city's arts district that is the former home of *The Fresno Bee* newspaper. After capital fund-raising is complete, renovation of the Bee Building is scheduled to finish in 2005, followed by the new building in fall of 2007. *T.I.*

IMAGES: COURTESY ALLIED WORKS (TOP); GLUCKMAN MAYNER ARCHITECTS (CENTER); FRESNO METROPOLITAN MUSEUM (BOTTOM)

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Rose Museum addition focuses on transparency

Shigeru Ban, in association with Dean Maltz Architect, recently won the competition for the expansion of the Rose Art Museum at Brandeis University. The pair approached the project through the concepts of flexibility, transparency, access, and views. "The nature of museums has changed," explains Maltz. "They are kind of like warehouses for art."

Conceptually, Ban and Maltz bring a new image to the museum but maintain its initial concept. The new space is constructed of a structural-glass facade on top of the existing brick wall. White panels of either metal or stucco mark the west and north elevations. The design adds a new administrative space, shipping and receiving area, art storage and workroom, workshop, and mechanical room, all planned for ease of movement and flexibility.

The architects capitalized on an opportunity to convert the upper level of the museum into a reception hall, as originally envisioned by Max Abramovitz (see News, page 31) in 1961, by relocating and combining existing galleries with the new spaces. The expected completion date is 2007. *Audrey Beaton*

Hunter addition emulates its natural surroundings

Construction began in march on a $19.5 million expansion and renovation project for the Hunter Museum of American Art in Chattanooga, Tennessee. Los Angeles–based Randall Stout Architects designed the 29,000-square-foot project. Their plan attempts to bring cohesiveness to the 1904 historic mansion and 1970s East and North Wing additions that make up the existing museum.

The addition adds a Temporary Exhibitions gallery, an atriumlike lobby, auditorium, café, gift shop, and outdoor sculpture terrace. Visually, the addition reflects its surroundings. It is clad in oxidized zinc panels that resemble the 80-foot limestone bluff on which it sits, and its curving stainless-steel roof emulates the neighboring Tennessee River and nearby rock formations.

"I want the addition to connect with the heart and soul of Chattanooga," says Stout. "The building forms are, from every city vantage point, reaching out to welcome you." The new addition will eventually be connected to Chattanooga's downtown by a pedestrian bridge, also designed by Randall Stout Architects with Derthick Henley Wilkerson Architects. The addition will be completed in late spring of 2005. *A.B.*

Graves's Minneapolis addition: classic or cliché?

The design for Michael Graves & Associates' classically inspired addition for the Minneapolis Institute of Arts is raising debate among local architects. With the 117,000-square-foot expansion, the firm will attempt to add its signature to the original 1915 McKim, Mead and White Neoclassic structure of light gray granite, and to Kenzo Tange's white brick Minimalist facade of 1974.

Graves's design, charged with bringing the museum into the 21st century, tries to respect both styles. Recessed stone panels continue the rhythm of the Classical windows, while the new wing sleekly wraps the end of the building in a Modern pavilion. Inside, a solid dome caps a three-story atrium, echoing the museum's original oculus. Causing debate is the light buff color of the German Jurastone chosen by the Graves team and associate architects RSP. Robert Jacobsen, the museum's associate director for exhibitions and collections, asserts, "Michael's design for us is a happy kind of marriage, a reinterpretation of a glorious space." However, a group of Minnesota Modernists insist it appears Postmodern. One architect comments, "The addition is simply another big box of museum space pushed awkwardly against the existing structure." *Bette Hammel*

IMAGES: COURTESY SHIGERU BAN ARCHITECTS (TOP); HUNTER MUSEUM OF AMERICAN ART (CENTER); MICHAEL GRAVES AND PARTNERS (BOTTOM)

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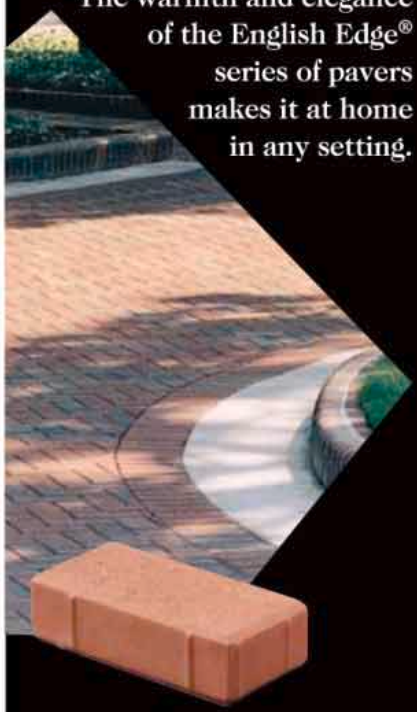

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News Briefs

An artwork encourages visitors to take the mike.

Freedom of information Just in time for election season, architect Laurie Hawkinson has collaborated with several New York artists to create a public artwork dedicated to free speech called *Freedom of Expression National Monument*. The red steel structure, whose design was inspired by Russian Constructivism, includes a massive megaphone, through which people can shout their opinions on world matters, or anything else. The work will sit in Foley Square in Manhattan through November 13. The first version of the sculpture stood in the Battery Park City Landfill in 1984. *S.L.*

Steve Jobs v. historic preservationists Apple and Pixar chief executive Steve Jobs is seeking permission to demolish his 1926 Spanish Colonial Revival home, which he deems an "abomination." In a public meeting, Jobs said that he planned to build a smaller home on the wooded site that would be better suited for his family.

But local preservationists are resisting the request, claiming that the Daniel C. Jackling estate qualifies for the California Register of Historic Resources and thus merits protection under the California Environmental Quality Act. The 17,000-square-foot, 14-bedroom mansion was designed for Jackling by George Washington Smith, a Santa Barbara architect who is considered the leading exponent of the Hispanic and Mediterranean revival of the 1920s. In 1924, Smith was commended by the Architectural League of New York for achieving "an effect that is at once original, personal, and distinctly American." *Allison Milionis*

Brooklyn Navy Yard to get overhaul The Brooklyn Navy Yard, a former shipbuilding yard turned industrial park in New York City, will undergo a massive revitalization in the next few years to help stimulate the city's fading manufacturing economy. In addition to adding new facilities and infrastructure, the Brooklyn Navy Yard Development Corporation (BNYDC) plans to create as much as 500,000 square feet of additional space to the existing 300-acre swath of land that is now home to a robust industrial community. The BNYDC would not disclose what it plans to spend on the project, but the city has said it is kicking in $71 million from its capital budget to improve infrastructure such as roads, sewage, and electricity over the next five years. *Christina Rogers*

***Nest* magazine closes** *Nest*, the interior design world's most eccentric magazine, is to cease publication after its fall 2004 issue. During its seven-year run, *Nest* won two National Magazine awards and had a cultlike readership. Architect Robert Venturi, novelist John Banville, photographer Nan Goldin, and other prominent arts figures contributed. But despite *Nest*'s striking design and its high-profile talent, the magazine reportedly was a money-hemorrhaging formula. It primarily owed its survival to the financial resources of its visionary publisher and editor in chief, Joseph Holtzman. However, despite the magazine's relatively poor commercial prospects, *Nest*'s literary editor, Matthew Stadler, insists that the real reason for ending publication is that the magazine has run its course. "We were interested in stopping before it became boring," says Stadler. "It wasn't the lack of profit that killed it, it was an aesthetic choice. Joseph Holtzman funded the magazine all the way through, and if it continued to be interesting, he would have happily funded it forever." *Alex Ulam*

Trump's planned tower.

Trump's newest tower New York developer Donald Trump recently unveiled plans for a new, $300 million, 64-story hotel/apartment tower on the Las Vegas Strip. Designed by local firm Bergman, Walls & Associates, the 645-foot glass tower will be the city's tallest building. The 1.6-million-square-foot building will include more than 1,000 hotel-style units ranging from 636 square feet to 1,057 square feet, plus such luxury amenities as a spa, salon, and restaurants. The new "Trump Tower Las Vegas" is expected to break ground by early next year. *Tony Illia*

IMAGES: COURTESY CREATIVE TIME (TOP); THE TRUMP ORGANIZATION (BOTTOM)

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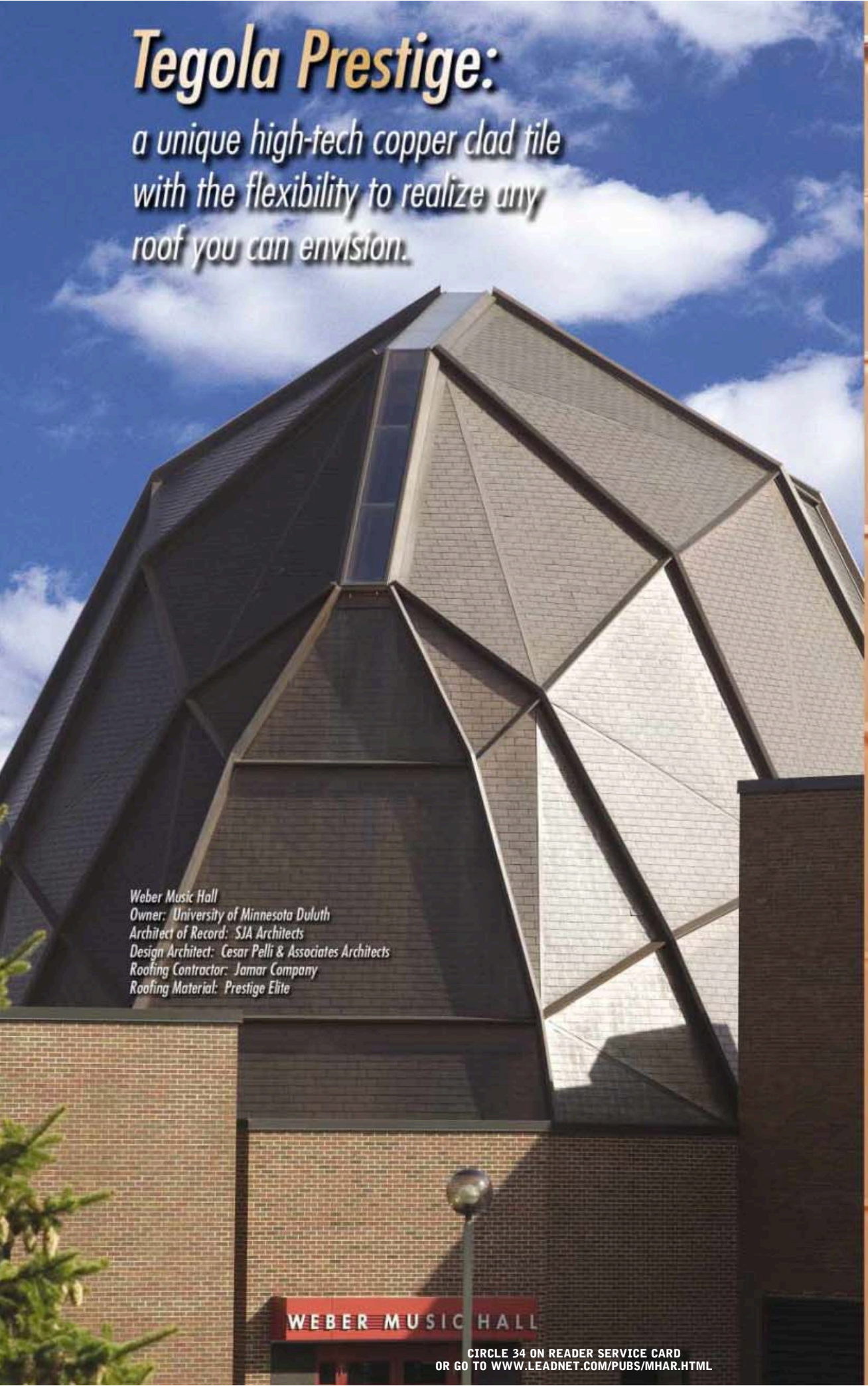

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The Carleton College Recreation Center in Northfield, Minnesota is a sports lover's place. The large column-free fieldhouse includes a six-lane running track; enclosing four courts for basketball, volleyball or tennis. Batting cages, long jump and pole vault pits, and a putting green round out the athletic offering.

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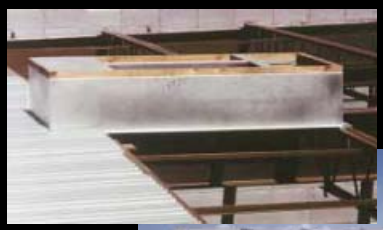

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Dates & Events

New and Upcoming Exhibitions

Bob the Roman: Heroic Antiquity & The Architecture of Robert Adam
New York City
October 1–December 4, 2004
An exhibition originated by the Sir John Sloane's Museum in London, it includes 70 drawings and focuses on the three years Robert Adam spent in Rome when he engaged both Charles-Louis Clerisseau and Giovanni Battista Piranesi to teach him to draw. In the Gallery at the New York School of Interior Design. Call 212/472-1500 or visit www.nysid.edu.

Second Annual Architecture Month
Fort Worth
October 2004
AIA Fort Worth will be educating, exploring, and celebrating architecture as art, not only with fellow architects, but with the broader community as well. Events will include exhibitions by local firms, competitions, lectures, and an architecture bicycle tour. Visit www.aiafortworth.org for further information.

Tactile Architecture 2004
Houston
November 4–7, 2004
As a special feature at the 30th annual International Quilt Festival, this annual juried exhibition challenges today's quilt makers to continue creating original works based on architectural themes and inspirations. At the George R. Brown Convention Center. Call 713/781-6864 or visit www.quilts.com.

Nine Museums by Yoshio Taniguchi
New York City
November 20, 2004–January 31, 2005
This opening exhibition will present the new Museum of Modern Art in the context of the other extraordinary art museums that Taniguchi has designed over the past 25 years and will address four integral themes in the architect's work: materials, proportion, natural light, and movement. At the Museum of Modern Art in Manhattan. For information, call 212/708-9400 or visit www.moma.org.

Huyghe + Corbusier: Harvard Project
Cambridge, Mass.
November 18, 2004–April 17, 2005
Pierre Huyghe celebrates the Carpenter Center in conjunction with the 40th anniversary of Le Corbusier's only North American building. The multimedia project will explore Le Corbusier's vision for the Carpenter Center, including multiple components that respond to the design history and its relationship to Harvard. At the Carpenter Center. Call 617/495-9400 or visit www.artmuseums.harvard.edu.

Van Gogh to Mondrian: Modern Art from the Kroeller-Mueller Museum
Atlanta
Opening October 19, 2004
An exhibition including architectural designs and models of the Kroeller-Mueller Museum produced by Hendrick Petrus Berlage, Henry van de Velde, and Ludwig Mies van der Rohe, as well as furniture commissioned by the Kroeller-Muellers from Berlage. At the High Museum of Art. Call 404/733-4400 or visit www.high.org.

Modern House Day Tour & Symposium
New Canaan, Conn.
October 23, 2004
A tour of internationally known Modern houses and a symposium featuring prominent editors, critics, and architects. Call 203/966-1776 for more information.

Washington: Symbol and City
Washington, D.C.
Opening October 9, 2004
The exhibition will examine the nation's capital from its earliest city plans and sometimes haphazard development to the origins of its distinctive monuments and the emergence of vibrant neighborhoods beyond the National Mall. Featuring large-scale touchable models of five of the capital city's architectural icons—the White House, the Capitol, the Washington Monument, and the Lincoln and Jefferson Memorials—the exhibition will also display maps, drawings, artifacts, videos, and photographs. At the National Building Museum. Call 202/272-2448 or visit www.nbm.org.

Ongoing Exhibitions

Building Revolution: Architecture in Cuba, 1959–1969
New York City
Through October 30, 2004
This exhibition features 200 archival images documenting over 70 architectural projects built by the Cuban government, reflecting specific social initiatives adopted immediately following the revolution. At Storefront for Architecture. Call 212/431-5795 or visit www.storefrontnews.org.

Mid-Century Modern Revisited: Design 1943–1953
Houston
Through November 28, 2004
This exhibition offers viewers a unique and wide-ranging introduction to one of the most creative and influential decades in the history of contemporary design. At Brazos Projects. For further information, visit www.brazosprojects.org .

Corvettes to Cuisinarts: Six Decades of Diversity in Industrial Design
Brooklyn
Through October 15, 2004
A celebration of the work of creative visionaries and designers who over the past 60 years studied and honed their craft at Pratt Institute. In the Rubelle and Norman Schafler Gallery. For information, visit www.pratt.edu/exhibition.

Sergio Rodrigues: Sultan in the Studio
New York City
Through November 17, 2004
Rodrigues is revered in his native Brazil as the country's first truly Modern designer and author of an authentically "Brazilian" style of furniture and objects. The first major American retrospective of his work will be on view at R 20th Century. Call 212/343-7979 or visit www.r20thcentury.com.

Civic Spirit: Changing the Course of Federal Design
New York City
Through November 10, 2004
An exhibition showcasing 19 projects, both completed and in progress, that have been commenced over the past decade under the Design Excellence Program of the United States General Services Administration. At the Center for Architecture. Visit www.aiany.org/civicspirit.

Symphony in Steel: Ironworkers and the Walt Disney Concert Hall
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Lebbeus Woods: Experimental Architecture
Pittsburgh
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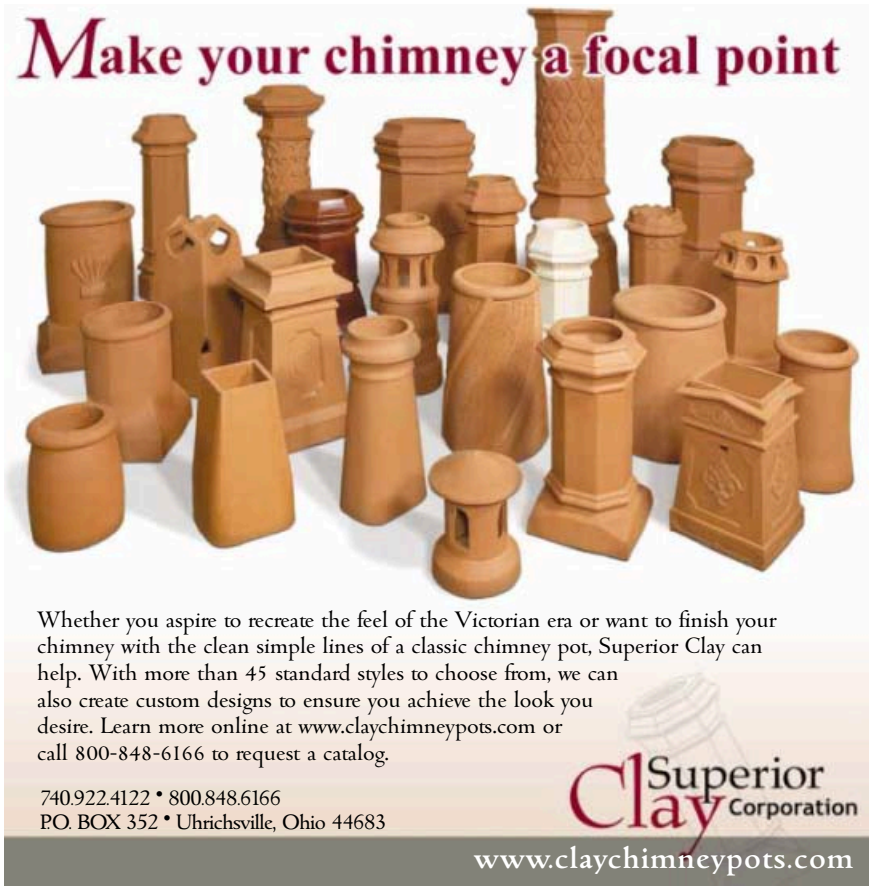
February 17–21, 2005
Deadline for submission of proposals: October 15, 2004
Those interested in presenting a paper or exhibiting work relevant to the International Making Cities Livable Conference (IMCL), "True Urbanism and the Healthy City," should send a 200–250 word abstract to the program committee chair. For more information, visit www.livablecities.org.

Dialogues with Design Legends: Jens Risom and Jeffrey Bernett
New York City
October 12, 2004
Carl Magnusson, executive vice president of design for Knoll, will moderate a dialogue between Danish-born Jens Risom, who has developed furniture product lines for Knoll and Jensen as well as his own Jens Risom Design, and Jeffrey Bernett, whose multifaceted design firm, studio B, specializes in interior architecture, transportation architecture, furniture, fashion accessories, household products, design communication, and strategic planning. At MAKOR, the 92nd Street Y West Side location. Call 212/415-5500 or visit www.92Y.org.



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Dialogues with Design Legends: Hamilton Smith and LOT-EK
New York City
October 26, 2004
Rosalie Genevro, moderator, is the director of the Architecture League. Hamilton Smith is responsible for many of the public buildings designed by Marcel Breuer's firm, including the Whitney Museum of American Art. LOT-EK, founded by Ada Tolla and Giuseppe Lignano, focuses on residential and commercial projects. At MAKOR, the 92nd Street Y West Side location. Call 212/415-5500 or visit www.92Y.org.

Dialogues with Design Legends—Textiles: In Search of the Red Thread
New York City
November 9, 2004
With Sheila Hicks, textile designer; Hiroko Takeda, specializing in hand-woven designs; and moderated by Cara McCarty, curator of Decorative Arts and Design at the Saint Louis Art Museum. This series pairs major and emerging figures in the design field. At MAKOR, the 92nd Street Y West Side location. Call 212/415-5500 or visit www.92Y.org.

Construction Watch Tour: Elevation 314
Washington, D.C.
October 9, 2004
Architect/owner Russell Katz will lead a tour of this environmentally friendly apartment and retail building in northwest Washington. The sustainable design features of the building include a green roof and geothermal heating and cooling. At the National Building Museum. Call 202/272-2448 or visit www.nbm.org.

Hariri & Hariri – Architecture
Washington, D.C.
October 12, 2004
The New York–based firm explores today's dynamic, speed-oriented, globally connected, contemporary culture. Toward this goal, the firm has developed a revolutionary material called "The Digital-Block" to be used in the construction of transparent walls capable of transmitting and receiving information. Principal Gisue Hariri will discuss the firm's innovative work, which includes Sagaponac House–#43, and a proposal for the Museum of the 21st Century. At the National Building Museum. Call 202/272-2448 or visit www.nbm.org.

Toward the Sustainable City: Developing Green Urbanism
Washington, D.C.
October 14, 2004
Timothy Beatley of the University of Virginia studies ways to create more sustainable urban environ-

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ments. He will highlight creative strategies by which both American and European cities and towns have fundamentally reduced their ecological "footprints" while becoming more livable and equitable places. At the National Building Museum. Call 202/272-2448 or visit www.nbm.org.

Jones & Jones
Washington, D.C.
October 14, 2004
The design firm Jones & Jones Architects and Landscape Architects received the 2003 Firm Award from the American Society of Landscape Architects. Founding principals Grant Jones, FASLA, and Ilze Jones, AIA, FASLA, will discuss the Seattle-based firm's culturally and ecologically integrated work, including the Cedar River Watershed Education Center in Cedar Falls, Washington, and the Smithsonian's National Museum of the American Indian. At the National Building Museum. Call 202/272-2448 or visit www.nbm.org.

Is Washington Ripe for Smart Growth?
Washington, D.C.
October 25, 2004
Bruce Katz, founding director of the Center on Urban Metropolitan Policy at the Brookings Institute, will discuss the Washington metropolitan area and the unique challenges it poses to incorporate Smart Growth principles effectively. He will be joined by Christopher G. Miller, president of the Piedmont Environmental Council, who will discuss how these challenges relate to other metropolitan areas in the United States. At the National Building Museum. Call 202/272-2448 or visit www.nbm.org.

Reflections on Cultural Diplomacy at Home and Abroad
Washington, D.C.
October 26, 2004
Author and photographer Elizabeth Gill Lui documented America's embassies around the world in her book *Building Diplomacy: The Architecture of American Embassies*. She will share her convictions about the role that cultural diplomacy can play in the shaping of America's image in the world. At the National Building Museum. Call 202/272-2448 or visit www.nbm.org.

Berlin: Architektur, Politik und Kultur
Houston
October 6, 13, 20, and 27, 2004
This series of lectures will examine Berlin's archi-

tectural evolution. It will identify important episodes in Berlin's consequential and troubled history to show how architecture and urbanism have altered the city in response to major historical movements, and how the resulting buildings and their architects changed the course of architectural history. At Brown Auditorium, The Museum of Fine Arts. Call 713/348-4876 or visit www.rda.rice.edu.

Ron Witte
San Francisco
October 18, 2004
Ron Witte is associate professor of architecture at the Harvard Graduate School of Design. He will speak in Timken Lecture Hall, California College of the Arts. Call 415/703-9562.

Reinhold Martin
San Francisco
October 25, 2004
Reinhold Martin, assistant professor of architecture at Columbia University, will lecture in Timken Lecture Hall, California College of the Arts. Call 415/703-9562.

Dialogues on Design
New York City
October 6, 13, 20, and 27, 2004
A series with distinguished design journalist, Louis Oliver Gropp, in which he interviews leading interior designers and architects on their views on design and the design process. Jeffrey Bilhuber, Rose Tarlow, and Cathy Whitlock, as well as architect Hugh Hardy, FAIA, founding partner of Hardy Holzman Pfeiffer Associates, are all scheduled at the New York School of Interior Design. Call 212/472-1500 or visit www.nysid.edu.

National Bridge Conference
Atlanta
October 17–20, 2004
A conference running concurrently with the Precast/Prestressed Concrete Institute's (PCI) Annual Convention/Exhibition, "Bridges for Life" will recognize industry leaders and innovators of the past 50 years, while focusing on the future, the industry's next 50 years. At the Hyatt Regency. Call 312/786-0300 or visit www.pci.org.

Of Its Time: Changing Attitudes in Historic Preservation
New York City
October 16, 2004
The one-day conference will address issues challenging historic preservation, architectural practice, and urban planning through exploration of design theory. Hosted by the Institute of Classical Architecture & Classical America. Call 212/924-9686 or visit www.classicist.org.

Architecture Week: Celebrating Design Collaboration
New York City
October 2–10, 2004
Events include a conference bringing together architects from around the world to speak about the challenges and opportunities of international collaboration, the AIA New York Chapter Design Awards Program Exhibition, a Design-In Marathon, Play By Design for K-12 students, and the Heritage Ball. For more details, visit www.aia.org/international and www.aiany.org/architectureweek/design.html.

The Interdisciplinary Health-Care Enterprise: Weaving Design Through the Fabric of Research, Education, and Patient Care
Washington, D.C.
October 27–30, 2004
The Academy of Architecture for Health (AAH) annual fall conference will focus on the intersection of architecture with clinical care, medical education, and scientific research. At the Omni Shoreham Hotel. For more information, visit www.aia.org/ev_aah_fall04-conf.

METALCON International
Las Vegas
October 20–22, 2004
The annual conference and exhibition includes new product exhibits, a comprehensive educational program, and live-action demonstrations of the latest field techniques, as well as a session with an overview of the U.S. Green Building Council's LEED (Leadership in Energy and Environmental Design) Green Building Rating System. At the Las Vegas Convention Center. Call 800/537-7765 or visit www.metalcon.com.

The International Concrete Repair Institute 2004 Fall Convention
San Francisco
October 20–22, 2004
The theme of the convention is Structural Enhancements, and it will consist of technical presentations, committee meetings, tabletop exhibits, networking opportunities, and special

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lectures

Hariri & Hariri, Courtesy National Building Museum

October 6
Diamond + Schmitt Architects
Jack Diamond, FRAIC, FAIA, principal of Diamond + Schmitt Architects

October 12
Hariri & Hariri – Architecture
Gisue Hariri, principal of Hariri & Hariri – Architecture

October 14
Jones & Jones
Grants Jones, FASLA, and Ilze Jones, AIA, FASLA, founding principals of Jones & Jones Architects and Landscape Architects

October 18
Patkau Architects
John Patkau, FRAIC, partner in Patkau Architects

exhibitions

Liquid Stone. Courtesy of LiTraCon, © GmbH

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through November 28, 2004

Liquid Stone: New Architecture in Concrete
through January 23, 2005

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Dates & Events

events. At the Hilton San Francisco. Visit www.icri.org for more information.

The SMACNA 61st Annual Convention
Maui, Hawaii
October 24–28, 2004
The Sheet Metal and Air Conditioning Contractors' National Association is holding a wide variety of educational and self-development sessions presented by industry experts to provide solutions tailor-made to meet the technical and business management needs of sheet-metal and air-conditioning contractors. At the Grand Wailea Resort. Call 703/803-2998 or visit www.smacna.org.

The NFPA Fall Education Conference
Miami Beach
November 14–17, 2004
The National Fire Protection Association conference will provide professional development opportunities for fire and life safety specialists. At the Fontainebleau Hilton. For further information, visit www.nfpa.org/meetings.

Solar Power 2004 Conference and Trade Show
San Francisco
October 18–21, 2004
Solar Power 2004 will bring together top executives, utility representatives, policymakers, builders, contractors, engineers, and solar enthusiasts. At the Hyatt Regency San Francisco. Visit www.solarpower2004.com.

Architecture Exchange East
Richmond
November 10–12, 2004
The region's largest building and design conference, featuring more than 60 educational sessions for architects, planners, engineers, interior designers, contractors, and landscape architects. Paul Goldberger, Pulitzer Prize–winning architecture critic and *New Yorker* staff writer, will present the keynote address. At the Greater Richmond Convention Center. Call 804/644-3041 or visit www.aiava.org.

Signature Urban Objects—Designing the Civic Identity
Philadelphia
October 15–16, 2004
A conference on how the objects in the street have a vastly underutilized power to create place identity. Every trash bin, kiosk, and lamppost is an opportunity to "brand" a locality. At the University of the Arts. Call 215/717-6120 or visit www.signatureurbanobjects.org.

Taliesin West: Building in Harmony With Nature
Scottsdale, Ariz.
October 21–23, 2004
The Scottsdale site will host tours, presentations, and dinners honoring Frank Lloyd Wright's sensitivity to fragile lands. The conference will explore several of the design concepts that dominated Wright's 70-year career. For further information, call 480/627-5373 or visit www.franklloydwright.org.

CSI's 6th Annual Product Representative Academy
Denver
October 27–29, 2004
The Construction Specifications Institute's 6th annual conference will be held in the Denver City Center Marriott. Call 800/689-2900 or visit www.csinet.org/prainfo.

Build Boston's 1st Annual Spring Residential Design Convention and Tradeshow
Boston
April 6–7, 2005
This residential offspring of Build Boston will include two days of intense professional development opportunities and workshops for design and construction professionals, along with an exhibition hall filled with the latest building products and materials. At the Seaport World Trade Center. Call 800/544-1898 or visit www.architects.org.

The International Facility Management Association's (IFMA) World Workplace 2004
Salt Lake City
October 17–19, 2004
An Expo featuring products and services in the following areas: building products, carpeting, energy management, FM outsourcing, FM software and automation, furniture, maintenance and services, office environments, security, sustainability, and more. For further information, visit www.worldworkplace.org.

Competitions

2005 Rudy Bruner Award
Deadline: December 13, 2004

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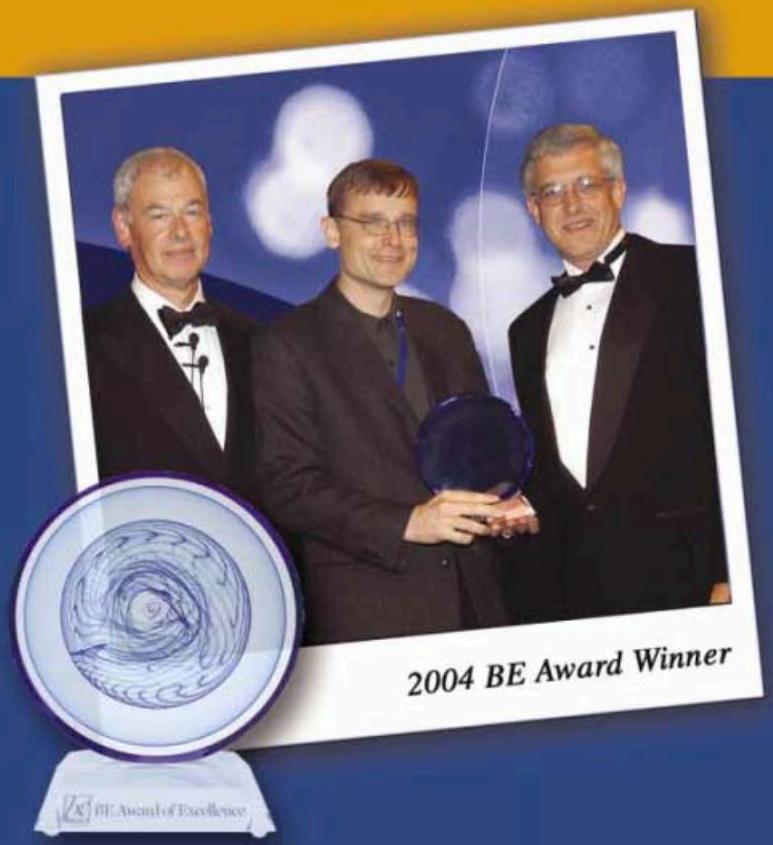

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Dates & Events

The Rudy Bruner Award is given to urban places that demonstrate the successful integration of effective process, meaningful values, and good design. RBA winners are distinguished by their social, economic, and contextual contributions to the urban environment, and often provide innovative solutions to our cities' most challenging problems. Call 617/715-3184 or visit www.brunerfoundation.org.

Flight 93 National Memorial Design Competition
Deadline: January 2005
The response to the violent acts in the skies over Southwestern Pennsylvania on September 11, 2001, will be a National Memorial to the people who died in what has become known as the first civilian act of defense in the war on terrorism. The design competition welcomes all submissions of ideas that will commemorate the 40 heroes of Flight 93. For more information, visit www.flight93memorialproject.org.

McCormick Tribune Foundation Icon/Centerpiece Competition
December 17, 2004
Architects, designers, and artists are invited to participate in a juried competition to create a defining work of art to serve as the centerpiece of a new museum dedicated to First Amendment rights and corresponding responsibilities. For more information, visit www.mccormickmuseum.org.

INawards
Deadline: October 12, 2004
As an opportunity to introduce innovative new designs from the Pacific Northwest to an international audience of peers and trade professionals, the International Interior Design Association (IIDA) Northern Pacific Chapter welcomes architects, interior designers, and industrial designers to submit entries of interior spaces and interior products completed after January 2002. Call 206/762-6471 or visit www.iida-northernpacific.org.

20th Anniversary Architecture in Perspective Competition
Deadline: December 3, 2004
The American Society of Architectural Illustrators' international competition honors the finest works of architectural illustration, both hand and digital. Call 614/552-3729 or visit www.asai.org for submission guidelines.

Canstruction: 12th Annual NYC Design/Build Competition
Deadline: October 15, 2004
Teams of New York City architects, engineers, contractors, designers, and students of schools of architecture, engineering, and design are welcome to design and build structures made entirely of canned foods to benefit the Food Bank for New York City. Call 212/792-4666 or visit www.canstruction.org.

Knokke Casino Architectural Competition
Deadline: November 15, 2004
The competition is an open invitation to architects from around the world to engage in the creative design of unique architecture for a new casino. For more information, visit www.knokke-heist.be.

Rome Prize 2005
Deadline: November 1, 2004
The American Academy in Rome fellowships are awarded in several fields, including architecture, design, historic preservation and conservation, as well as landscape architecture. For further information, call 212/751-7200x47 or visit www.aarome.org.

2005 Barrier-Free America Award
Deadline: November 5, 2004
With this national award, the Paralyzed Veterans of America (PVA) honors an individual for his or her sensitivity to the importance of accessible design, as well as the difference they have made through a particular project in achieving a barrier-free environment. Submissions welcome from individuals working in architecture, landscape architecture, construction, engineering, facilities management, building development, and public education. Call 202/416-7644 or visit www.accessibledesign.org.

Ceramic Tiles of Italy Design Competition
Deadline: January 30, 2005
North American architects and interior designers are invited to submit residential, commercial, or institutional projects featuring Italian ceramic tile, completed between January 2000 and January 2005. Visit www.italiatiles.com or www.italytile.com for details.

E-mail events and competitions information two months ahead of event or submission deadline to elisabeth_broome@mcgraw-hill.com.

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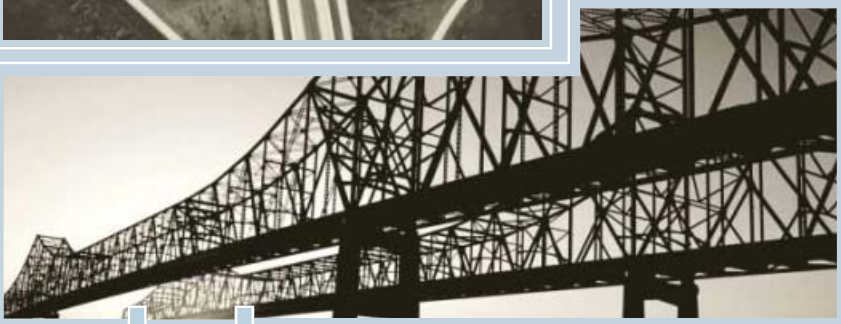

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FOR THE EMERGING ARCHITECT

A young firm in Montreal, NOMADE, is winning one large project after another. The partners have a multidisciplinary approach to designing architecture and are making a name for themselves through an intentional lack of formula or signature style. Find out more in Design and on our Web site. In Work, we examine the program New York Designs, which helps young designers gain a foothold in the business.

DESIGN

Integrating ideas in urban design

Although the three founding partners of Montreal-based NOMADE Architecture each received their degrees from the University of Montreal around the same time, it wasn't until working on cooperative projects while employed in different firms that Michel Lauzon, Martin Leblanc, and Jean Pelland (pictured, left to right) had the opportunity to meet. Leblanc explains, "After some discussion, we realized that we had the same ideas of how architecture should be and where it should go." They saw the glaring absence of a creative, multidisciplinary approach to the projects they were involved in. The trio also believes that their locale was a catalyst to opening their own firm. "One look at the architecture around Montreal, or lack thereof," states Pelland, "prompted us to create a firm that could differentiate itself from what was going on here." They founded NOMADE in 1999.

Based on their previous experience, each partner brings a specialized skill set to their work beyond basic architectural qualifications—Pelland, a knowledge of construction; Leblanc, expertise in technology; and Luzon, a background in project management and marketing. The anonymous moniker of the firm provides the first clue into NOMADE's driving force. Leblanc says, "Architecture should be a result of collective ideas. It should integrate the perspective of the client, the developers, the stockholders, and others who have a stake in the project." Many of NOMADE's large-scale projects, including Le Quartier des Spectacles—the entertainment district of Montreal—and the headquarters of Quebecor, incorporate the ideas of many outside of the architecture field as well as those within it, so it was decided that the firm's name should characterize a group where individual identity would not take precedence. "For us, it's more important to create an architecture relevant to each project rather than have a signature style," explains Lauzon.

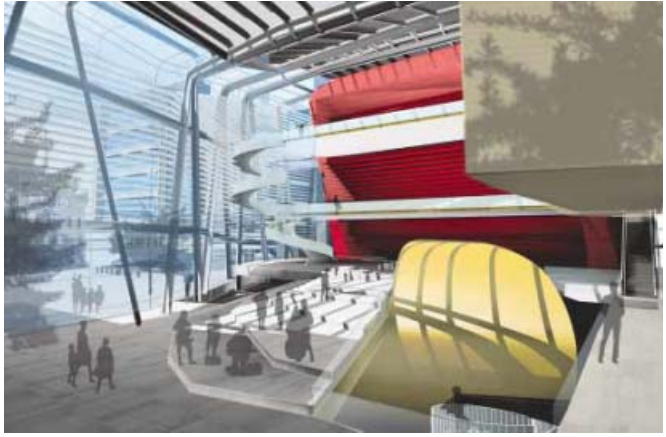
Like many young firms, the three partners found themselves immersed in

Le Quartier des Spectacles, Montreal, Canada
The redesign of the entertainment district involves transforming vacant lots into urban, cultural, and economic elements—doubling the current residential units and creating parks, plazas, and retail spaces.

Quebecor Headquarters, Montreal, Canada
As the project and design architect on this renovation, NOMADE's task was to take the outdated building and create relevant architecture that accords with the media corporation's brand and the urban character of the area.

IMAGES: COURTESY NOMADE

Canadian Museum for Human Rights, 2003
In this invited international competition, NOMADE teamed up with SOM to design a new museum in Winnipeg, Manitoba. The program included exhibition halls, a training center, and a concert hall.



Montreal Cultural and Administrative Complex, 2003
The multiuse design competition required new space for the Montreal Symphony Orchestra, the Montreal Conservatory of Dramatic Arts, the Conservatory of Music, and head offices for the Quebec government.

architectural competitions (more than 20 in the past five years) while working on smaller projects. They treat competitions as efforts of separate design studios, using them as an opportunity to envision large-scale projects not usually presented to fledgling firms, while also enabling them to collaborate with other architects. In a recent competition to design the Canadian Museum for Human Rights, they teamed up with SOM and were short-listed with higher-profile firms.

Perhaps not as common for other young architectural practices, the team's competition entries have garnered them new commissions, even when their design wasn't ultimately chosen as the winner. Upon seeing the firm's previous competition entries, the City of Montreal picked NOMADE for the enormous task of renovating the city's entertainment district. Recently, the partners were invited to China to partake in the first Architectural Biennial of Beijing and to speak on the state of architecture in Canada. The firm has also been hired as the lead consultant for a multiuse residential project in China.

These architects admit they haven't built much—but instead of seeing that as a handicap, they use it to their advantage. "Without a doubt, experience is important, but sometimes it can be an obstacle to creativity. We're at a stage now where we're flexible in our approach, and potential clients come to us if they're searching for unique answers," states Lauzon. Judging from their recent commissions, they should be providing answers for years to come.
Randi Greenberg

For more projects and competition entries by NOMADE, go to archrecord.construction.com/archrecord2/

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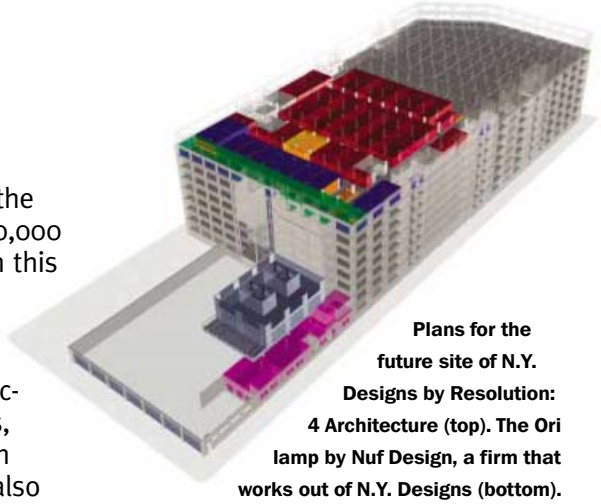
Space and cultivation for designers

Designers fresh out of school may have the drive to create, but chances are they lack business or marketing know-how. This lack of training has made it all but impossible for start-up design firms to begin their practice with a boom. However, with major contributions from New York State, HUD, and the Economic Development Administration totaling more than $6 million dollars for a new program called New York Designs, such firms now have a greater chance for early success in an incredibly competitive market.

New York Designs is an "incubator" located on the Long Island City campus of City University of New York's LaGuardia Community College. Currently, the test program is housed in a 4,000-square-foot unused loading dock of the International Design Center of New York warehouse, but it will soon be moving to the eighth floor of the same building, with more than 40,000 square feet at its disposal. Within this space, several business-growth services tailored for designers will be available.

Natalia Arguello, creative director of New York Designs, explains, "We'll be able to house 20 design firms at reduced rents, but we'll also be helping nontenant designers. The current plans for our new space will include a fully equipped workshop with state-of-the-art prototype machinery, conference rooms, a design library, and a gallery."

New York Designs also addresses the need these burgeoning designers have for all-important business skills. Both business counseling and classes are offered, and the design community is responding. Class attendance, for subjects that have varied from model making to marketing, have tripled in just two semesters.



Plans for the future site of N.Y. Designs by Resolution: 4 Architecture (top). The Ori lamp by Nuf Design, a firm that works out of N.Y. Designs (bottom).

Arguello, who admits to her own lack of business savvy when she completed design school, knows firsthand how helpful this program can be to a designer. "Essentially, we're going to be a one-stop design center where the designer has everything they need under one roof," states Arguello. *R.G.*

For more information on N.Y. Designs, go to ***archrecord.construction.com/archrecord2/***

IMAGES: COURTESY NEW YORK DESIGNS-RESOLUTION:4 ARCHITECTURE (TOP); NUF DESIGN (BOTTOM)

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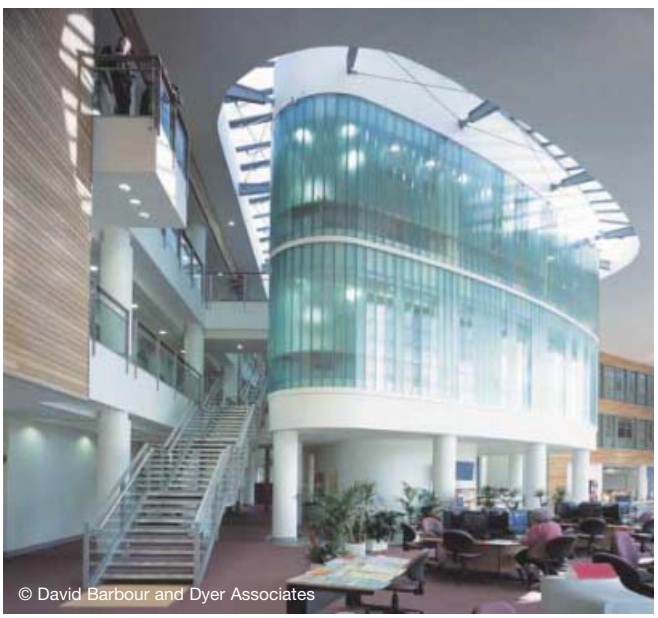
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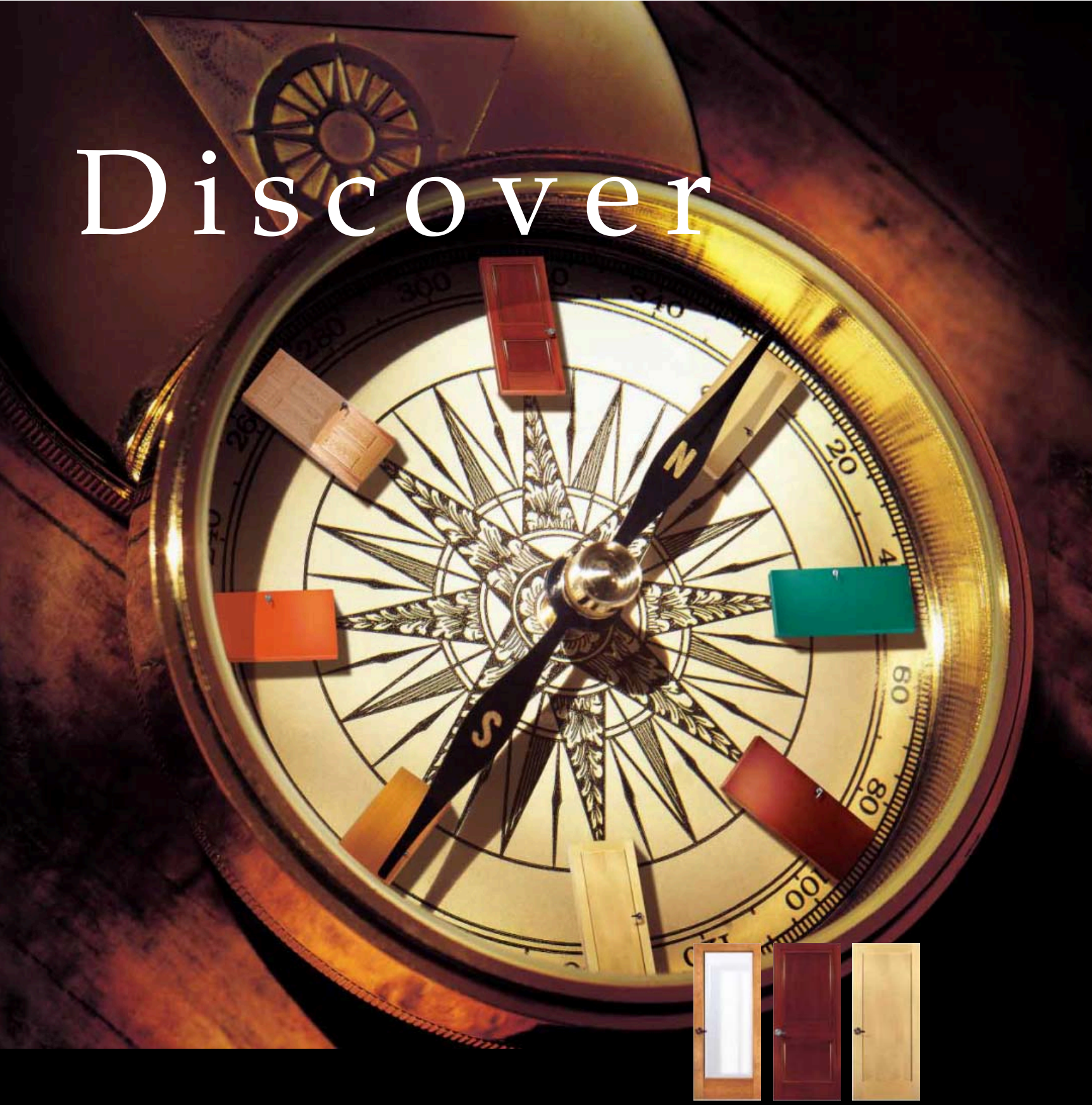

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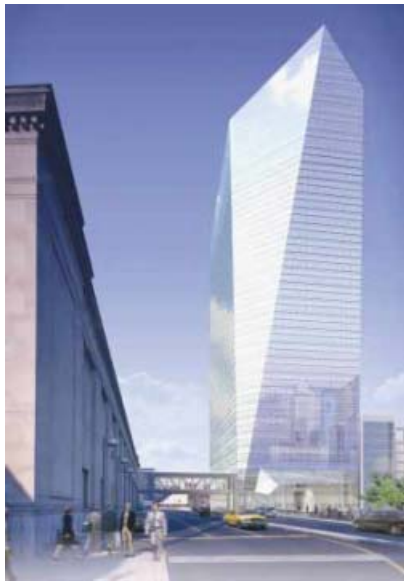
VT INDUSTRIES **Architectural Wood Doors**

Philadelphia sets a path toward revitalization through a redefined government role

Correspondent's File

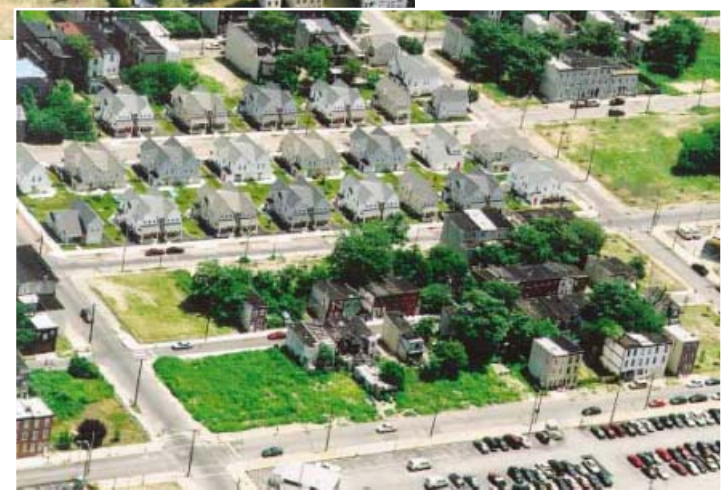
By Joseph Kelly II



In the past four years, the City of Brotherly Love has become a hotbed of urban development and revitalization. In almost all of the nearly 70 neighborhoods in this 135-square-mile city, the sights, sounds, and signs of construction form part of the everyday pedestrian experience. The majority of the city's efforts are focused on transforming its infamously blighted neighborhoods into dynamic residential districts through the city's Neighborhood Transformation Initiative (NTI) and putting forward development projects that are reshaping the city's predominantly 18th- and 19th-century built environment into a dynamic setting relevant for sophisticated contemporary urban living. Presently, more than 4,000 new condo units, several cultural buildings, and nearly a dozen downtown towers are in design or under construction. Other major projects, such as Robert A.M. Stern's master plan to transform the city's former Navy Yard, will—once completed—establish Philadelphia as a major global urban center.

How has this happened so quickly? Much stems from a city government that appears—at least on the surface—to have transformed itself from an overbearing, inefficient machine into a transparent promoter of development and a successful arbiter of change. The new approach has spurred major public and private investment in large civic, commercial, and residential projects. Hence, by becoming more transparent and turning to

Joseph Kelly II writes for RECORD, Architectural Lighting, Architecture, Metropolis, I.D., *and* ICON. *He is currently working on a book on the redevelopment and revitalization of Philadelphia.*



Philadelphia's skyline (top left); Pelli's Cira Center (top right). A before (left) and after (below) scenario from the Neighborhood Transformation Initiative, which fights blight.

IMAGES: COURTESY GREATER PHILADELPHIA TOURISM MARKETING CORPORATION (TOP LEFT); CESAR PELLI & ASSOCIATES (TOP RIGHT); NEIGHBORHOOD TRANSFORMATION INITIATIVE (BOTTOM TWO)

community and civic groups for the help it needs in devising civic change (partly because this financially strapped city lacks the funds to realize change), the city's approach is epitomized by the crop of modern buildings now or soon to be lining its streets.

Problems of the past

For as long as anyone can remember, Philadelphia has played a notorious behind-the-scenes pay-to-play political game of governing: Political supporters and bureaucratic friends, whether qualified or not, have often received city contracts in return for campaign contributions and other favors, and city leaders have had unchallenged authority over building projects. Edmund Bacon, head of the Philadelphia City Planning Commission (PCPC) from the 1950s through the 1970s, held sole authority to select architects for Philadelphia's previous urban renewal effort. The face of the city arguably changed from a more structurally diverse and cosmopolitan character into a sterile downtown dominated by bland architecture. Bacon also selected designers who delivered schemes that accorded only with his ideas, focusing on Center City and ignoring the neighborhoods, which at that time were showing initial signs of decay following the first migration of city residents to the suburbs.

Perhaps more crippling to the city has been the astonishingly high wage tax, which was introduced in 1939 as a temporary solution to combat the effects of the Depression. Philadelphia continues to inflict this tax on residents to generate over half its annual revenue. (According to the Pennsylvania Economy League, the city's percentage of wage-tax dependence, 56, is the highest in the nation; Detroit is second with a 41 percent dependency.) As a result, businesses and residents have long fled to the suburbs, bleeding the urban center of its industrial core, jobs, population, and revenue sources. In the aftermath, entire once-thriving middle-class neighborhoods now stand as heavily blighted inner-city ghettos.

Fostering change

A key to decentralizing Philadelphia's authority has been its network of community-development corporations and quasi-government authorities, which are helping redevelop the city through a more public process. These include the nationally recognized Center City District, which recently completed a community-based effort to relight the Benjamin Franklin Parkway. Other organizations include the University City District (UCD) and Old City District (OCD), which are transforming important underdeveloped or underrealized spaces, such as the Delaware and Schuylkill River waterfronts and the neighborhoods surrounding Center City, into thriving communities. Meanwhile, NTI has used a $300 million municipal bond to clean and clear large tracts of land, offering these lots to private developers at a minimal cost and spurring revitalization of heavily blighted neighborhoods.

Topping this activity is a heightened level of public discourse involving design and redevelopment issues. Residents and the local press are better versed in the economics and the politics of urban renewal than ever before, and they are better able to discuss current revitalization and engage in public forums on design change, held by local organizations like the Design Advocacy Group, a coalition of architects and planners that advocates for design change through lobbying, forums, and regular newspaper columns.

Additionally, after years of pressure from the local business community to make the city more competitive, Mayor John Street is finally addressing ways to lower the wage tax, conveying a new understanding of openness in municipal politics. The current administration has also established incentives to encourage large and small development via a 10-year tax abatement for new residential construction and mortgage-assistance programs for low-income individuals.

Moshe Safdie's planned addition to the public library (above); and Rafael Viñoly's completed Kimmel Center for the Performing Arts (left).

IMAGES: COURTESY MOSHE SAFDIE AND ASSOCIATES (TOP); GREATER PHILADELPHIA TOURISM MARKETING CORPORATION (BOTTOM)

Some of the major architects working in Philadelphia

Tadao Ando: $50 million Calder Museum is set to open in 2006.
Richard Gluckman: $70 million expansion of the Philadelphia Museum of Art's administrative office and gallery complex.
Robert A.M. Stern: Master plan for residential and commercial district at the former Navy Yard; $140 million, 33-story residential high-rise; $500 million, 70-story downtown Comcast office tower.
Cesar Pelli: 35-story, $130 million Cira Center office tower.
SHoP: Four new downtown condominium projects.
Rafael Viñoly: $265 million Kimmel Center For Performing Arts.
Moshe Safdie: $110 million expansion to and renovation of the Central Branch of the Free Library of Philadelphia.
Pei Cobb Freed & Partners: $138 million National Constitution Center.
Kieran Timberlake: The Wharton School's Levine Hall, and future project to transform Philadelphia's main USPS complex into university offices.
NBBJ: $520 million Lincoln Financial Field (football).
HOK: $350 million Citizen's Bank Park (baseball).
KPF: $500 million International Terminal at Phila. International Airport.
Michael Graves: $150 million Philadelphia Eagles NovaCare Complex.

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The results

The private-development focus, public input, and government transparency has in only three years inspired a proliferation of recently completed, or planned, housing, commercial, office, and community-development projects—many with price tags in the hundreds of millions. Many carry such designer name tags as Rafael Viñoly, FAIA, Michael Graves, FAIA, Robert A.M. Stern, FAIA, Cesar Pelli, FAIA, the firms of KPF, NBBJ, HOK, SHoP, Grimshaw, The Olin Partnership, Richard Gluckman, FAIA, Moshe Safdie, FAIA, and Tadao Ando, among others.

Funding from Philadelphia's major private foundations, such as The William Penn Foundation and the Pew Charitable Trusts, is aiding redevelopment along such areas as the Benjamin Franklin Parkway (the city's focal cultural corridor), which will soon contain Gluckman's $70 million redesign of the Philadelphia Museum of Art's new administrative and gallery complex; Safdie's $110 million redesign of the Central Branch of the Free Library of Philadelphia; Ando's subterranean design for the new $50 million Calder Museum; and the proposed move of the famed Barnes Foundation from its home in suburban Philadelphia.

The scope of private residential, commercial, and office projects can take your breath away: Pelli is designing Cira Center, a 35-story, $130 million office tower near the city's central train station, while Stern's reimagination of the city's old Navy Yard will provide a major mixed-use development and an entire new neighborhood. New York–based SHoP is designing four condominium complexes, including Old City 108, a 12-story luxury condo in the heart of the historic district. Wallace Roberts & Todd is designing a $280 million, five-tower gated condo complex called Waterfront Square on the North Delaware River waterfront, which includes its own marina. Situated near this complex will stand the new $700 million, four-tower World Trade Center of Greater Philadelphia.

A massive swath of land is set aside for a new community, part of the Neighborhood Transformation Initiative.

NTI's success has also been impressive. During the past three years, it has cleaned up more than 31,000 vacant lots, demolished 4,100 of the most dangerous of Philadelphia's 30,000 abandoned buildings, and removed 185,000 abandoned vehicles and 15,081 dangerous trees. NTI also encouraged the development of 5,128 affordable housing units, 5,000 market-rate housing units, and 2,100 housing units in large devel-

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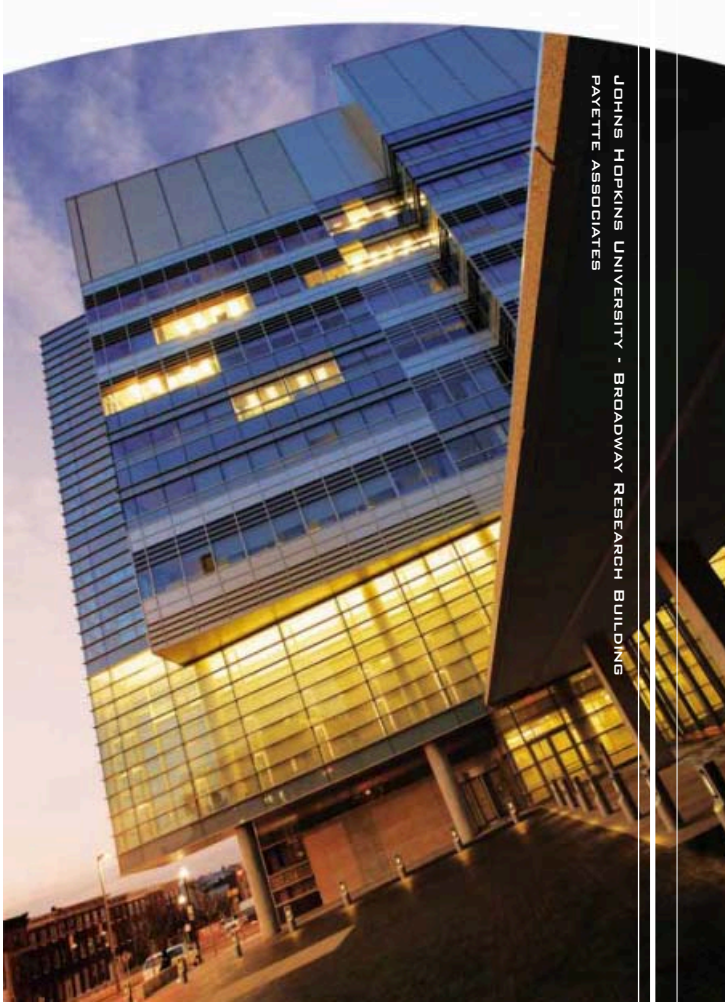

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opments, as well as fostering the rehabilitation of 11,673 homes in the city.

Criticisms and responses

But John Gallery, executive director of the Preservation Alliance for Greater Philadelphia, believes unplanned and decentralized development fails to appropriately consider community resources, such as schools and medical and community-support facilities, and fails to articulate a vision for growth throughout the city and in the neighborhoods. He also worries that the NTI program does not adequately prepare for the future. "[The city] lacks vision about what might happen to the so-called transforming neighborhoods after all of this [NTI] demolition occurs," says Gallery, who worked for the PCPC during the 1960s under Bacon and later headed the city's Office of Housing and Community Development.

In contrast, NTI director Patricia Smith believes that putting together a master plan would be unproductive. Such a plan, she explains, would likely be outdated when complete because of the extraordinary level of development activity throughout the city. PCPC executive director Maxine Griffith sides with Smith, explaining that the most important activity is working with neighborhood groups to give them recommendations for developing their communities.

And though Mayor John Street is now practicing a more open, democratic form of governing, efforts haven't always reflected a community-minded approach. When Indianapolis-based developer Simon Group in 2002 dropped out of its commitment to realize an entertainment complex on the city's underused 13-acre Penn's Landing site along the Delaware River, local groups like DAG and the University of Pennsylvania's Penn PRAXIS organized public forums and charrettes to address possible development. Yet Street moved ahead with his own plans to hire a developer. Later, it was revealed that the the mayor, among others, was implicated in an F.B.I. corruption investigation, as was Penn's Landing Corporation, the quasi-government entity that runs Penn's Landing. Since then, the project has dropped from the public's consciousness and no one knows if it will reemerge.

Meanwhile, local design professionals' efforts to reform how the government builds (including a movement to update outdated zoning) cannot resolve the one issue that obstructs Philadelphia's emergence as an international metropolis: its provincial mentality, which often overlooks the city's role as the hub of the nation's sixth-largest region (which includes Southeastern Pennsylvania and Southern New Jersey). Philadelphia must work together with its surrounding communities to take advantage of its resources and establish a cohesive identity for the area, which it currently lacks. ■

Robert A.M. Stern's revitalized vision for the old Philadelphia Navy Yard.

IMAGE: COURTESY ROBERT A.M. STERN ARCHITECTS

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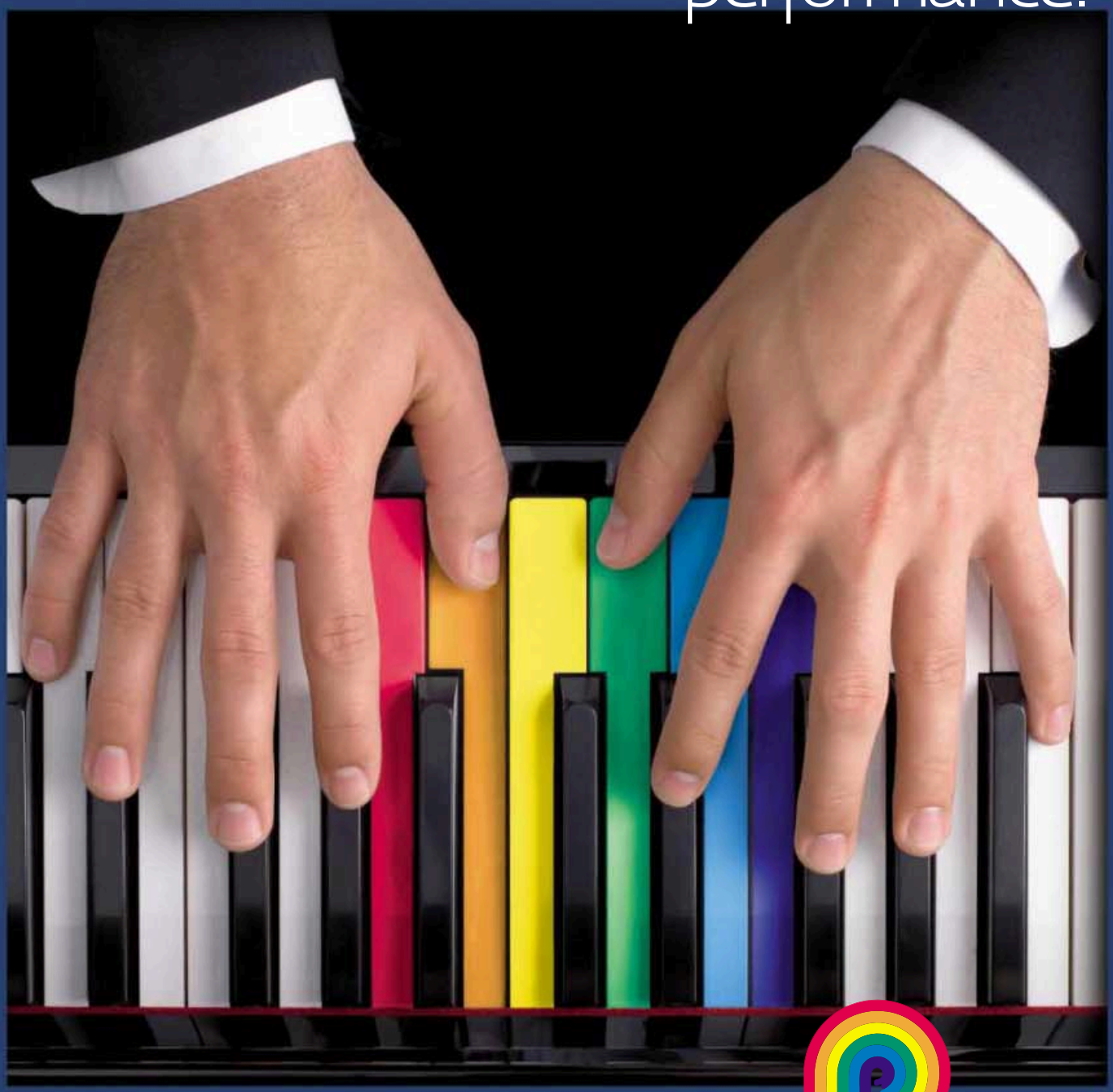

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Making a mark by allowing the setting and climate to shape the architecture

Exhibitions

By Liane Lefaivre

Geoffrey Bawa: The Genius of the Place. *Curated by David Robson. At the Deutsches Architektur Museum, Frankfurt, Germany, through October 17.*

Natural ventilation cooled all of Bawa's buildings, including the Steel Corporation headquarters in Orawela (left), the Ena de Silva House in Colombo (below left), and the State Mortgage Bank in Colombo (below right).

Geoffrey Bawa's architecture was always a response to site. Living in a tropical paradise like Sri Lanka certainly put Bawa in touch with his surroundings. How could he go wrong with palm fronds swaying in the breeze, waves rolling onto endless white beaches, and a great tradition of classical Sinhalese Buddhist, Portuguese, Dutch, and English architecture enriching towns and countryside alike? But many others have gone wrong and continue to do so. Contemporary architecture in Sri Lanka (formerly Ceylon) can be as bad as anywhere else. What is surprising is how Bawa, who was born in Sri Lanka in 1919 and died there on May 27, 2003, succeeded in balancing Modern and traditional, global and regional.

The exhibition now at the Deutsches Architektur Museum in Frankfurt presents a complete and fascinating view of Bawa's world. Photographs, particularly those by Helene Binet and Christian Richters, capture Bawa's sense of place, as do five remarkable models built by the Delft-trained Dutch architect Robert Verrijt and his collaborators.

Curated by David Robson, who is also the author of an indispensable monograph on Bawa, this is a very personal exhibition. With the help of Channa Deswatte, who has inherited Bawa's practice, Robson has included original sculptures by Laki Senanayake and original batik banners by Ena de Silva that were part of real projects designed by Bawa. Senanayake and de Silva were close friends and collaborators of Bawa and helped comprise, along with Bawa, a true Sinhalese cultural renaissance in the wake of national independence in 1949. De Silva, who is now 83, made the journey to the opening, with many of Bawa's younger collaborators. It was a love-in that was keenly felt, as Bawa died of a stroke just over a year ago.

Originally trained as a lawyer at Cambridge in England, Bawa came to architecture as an adult in the 1950s, after buying a country house in Lunuganga, an hour outside of Colombo, Sri Lanka's capital. As he fixed up the house and its property, he became hooked on architecture. What grabbed him was the relationship between buildings and nature, the man-made and its surroundings. The house in Lunuganga became the love of his life.

Soon he dropped his law career, returned to England, and at age 35, enrolled at the Architectural Association in London. Robson points out that although Bawa came into contact with the Modernist legacy of Mies and Le Corbusier at

Liane Lefaivre is the coauthor, with Alexander Tzonis, of Tropical Architecture *(Wiley, 2000) and* Critical Regionalism *(Prestel, 2003).*

PHOTOGRAPHY: © DAVID ROBSON (LEFT TWO); HARRY SOWDEN (RIGHT)

the AA, he developed a special affinity to Frank Lloyd Wright.

In some regards, Bawa was more Wrightian than even Wright. He is probably the only architect in the 20th century who had the luxury of designing buildings literally on-site, rather than in his office. Bawa's drawings, as presented in this exhibition, are awkward, like those of a child. For him, the real piece of paper on which to work was the ground itself. Construction workers were his pencils. While working on Ruhunu University (1980–88) on a beach on the Indian Ocean in Matara, he went so far as to have the laborers tear down one building they had just erected and rebuild it a short distance away.

We tend of think of Bawa above all as a supremely elegant designer, a fashioner of paradisiacal homes and hotels. It would, indeed, be hard to come by an architect who designed as many photogenic buildings as he. But what emerges from the exhibition and catalog is an understanding that elegance was just part of Bawa's significance. His first masterpiece was a house built for Ena de Silva in Colombo in 1960. De Silva hated colonial design as much as she did air-conditioning and demanded a house that would incorporate traditional vernacular Kandyan features, such as an enclosing perimeter wall for the whole compound, a pitched tile roof, open-sided rooms, verandas, courtyards, and a shrine room, along with modern spaces like an office for her husband, a studio for her son, and a wing for visitors. Bawa designed a plan that is an introspective pattern of interlocked pavilions and courtyards revolving around a large central court (or *meda midula*) and not one pane of glass to impede natural ventilation.

BAWA'S ARCHITECTURE WENT BEYOND THE PICTURESQUE AND CAME CLOSE TO A MUMFORDIAN CRITICAL TROPICALISM.

Bawa's architecture went beyond the picturesque, and came very close to a Mumfordian critical tropicalism. His buildings were all bioclimatically responsive, incorporating natural ventilation, even in his luxurious houses and hotels. This is as true of his first house at Lunuganga (started in 1953) as it is of his last project, the Pradeep Jayewardene House (completed in 1998).

The real revelations in the exhibition are Bawa's office buildings, in particular his Steel Corporation Offices (1966–69) in Orawela, Sri Lanka. The project adopts a simple rectangular form but with an outward cantilevering section (inspired by temple buildings in Kerala, India, and Nepal) that provides protection from the overhead sun and monsoon rains while permitting the use of a breathing wall. The State Mortgage Bank in Colombo (1976–78) is even more ingenious—a 12-story building that Malaysian architect and author Ken Yeang has called the "best example of a bioclimatically responsive tall building to be found anywhere in the world." The building, like the site, is a lozenge-shaped wedge, which Bawa capped with a raised concrete canopy that helps protect the offices below from the direct impact of the sun and allows them to be naturally lit and ventilated. The main elevations face north and south in order to reduce solar gain and catch the main breezes. Windows are set back from deep spandrel panels designed as air-intake louvers.

The exhibition is an eye-opener. Western architects can learn a lot from Bawa, who showed how Modernism could adapt to a tropical climate. ■

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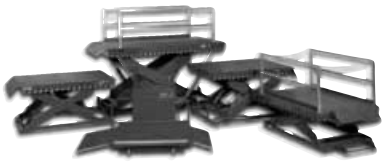

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Finding an open space for the exercise of democracy in New York's dense urban fabric

Critique

By Michael Sorkin

DEPARTMENTS

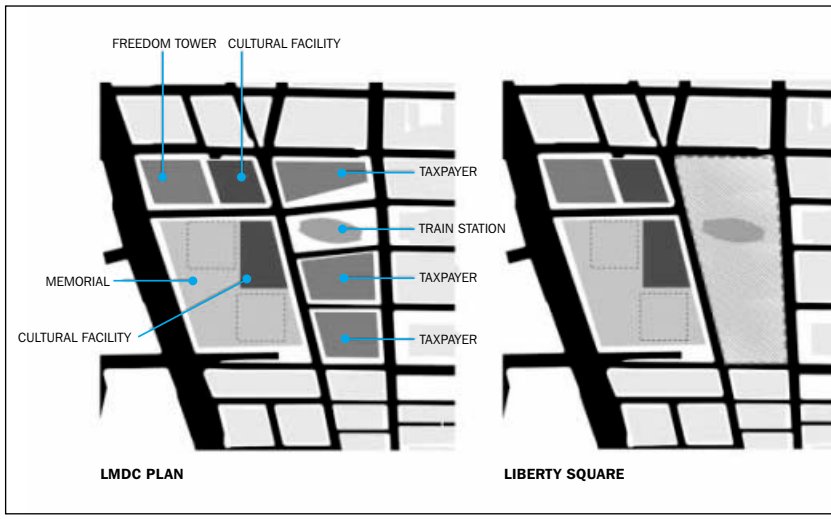
One of the basic rights enshrined in the First Amendment to the Constitution is that of "the people to freely assemble." Free assembly is the primary expression of democracy in space, the physical embodiment of liberty. This relationship far predates the American experience. Cities, in particular, have long been seen as especially conducive to freedom, as exemplified in the famous motto of the Hanseatic League: "City air makes you free."

The just city is one where citizens move unimpeded and gather in many different ways for self-expression. In modern times, social progress has been directly linked to the variety of rallies, demonstrations, marches, and insurrections that have had as their arena the streets and squares of the city. From women's suffrage to civil rights to union organizing to antiwar protests, the power of bodies together in space has been crucial to the defense of our rights. In real democracy, the streets belong to the people.

In city after city, certain places have become linked to these gatherings, institutionalized by repeated use. While the street is the bedrock of the popular "right to the city"—the conduit of association—it is only part of the necessary infrastructure of assembly that includes both privatized spaces such as bars, cafés, lecture halls, stadia, and stoops, as well as bigger public spaces: the parks, plazas, and town squares that remain fundamental to sound urbanism. Whether the Zocalo in Mexico City, the Mall in Washington, or Tiananmen Square in Beijing, these great sites are zones of focus, the common property of those dedicated to the struggle for free association. Indeed, the right of the public to gather in these places continues to be defended in blood.

Such matters have been much in the news in the current political season. The protest cage at the Democratic Convention in Boston—a prisonlike enclosure surrounded by razor wire—suggests a sinister elision of the war on terror with the control of popular assembly. The frustrations of those seeking to demonstrate against the Republicans in New York City have also provided ample evidence of the constraints on the popular right to make use of its own spaces. It also points up something else: the lack of enough suitable places for mass political rallies. Our main rallying spots in New York—whether Central Park, Times Square, or Fifth Avenue—all depend on the disruption of some other activity, whether traffic or recreation, and are thus subject to negotiation with the authorities, who, as recent events have so vividly shown, can be recalcitrant. Other venues—like Union Square, with its rich historic association with protest—are too small. Still others, including City Hall Park, have been fenced and "improved" to prevent gatherings.

The organizers of the largest New York demonstration, a group called United for Peace and Justice, originally applied for a permit to gather on the Great Lawn in Central Park. This was denied on the basis of the alleged fragility of the grass. The city offered as an alternative the West Side Highway, which the demonstrators refused, electing instead to march more visibly in the streets near Madison Square Garden. Such insubordinate assembly is part of the animating tension of democratic discourse and suggests that the character, location, and political valence of a space is crucial to its suitability for succinct public expression. Speech demands its audience.



Instead of erecting temporary "taxpayer" buildings at Ground Zero (above), the LMDC could create a venue for public gathering like Washington's Mall (below).

PHOTOGRAPHY: © BETTMANN/CORBIS

This problematic lack of suitable space comes at a critical moment as the nation rushes breakneck to restrict freedom of movement under the guise of fighting terror. While vigilance is necessary, these restrictions also represent a victory for the enemies of freedom, both at home and abroad. The attacks of 9/11—the initiating event in this cycle—were both an act of murder and an assault on our freedom to assemble. The World Trade Center replacement project, however, contains remarkably little nonprogrammed gathering

Michael Sorkin practices architecture in New York and is the director of the graduate urban design program at City College of New York.

space. The major component, of course, is a memorial that is parklike and solemn, not the spot for mass rallies. Remaining spaces of nominal assembly—such as the Wedge of Light—are residual, scarcely more than enlarged sidewalks. The proposed cultural facilities may be public, but they are decidedly not political or about large gatherings.

THE GROUND ZERO PLAN IS BUSINESS AS USUAL, VALIDATED AS APPROPRIATE BY A LAYING ON OF SACRAL ICONOGRAPHY.

Ironically, the WTC contained a larger plaza than anything currently proposed. It was, however, so inhospitable and its associated meanings so commercial that it never functioned as a place of assembly, simply as a windswept expanse to be crossed or avoided.

Instead of useful forms of assembly, the Ground Zero plan substitutes an iconography of freedom that slights its actual expression. For example, the "Freedom Tower" is simply an office building, doubtless one in which free access will be heavily circumscribed by security demands and sky-high rents. It limply signifies liberty via a vague asymmetry meant to evoke the Statue of Liberty, a devoluted icon for an icon, abstracted beyond recognition. The memorial is centered on the symbolism of the Trade Center footprints, which are to be water-filled and uncrossable. The Wedge of Light—should it actually be realized—calls for passive solemnity. The yet-to-be-conceived Museum of Freedom, however important it might become, will be a largely individual experience.

What has happened downtown is the creation of a plan that is essentially about business as usual, validated as appropriate by a laying on of sacral iconography. Everything receives its label—Freedom Tower, Wedge of Light, Park of Heroes, and so on—in order to create an aura of rhetorical piety to redeem activities that are anything but. If anything points up the fast-and-loose style of reverence of the rebuilders, it is the recent announcement by the Lower Manhattan Development Corporation and Larry Silverstein that—given the flat office market and the failure to obtain a double payout from Swiss Re—they are likely to build "taxpayers" on the eastern portion of the site, an area (on either side of Santiago Calatrava's fine transit station) that amounts to more than three city blocks. These proposed low-rise commercial buildings would be intended as placeholders for future office towers, which might not be constructed for decades. If this goes ahead, a shopping center would line the rebuilt Greenwich Street, facing the memorial and the two cultural buildings the LMDC is developing.

Clearly, this is not the highest-and-best use for New York's most significant urban project. However, it does present a remarkable opportunity. These blocks might become the great public plaza that the city lacks. Surrounded by a strong edge of buildings, highly accessible, and located on a site of remarkable resonance, the space might become not simply a symbol but the scene of liberty in action, a zone of free assembly and free speech. It is also in the heart of things, at the center of our institutions of governance and commerce, an apt and visible site for public expression. And instead of managing remembrance through a series of themed activities that offer little opportunity for spontaneity or collectivity, it would truly belong to the people, an embodiment of our nation's greatest ethical and political power.

It's time to build Liberty Square. ■

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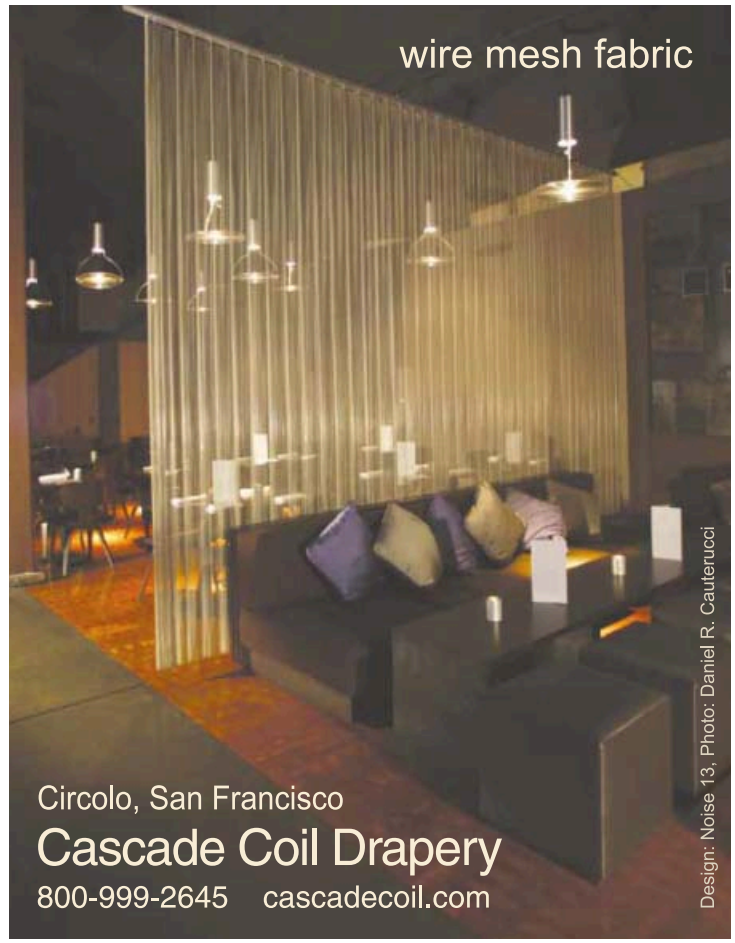

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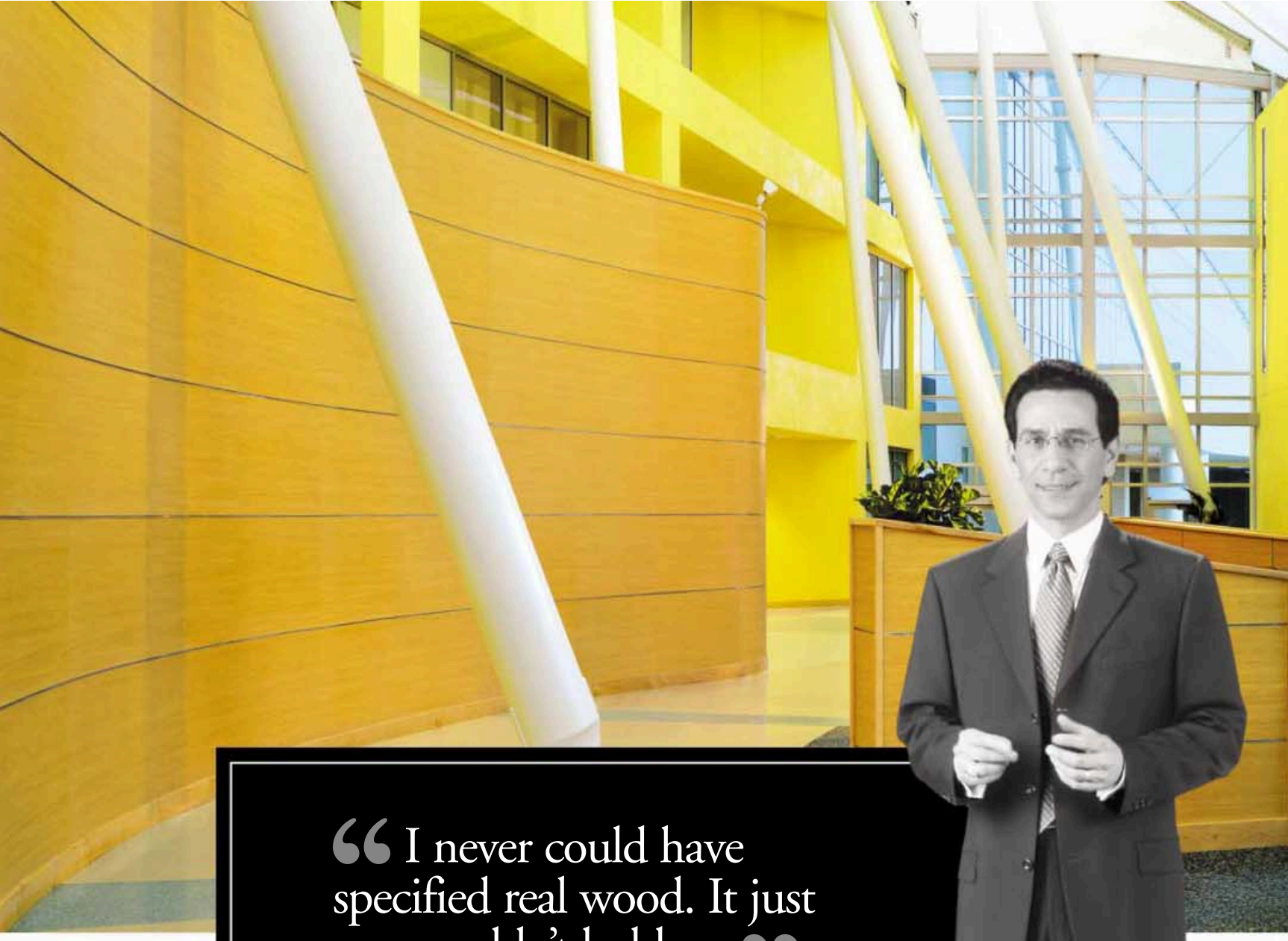

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Cross-border explorations: Two thinkers who span disciplines and a place on the Silk Road

Books

Eisenman Inside Out, Selected Writings, 1963–1988, *by Peter Eisenman. New Haven: Yale University Press, 2004, 264 pages, $30.*

Having reached his early 70s, Peter Eisenman—architect, theorist, professor, publisher, editor, historian, administrator, impresario—has lately been doing a lot of building and publishing. His monumental and detailed analysis of two buildings by Giuseppe Terragni came out last year, and he has now delivered a collection of early essays. Mature architects will remember many of the articles in this volume, and it is rewarding to have them back in print and in one place. As we see from the bibliography at the back of the book, these essays were culled from a much longer list.

In the introduction, Eisenman describes his lifelong quest to understand what he calls the "interiority" of architecture: that elusive spirit of architecture's core of being, not what he calls a "mere" formal, compositional, structural, or functional quality, but something more basic and inchoate. To this end, he has periodically enlisted assistance from other disciplines, most noticeably semiotics, linguistics, and deconstructionism.

In the first essay, which was written in 1963, Eisenman—still under the influence of his Cambridge University mentor, Colin Rowe—attempted to supersede contemporary norms of criticism by arguing that functional expression has both an instrumental and a symbolic quality and that pure functionalism is,

therefore, impossible. It is a convincing piece. The essay predates the influences of (among others) Christian Norberg-Schulz, Noam Chomsky, semiotics, and Jacques Derrida's deconstructionism.

The book then skips to the 1970s, and we pick up Eisenman's interest in architecture as it relates to linguistic expression. By then he was trying to make buildings that were "meaning-less," architecture with neither denotative nor connotative significance, possessing only what he later would call *interiority*. An early essay on this aspect of architectural theory, "Cardboard Architecture" (1971), describes the design process and desired outcome of his first built works, Houses I and II. Eisenman once again maintains that he has surpassed previous theories to formulate an unprecedented way of both looking at and making architecture. But just how revolutionary are his buildings and theories? Based on the essays in this volume, it is still an open question. Take this excerpt from "Cardboard Architecture" concerning House I:

> "All of the apparent structural apparatus—the exposed beams, the freestanding columns—are in fact nonstructural. When this is understood, a first step has been taken to unload, albeit in a very primitive way, their structural meaning. While the apparent physical fact is the same whether they are load bearing or not, their meaning has changed because they are in fact not load bearing, and thus the intention implied in their use in a particular location must now be considered in a different way."

The same could be said about Filippo Brunelleschi's 15th-century church of San Lorenzo in Florence. In San Lorenzo, we see an array of members that look structural but aren't, a grid of abstract planes and lines that define a three-dimensional matrix and the conceptual index to an ideology. Many architects and scholars have noted this.

But unlike at San Lorenzo, where pilasters and moldings on the walls are easily understood as representations of structure, the "nonstructural structure" of House I is freestanding. Until Eisenman tells us that what looks structural is not structure, we have no way of knowing it. This is indeed one of his stated intentions; it makes his ostensible structure opaque as nonstructure. This is the obverse of the truss that supports what looks like a dome at the U.S. Capitol. While the architect of the Capitol most certainly wanted us to believe it is a dome, and kept the information from us (save those privy to a section through the dome), Eisenman gives us the "knowing wink" via his essay. As footnotes for his buildings, these essays are a bit like the notes provided by T.S. Eliot for poems such as *The Wasteland*. They promote a richer understanding of the poem, but without the footnotes we may miss some of Eliot's deeper meanings and allusions. Without Eisenman's footnotes, the meaning is merely reversed, but we don't really know if that means it has been deepened. Does this matter? Apparently not to him.

In essays of the 1980s, he elaborates and refines his theories, but these writings, it seems to me, do not support his claims to unparalleled theoretical innovation. Without these recurrent claims, the articles would be more enjoyable.

Many architects tend to dismiss this sort of writing out of hand, without giving it a thorough reading. This is a mistake. Eisenman always questions the status quo, always presents potentially plausible interpretations of architecture, and at times shows brilliance. The essays are interesting, his writings about other architects' works are perceptive, and much of the descriptive material on his own work is worthwhile. I have in the past found his

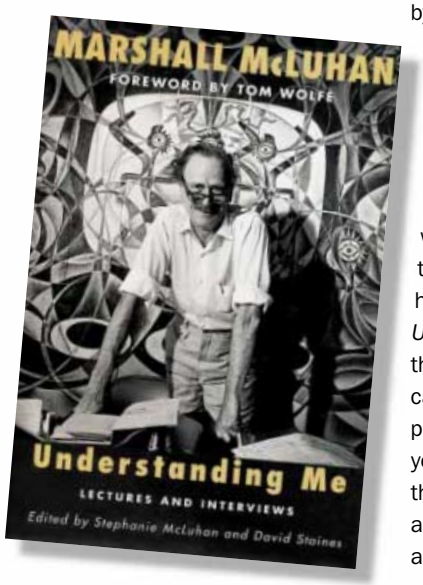
articles on the Smithsons, Michael Graves, John Hejduk, and James Stirling first-rate and engaging. An essay on Philip Johnson, overtly supportive but subtly (indeed, covertly) critical, is worth the price of the book. I may not agree with all of Eisenman's ideas, but I always enjoy reading them.

Will the next volume of Eisenman's essays shed more light on interiority, and give us a truly transparent view of it? Architects are notoriously bad at explaining their own works. Most of them (except maybe Rem Koolhaas and Leon Krier) should leave that to others. *Thomas Schumacher*

Understanding Me: Lectures and Interviews, *by Marshall McLuhan, Stephanie McLuhan, David Staines, and Tom Wolfe. Cambridge: MIT Press, 2003, 317 pages, $28.*

Marshall McLuhan, the communications theorist who focused on the media's psychic and social consequences, invented, among many other things, the idea of the global village. In *War and Peace in the Global Village* (1968), he presciently wrote that the global village could easily produce bloodbaths. His 1967 book, *The Medium Is the Message*, elucidated what is now a cliché. *Understanding Me* is a pun on his *Understanding Media: The Extensions of Man* (1964), the book that first brought McLuhan to international attention.

In *Understanding Me*, McLuhan, ever coining terms and turning phrases, writes, "The medium is the massage, not the message … it really takes hold and massages the population in a savage way." Ironically, it was the media that turned McLuhan into a cultural icon. A San Francisco advertising man, Howard Gossage, took it upon himself to introduce the Canadian theorist to the U.S. press and advertising industry, at his own expense. By the mid-1960s, major magazines and newspapers were comparing McLuhan's insights to those of Darwin and Freud. But by the time of McLuhan's death in 1980, his critics, chiefly New York intellectuals, had dismissed him as unserious and old hat. He had become best known for one-liner aphorisms, many of which turned common sense on its head. "All forms of violence are quests for identity," he wrote, and "Charisma means looking like a lot of other people." If the last seems especially counterintuitive, think Bush and Kerry. Aristocratic scions both, each is trying to prove he has charisma by denying he is exceptional. Bush has gone so far as to turn himself into a good old boy.



When the Internet burst onto the scene in the '90s, it seemed to fulfill prophesies McLuhan had made 30 years earlier. Again he was lionized, this time by turn-of-the-21st-century techies, for whom he became a sort of patron saint. *Understanding Media* had predicted the type of "interactive" communication that the Internet made possible, but what really grabbed young techies was McLuhan's belief that the new media were spreading a seamless web over the earth and becoming an extension of

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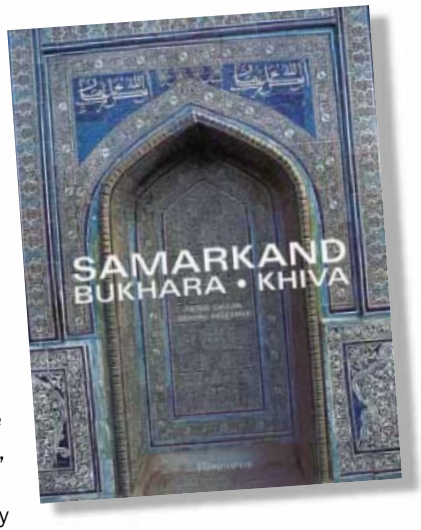
humankind, capable of altering the human mind and history itself. He came to this conclusion without knowledge of galvanic skin responses to technology, terminal node controllers, or the Apple Newton. *Wired* magazine, the most prominent of the dot-com journals, ran his picture near the masthead in every issue.

In the foreword to *Understanding Me*, Tom Wolfe, the pop-culture critic and author, writes, "I can't think of another figure who so dominated an entire field of study in the second half of the 20th century." The book is a transcription of two dozen tapes of McLuhan's television interviews and lectures, spanning the years 1959–79. They were collected by McLuhan's daughter Stephanie, a New York television producer. She correctly notes that the lectures comprise a biography or autobiography "enabling you to read McLuhan in the original, where you will find a more accessible, even unmediated, encounter than is possible through his books."
Andrea Oppenheimer Dean



Samarkand, Bukhara, Khiva, *photographs by Gérard Degeorge, text by Pierre Chuvin. Paris: Editions Flammarion, 2003, 232 pages, $60.*

Where can I find that Pakistani guy with the drums and the howling chorus? That Puerto Rican dance band my friend played for me? In most outlets, you head for "World Music," where the sacred and profane of other continents rub elbows, often quite incongruously.

Samarkand, Bukhara, Khiva is the kind of book that's likely to fall into architecture's "World Music" bin. The work of two Frenchmen, a photographer and a writer, who spent five years in the region of three famous oasis towns along Central Asia's Silk Road, it documents their monuments—mosques, shrines, and mausoleums—and a few of the old houses.

The text spends more time describing what the photos clearly show than explaining how and why the buildings got that way. As a visual record of these remarkable, and for us pretty inaccessible, towns, the book does a good job. The photos are striking, and the buildings are often beautiful in form and ornamentation.

The text provides a running commentary on the history of each town and, in particular, of the people with whom its monuments are associated—tyrants, sheikhs, imams, and the occasional wet-nurse. This history is heavily lifted from other sources, all properly attributed. Missing, though, are the pleasures of a first-person account, which is surprising considering how long the authors stayed in the area.

That these stopovers along the Silk Road revealed architecture of this quality speaks to the importance of these communities as centers of philosophy and culture—oases and crossroads in another sense. They also figure heavily in Sufism, Islam's mystical wing. It's frustrating, then, to not find more here about what we're seeing. The cathedrals of Europe also had their patrons, but knowing their personal histories is not why we buy books about them. *John Parman*

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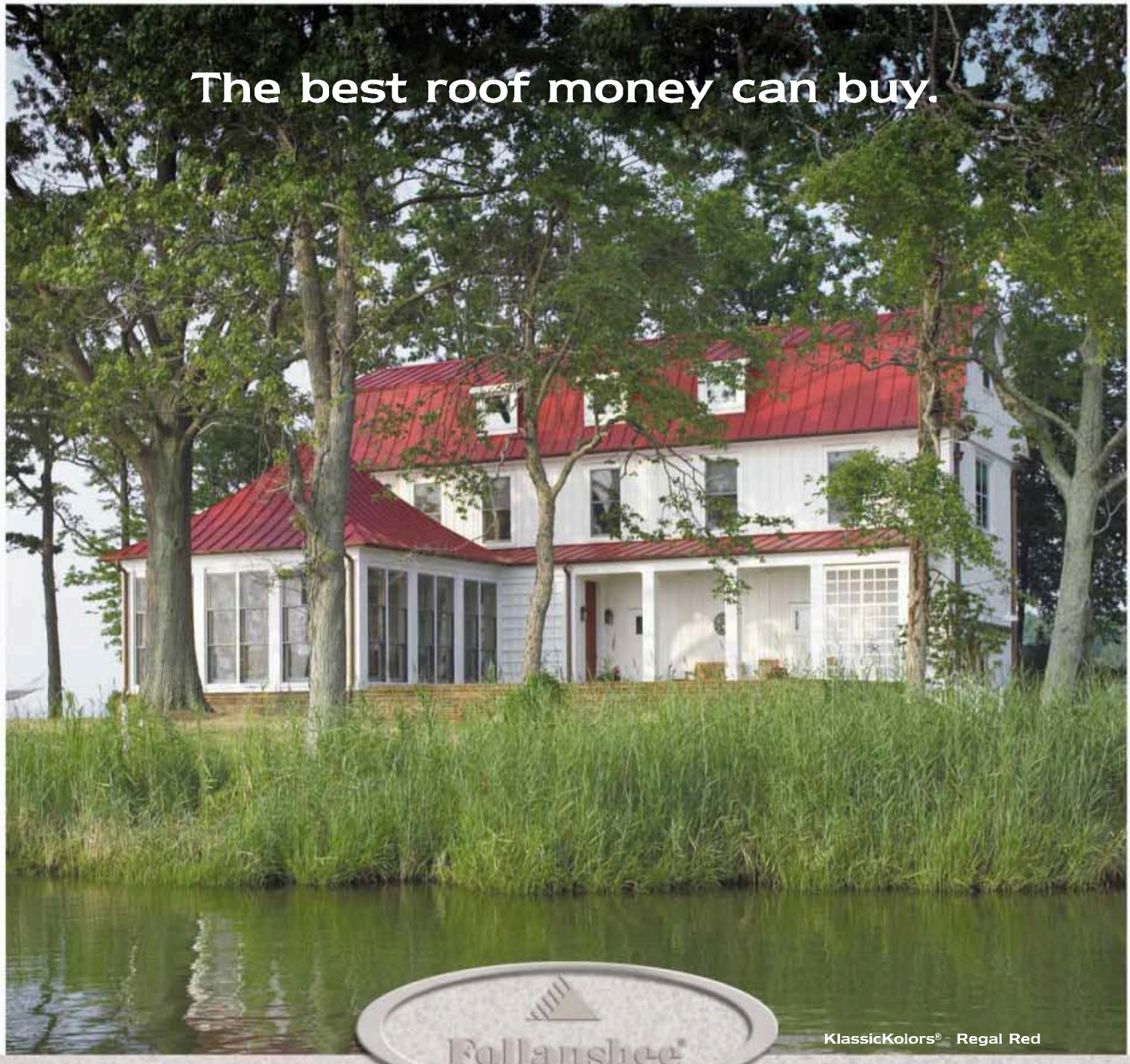

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Snapshot

By Robert Such

An improbable cafeteria provides lunchtime escape

Nicknamed for the James Bond film *Octopussy* and for its resemblance in plan to the shape of a spider, the Octospider workers' cafeteria stands 26 feet above a lake on an expanding campus of factories, warehouses, and workers' housing on the outskirts of Ratchaburi, west of Bangkok.

The Ian Fleming story that was immortalized by Roger Moore in 1983 "reflects the essence of the building," says Oliviero Godi, who along with Dorit Mizrahi is a principal of Exposure Architects, the Italian practice behind the cafeteria design. Like *Octopussy*, says Godi, Octospider is "an improbable [creative work] sprung out of a fervent imagination." Indeed, the building brings to mind the fantastic headquarters of some of 007's arch rivals.

Designed for the Satin Textiles Company, the cafeteria, which can serve some 300 workers, embodies the ideals of Satin Textile managing director Schle Wood, who, says Godi, "insisted on providing his employees with a better working environment as a fundamental part of his vision for a modern industrial operation."

PHOTOGRAPHY: © ROBERT SUCH

Supported by concrete pillars, three pierlike dining areas extend out over the lake. Access to the cafeteria and the kitchen is provided by a shallow ramp that arcs across the water and then flattens out as it passes through the building. The sense of lightness found in traditional rural architecture—canopied structures that provide shade from the beating sun and shelter from heavy rains—influenced Octospider's architecture, which also incorporates louvered walls to allow cross ventilation. And the slanted piles that support the crescent-shaped walkway mimic bamboo, enabling the ramp to blend in with its surroundings.

The extended walkway and elevated structure were conceived "to provide workers with a unique environment, where they do not feel as though they are inside the factory for the brief time they spend eating," explains Godi. And as diners enjoy this privileged vantage point, rising above the reality of the factory below and looking out across the landscape, they are also being observed by the workers on the ground.

Exposure Architects' building demonstrates the firm's sensitivity to Thai architecture and landscape. At the same time, it serves as a stagelike venue where taking time out to eat provides escape from the daily work routine and becomes an enjoyable actor-spectator experience. ■

A gently sloping ramp arcs over the lake and transports factory workers up to the Octospider cafeteria where, soaring above the fray, they find a welcome respite in the middle of a long day.

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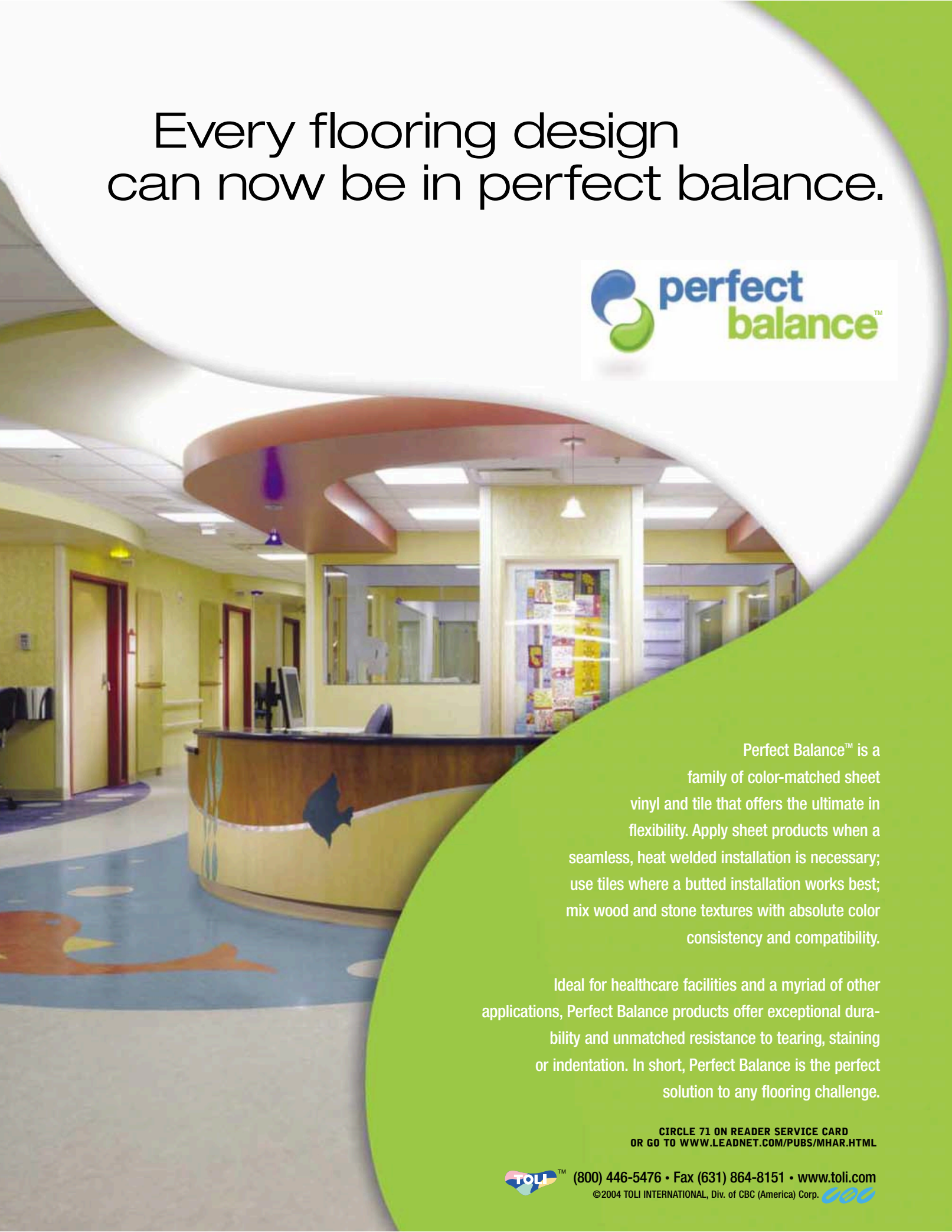

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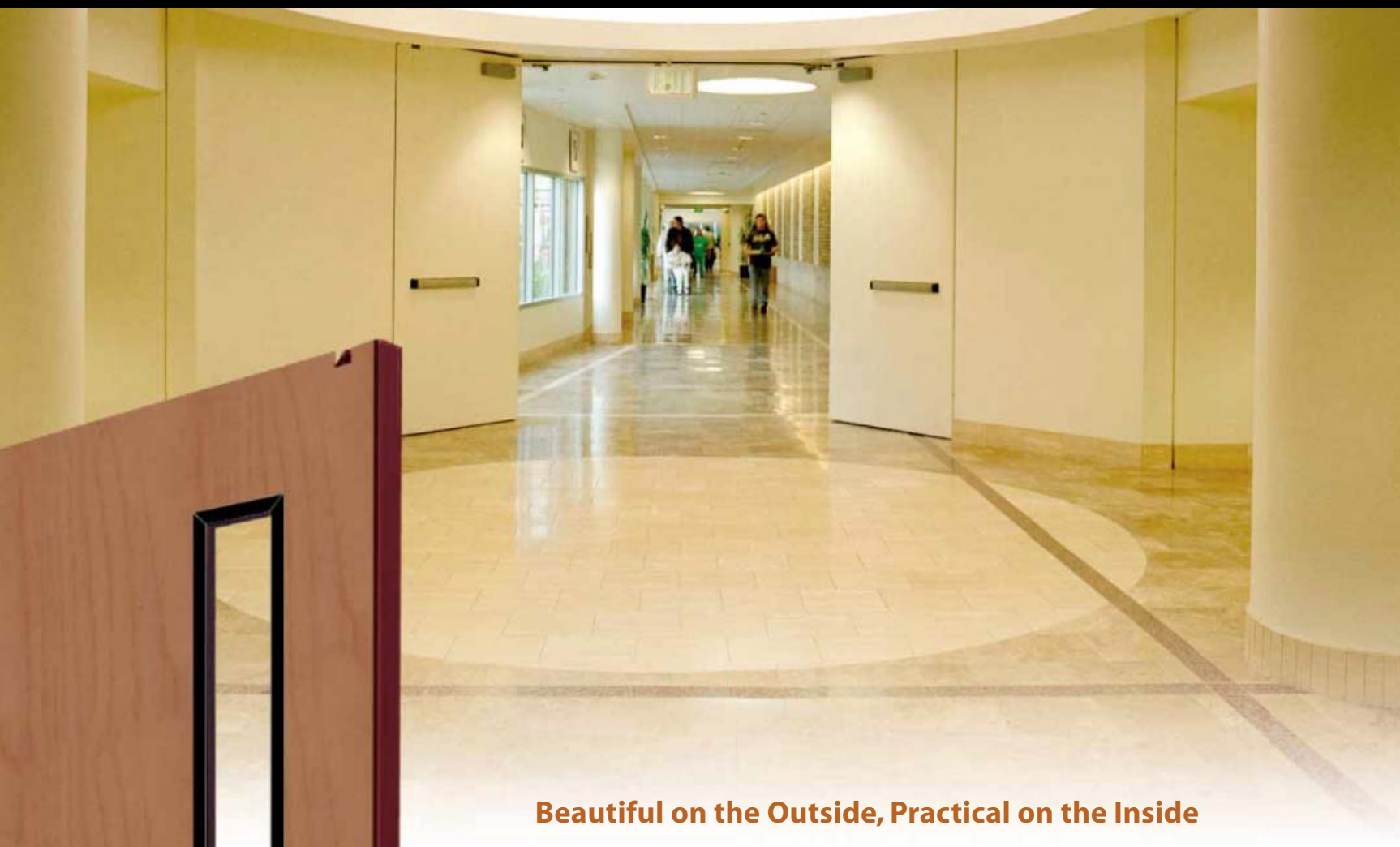

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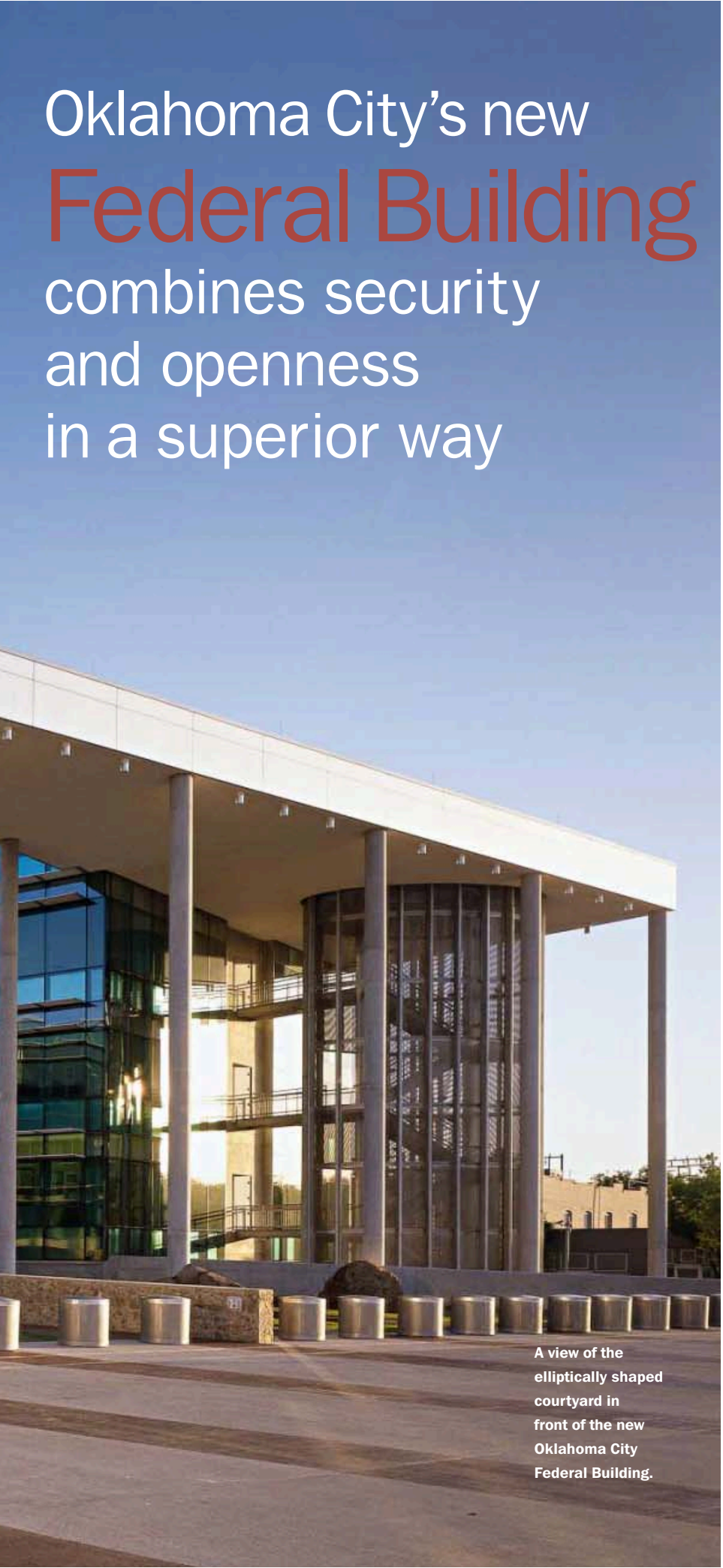
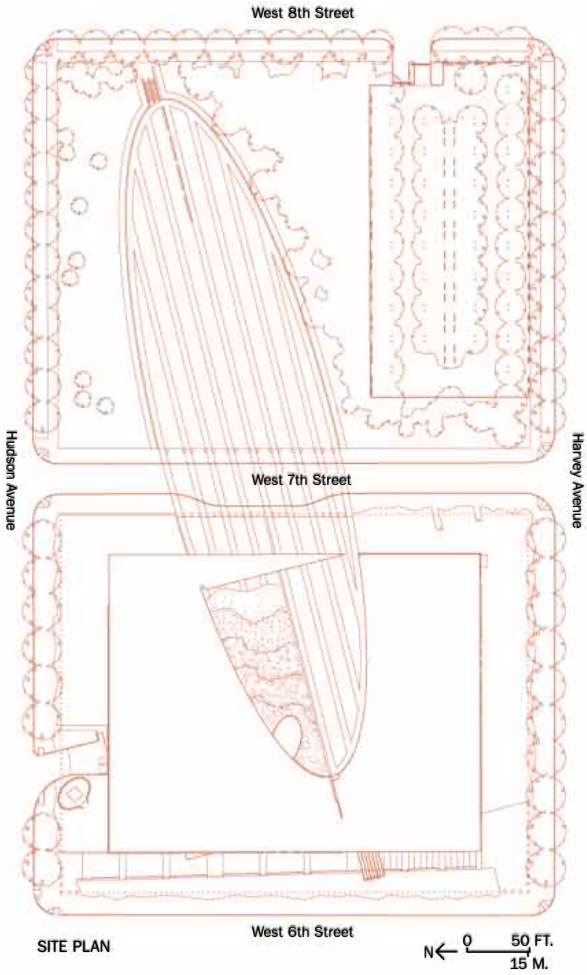


A view of the elliptically shaped courtyard in front of the new Oklahoma City Federal Building.



By Jane C. Loeffler

The Oklahoma City Federal Building makes a strong and welcome statement of federal purpose in a place that will always figure in our collective memory. It replaces the nine-story Alfred P. Murrah Federal Building that collapsed in a terrorist bombing on April 19, 1995. Aimed at the federal government, that attack killed 168 people and was the worst such incident on U.S. soil when it occurred. We are just beginning to see the impact of that blast and that of the more recent 9/11 attacks on the civic landscape. In that context, the federal building is significant as a major public project that manages to combine necessary security with design excellence.

Given the fear that gripped federal workers in the aftermath of the bombing, and the realization that the unhardened design of the previous building had left occupants at risk, security imperatives easily could have overwhelmed the design of any replacement building. They did not because the U.S. General Services Administration (GSA), which oversees all federal-government construction projects, had determined that the new building would not be a memorial but a fully functioning state-of-the-art building. (A poignant memorial, designed by Hans and Torrey Butzer and Sven Berg [ARCHITECTURAL RECORD,

Jane C. Loeffler is an architectural historian in Washington, D.C., who writes frequently on embassy design and public policy.

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The building occupies the southern end of the site (this page, above), nearest downtown. Artist Brad Goldberg's boulder-strewn water sculpture takes up one half of the courtyard (opposite, bottom). A public park is located on the block to the north of the building (opposite, top).

July 2000, page 28], was dedicated on April 19, 2000, on the site where the Murrah Building fell.) When the GSA awarded the high-profile commission to Ross Barney + Jankowski Architects of Chicago through its Design Excellence Program, the intent was to make the building forward-looking, but not fortresslike.

When the GSA's chief architect Ed Feiner describes the new building as "a commitment building," he's referring to the fact that the GSA could have permanently moved workers to another area, or leased space somewhere, rather than replacing Murrah with a new government-owned building here. In the aftermath of the bombing, Ron Norick, who was then Oklahoma City's mayor, headed to Washington to meet with President Clinton at the White House. There, he stressed that "it was vital to keep the federal presence in the downtown area."

A replacement for the Murrah Building was deemed essential as a way of jump-starting redevelopment in the area of the blast, and a means to keep scores of federal jobs in the city, argued Norick. "I knew if they didn't build the building, they'd be moving many or most of the jobs to Dallas or Kansas City or someplace else," he declared. Norick's mayoral successor Kirk Humphreys reiterated this, adding, "The federal government had no clear identity without a building." In a remarkable display of bipartisan unity, led by staunch Republicans, who ironically represent a constituency that harbors strong antigovernment sentiments, Oklahoma's elected officials backed a new federal building as a much-needed symbol.

Any new workplace really had to lure back reluctant workers after the bombing. According to Norick, tenants who survived the attack "just wanted to get out of town." HUD workers, for example, who relocated to an old shopping center, liked it there and wanted to stay in the convenient, inconspicuous structure, which had free parking. To win back the confidence of former tenants, GSA decided to exclude law-enforcement agencies from the new building. Coupled with the evident security engineered into the structure, these decisions convinced most (if not all) tenants to return to the city-center site.

According to Leonard C. Murphy, who supervised the $40 million project for GSA, "We knew we didn't want to build a bunker, and also that we wanted a building that invited the public." For architect Carol Ross Barney, FAIA, this challenge meant finding a design solution that would look, feel, and be secure, but one that would also welcome visitors and encourage engagement with the larger community. Because former Murrah tenants did not want anything tall, she started out thinking in terms of a campuslike arrangement of low structures. Unfortunately, as one block of the planned-upon three-block parcel was unavailable, she decided on a single, three-story structure paired with a public park on two blocks. Instead of pushing the building to the far end of the site, where it would have seemed more imposing and remote, she pulled it as close as possible to the south end, near downtown. That means it is clearly visible from the memorial, but it does not upstage it in any way.

A NEW BUILDING WAS ESSENTIAL TO JUMP-STARTING REDEVELOPMENT IN THE BLAST AREA.

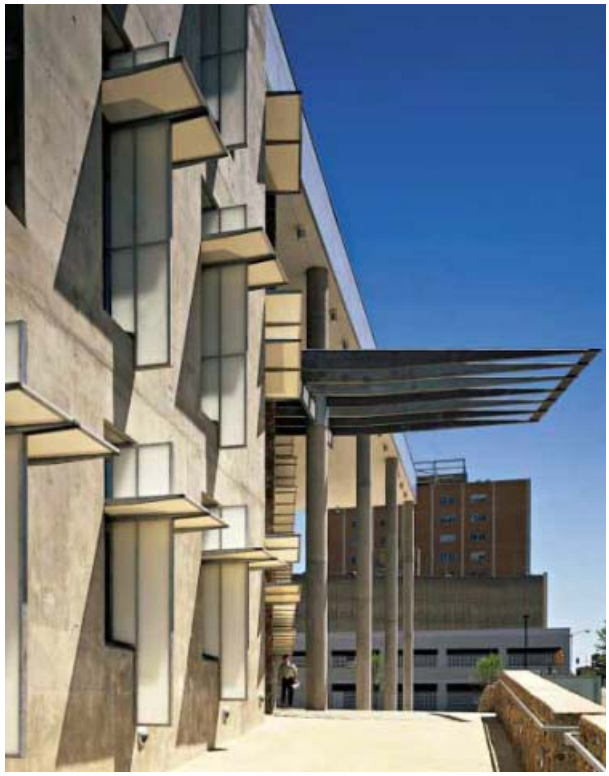
It also means that the memorial, a shallow reflecting pool and a field of 168 empty chairs, is visible from the building—a potentially uncomfortable reminder to federal

PHOTOGRAPHY: © STEVE HALL/HEDRICH BLESSING

workers. That prompted the installation of floor-to-ceiling window coverings in all of the offices. But workers say this concern turned out to be unfounded, as no one at the new building is closing the blinds to block the view of the memorial. Even in the offices and conference rooms occupied by HUD, the agency most affected by the Murrah attack, workers prefer to keep the shades open—evidence, they say, of their comfort level in the new building.

To augment openness, Ross Barney gave the 181,000-square-foot, U-shaped building two equally accessible "fronts," each with its own personality. Facing south to the downtown (and also the memorial), the building takes a formal stance. A soaring colonnade and concrete walls punched with windows line up with city streets—homage to the grid on which Oklahoma City was laid out in the land rush of 1889. Facing north, however, to a less densely settled and newer part of town that promises to see rapid development over the next decade, a visual drama unfolds. Here the building opens up completely to reveal a stunning courtyard featuring a glass curtain wall that partially encircles an installation of cascading red granite boulders. The rocks, gathered from a bison farm in the hills of western Oklahoma, were selected and arranged by landscape sculptor Brad Goldberg as part of GSA's Art in Architecture Program. Coming upon the courtyard is like is opening a jewel box and finding an unexpected gem.

Light shelves and sunshades protect windows on the south elevation (right). Lobby walls are covered with a veneer of local creek stone (below).



SITE FEATURES HERE EXPRESS ROSS BARNEY'S BELIEF THAT "BUILDINGS ARE ROOTED IN THEIR PLACE."

Beyond the courtyard is a park planted with trees on one side to evoke the Oklahoma woodlands and with native grasses and wildflowers on the other to evoke the prairie. A surface lot that keeps unscreened parked cars at least 100 feet from the building—a security requirement—lies beyond the park, in the northeast corner of the site. Ross Barney inscribed an elongated ellipse in the landscape, a dramatic device that ties together the two-block site. She extended its geometry into the building, integrating the park seamlessly with the architecture. From the air, the ellipse, with its alternating stripes of crushed red stone and green grass, makes the new landmark easy to spot. Others can debate whether or not that is a good idea, but for a visitor approaching on foot, the stripes simply lead the eye to the most striking portion of the building.

Describing her fascination with everything from the texture of local rocks (incorporated into a remarkable wall veneer that resembles an archaeological excavation) to the elliptical shape of ceremonial grounds used by Native American Indians (the inspiration for the ellipse), Ross Barney emphasizes her belief that "buildings are rooted in their place." Stuart O. Dawson of Sasaki Associates; artist Douglas Hollis's 46 star-shaped, stainless-steel benches symbolizing Oklahoma's entry into the Union as its 46th state; and artist Goldberg's sculpture, whose boulders seem to have arrived self-propelled from the Washita Mountains, aid her ably in connecting the architecture to its locale.

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What also ties the site together are the steel bollards, some illuminated at night, that ring the perimeter and separate the building from vehicular traffic. Compared to the massive Jersey barriers that surround public buildings elsewhere, these are not intrusive, and most are likely to be at least partially obscured by the native grasses that have yet to establish themselves on the site. (The landscape architect, though, says the intent was never to hide them.) Video cameras mounted on poles near the perimeter provide the building's first line of defense.

Blast-resistant design by Weidlinger Associates and a structural system engineered by The Benham Companies of Oklahoma City provide a second line of defense. Given GSA's stringent force-protection requirements, Jim Reynolds, who served as project architect for Benham, is understandably proud of "the concrete two-way slabs that permit the high ceilings and open, unobstructed interiors"; the "wall columns" that permit the large windows; and the stone veneer, devised in collaboration with Ross Barney so that individual stones will not become projectiles in the event of an explosion. To minimize further risk of injury in the event of a blast, the architects selected panels of insulated laminated glass bonded to steel frames with structural silicone. The window units are manufactured by the same company that fabricated replacement windows for the Pentagon.

Undoubtedly, one of the most welcoming features of the building is the entry arrangement that allows people to walk into the small lobby atrium from either the north or south "front" entrance without having to pass through security. By having both entrances feed into one lobby, Ross Barney allowed the same guards to monitor both doors. And she created an inviting lobby open to the public, where colored light pours through a skylight of dichroic glass, then through glass bridges connecting the floors above. Security screening occurs in adjacent areas where the walls are made of polished steel for strength, and to set them apart as transition zones between the lobby and offices beyond.

PEOPLE CAN ENTER THE BUILDING'S LOBBY WITHOUT HAVING FIRST TO PASS THROUGH SECURITY GATES.

A daylighting system will make interior electric lights unnecessary much of the time. Features include sunshades or shelves (made of fabric and framed in aluminum) that allow the building to screen out sun and glare and "harvest daylight," as Ross Barney puts it. Heat and air-conditioned air are distributed using an underfloor distribution system that enables planning flexibility.

Unlike John Johansen's Mummers Theater (1970), an Oklahoma City landmark that always pleased architectural cognoscenti elsewhere but never won local acclaim, the new federal building is already recognized as an asset. Downtown OKC Inc. lists it along with the other urban redevelopment projects, including the popular Bricktown, that have totally transformed the southwest capital since the early 1990s—a sign that a grateful city has already embraced it as part of its future. ■

Visitors can actually enter the building's small lobby from either end before going through a single security area (top). Laminated-glass footbridges (right) allow people on upper floors to pass from one side of the building to the other.

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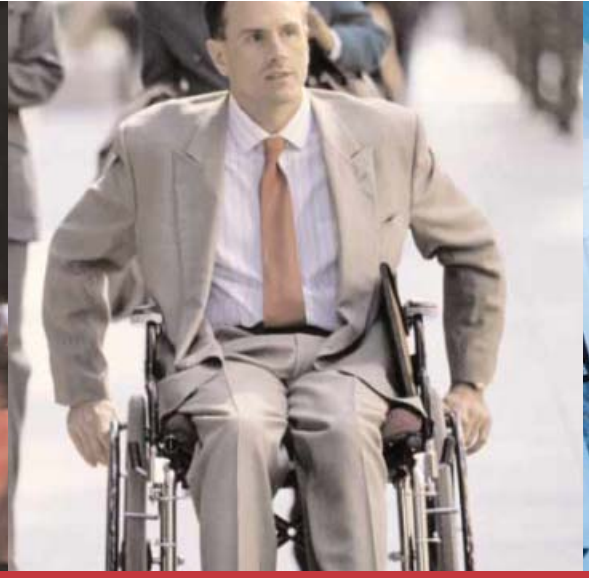

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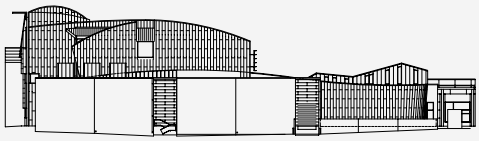

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Museum Quartet

Four designs bring a new voice to the debate over what a museum should be

1. **Brooklyn Museum**
   Polshek Partnership
2. **Aomori Contemporary Art Center**
   Tadao Ando Architect
3. **Museo Picasso Malaga**
   Gluckman Mayner
4. **Danish Jewish Museum**
   Studio Daniel Libeskind

PHOTOGRAPHY: © RICHARD BARNES (1); MITSUO MATSUOKA (2); DAVID HEALD (3); BITTER BREDT (4)

By Robert Ivy

Given the large number of pages devoted to contemporary museum design by the architectural press, you might wonder why ARCHITECTURAL RECORD is devoting more attention to the subject. Haven't we seen enough? Yet museums continue to proliferate across the international landscape, leading to the conclusion that, post-Bilbao, every municipality seems to want a smash.

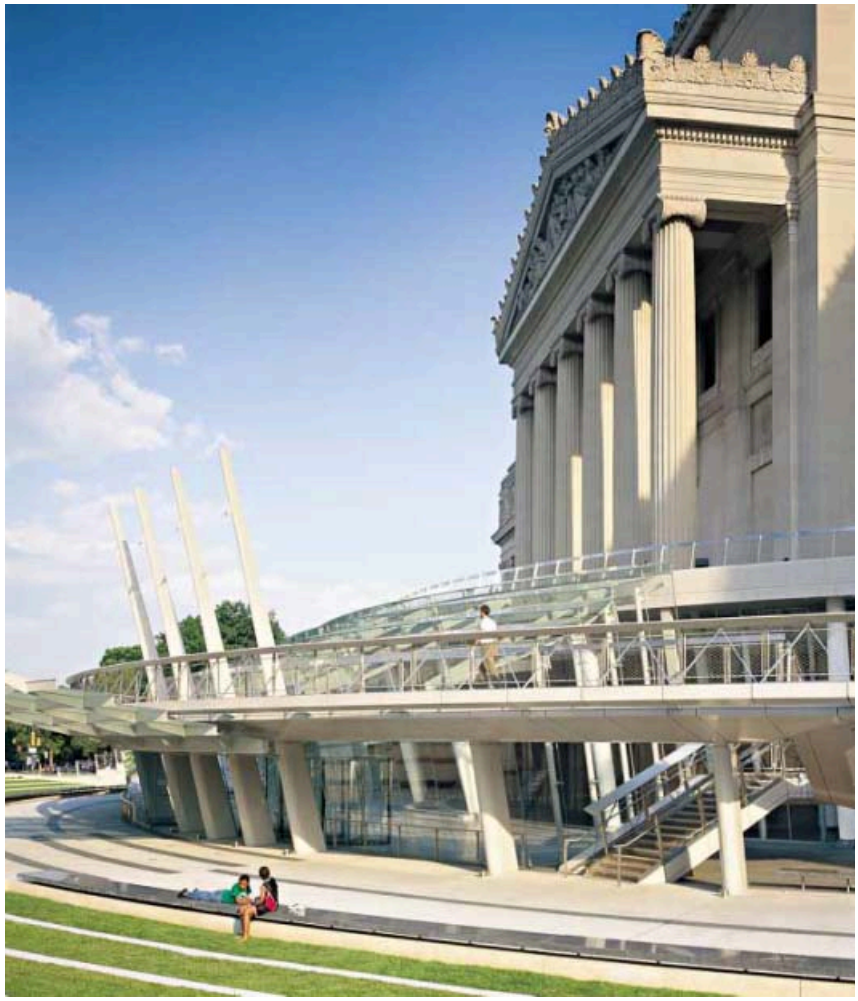
Once clearly designated by function, primarily as repositories of discrete objects, museums are no longer constrained by familiar labels, allowing them to continually cross the line between traditional disciplines: The art museum doubles as civic emblem and as front porch, and the museum of history serves as interpretive center. Museums carry unstated semiotic messages, whether of politics or ethnic heritage. These formerly all-public institutions now actively court private partnerships. Purists may fume at a perceived weakening of standards, while museum directors eagerly seek new ways to attract the public, and mayors dream of potent new urban symbols.

Today, the museum-world debate centers on the institution's posture toward contents: Should the physical envelope provide a passive background for the ideas or artwork within, or should a museum (and its architect) emote or speak in its own architectural language? Directors, patrons, and architectural professionals are continually experimenting with a range of expressions.

Like other human institutions, museums are evolving. In a recent conversation with RECORD, the architect Daniel Libeskind asserted that museums are growing toward an important, as-yet-undefined new purpose, engaging a broader public and finding a new voice. The projects that follow demonstrate the ability of museums to reinvigorate existing structures and the surrounding landscape with new meaning. We will be covering other major examples in the months ahead, in a trend that continues to surprise.

A new entrance by the **Polshek Partnership** opens the treasures of the **BROOKLYN MUSEUM** to a new generation of viewers

By James S. Russell, AIA



For most museums, a new entrance is no big deal. But the 5,000-square-foot crystal arc that's just been added to the Brooklyn Museum is much more than a doorway: "This openness and transparency is about getting people to feel that they belong," said Arnold Lehman, the museum's director, in an interview.

Not long after he joined the museum seven years ago, he brought his wife, who took one look at the building's magnificent but fortresslike facade and declared it "like a ministry on a ring road in Moscow." The towering, 260-foot-long granite and limestone facade represented the apogee of the borough's gilded-age urban ambition (page 119). Over time, Brooklyn grew more industrial, more ethnically diverse, then poorer. Many of the great collectors moved on; visitors felt dwarfed in the vast, echoing spaces.

Lehman's ambition is to reflect the borough's vibrancy within these massive walls. He is trying to draw in its staggeringly diverse communities, especially those brimming with people who have never considered museumgoing a habit worth developing. "For generations, this building has signaled that it is about a specific group of people who know how to navigate it, who know how to interpret things."

Marrying the 19th century with the 21st

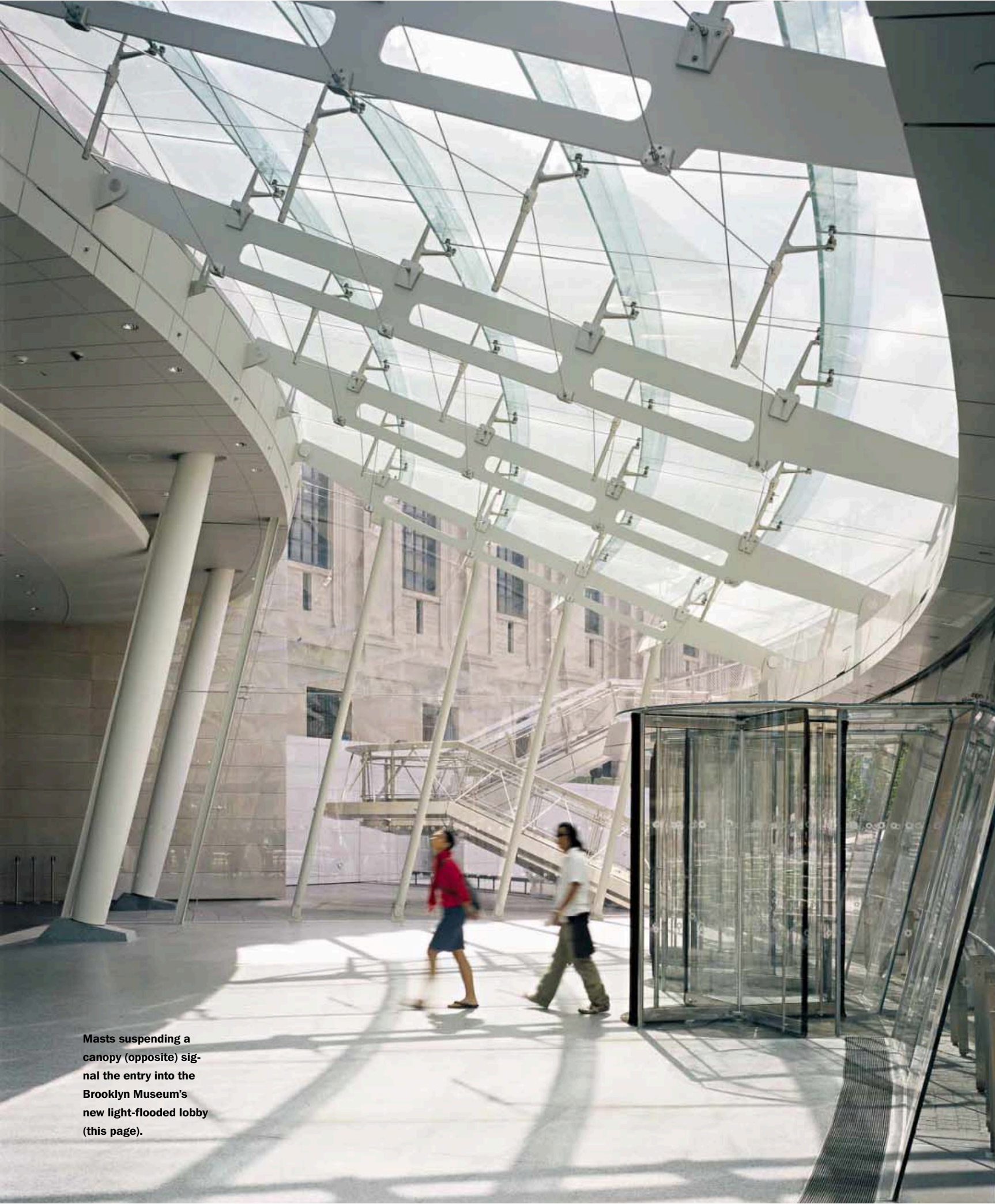
For James Stewart Polshek, the creation of an inviting entrance went beyond rectifying the crude removal, in 1934, of the museum's original entrance stair. It meant that the massive facade had to open up, admit light, and make passersby curious about what lies within. "And yet I couldn't ignore or make a mockery of what was there," he said. "We had to match in a 21st-century way the 19th-century excellence of the McKim, Mead and White design."

The transparent entry-pavilion design, with its stepped roof a "ghost" of a vanished grand stair, drew skeptics. Wouldn't the design simply create a bigger hole in a facade that needed stitching together, not additional amputation? Some historic preservationists lobbied for restoration of the old stairway. Lehman and Polshek rejected that option. "The original stairs were double the height of the staircase at the Metropolitan Museum," Polshek explained. "It's much higher than we could expect people to comfortably climb. And you couldn't easily create access with dignity for older people or those with disabilities." Added Lehman, "We don't think you should have to ascend to art."

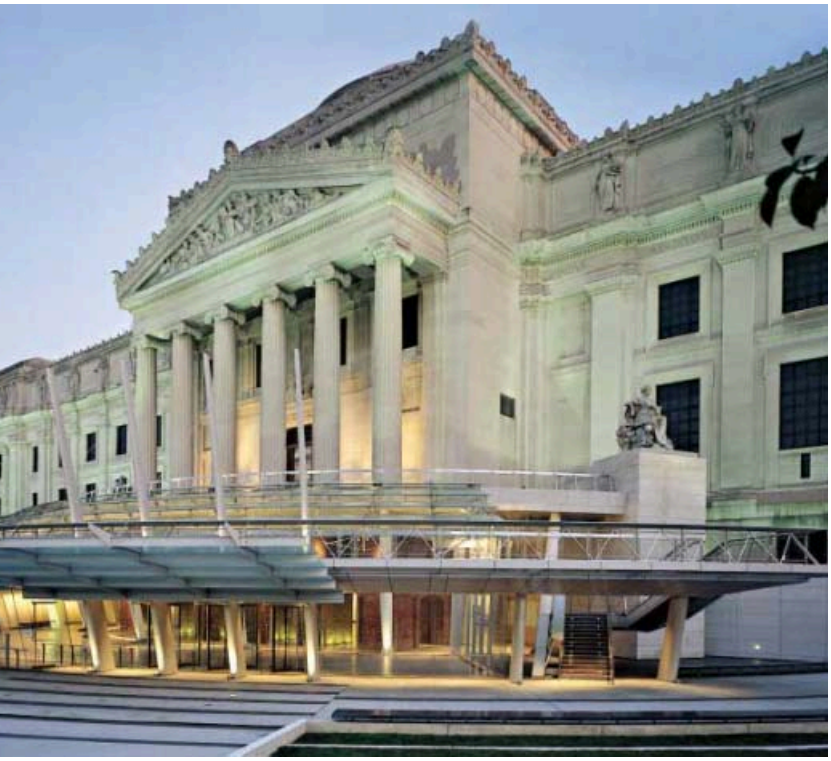
In drawing a broad arc in plan, then crossing it with a radial oriented to a subway entrance, the architect shifted the old frontal doorway to face the direction from which most people would enter (plan, page 122). The Museum and Polshek persuaded the transit authority to swivel the subway stair to face the museum. Polshek added benches and shade trees that attract mothers with toddlers and teenagers seeking a quiet place to

Project: *Brooklyn Museum Entrance Pavilion and Plaza, Brooklyn, N.Y.*
Architect: *Polshek Partnership—James S. Polshek, FAIA, Duncan R. Hazard, AIA, Don Weinreich, AIA, Robert D. Young, AIA, David E. Tepper, R. Craig Mutter, AIA, Robert S. Condon, AIA*
Consultants: *Robert Silman Associates (structural); Jaros Baum & Bolles (m/e/p);*
Contractor: *Bovis Lend Lease*

PHOTOGRAPHY: © RICHARD BARNES



Masts suspending a canopy (opposite) signal the entry into the Brooklyn Museum's new light-flooded lobby (this page).



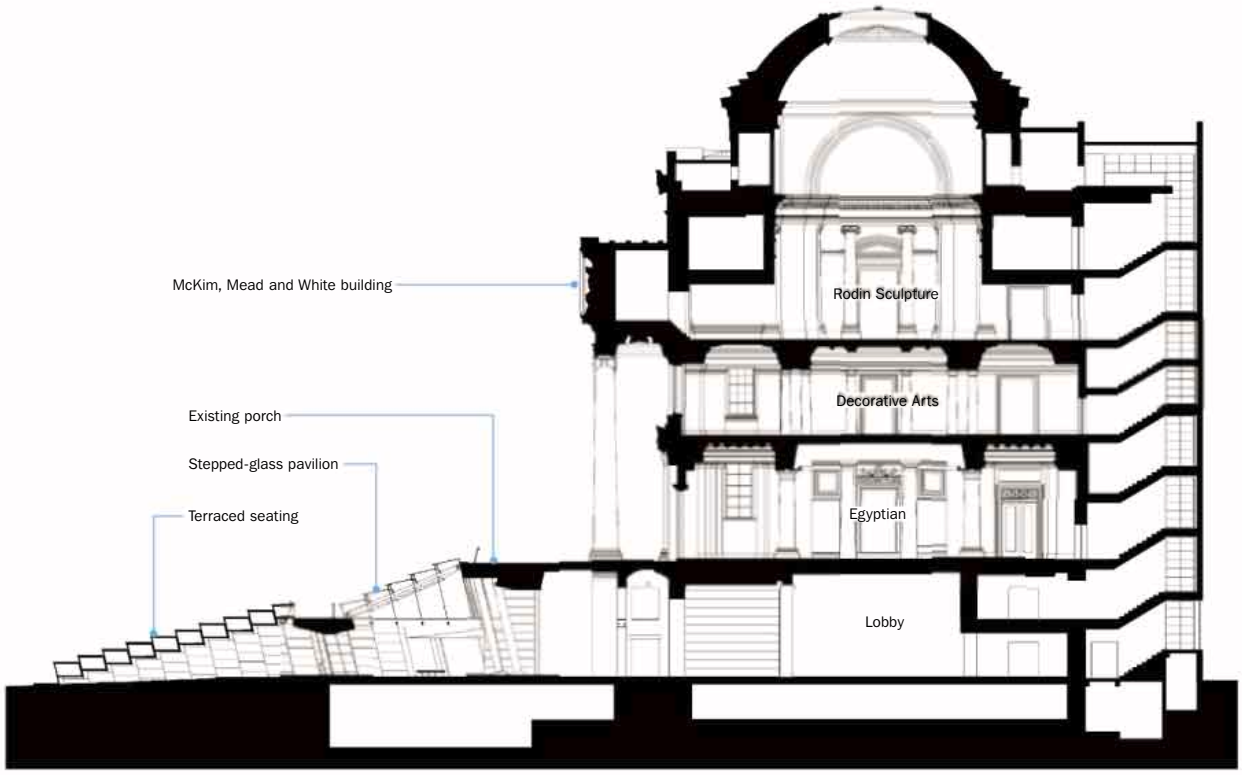
read. An amphitheater ascends the northeast quadrant of the arc, beckoning passersby from the opposite direction to take in the theater of the street with its sun-bathed steps and the impish fountain by WET Design. "Arnold asked for a great public space," explained Duncan Hazard, Polshek's managing partner. "This is the museum's gift to the city."

As built, the entrance could never be thought the empty void the critics feared. The "water white" glass of the curving wall under the roof cants outward to make the facade reflection-free, inviting people to check out the activity within. At the top of the amphitheater, a walkway over the entrance—the architects call it a *passerelle* (footbridge)—begs to be explored. From the walkway, people peer inside, their reflections bobbing along the vertical strips of glass in the roof. Those within stare back, or follow the roof walkers' reflections, which multiply, flutter, and evaporate. This quiet bustle doesn't mean the grand old building gets lost. As you enter, your gaze is actually drawn upward to the massive pilasters and entablature of the old facade. The museum no longer acts as if it has permanently hauled up its drawbridge.

Advertising Brooklyn's new vibrancy

Within the light-filled lobby, Polshek's team displayed the brick piers that support the massive portico above. Visitors feel this evocation of ancient Roman monumentality as they make their way through the narrow passages between the piers to the spacious, double-height lobby. "We contrasted the basic primitive mass of the brick piers with the technical

The great porch (below) is not open to the public, but it has been preserved. Behind the "two-story" facade lies five intricately worked levels (section, right). The pavilion occupies what was once a driveway fringed with scrubby grass. Polshek has added a wood-clad stepped amphitheater (opposite, top). Near the door, shaded benches welcome passersby. The low, curved planters leave a clear vista into the glass pavilion (opposite, bottom).



SECTION LOOKING EAST

FROM GRAND CIVIC PALACE TO GILDED-AGE SURVIVOR

Brooklyn may have looked bucolic as the first wing of what was then called the Brooklyn Academy of Arts and Sciences rose in 1898 (top). Its gigantic portico and mighty dome promised the likes of the Louvre, the British Museum, the Hermitage—in short, a grand civic palace. But Brooklyn, instead, became gritty Flatbush Avenue and industrial Red Hook, famous for the Dodgers and Coney Island rather than Degas and Corot. Only a sixth of the museum's Beaux Arts plan, by McKim, Mead and White, was realized, from 1897 to 1915 (middle). The range of galleries running along the long main facade is backed by only one of four planned gallery-wrapped courtyards.

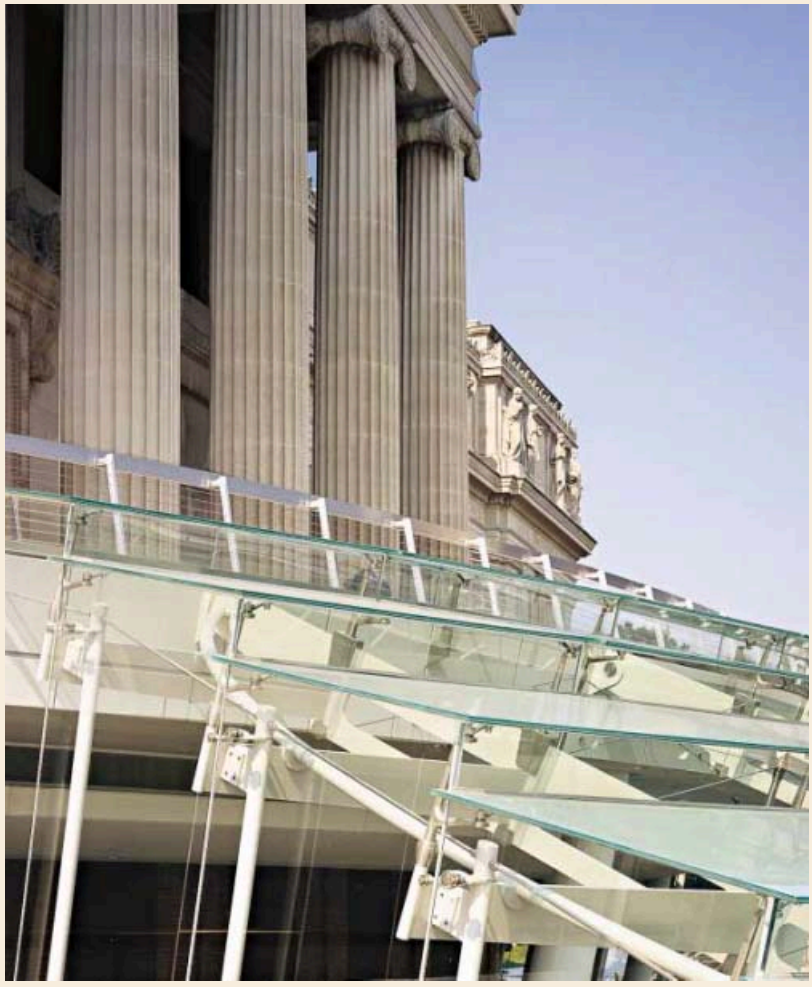
When constructed, three massive tiers of steps rose an intimidating 28 feet to the portico. Severely deteriorated by the 1930s, they were removed in 1934 and a new street-level entrance was punched through the portico base (bottom). Not only did it mar the facade, it delivered patrons into a dimly lit no-man's-land: "What used to be the back of the auditorium," said Lehman. *J.S.R.*

It took "about a zillion" tries to detail a "jewel-like necklace"

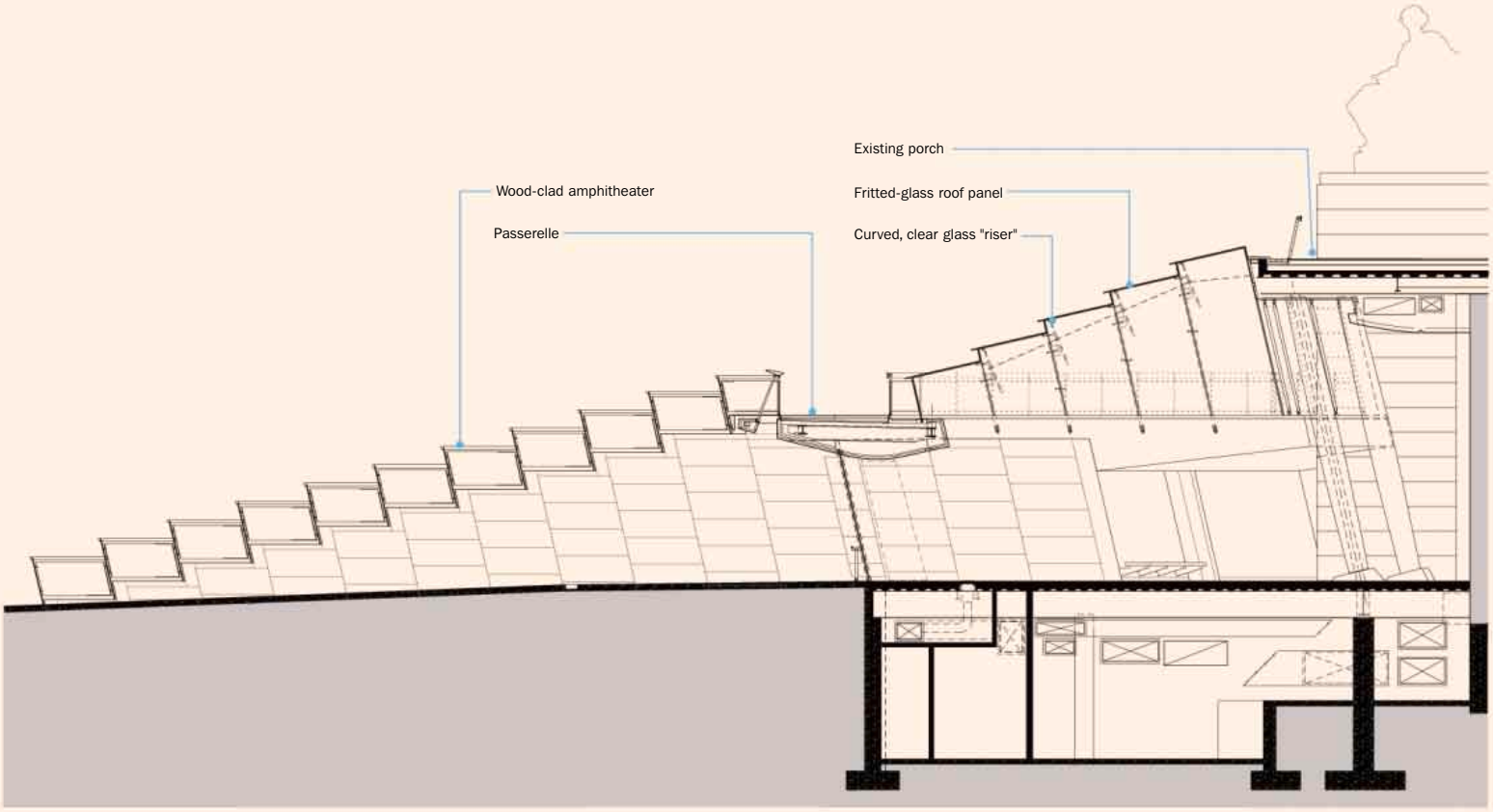
How to make an entrance that is transparent yet substantial enough to hold its own against the original building's grandeur? The inspiration came, said Duncan Hazard, Polshek's managing partner, from Pennsylvania Station, a demolished masterpiece by McKim, Mead and White, the museum's original architects. "The glass-and-steel train shed wedded to the great Roman temple in front was a wonderful combination," he explained.

Polshek collaborated with Dewhurst MacFarlane, engineers specializing in glass construction. "Though they would have liked nothing better than to build the whole structure out of glass," explained David Tepper, a project architect at Polshek, "we preferred a combination of steel and glass because it made a richer reference to the Beaux Arts tradition." No obvious solutions presented themselves, however. "The hybrid nature of this structure was its biggest challenge," adds Tepper. "It was difficult to quantify and difficult to analyze." Asked how many iterations were studied, Hazard replied, "About a zillion."

As built, thin steel rafters radiate from the existing building and support the fritted-glass roof panels. Curved 1-foot-high transparent glass panels act structurally as beams and visually as the roof steps. TriPyramid Systems, a company that has turned yacht-hardware expertise to the design of elegant glass-wall supports, devised the fretwork of cables, fittings, and stainless-steel king posts that tensions the flangeless metal rafters. At the sides of the glass shed, the designers introduced horizontal trusses into the roof-support system, laterally "suspending" the tensioned beams in between. Polshek compares the entry's "jewel-like" construction to a necklace. *J.S.R.*



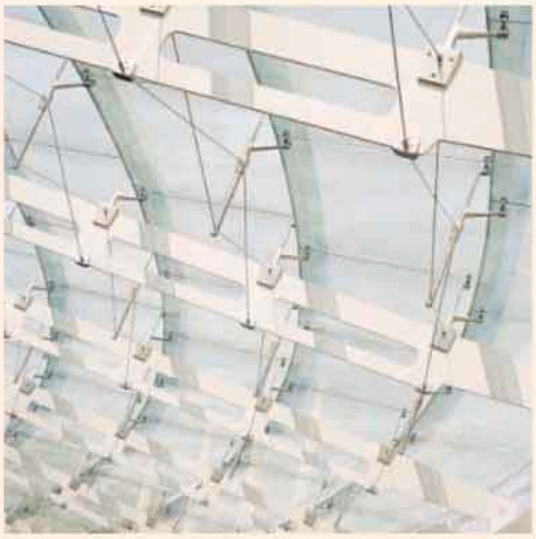
PHOTOGRAPHY: © RICHARD BARNES, EXCEPT COURTESY BROOKLYN MUSEUM (HISTORIC PHOTOS)

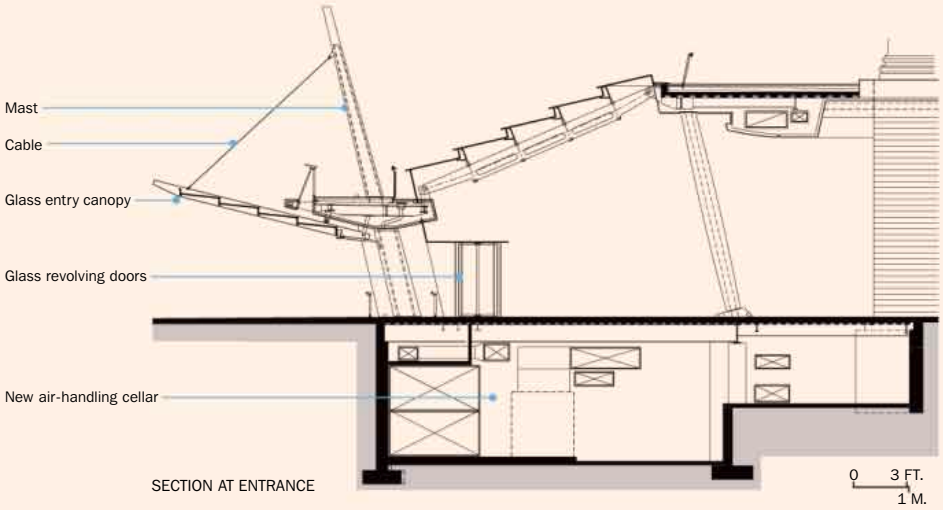


SECTION AT AMPHITHEATER

0 3 FT.
1 M.

Fritted glass clads the pavilion's stepped shed (opposite, right). The risers' curved, clear glass reflects those strolling the *passerelle* (near left). It invites visitors from the amphitheater (drawing, above). Masts suspend the entrance canopy via cables (drawing, below). Under the glass, stainless-steel cables and rods stiffen gray-painted metal rafters (bottom left). A horizontal arch anchors the glass-support assembly at each end (far left).



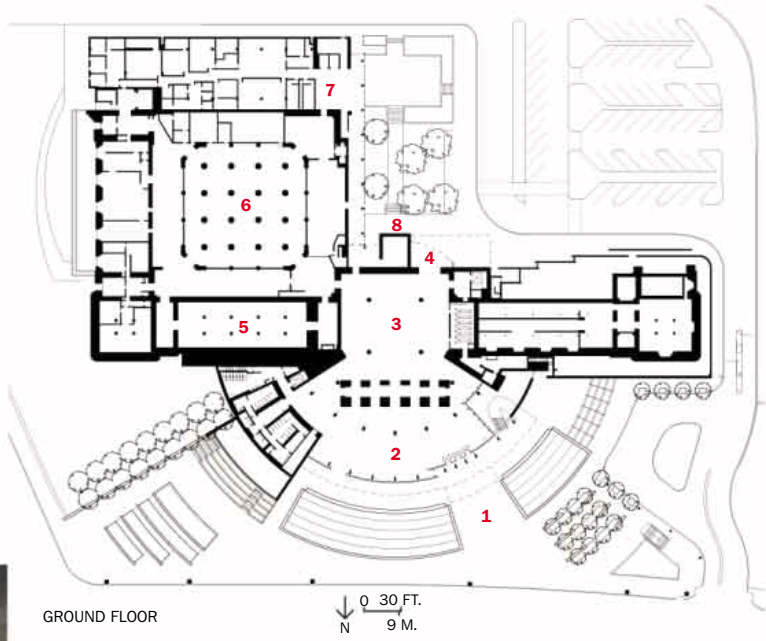


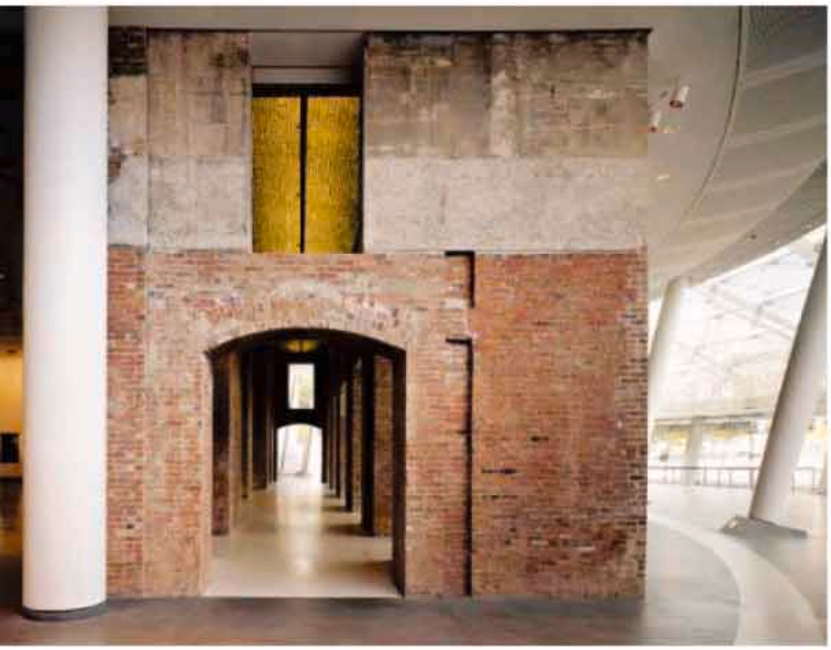
SECTION AT ENTRANCE

0 3 FT.
1 M.

Polshek's team revealed the massive masonry piers under the great porch (below). The pavilion's expansive interior fills during the museum's popular First Saturday (of each month) festivities (bottom). As well as inviting people in, it opens the the museum to the city (opposite).

1. *Entrance plaza*
2. *Entry pavilion*
3. *Lobby*
4. *Parking entry*
5. *Temporary exhibit*
6. *Exhibit*
7. *Existing main elevators/stairs*
8. *Future main elevators/stairs*





derring-do of the glass," explained Hazard. The angled end walls of the pavilion slice into this lobby behind the masonry, drawing daylight deep into the building.

The $63 million project included much unglamorous remediation. Yet-to-be-funded air handlers will fill space carved out under the entry pavilion. They will supply museum-quality climate control to the many galleries that are not yet air-conditioned. To separate pedestrian and auto movements, parking and drop-off areas were routed to the rear, where a second entrance was relocated so that all patrons will arrive in the remodeled main lobby. Nearing completion at press time, the lobby itself continues the public "invitation" that the entry promises by offering extensive guidance—both human and electronically interactive.

The Brooklyn Museum has much left to do. Realizing the potential of its extraordinary collections and its magnificent building will take more patience. (Polshek has been working there since 1986, when he and Arata Isozaki won a competition for a master plan.) But Brooklyn itself is changing rapidly, and Lehman sees the entrance as the most tangible advertisement of his agenda to link the museum's treasures with the life of the city. The inaugural exhibition for the new entrance, *Open House: Working in Brooklyn*, "celebrated the borough as a focal point for contemporary art in U.S.," explained Lehman. After all, he added, "The majority of New York artists now live and work in Brooklyn."

Lehman's team has also been reinstalling the collection and regrouping key works—such as 1,300-year-old Andean tapestries—in thematically decorated rooms. *New York Times* critic Michael Kimmelman found this art installation tasteless, but Lehman is unapologetic. "We have a huge opportunity with underserved audiences. That we provide the opportunity for people to look at art and relate to it in their own way is both the greatest challenge and the greatest reward." ■

Sources

Pavers: *Hanover; Liberty Marble*
Stone: *Branco Quartzo Granite; Indiana Limestone; Mesabi Black Granite*
Ipe wood deck: *Pau Lope*
Roofing, waterproofing: *Carlisle (built-up, elastomeric)*
Glass and skylights: *Pilkington (skylight and storefront glass); W&W Glass Systems (curved glass, revolving doors)*

For more information on this project, go to Projects at **www.architecturalrecord.com**.

PHOTOGRAPHY: ©

By Naomi R. Pollock, AIA

Filling the northern tip of Japan's Honshu Island, Aomori Prefecture is better known for apples than architecture. But the completion of Tadao Ando's Aomori Contemporary Art Center (ACAC) has helped to put the agricultural outpost on the proverbial architectural map. The country's first artist-in-residence facility, the ACAC is a serene haven where potters, printmakers, and other talented people come to hone their craft surrounded by nature.

While the ACAC needed an institutional presence, its built form had to be a blank canvas on which the artists could work and a benign intrusion that could meld with the landscape. To Ando, achieving these divergent goals called for an "invisible architecture" made of "pure geometric forms that are without a trace of arbitrariness." True to Ando's words, each of the three programmatic pieces—places for artists to work, display their art, and live—is housed in its own building, whose simple shape is neither jarring to the eye nor entirely inconspicuous. As a whole, the buildings' clean lines and quiet materials are at peace with their setting and underscore the natural beauty all around them.

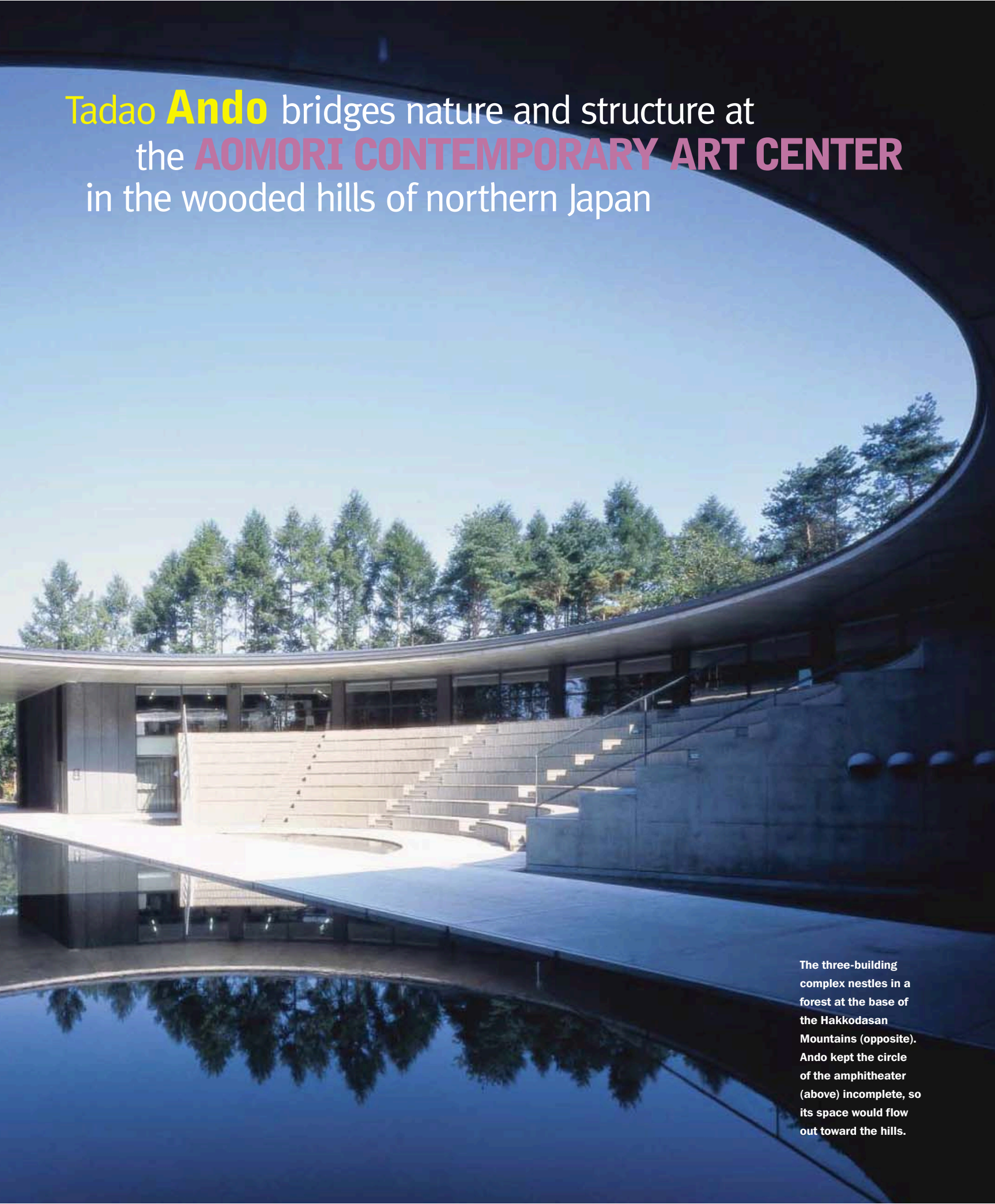
Located on the outskirts of Aomori City, adjacent to the Aomori Public College, the ACAC occupies a secluded, hilly parcel surrounded by forest. From November to March, the site is blanketed with snow, but in summer it blossoms with flowers and trees. Leaving behind the sight and sound of cars, a trellised arcade guides pedestrians from the road to the heart of the complex: a two-story, circular building that holds the gallery, amphitheater, and administrative offices. From there, the land slopes downward to the bar-shaped studio and the dormitory buildings.

Naomi R. Pollock is RECORD*'s special international correspondent in Japan and the coauthor of* Japan 2000: Architecture and Design for the Japanese Public.

Project: *Aomori Contemporary Art Center, Aomori, Japan*
Client: *Aomori City*
Architect: *Tadao Ando Architect & Associates—Tadao Ando, principal; Hironobu Wakayama, design team*
Engineers: *Kanebako Structural Engineers (structural); P.T. Morimura & Associates (mechanical/electrical)*
General contractor: *Takenaka Corporation, Marukisaitogumi Company, and Yamaguchi Corporation Construction joint venture*

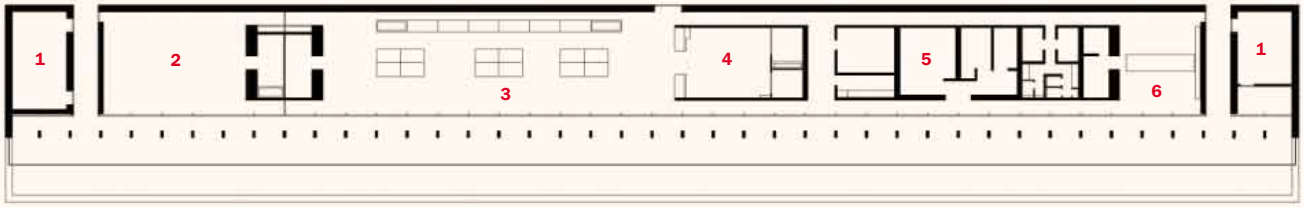
PHOTOGRAPHY: © MITSUO MATSUOKA, EXCEPT AS NOTED

Tadao **Ando** bridges nature and structure at the **AOMORI CONTEMPORARY ART CENTER** in the wooded hills of northern Japan

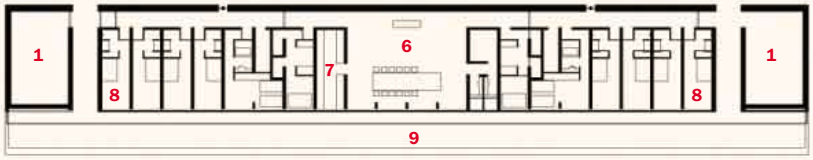


The three-building complex nestles in a forest at the base of the Hakkodasan Mountains (opposite). Ando kept the circle of the amphitheater (above) incomplete, so its space would flow out toward the hills.

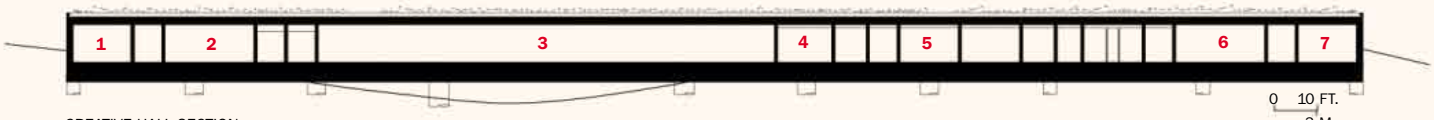
1. *Machine*
2. *Woodworking*
3. *Workshop*
4. *Printing*
5. *Editing*
6. *Dining*
7. *Kitchen*
8. *Bedroom*
9. *Terrace*



CREATIVE HALL

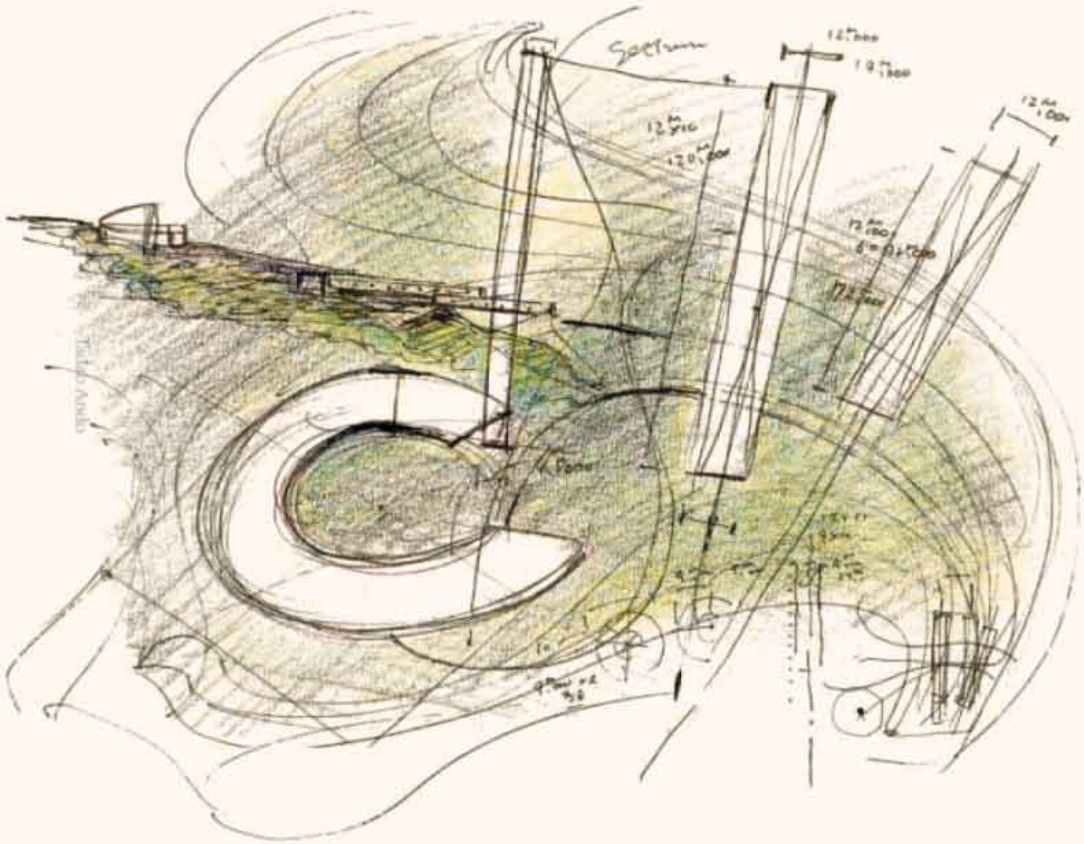


RESIDENCE HALL

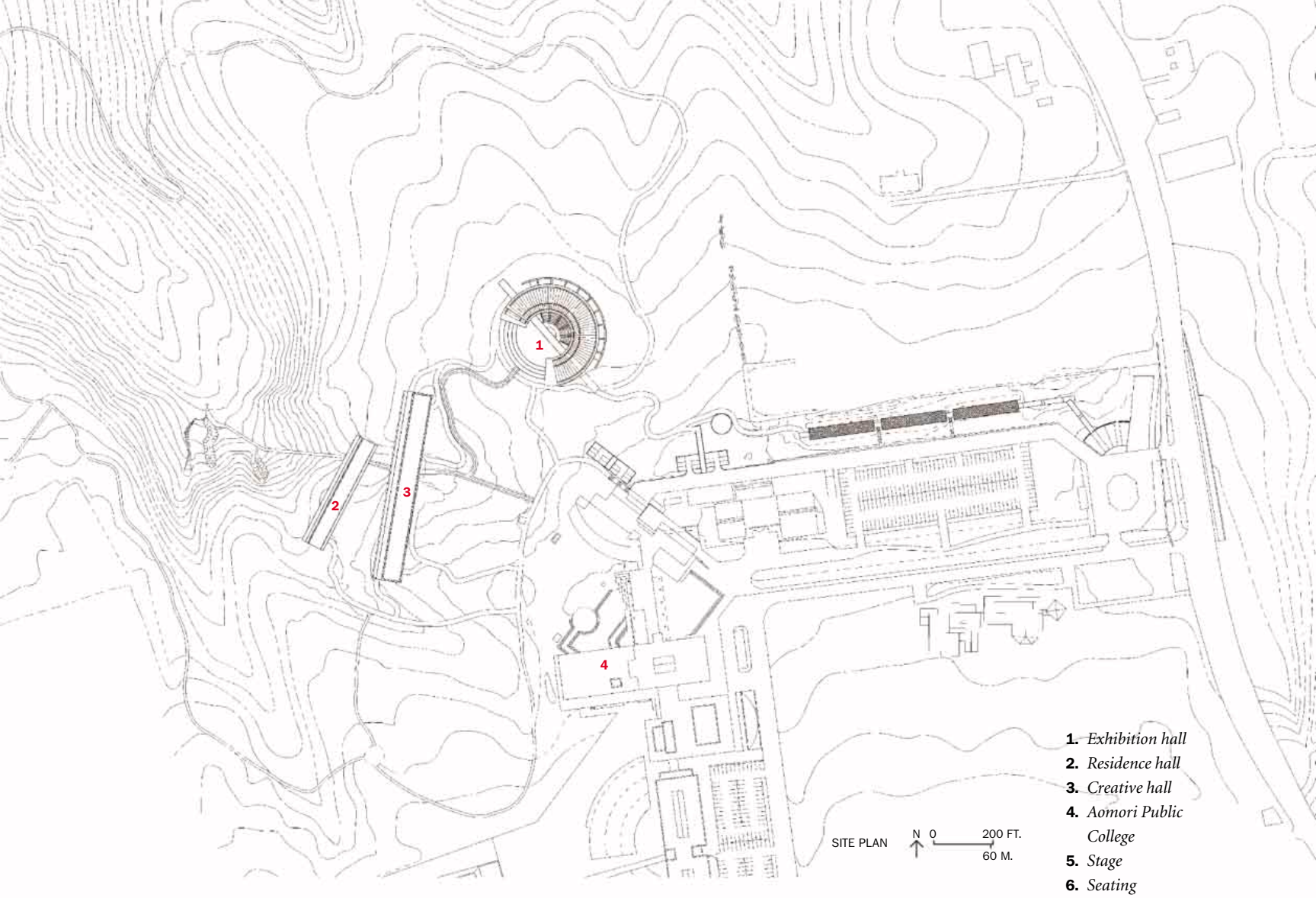


CREATIVE HALL SECTION

The three buildings of the complex (sketch, right) offer 43,360 square feet of space indoors and another 3,000 square feet outdoors in the amphitheater and terraces. Both the creative hall (plan and section, above) and the residence hall (plan, above) have long balconies that refer to traditional Japanese *engawas*, or verandas.

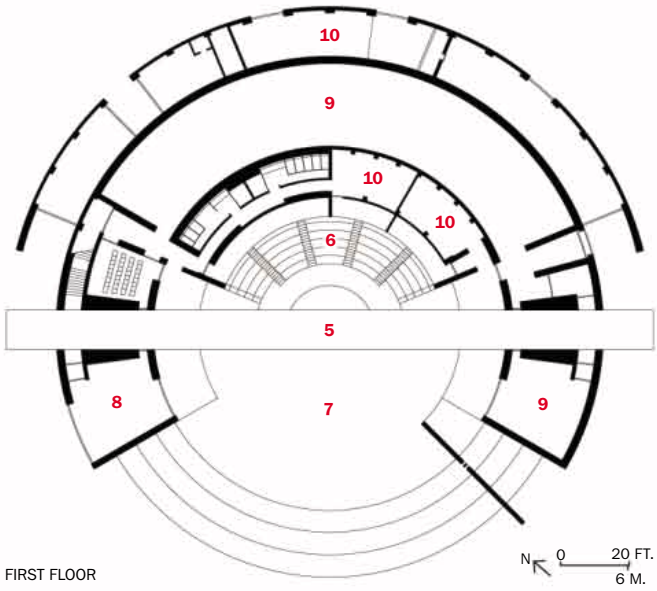


PHOTOGRAPHY: © SHINKENCHIKU-SHA (TOP)

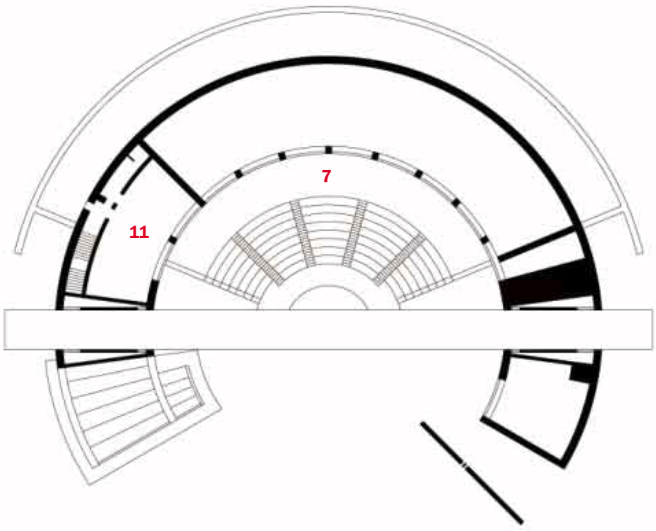


1. *Exhibition hall*
2. *Residence hall*
3. *Creative hall*
4. *Aomori Public College*
5. *Stage*
6. *Seating*
7. *Terrace*
8. *Library/tearoom*
9. *Exhibition gallery*
10. *Storage*
11. *Staff office*

Ando used the natural topography of the art center's rolling 65-acre wooded site to embrace the three buildings and root them in the landscape (site plan, above). A shallow pool in the center of the gallery/amphitheater building also helps connect the realm of architecture with that of nature.



FIRST FLOOR



SECOND FLOOR

Arched trellises protect walkways and allow plants to become part of the architecture (left and middle). Water, in the form of a natural stream (bottom) and an artificial pool (opposite) are essential to Ando's design.

Although Aomori City's mayor originally had his heart set on building an art museum, budget constraints made that impossible. So he consulted with Goji Hamada, an internationally known performance artist and the current director of the ACAC, who suggested making an artist-in-residence center instead. Because it would not require a permanent collection, such a center would be cheaper in the long run and enable local citizens to interact directly not just with art but with artists. "If an artist comes here, his influence will continue to propagate like a pebble in a pond," explains Hamada. The mayor agreed and initiated an invited competition, which resulted in Ando's selection.

While Ando was in charge of the architecture, Hamada authored the program. He envisioned a place where up to eight artists from all over the world could live and work for three-month stints. In exchange for room, board, studio space, and supplies, the visitors present their projects to the public via exhibitions, performances, lectures, and workshops.

During their tenure at the ACAC, artists are free to make and display their pieces anywhere on-site, providing there are no permanent changes to the property; trees, terraces, and rooftops are all fair game. Many artists show their work in the crescent-shaped exhibition hall, whose concrete surfaces can accommodate everything from ceiling-suspended sculptures to floor-based installations.

Other participants choose the amphitheater. An outdoor room, it is clearly defined by tiered wooden seats and the two-story building embracing it on either side. At the same time, it is completely open to the sky. Juxtaposing the natural and the man-made, the would-be stage is actually a shallow, stone-covered pool that fans out toward the trees. Terraced like a rice paddy, the shimmering surface cascades over the edge. While the water is continually recycled, the image of flowing liquid metaphorically turns into sloping land. Artists who do not want to get their feet wet can perform on the narrow concrete strip hovering above the water. Cutting across the circular plan's diameter, it doubles as the circulation spine for the building as a whole.

Taking the water motif one step further, the studio and dormitory are both bridge buildings spanning small streams. While the

PHOTOGRAPHY: © SHINKENCHIKU-SHA (TOP AND BOTTOM)

dormitory comprises blocks of bedrooms at either end and a communal dining area in the middle, the 430-foot-long "creative hall" is essentially one big atelier that contains an open work area anchored by a wood shop at one end and an informal lecture hall at the other. Specialized rooms for photo processing, printmaking, paint mixing, and sound recording round out the program. "If we don't have what the artists need, we get it," sums up Hamada.

Echoing the traditional Japanese *engawa*, or veranda, a covered, exterior porch runs the length of the building. Open on one side and enclosed with glass on the other, the porch is also the primary lighting source. "Natural light varies according to season and time," says Ando. "This too can stimulate artists."

Designed to minimize its impact on the soil, the studio's poured-in-place concrete structure follows the example of highway construction, using as few foundations as possible. Another technical innovation was using snow—the area gets 23 feet annually—to cool the building. At the end of the winter, snow is piled up in a large storeroom behind the gallery, where it gradually melts during the summer. Mechanical blowers then distribute the storeroom's cooled air throughout the building.

Just as Ando has carefully blended building and site, Hamada has bonded the ACAC with its community. Unlike many of the cultural centers built in Japan in the 1990s, which were strong on architecture but weak on programmatic follow-through, the ACAC lures local citizens to sketch the buildings, see exhibitions, and enjoy the scenery. Ando's architecture fosters these activities and should keep people coming back again and again. ■

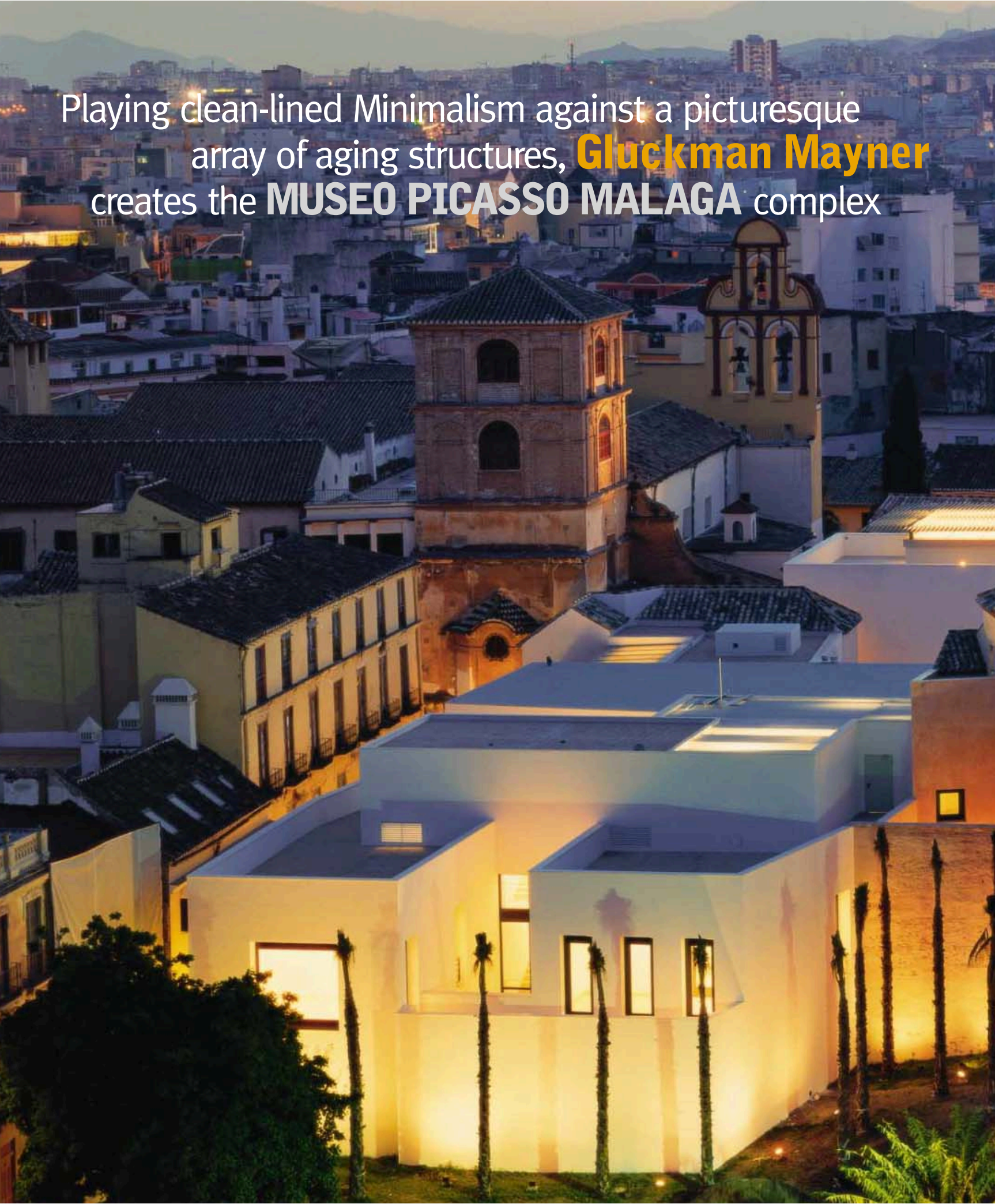
Materials

Exterior walls: *Exposed concrete with fluorine resin paint; steel panels; phosphating galvanized steel sash*
Exterior paving: *Cinder concrete with trowel finish*
Exterior ceilings: *Concrete with fluorine resin paint*
Interior flooring: *Cinder concrete with trowel finish; wood boards*
Interior walls: *Exposed concrete; plasterboard*

For more information on this project, go to Projects at **www.architecturalrecord.com**.

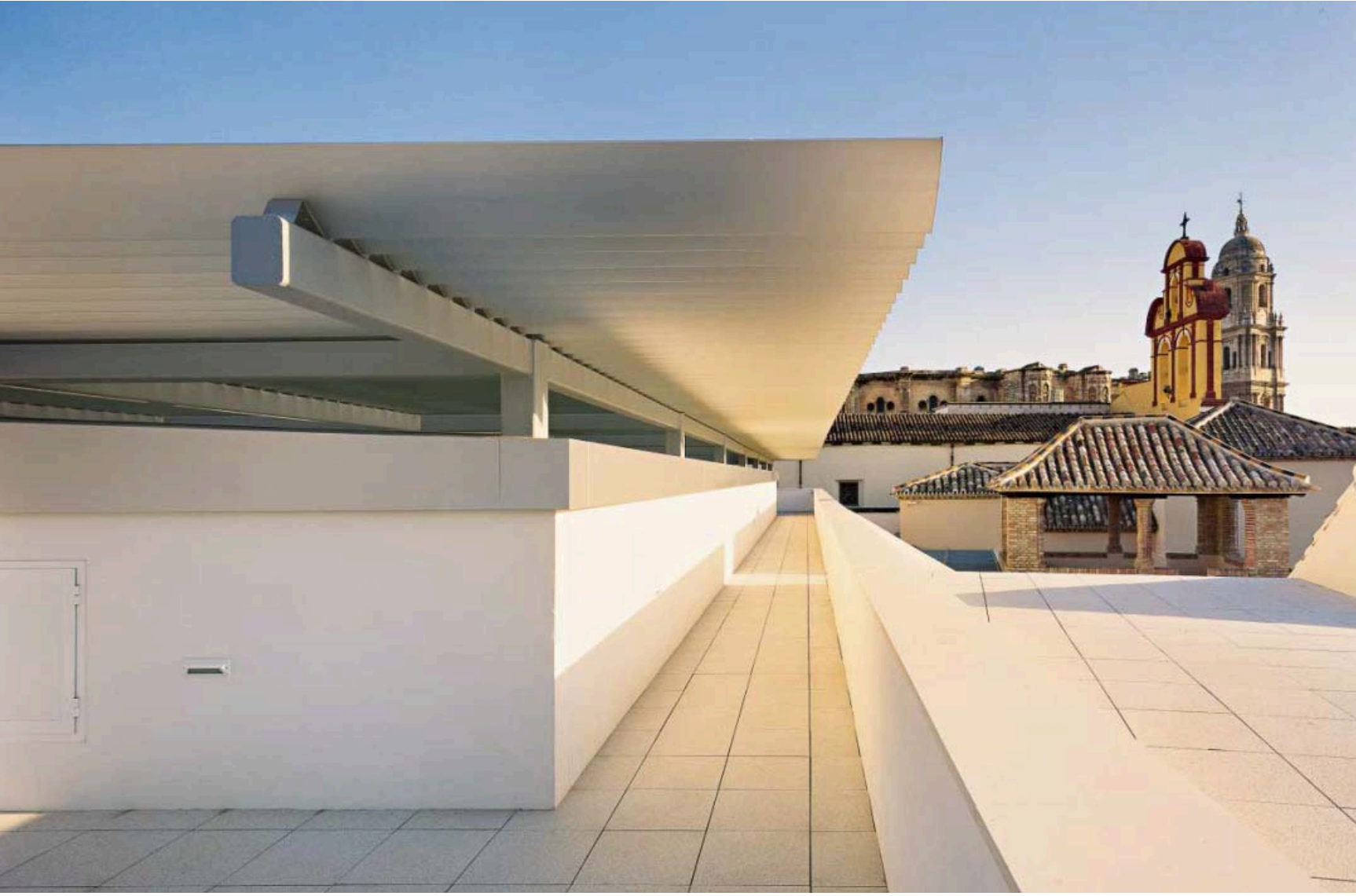
The circular exhibition hall has clerestory-lit gallery space (this page and opposite) for temporary displays of art. Ando hopes artists will use both indoor and outdoor spaces for exhibiting their work.

PHOTOGRAPHY: COURTESY TADAO ANDO (RIGHT SPREAD)



Playing clean-lined Minimalism against a picturesque array of aging structures, **Gluckman Mayner** creates the **MUSEO PICASSO MALAGA** complex

The museum's context is low-rise and dense, incised by narrow streets veering off at oblique angles. Punctuated by occasional towers, the urban fabric evolved loosely over time. Gluckman preserved his site's piecemeal sensibility, while juxtaposing Minimalist precision with older forms.



PROJECTS

By David Cohn

Can an architect Richard Gluckman apply to 16th-century European palaces the methods he developed for transforming obsolete New York City industrial buildings into spaces for art? The seasoned gallery designer put this question to the test when he, along with local architects Isabel Cámara and Rafael Martín, won the commission to adapt the Buenavista Palace into the Picasso Museum in Malaga, Spain.

Picasso was born in Malaga, and the idea of bringing his art here inspired his daughter-in-law, Christine Ruiz-Picasso, and her son Bernard to donate a large part of their personal collections to the city. Their decision culminated a long courtship led by Carmen Giménez, the museum's first director and overseer of this architectural conversion. Ruiz-Picasso selected the structure herself, mainly for its location in the city's oldest area, between Picasso's birthplace and the cathedral, and for the intimacy of its interior. At the time, the badly deteriorated building contained the Museum of Fine Arts. (Its collections now lie in storage, pending relocation.)

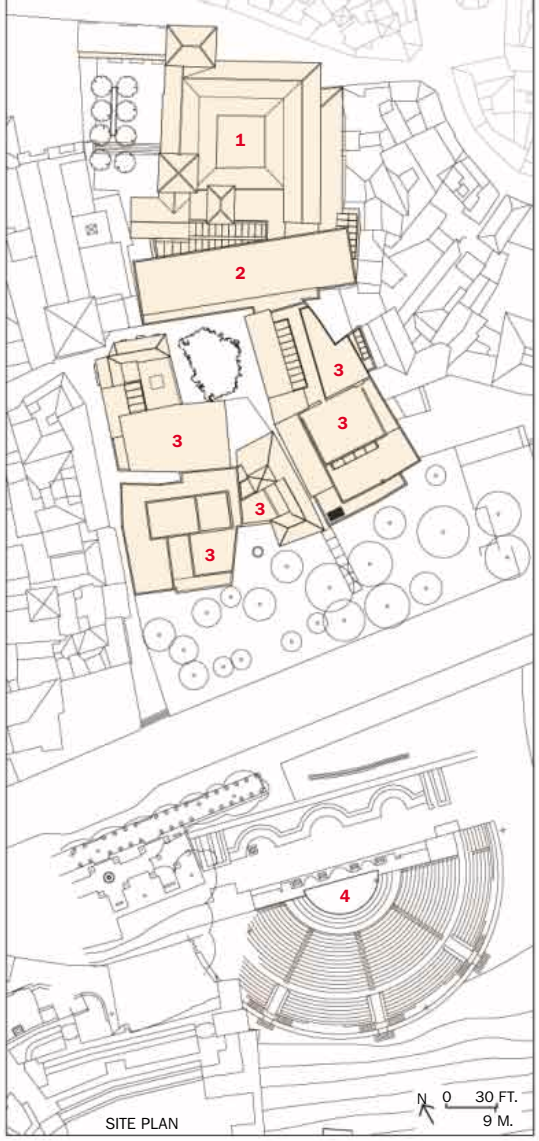
At first, the architect's intervention involved renovating the 24,000-square-foot palace and, on the site of a 1950s patio, creating a two-story, 19,000-square-foot wing for temporary exhibitions. As the project evolved, however, Giménez acquired several unrelated buildings to the east of the palace, all in poor condition. Here, the architects cobbled together a picturesque, 37,000-square-foot collection of structures—some new and others heavily restored or gutted—preserving original facades and massing wherever possible. This cluster, now housing galleries, an auditorium, offices, educational facilities, a library, and a shop, surrounds a court (centered on an ancient fig tree) that connects the ancillary buildings to the palace. During construction of this complex, archaeologists uncovered in the palace cellar rare in situ remains of the ancient Phoenician city wall, circa 700 B.C., as well as Roman and Muslim structures, which are all now open to visitors.

The Buenavista Palace's checkered history gave the architects a surprisingly free hand in its restoration. Though the 1530 stone facade—combining primitive Renaissance details with a Mudejar, or Moorish-style, tower—has survived, the palace suffered many uses and abuses over the years. In the 1950s, the building, then a near ruin, underwent drastic alterations during its first conversion into a museum. With the exception of the

David Cohn is RECORD's correspondent in Spain.

Project: *Museo Picasso Malaga, Spain*
Architects: *Gluckman Mayner Architects—Richard Gluckman, FAIA, principal; Martin Marciano, project architect; Elena Cannon, Celia Chiang, Srdjan Jovanovic-Weiss, Taro Narahara, Ruso Panduro, Amina Razvi, Joao Regal, Elizabeth Rexrode, Kaori Sato, Nina Seirafi, Tameki Uchikawa, Thomas Zoli, project team*
Associate architects: *Camara/Martin Delgado Arquitectos*
Engineer: *Arup*
Landscape: *Maria Medina*

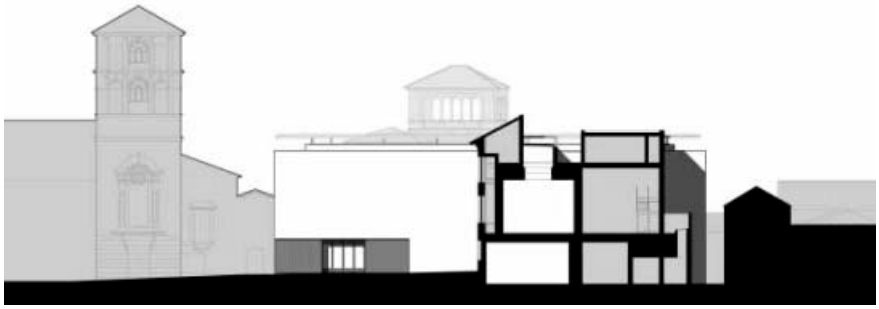
PHOTOGRAPHY: © DAVID HEALD



SITE PLAN

1. *Existing palace*
2. *New wing: temporary exhibitions*
3. *Incorporated ancillary buildings*
4. *Roman amphitheater*

Fixed anodized-aluminum louvers provide sun protection over the skylight and roof of the museum's temporary-exhibitions wing (opposite and this page, bottom). The roof deck will likely provide a venue for catered public receptions. Expansive views from this perch take in the scenic jumble of surrounding rooftops, as well as the cathedral's dome and spire (top).



SECTION A-A

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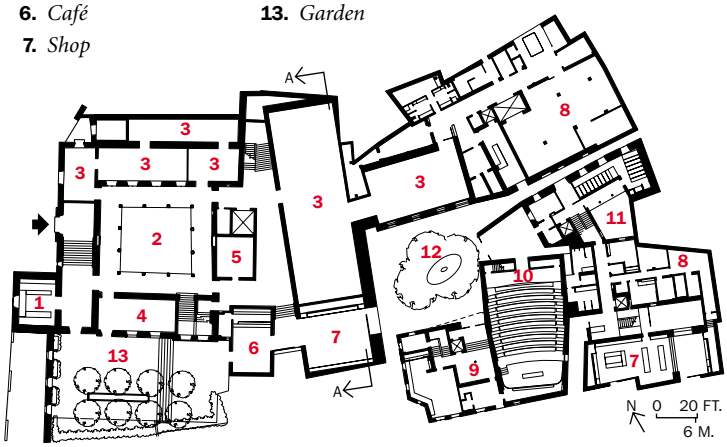
6 M.

The museum's administrative building, clad in white stucco (below), stands in contrast to the rougher masonry exterior of the museum's library, adjacent to it (opposite). The patio, though modified over time, occupies its original 16th-century location in the palace (bottom).

1. *Ticket counter*
2. *Patio*
3. *Exhibition*
4. *Reading room*
5. *Video*
6. *Café*
7. *Shop*
8. *Storage*
9. *Education*
10. *Theater*
11. *Library*
12. *Court (with fig tree)*
13. *Garden*



FLOOR PLAN

handsome original patio—featuring marble columns with exquisite Ionic capitals from 16th-century Italy—and impressive wooden ceilings with elaborate Mudejar joinery, most of the remaining interior details and finishes were of recent vintage and poor quality, according to the architects. Such elements included the floors, moldings, and much of the woodwork.

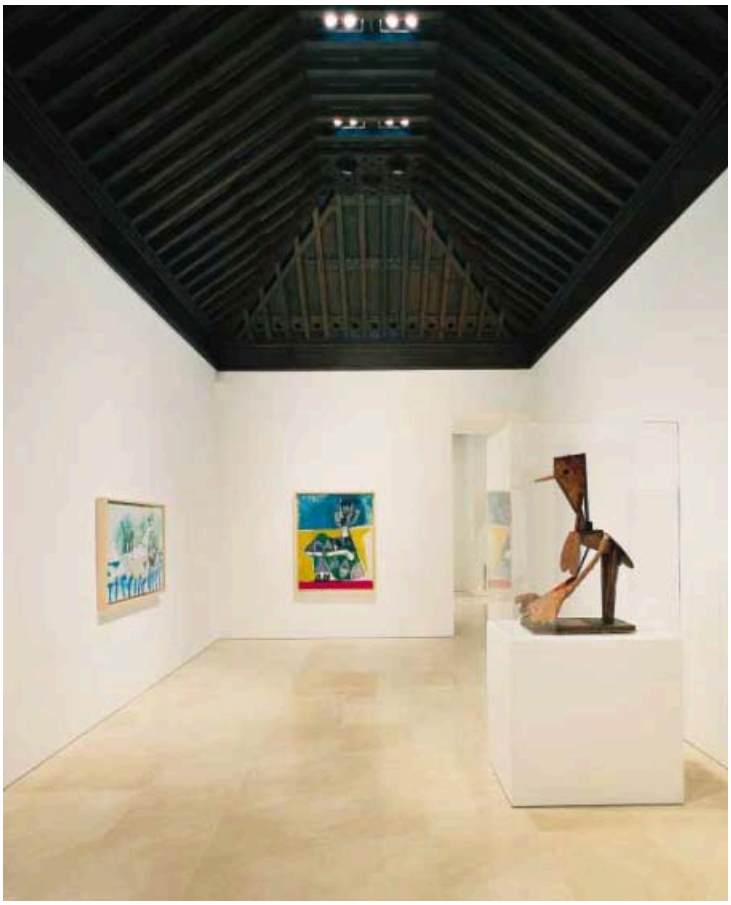
Peeling back the 1950s ornament and finishes, Gluckman approached the restoration, he says, with an intent to "quiet down" the spaces and draw out their most favorable proportions to create a neutral setting for displaying art. At times, however, he may have taken this approach too far, trying to smooth out, perfect, and otherwise adjust the palace, rather than acknowledge the idiosyncrasies that distinguish it. From the patio, he removed a modern fountain—with the potential for gurgling and animated reflections of water—and modeled the court's spare restoration on a similar Andalusian example in New York City's Metropolitan Museum of Art. Though unassailable as a historic source, the form is now quite removed from the traditional spatial connections and characteristics of such patios in southern Spain. The surrounding galleries, now home to the permanent collection, had opened onto the central space, but Gluckman has linked them in an independent circuit for reasons of climate control and circulation.

In the interests of proportion and axial alignments, the architect says, he adjusted other openings and demolished some interior walls. After stripping the gallery walls to the masonry, he refinished them in plaster without moldings, and separated them from the floors with his signature reveals. Certain original doors remain, but the fenestration all had to be replaced with wooden replicas to accommodate double glazing. One of the palace's various window configurations served as the prototype. In a welcome touch of local color, woven hemp mats, or *esterones*, hang outside the windows to filter in daylight.

To tone down the floor and prevent reflected color from interfering with the paintings, Gluckman explains, he replaced the traditional patterned ceramic tiles, installed in the '50s, with large pieces of pale marble. Also in a measure to calm the spaces and defer to the artwork, the architect stained the beamed ceilings, the gallery's most distinctive feature, a recessively dark brown—even darker than traditional Spanish woodwork. His modern mechanical interventions appear equally discreet, with ceilings carefully pierced for lighting and smoke detectors—an option the architect considered less obtrusive than visible track systems. Window seats, ceiling borders, and perforated marble grilles conceal air supplies and returns.

The new wing, for temporary exhibitions, allowed Gluckman to create large, Modern spaces, which, he says, offer the functional flexibility for large-scale contemporary work, as well as a vivid spatial contrast to the "actually quite small (by today's standards)" palace rooms. A central skylight, veiled with a 16-by-96-foot, taut cotton scrim, dominates the high, open upper gallery. Here, no other details intrude on the grand Minimalist play of space, proportion, and light. Above the scrim, two layers of double glazing and motorized shades, and a crown of fixed, anodized-aluminum louvers—

Views from the interstitial space between the palace and new construction reveal a stair with steel-plate rails (right) and stretched-cotton gallery ceilings (below), installed beneath the skylights by sailmaker Farley Fontenot. In the palace, centuries-old wood ceilings (bottom and opposite) remain.



an assemblage consciously inspired by Renzo Piano's Cy Twombly Gallery in Houston—temper the Mediterranean rays. A double-height, skylit atrium, separating these galleries from the palace, gives access to a café, a garden by Maria Medina, and the fig-tree court.

Gluckman relishes the contrast between the large, new galleries and the intimacy of the original palace, but this contrast can sometimes seem rather aggressive. While the architect, in the curatorial interests of showing art in a neutral setting, went to considerable trouble to quiet the character of the palace galleries, the dramatic scale shift to the new spaces claims a great deal of attention in its own right.

The paintings and sculptures in the permanent collection are largely family pieces, portraits and domestic scenes that Christine Ruiz-Picasso selected for herself from the master's legacy, with dogs, cats, and other charming details, and they are dimensioned for a conventional home, so the palace's galleries suit them well. But this visitor, at least, missed a bit of the rooms' own warmth and color—the sounds of a fountain in the patio perhaps, or a few of the curious details, misalignments, and inconveniences that the architects so carefully corrected. Clearly, the 1950s interventions, with their abundance of ill-conceived details, did a disservice to the palace's authentic character. And Gluckman cleaned up those intrusions with high-quality materials and careful detailing. But the aim of eliminating distractions in the service of art, if too zealously applied, can also damage our experience of historic spaces. ■

Sources

Windows: *La Navarra Tallar (custom)*
Glass: *Saint Gobain; Okalux*
Lighting: *Erco; Ignuzzi; Isometrix*

For more information on this project, go to Projects at **www.architecturalrecord.com**.

TARIFAS
INFORMACIÓN

The museum occupies the renovated Royal Boathouse built by King Christian IV in the early 17th century (opposite). Brick vaults (right) rise dramatically above the skewed walls of birch panels and slanting oak floors of the new museum space.

Studio Daniel **Libeskind** skews walls and slants floors in a former boathouse to heighten the experience of the **DANISH JEWISH MUSEUM** in Copenhagen

By Nicholas Adams

Lucky is the wanderer who finds the gate into the garden of the Royal Library in Copenhagen. Shielded behind high brick walls is one of the great oases of downtown Europe. Cool, wet weather gives the trees that extra shot of green. The traffic is sufficiently distant so that the gentle splash of water from a fountain dominates any urban noise. Nearby, a large bronze statue of the great Danish philosopher Søren Kierkegaard sits in (uncharacteristically) peaceful meditation. *Rus in urbe*—the countryside in town.

Along one side of this garden oasis, Studio Daniel Libeskind has shoehorned a small new museum into the brick Royal Boathouse built in the early 17th century. Originally part of the old Arsenal adjacent to the Royal Palace, the new Danish Jewish Museum barely ripples the tranquillity of the south side of the garden. Only six granite blocks splayed across a slanted apron with white strips along the pavement, plus a simple signpost and a massive bronze door inscribed with the word *Mitzvah*, mark the entrance.

Mitzvah means "a good deed" or "the duty to do the right thing" in Hebrew, and it is a surprising theme for a museum dedicated to the long and relatively peaceful history of the Jews in Denmark. Whose good deed and what right thing, one wonders? The reference is specifically to the events of October 1943, when thousands of Danish Jews crossed the narrow straits of the Oresund separating Denmark from Sweden to escape the Nazis. (Among those who fled were the young Arne Jacobsen, a Jew, and Jørn Utzon, who had Jewish family members.) Aided by local resistance leaders, alerted and protected in some cases by their Christian neighbors, this rescue represented the only instance in World War II when a national population collaborated systematically to help Jews escape. And, as Hannah Arendt famously noted in *Eichmann in Jerusalem* (1963), this was the only instance in which a Jewish population acted to save itself. More than 7,000 Danish Jews survived the war, more than 90 percent of the country's Jewish population. The mitzvah of the Danes in 1943 provided Daniel Libeskind with the thematic heart of the museum: The letters of the word not only form the logo at the door, but their jagged shapes interlace abstractly to generate the cranked corridors and exhibition spaces within.

The ground floor of the old boathouse approximates a square, measuring 80 by 80 feet, with a rectangular bite taken out for bathrooms, which leaves a stumpy L-shape for display. (Storage and administrative facilities are off-site.) Iron rings attached to the old brick groin vaults indicate that the space may have been intended for boat storage. Nevertheless, round holes at the crowns of the vaults for the escape of smoke attest to its subsequent use as a workshop as well.

This is not a museum of conventional galleries. Visitors enter the building as a Dane might have entered a boat in 1943 to make the dangerous trip across the waters to Sweden. They are greeted by a prowlike ticket booth and are then directed past a cloakroom to a small video room. Once museumgoers have viewed the videos, they pass into the twisted hallways and passages. The spaces foster movement and transit, without creating a frantic quality. For *Space and Spaciousness: An Exhibition About Jews in Denmark*, on view for the next year or so, visitors walk through five areas defined by thematic content. The displays in the vitrines are accompanied by text/image touch screens.

Libeskind stripped the interior down to the bare brick walls and then clad the walls of the gallery spaces in light brown Norwegian birch panels, which in turn are attached to black chipboard and supported by metal stud walls. Rising to different heights, the canted and pitched walls give the visitor a sense of being enclosed by the abstracted forms of the

Nicholas Adams is professor of architectural history at Vassar College. He is writing a book about Gunnar Asplund's Law Courts in Gothenburg, Sweden.

Project: *Danish Jewish Museum, Copenhagen, Denmark*
Architect: *Studio Daniel Libeskind—Daniel Libeskind, principal; Susanne Milne, project architect; Juan Arana, Guadalupe Cantu, Tate Conrad, Shawn Duffy, Miguel Plata, Robert Hirschfield, Jens Hoffmann, Nadine Jerchau, Sven Pfeiffer, Jason Scroggin, design team*
Renovation architects: *Fogh and Følner*
Owner: *Danish Jewish Museum*
Consultants: *Hansen and Henneberg (lighting, safety, m/e engineers); Moe and Brødsgaard (structural, m/e engineers); Kvorning Design & Kommunikation (exhibition, graphics); GHB Landskab (landscape)*

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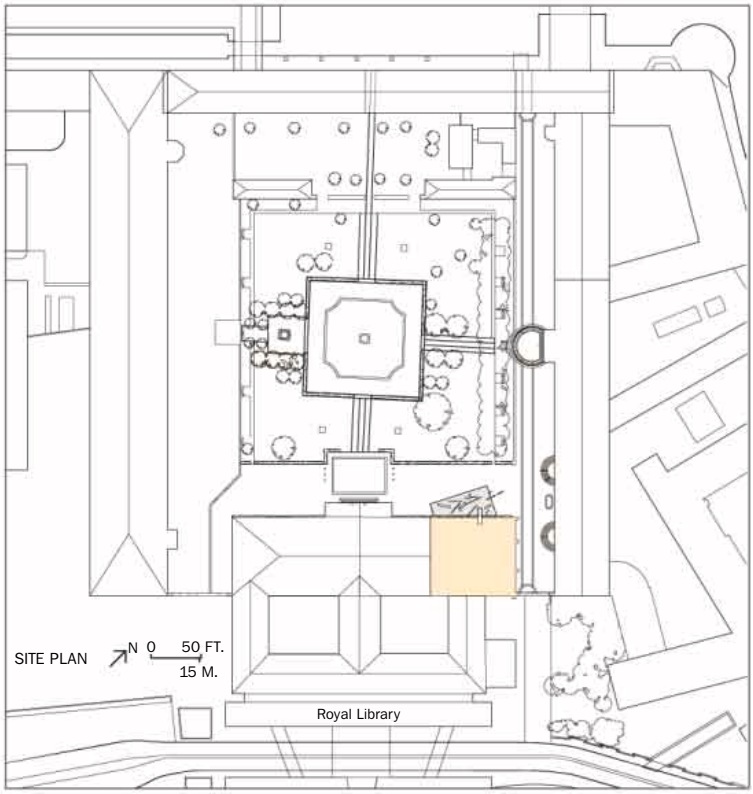
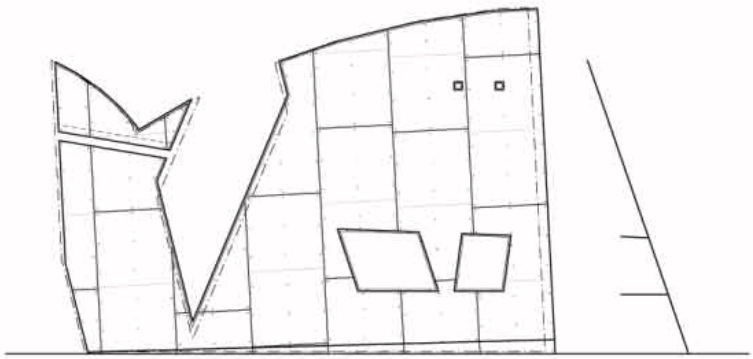
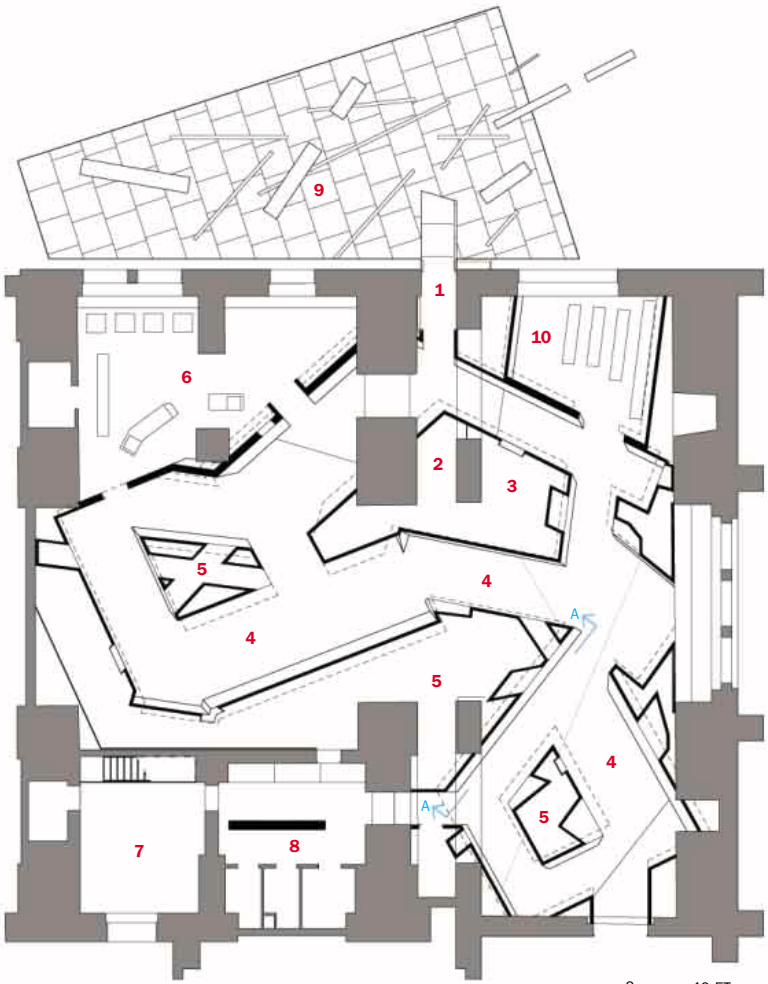




TRUE ELEVATION OF VITRINE OBJECT A-A



FLOOR PLAN

1. *Entrance*
2. *Tickets*
3. *Coatroom*
4. *Main exhibition*
5. *Vitrine objects*
6. *Museum shop*
7. *Office*
8. *Restrooms*
9. *Terrace*
10. *Cinema*

A colorful desk (opposite, left) directs visitors to the bookstore near the entrance to the museum. Nearby, the gallery walls billow up forcefully along the brick vaults of the former boathouse (opposite, right). Black chipboard seams and slashes of recessed lighting accentuate the geometry of the birch panels, which are mounted on a metal stud-wall structure.

ship's hull. The floor slants, as well, in two somewhat alarming, camber-like waves as the "boat" heels and yaws. Slashes for light fixtures embedded in the walls suggest searchlights. We are, evidently, at sea. This is only the first reading. Perception is quickly modified by the way in which the black seams between the panels and the light slashes create forward and reverse perspectives. A fascinating tension between the wall mass and the perspective lines set up by the panel seams emerges: What is up close slides away quickly; what is far away seems to move precipitously closer.

Parallelogram-shaped glass vitrines placed in the birch walls and, in some instances, around corners, establish their own tangents. The result owes as much to the computer age as to the Expressionist film *The Cabinet of Dr. Caligari*. Indeed, the push-me-pull-you perspective of seams, slashing lights, and vitrines calls to mind Baroque architects such as Guarino Guarini or the trompe l'oeil perspectives of the Renaissance architect Philibert de l'Orme. A trick perspective door stands at the far end of the gallery space; the wood panels seem to sneak their way up, like smoke or clouds, into the holes in the crown of the vaults—another Baroque effect.

Libeskind has explored this repertory of visual effects before, and the relationship of Copenhagen to his earlier museums such as the Jewish Museum in Berlin [RECORD, January 1999, page 90] or the Imperial War Museum North in Manchester, England [RECORD, October 2002, page 124], comes immediately to mind. Of course, the modest $4 million budget and the 4,844-square-foot size alone would defy too close a comparison. Libeskind's museum in Copenhagen occupies an already constructed building, unchanged on the outside in order to blend with the other buildings around the Library Garden. Additionally, not all the intentions for the building have been carried out. A look at the models on display at the Danish Architectural Center reveals that certain elements around the entrance, as well as some light patterns inside, were eliminated.

Nevertheless, economy works to the Danish Jewish Museum's advantage. Using only the limited range of color provided by the birch panels—an appropriately Scandinavian reference—produces a sufficiently lush, tonal variety. The Imperial War Museum in Manchester, by contrast, appears diagrammatic and its forms simplified, while the Jewish Museum in Berlin has a didactic monumentality. And there are moments in Copenhagen when the tradition of the wood ship blends naturally with the sprayed zigzags of computer technology: You are at sea in 1943, and you are also clearly here in the present—in an early-17th-century boathouse near the Danish Royal Palace in spaces that are possible only today. The blending of past and present, of near and far, of imagined and real, was one of the great achievements of the Berlin Museum when empty. On a smaller scale, and with more limited means and ambitions, Copenhagen manages similar effects very well. The vitrines are sealed: From an architectural point of view, the museum is the equivalent of the Berlin museum

Glazed vitrines project forward from free-standing objects (below), including ones shaped like the hull of a boat (left). The sloping oak-plank floor seems to float between the ventilation scuppers (opposite) and is carried by joists over a concrete slab.

empty, rather than full.

But will visitors accustomed to think of the museum as a container for the objects on display know all this? At Berlin, a six-pointed star connected to significant sites of Jewish history acted as the defining thematic motif. At Manchester, the shardlike imagery is meant to evoke the "contemporary world shattered into fragments by conflict," in Libeskind's words. Neither effect is easily understood. In Copenhagen, the metaphor is decidedly literal (and partially explained in a pair of introductory videos), yet some visitors are clearly mystified by the pitching and heaving of the floor. And there are other problems, possibly more profound, with Libeskind's interpretation of the program.

In its inaugural publication, the museum made it clear that this is not meant to be a Holocaust museum. Indeed, the events of October 1943 are represented elsewhere in Copenhagen, and the mission of the Danish Jewish Museum was to reflect the entire history of the Jews in Denmark, from their invitation in 1622 by the king to come to Denmark (ostensibly to act as merchants) to the present. Focusing on the dramatic crossing of the Oresund in October 1943 reduces the long history of progressive assimilation and relatively tranquil coexistence between Danish Christians and Jews to a single moment. And how much should be made of the country's role in 1943? Yes, many were saved, but Denmark's pro-Nazi sympathies were not inconsiderable, and some now still feel that the country could have done more to help Jewish refugees in flight from Germany. Emphasis on October 1943 makes it hard to see the variegated nature of the rest of the Jewish experience in Denmark.

And Libeskind has not made it easy on the viewer. One vitrine, which explains how the Jews came to Denmark, is so low that visitors either pass it by or must scrunch down to see it. Sloping floors and walls sometimes meet vitrines that are themselves angled, so that the labels (and objects) slide away from the viewer. Some visitors lean hard into the walls to support themselves while they peer into the vitrines.

Libeskind deserves enormous credit for leading with the best narrative line to striking effect. But the question remains about making a Holocaust museum for a collection of objects that is not about the Holocaust: Is creating a baby Bilbao worth this distortion of the historical narrative? When we highlight the heroism and bravery of some Danes over several months of 1943, we lose touch with the texture of Jewish life in Denmark over the 300 years that the museum is meant to explore. In the one museum in Denmark devoted to a minority, that seems like a significant loss. ■

Sources
Birch plywood cladding: *Finnforest*
Glazing: *Scanglas*

For more information on this project, go to Projects at ***www.architecturalrecord.com***.

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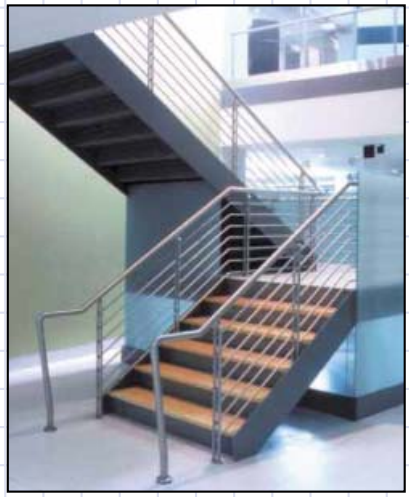

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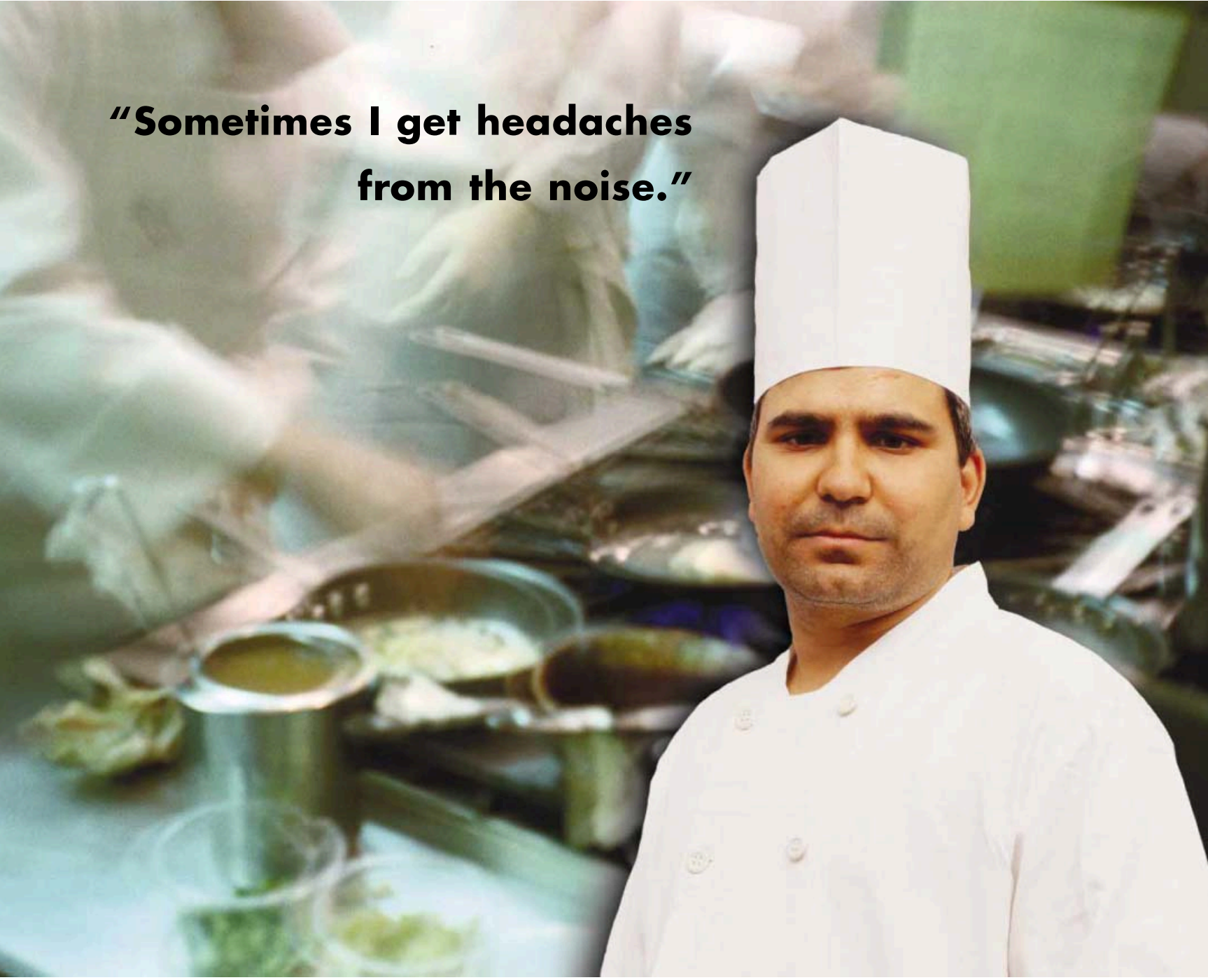

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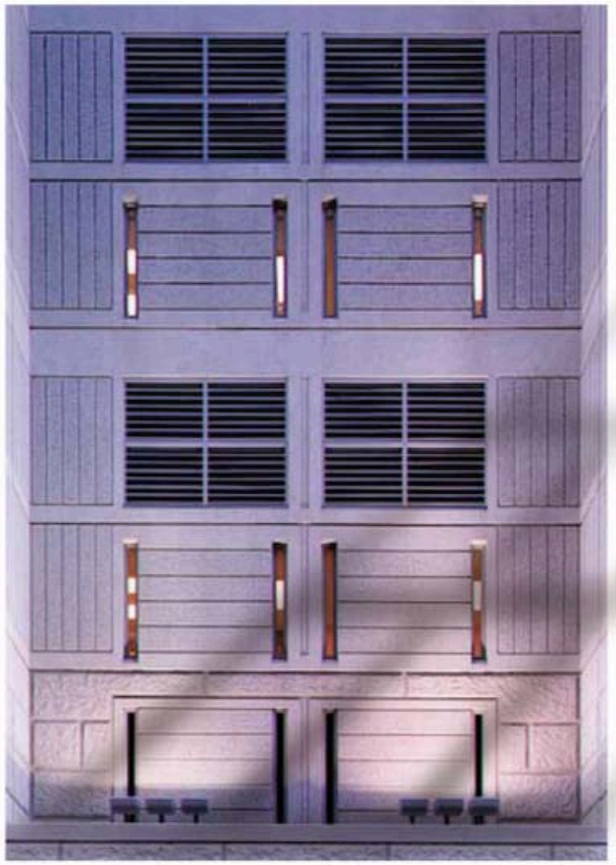

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By Nancy B. Solomon, AIA

Construction activity in the health-care sector is alive and well. According to F.W. Dodge, $16 billion was spent on health-care facilities in 2002, making the sector the fourth-largest market by dollar value of nonresidential construction, and the figure is expected to rise to $19.59 billion by 2009. Aging facilities are one of the reasons this market has stayed robust. "A lot of hospitals were built around World War II and will therefore have to be renovated or rebuilt soon," says Stacy Malkan of Health Care Without Harm (www.noharm.org), in Washington, D.C., a coalition of health-care facilities and medical professionals that strives to make the industry environmentally friendly. In some cases, legislation and growth drive the trend. In California, where the population is expected to grow by 9.3 percent between 2002 and 2008, Senate Bill 1953 has mandated that all health-care facilities comply with stricter seismic requirements by 2030, setting in motion a huge overhaul of hospitals throughout the state.

Increasingly, the forms of new facilities reflect not only the science but also the art of the healing professions. Hospital design, like medicine, has been in a state of evolution over the past few decades. "Medical science was grossly inadequate before 1900," says Roger S. Ulrich, a professor of architecture at Texas A&M University. If the infirm made it to a hospital, "the odds of getting better were lower than the odds of getter worse," he explains. Instead of medicine, the ill relied on "mind-body interventions"—family, spiritual support, views of nature and art—to distract them from pain and to limit stress while their bodies struggled to heal.

The odds for patients began to improve in the early 1900s. Penicillin was isolated in 1928 and widely used by the 1940s; this so-called "wonder drug" finally gave the medical profession a dependable weapon with which to fight many illnesses. Diagnostic equipment multiplied, and surgical procedures became more and more sophisticated by the mid-20th century, at which time hospitals became essentially platforms for numerous space-consuming tools. Infection reduction and procedural efficiency were now the controlling factors in health-care design, leading to stark, artificially lit, institutional structures filled with high-tech machinery and organized according to critical adjacencies. Natural light, which was an anathema to many of the new tools and procedures, was severely limited, and as a consequence, so were views to the outdoors.

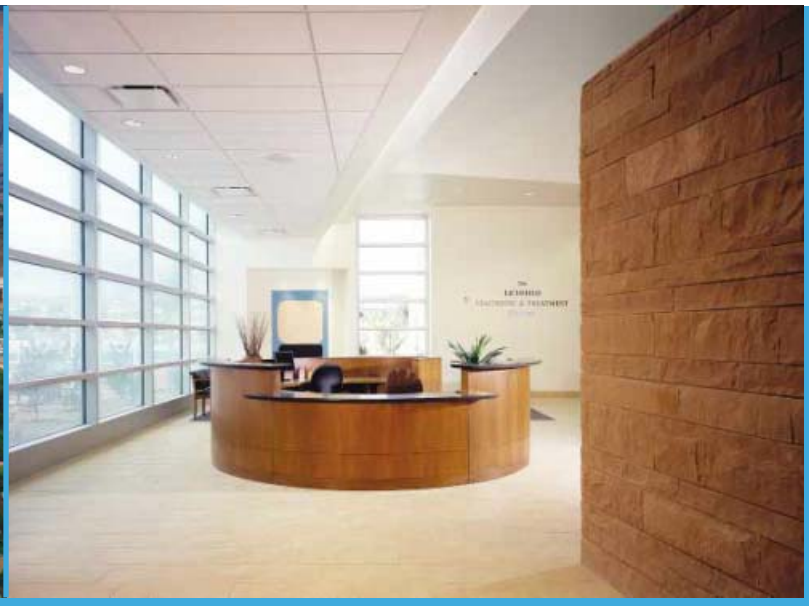
Nancy B. Solomon, AIA, writes frequently about architectural technology. This past August, RECORD ran her story about environmentally friendly health-care facilities.

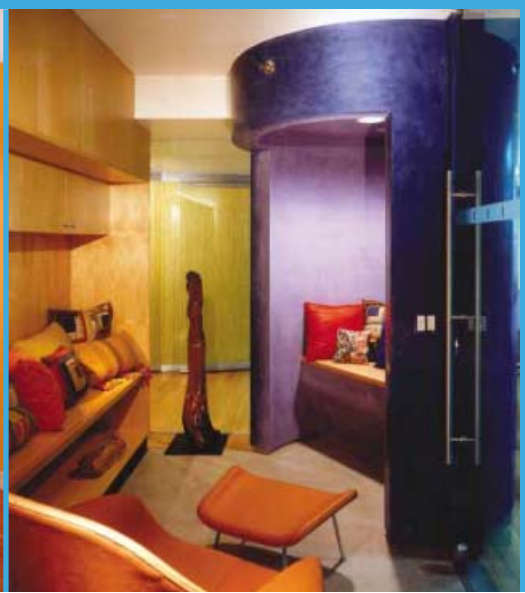
While reliance on critical diagnostic and treatment methods has never waned, another sensibility began to emerge in the late 1970s and early 1980s. Rosalyn Cama, an interior designer in New Haven, Connecticut, and chair of the board of directors for The Center for Health Design, a nonprofit group based in Concord, California (see below), in part credits expectant mothers who demanded homelike, less-clinical settings for labor and delivery. Hospitals, which were entering a more competitive period financially, responded by building birthing centers with residential-style furnishings and accommodations for family members. This new business atmosphere gave rise to what Cama calls "the hotel look" in hospitals: Administrators reasoned that if potential patients preferred well-appointed maternity wings, it would be worthwhile to spiff up their lobbies as well.

It was around this time that the nonprofit group Planetree (www.planetree.org) was founded in Derby, Connecticut. Named after the type of tree beneath which Hippocrates is said to have taught his students, Planetree promotes humane medical experiences that empower patients and their families through education, partnership with health-care providers, and nurturing environments. Similarly, The Center for Health Design (www.healthdesign.org), founded several years after Planetree, has a mission to improve the quality of medical care through evidence-based design research, which aims to determine how the built environment influences inhabitant behavior, psychosocial characteristics, and in the case of health care, therapeutic outcomes.

Since the mid-1980s, evidence-based research has consistently demonstrated that facility design can indeed affect the healing process. In 1984, A&M's Ulrich undertook a study in which patients in rooms with views of nature recuperated faster and reported feeling better than those whose windows looked onto the brick walls of an adjacent building. More recent clinical studies by Ulrich, as well as other research teams at hospitals in the U.S. and abroad, indicate that stress can be significantly and quickly reduced if patients look at scenes of nature and certain types of visual art. In a matter of minutes, if not seconds, positive emotions increase and key stress indicators such as blood pressure, heart rate, and respiration rate decrease. And scores of medical studies indicate that lower stress levels are associated with both enhanced immune function and less incidence of pain.

If these data weren't enough to encourage health-care administrators to pay attention to hospital designs, three other forces have strengthened their resolve. First, a growing shortage of medical professionals has motivated hospitals to overhaul their facilities as a method of attracting and retaining top-notch staff. Second, a greater sensitivity to the needs of local communities, from which hospitals draw much of their clientele and support, has made them reexamine their physical presence.

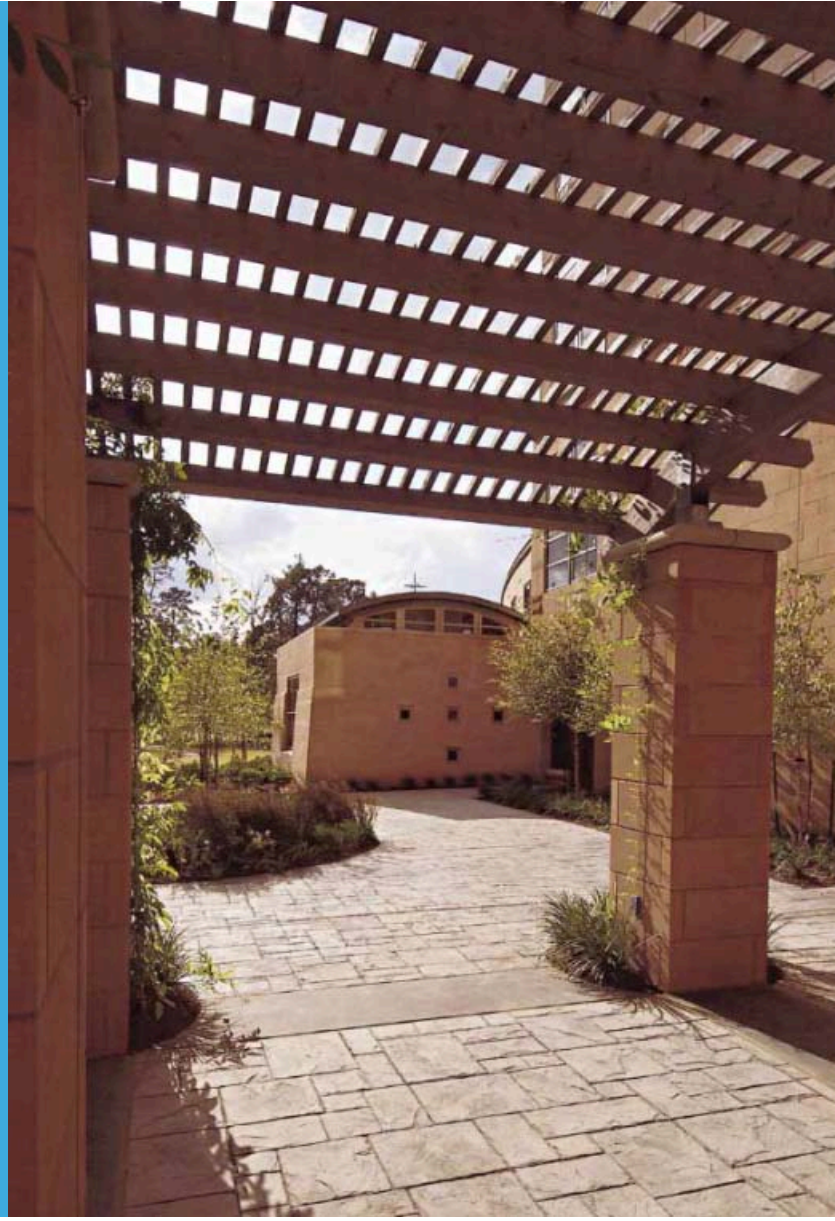




Anshen + Allen's Dixie Regional Medical Center in St. George, Utah (top two), features an entry warmed by southwestern light, and materials such as wood and local stone, to create a more welcoming atmosphere for patients than the sterile hospital ward of yore. Guenther 5 Architects has also given hospital interiors a residential feel at the Continuum Center for Health and Healing (bottom left) and the Beatrice Renfield Center for Nurses (bottom right), both at Beth Israel Medical Center in New York City.

PHOTOGRAPHY: COURTESY INTERMOUNTAIN HEALTH CARE (TOP LEFT); © JOHN EDWARD LINDEN (TOP RIGHT); PETER MAUSS/ESTO (BOTTOM LEFT); DUB ROGERS (BOTTOM RIGHT)

A prominent entry with generous glazing, as well as an interior healing garden, are standout features of the new campus for the Bronson Methodist Hospital in Kalamazoo, Michigan, designed by Shepley Bulfinch Richardson & Abbott (left two). At St. Luke's Community Medical Center in The Woodlands, Texas (right), by HGA, an outdoor healing garden and landscaped terraces allow patients and families to enjoy natural surroundings or simply a breath of fresh air.



PHOTOGRAPHY: © PETER MAUSS/ESTO (LEFT TWO); AKER/ZVONKOVIC PHOTOGRAPHY (RIGHT)

Finally, growing interest in a health-driven understanding of sustainable design [RECORD, August 2004, page 179] has emboldened clients, architects, and product manufacturers to search for ways to introduce natural light and alternative materials into the hospital setting, not only to save energy and reduce toxic emissions but also to revitalize occupants.

There are many contemporary examples of the convergence of these trends. Kaiser Permanente, the largest health-care provider in California, recently enlisted the two-firm team Chong/SmithGroup to develop a "template" for its hospitals in the state; they asked the architects to emphasize patient-friendly details such as extensive glazing and inviting, open entries and circulation spaces. Healing gardens, a natural escape from the often-harsh realities of hospital wards, have also gained popularity. Artist and garden designer Topher Delaney, principal of Seam Studios in San Francisco, has been credited with pioneering this trend; it began when she was diagnosed with breast cancer in 1988 and sought a place of solace at the hospital where she'd received the news.

Designers have also begun working hand-in-hand with medical researchers to determine how their buildings affect health and well-being. In 2000, for example, The Center for Health Design began teaming up with health-care providers in an effort called the Pebble Project. The scope of the project varies with each provider, ranging from medical outcomes and length of stay to employee turnover, but the aim is to document examples of health-care facilities "whose design has made a difference in the quality of care and financial performance of the institution." And the Academy of Neuroscience for Architecture was established by the AIA's San Diego chapter at the institute's national convention in 2003, at which time it received a $100,000 Latrobe Fellowship to study the relationship between the brain and the built environment.

So we've managed to spiral upward, coming full circle on a higher plane. With more sophisticated equipment and knowledge, scientists suggest that the mind-body interventions of an earlier age still play an important role in medicine today. While the conventional concerns of infection control and functional efficiency must still be addressed, designers must pay attention to the psychological and emotional needs of not only patients but also families and staff members, who can provide better care if they have opportunities to nourish themselves as well.

The four projects included in this month's Building Types Study illustrate this trend toward hospitable hospitals. They lighten the spirit with joyful, life-affirming gestures such as generous daylight, bright color, playful forms, elegant detailing, artwork, and access or views to nature. Architects would do well by examining these efforts and taking heed of the growing movement toward patient-focused care. Based on current forecasts, this sector will be offering significant opportunities for design professionals in the foreseeable future. ■

Maternity and Pediatrics Hospital
Madrid

1

RAFAEL MONEO COMBINES TWO HEALTH-CARE FACILITIES UNDER ONE ROOF, CRAFTING AN URBAN OASIS OF CRISP, SHIMMERING VOLUMES.

By David Cohn

Architect: *Rafael Moneo—Rafael Moneo, principal; José María de la Mata, collaborator; Belén Hermida, project architect; Oliver Bieniussa, Rafael Beneytez, Carmen Díez Medina, Jacobo García-Germán, José María Hurtado de Mendoza, Fernando Iznaola, Francisco Padilla, Borja Peña, Sandra Pérez-Nievas, Pablo Perlado, Juan Rodríguez Villa, Christoph Schmid, Tara Solomon, Veronika Weisner, project team*
Client: *Leases and Developments of the Community of Madrid*
Owner: *Public Health Administration, Regional Government of Madrid*
Engineers: *Jesús Jiménez Cañas and Eduardo Gimeno Fungairiño (structural); Rafael Úrculo Aramburu (mechanical)*
Consultants: *Carmen del Pino (graphic design)*

Size: *500,000 square feet*
Cost: *$153.3 million*
Completion date: *September 2003*

Sources
Glass facade: *Saint Gobain*
Curtain wall: *Folcrá*
Cast aluminum: *Fundiciones Ros*
Aluminum screen: *Llambí*
Granite: *Granil Ouro*
Marble: *Luis Sánchez Díaz*

For more information on this project, go to Projects at **www.architecturalrecord.com**.

According to Rafael Moneo, who designed the Gregorio Marañon Maternity and Pediatrics Hospital in Madrid with specialist José María de la Mata, a hospital "should be clear, clean, and luminous. It should have the logic one expects from science for those who, in sickness, seek its aid. It should offer patients and their families every convenience. It should create an atmosphere of calm, tranquillity, and rest. And it should reflect in all its elements the value of hygiene for health." To achieve these goals, Moneo and De la Mata's design relies on the logic of a gridded circulation plan and the calming, cleansing effect of natural light, which descends from eight courtyards into all the rooms and corridors, and which is reflected from its pearly glass facades.

Program

The building is part of the multi-block campus of Gregorio Marañon, a major public teaching hospital in central Madrid. Moneo was brought into the project to help renovate the aging complex, an accumulation of buildings dating from the early 20th century to the 1980s. The 500,000-square-foot, seven-story facility, developed in close collaboration with doctors and staff, replaces the obsolete maternity hospital on the same site. It combines the functions of two independent but related institutions. Each has its own entrance, emergency room, operating rooms, outpatient facilities, and beds; only diagnostic facilities and general services are shared.

David Cohn is a RECORD *contributing editor based in Spain.*

Solution

The design for the building springs from its urban situation. Its site was part of a superblock that Moneo broke up to facilitate circulation through the complex, restoring two suppressed streets. Obsolete buildings will be cleared from the center of these blocks to create a central plaza with a parking garage below, flanked on its two long sides by restored brick pavilions from the 1920s. The Maternity and Pediatrics Hospital occupies an entire block at the southern end of this plaza. Taking advantage of a 10-foot difference in grade, Moneo created two "ground floor" entries for maternity and pediatrics, the latter one story above the former, on opposing diagonal corners. Ramps on a third corner bring ambulances to a below-grade court serving pediatrics and maternity emergency areas. Outpatient services are located on each of the ground floors; operating rooms, birthing rooms, and prenatal units on the floor above them; and X-rays, labs, and diagnostic services on the lower "emergency" level.

The courtyard plan was developed to isolate patients and users from what Moneo terms the "hard and aggressive" urban surroundings. Through the careful positioning of the lobbies and the elevator banks

PHOTOGRAPHY: © DUCCIO MALAGAMBA, EXCEPT AS NOTED

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Prominent signage at the opposite-corner entries (opposite and this page), amplified by strong massing and cleanly limned materials, lends the hospital an engaging street presence.

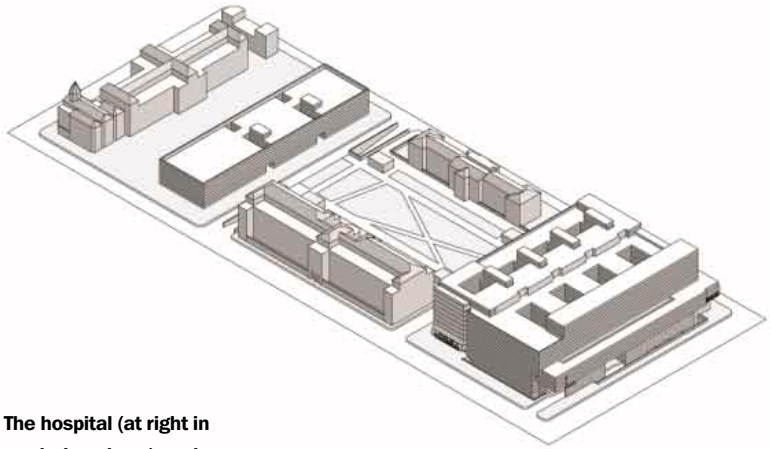
SECOND LEVEL

GROUND LEVEL

BASEMENT

N 0 20 FT. 6 M.

1. *Entry*
2. *Waiting room*
3. *Admissions*
4. *Emergency treatment*
5. *Nurses' station*
6. *Medical unit office*
7. *Laboratory*
8. *MRI room*
9. *Kitchen*
10. *Security*
11. *Administration*
12. *Blood testing*
13. *Public cafeteria*
14. *Staff cafeteria*
15. *Chapel*
16. *Lecture hall*
17. *Classrooms*
18. *Outpatient surgery*
19. *Fertility laboratory*
20. *Consultation*
21. *Delivery room*
22. *Neonatal unit*
23. *Neonatal intensive care*
24. *Pediatric intensive care*
25. *Pediatric surgery*
26. *Ob/gyn surgery*



The hospital (at right in rendering above) anchors a tightly bound urban superblock. Glazed corridors look onto an interior courtyard (below).

Orthogonal volumes pulled from the main structure, along with the horizontal mullions, break up the building's large mass and help integrate it into its urban surroundings.

on each of the four corners, the apparently open grid of corridors has been calibrated to segregate public and staff, who access patient rooms from two opposing perimeter corridors. Transverse corridors feed between these perimeter accesses to the nurses' stations and patient rooms, which are grouped around the courtyards in the building's center. Patient rooms line only two sides of each court, so they can overlook the activity of the corridors on the opposite sides.

Patient rooms feature planes of vivid color, custom-designed furniture, and interior maple shutters that offer privacy and a domestic air. Maternity rooms include a rocking chair for mother and baby. Like the furniture in the waiting areas, Moneo's design of chrome tubing and white upholstery has the ele-

PHOTOGRAPHY: © ROLAND HALBE (BOTTOM)

Sunlight brightens an interior of clean, calming whites and neutrals (this page). The interior courtyards permit glimpses throughout the building, creating a sense of community despite the hospital's size (opposite).

gant beauty of classic Bauhaus pieces. Corridor floors and wainscoting are of white marble, with recessed strip lighting and metallic acoustical tile for the ceilings.

Moneo developed the building's spectacular glass skin from the tilted glass prisms of his Center Kursaal in San Sebastián, Spain [RECORD, May 2000, page 212]. The glass forms the outer layer of a ventilated cavity wall and is supported by horizontal aluminum mullions. Its soft, creamy surface is created by an inner layer of sandblasted, mirror-backed glass. The glass doesn't reach the ground; a wainscoting of cast aluminum panels clads the retrenched lower floors, while perimeter light courts for the basement levels are clad in granite. The glass and aluminum make the hospital's crisply modeled volumes glow and sparkle amid the grim brick buildings that surround it, giving it, as Moneo comments, the air of lightness, precision, and hygiene one expects of a medical instrument.

Commentary

As in many of his buildings, Moneo's design goes beyond functional and formal issues to identify more fundamental and elusive concerns—in this case, how the building can help spiritually as well as practically in the work of caring for patients. He conceived the hospital, like the monasteries that the courtyard typology derives from, as an all-embracing environment, withdrawn from the outside world and focused around its courts and corridors: an autonomous, protected community of order and light. ■

HOT

Children's Hospital, Ambulatory Care Building

Vancouver, British Columbia, Canada

2

HENRIQUEZ PARTNERS AND THE IBI GROUP MITIGATE CONCRETE'S TOUGH SIDE WITH BRIGHT COLOR AND WARM MATERIALS FOR A CHILDREN'S CLINIC.

By Rhys Phillips

Architect: *Henriquez Partners/IBI Group (design architects)—Richard Henriquez, partner in charge, design; David Thom, partner in charge, management; Ivo Taller, project architect; Ron Eagleston, Yijin Wen, Frank Stebner, Raj Nath, Julianne Kennedy, Jaime Dejo, Marc Bouille, Peter Willemse, design team; Karlsberger Associates (associate architect)—Mike Tyne, AIA, Ken Redmond, AIA, Jane Holden, AIA, design team*
Client/owner: *Children's and Women's Health Centre of British Columbia*
Engineers: *Read Jones Christoffersen (structural); Stantec Consulting (m/e/p)*
Consultants: *Juli Hodgson Design (interiors); Durante & Kreuk (landscape)*
General contractor: *PCL Constructors Canada*

Size: *115,000 square feet (new); 6,500 (renovation)*
Cost: *$17 million*
Completion date: *January 2002*

Sources
Concrete: *Ocean Concrete*
Built-up roofing: *Soprema*
Steel: *Eagle Iron*
Glass: *Midway Glass and Aluminum*
Painting: *M&L Painting*

For more information on this project, go to Projects at **www.architecturalrecord.com**.

Squeezed between snow-capped mountains, Juan de Fuca Strait, and the Fraser River delta, Vancouver has one of the world's premier urban settings. While it boasts a mild, largely benign climate, it can be plagued by long periods of cloudy, wet weather. This suggests a climate ill-suited to the raw concrete architecture of Brutalism. Over the past decade, however, the work of Henriquez Partners has presented a strong argument for the appropriateness of bold concrete forms in urban Vancouver, with projects like the Coal Harbour Community Centre and two recent award-winning social housing projects. The firm's Ambulatory Care Building (ACB) on the British Columbia Children's Hospital campus (a joint effort with IBI Group and Karlsberger Associates as associate architects) succeeds on a tight budget in creating a bold but welcoming facility for young patients.

Program

ACB replaces the demolished north wing of the Children's and Women's Hospital, a sprawling single-building complex with mazelike interior spaces that render its wayfinding, fresh air, and sunlight features "not very good" according to partner in charge Richard Henriquez. The hospital's long-term program calls for smaller buildings, assembled with other nearby medical facilities into a campuslike setting using streets and landscaped quadrangles. A primary objective for the new, 115,000-square-foot facility, which provides outpatient pediatric services for 66,000 visitors annually, was to create a bright, welcoming environment for children and their parents. With more than 50 clinics required for nearly 30 specialties, treatment and procedure rooms had to be flexible enough for different disciplines to utilize them at different times of the week.

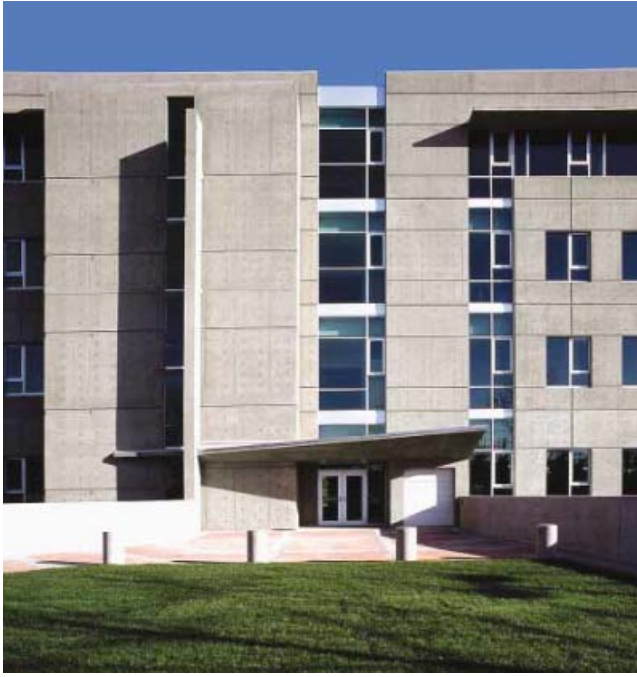
Rhys Phillips has been writing about Canadian architecture for the past two decades. In 2003, he was inducted into the Royal Architectural Society of Canada as an Honorary Fellow.

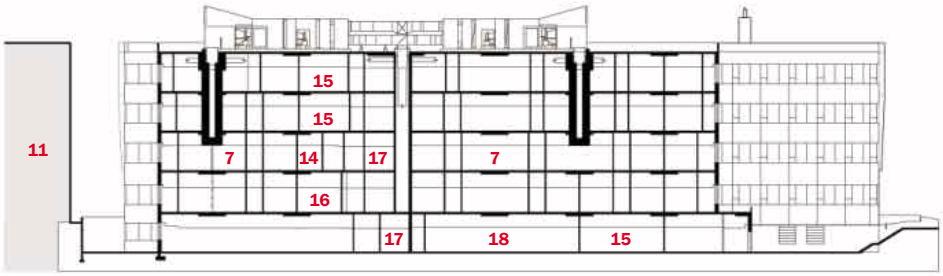
Solution

ACB is a modestly scaled building connected to the main complex by a glazed bridge on the second level. Henriquez stretched the four-story structure along a pleasant new street lined with trees, lanterns, and outdoor seating. Its animated south-facing public facade emphasizes transparency with a double-height, glass-fronted concourse shielded by an impressive concrete canopy that minimizes solar gain. "The relatively narrow floor plate made up of two rectangles of different lengths maximizes the penetration of natural light from Vancouver's fickle sunshine," says Henriquez.

Functionally, the floor plate is programmed into three horizontal and two vertical zones. On the first

A glazed walkway (near right) connects ACB to the existing hospital (lower left in photo below). Canopies over entries and windows prevent heat gain (far right). The concourse (below) is pushed forward from the main volume, its columns extruded upward to create flying-buttresslike arches that obviate the need to introduce additional columns on the main floor.

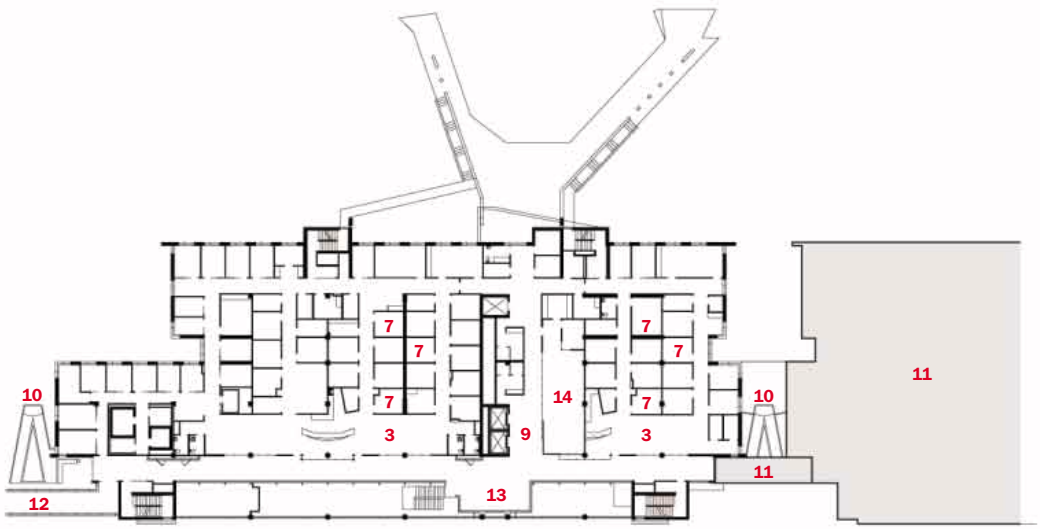




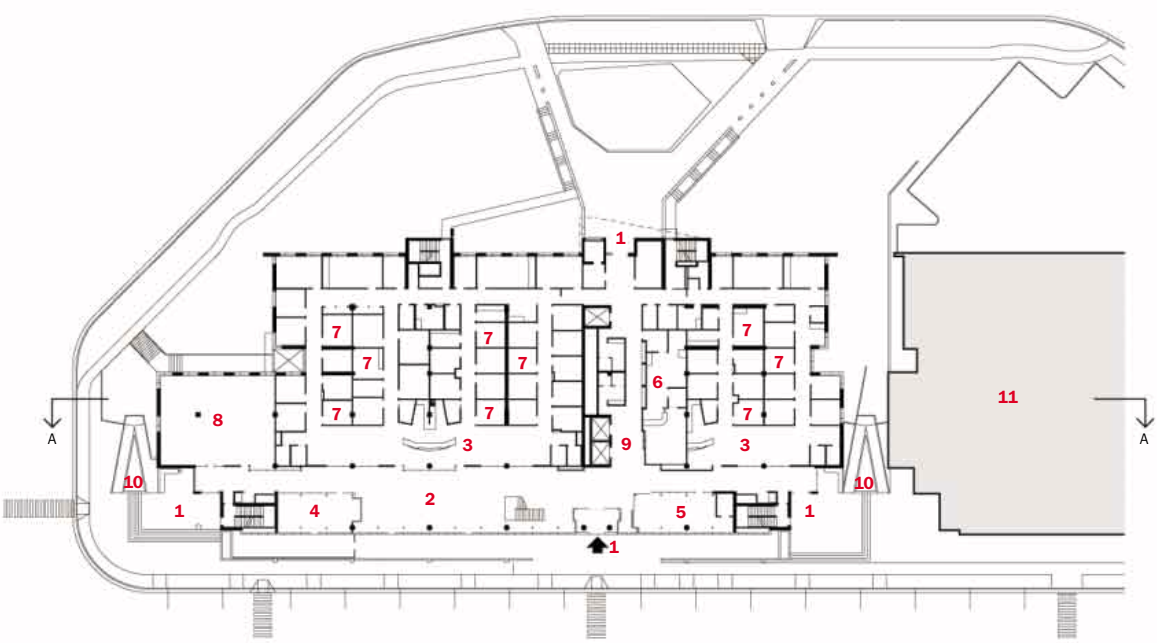
SECTION A-A

0 30 FT.
9 M.

1. *Entry*
2. *Concourse*
3. *Reception*
4. *Day care*
5. *Gift shop*
6. *Pharmacy*
7. *Clinical office*
8. *Dentistry*
9. *Service core*
10. *Access ramp*
11. *Future phase*
12. *Bridge to existing hospital*
13. *Public corridor*
14. *Patient library*
15. *Conference room*
16. *Examination room*
17. *Restroom*
18. *Server room*



SECOND LEVEL



GROUND LEVEL

N 0 30 FT.
9 M.

two levels, the bright, open concourse serves as the patient reception zone. The clinic zone, stretched along the center of the floors and organized as a series of three "pods" on each floor, is immediately visible and color-coded to ensure quick orientation. A third, private zone occupies the north side of the building and contains case preparation rooms. Patient files are stored in this zone, transferred each morning from doctors' offices located on the third and fourth floors. These narrow upper floors boast extensive north- and south-facing glazing. Additional overhangs, along with tinted, slightly reflective glass and operable windows, help the non-air-conditioned building achieve an estimated 50 percent energy savings over similar conventional buildings.

In keeping with current hospital design practice, according to project architect Ivo Taller, the treatment rooms were kept generic and unprogrammed. "Each one contains digital imaging equipment, a pedestal sink with sensor-operated faucets, and a standard examining table—but they're intended to be multifunctional so they can be in constant use," he says.

Despite a modest budget, Henriquez says, "We wanted to up the architectural quality of the typical hospital, and we found it cheaper to build in concrete, where the structure and the cladding are the same." A special seal was used on the concrete to prevent it from turning dark and streaky when wet, not a small matter in a city where it rains 197 days a year.

Commentary

ACB's south elevation, with its tension between competing vertical and horizontal forms and structures as well as between concrete solids and glazed voids, provides a robust and transparent public facade. Inside, public areas are spacious, uncluttered, and filled with natural light—all helped along by crisp detailing in metal, glass, and wood, and softened by touches of bright color. ■

PHOTOGRAPHY: © DEREK LEPPER

An open stair of glass, metal, and wood (near right) provides access from the ground floor to clinical offices on the second level. Color coding of the clinic spaces (far right and below) simplifies wayfinding in a facility housing a wide variety of specialists.

Provincial Hospital Graz-West

Graz, Austria

3

DOMENIG/EISENKÖCK/GRUBER WELCOME DAYLIGHT AND FRESH AIR INTO A PUBLIC HOSPITAL WITH AN UPSCALE FEEL IN A SPECTACULAR LANDSCAPE.

By Liane Lefaivre

Architect: *Domenig/Eisenköck/Gruber—Günther Domenig, Hermann Eisenköck, Rupert Gruber, design principals; Johannes Dullnigg, project manager*
Client/owner: *Steiermärkische Krankenanstalten Gesellschaft*
Engineer: *Fritsch, Chiari & Partner*
Consultants: *Land in Sicht (landscape); Gerhard Düh (fire protection); Erwin Wagner (building services)*

Size: *335,800 square feet*
Cost: *$99 million*
Completion date: *August 2002*

Sources
Structural system: *Steiner Bau*
Metal/glass curtain wall: *Morocutti Stahlbau; Metallbau Heidenbauer*
Concrete: *Andreas Sauritschnig*
Aluminum: *Schüco International*
Insulated panels: *Eckelt Glas*
Fire doors: *TorTec Brandschutztor*
Acoustical ceilings: *Lindner*
Cabinetwork/custom woodwork: *Stoisser Objektmöbelproduktion*
Elevators/escalators: *Kogler*
Interior ambient lighting: *Kreon*

For more information on this project, go to Projects at **www.architecturalrecord.com**.

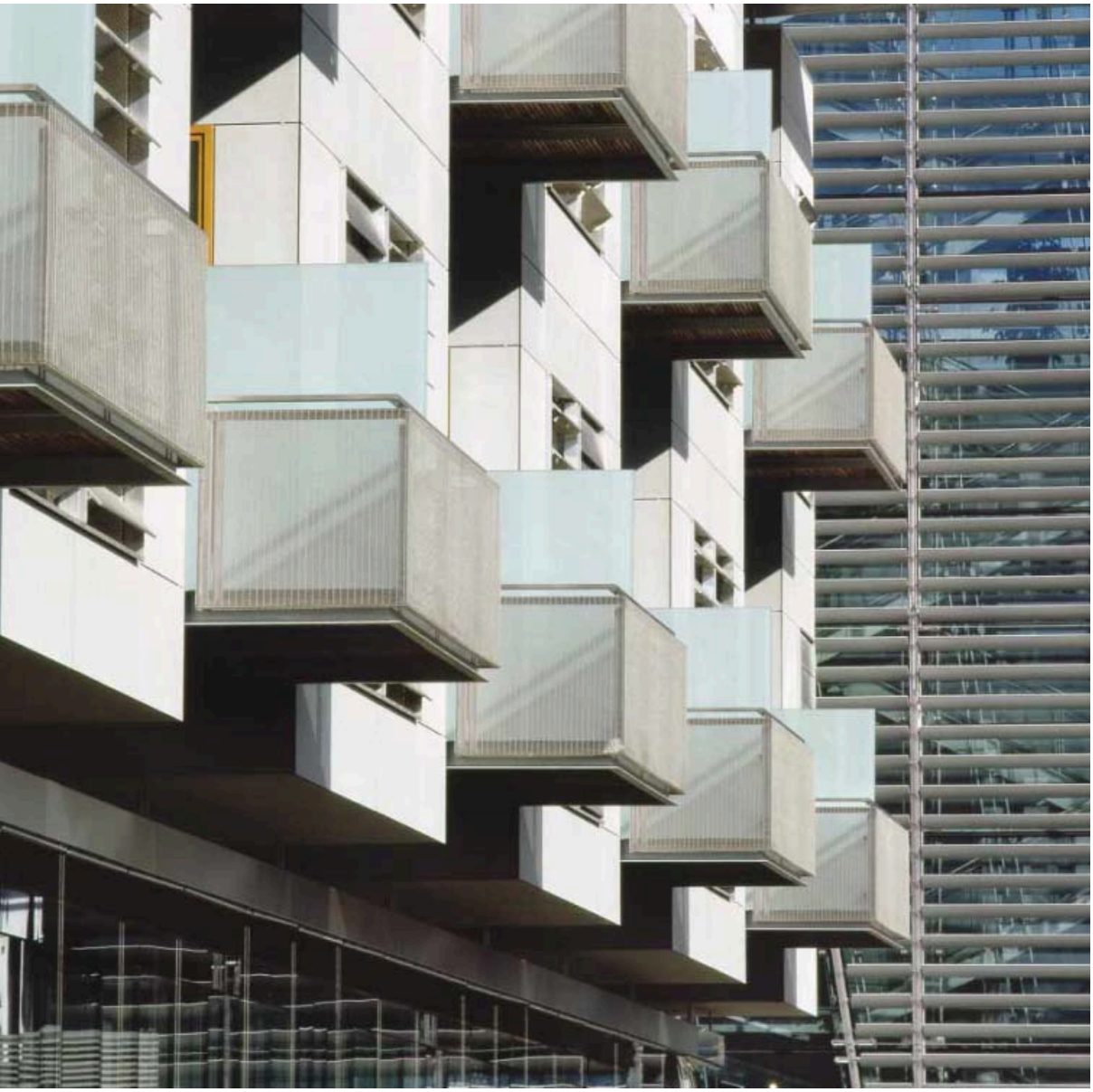
Josef Hoffmann's Pruckersdorf Sanatorium of 1904 was a functional and aesthetic masterpiece that might have set a precedent for hospitals in Austria—but didn't. Throughout the 20th century, Austrian hospitals fared perfectly well without architects' architects. Today, the country not only has the most hospitals per capita in the European Union, it also boasts the highest international ratings, along with France, in health-care quality. Recently, however, the climate for public hospital construction has shifted. State facilities are now competing for patients who have opted for new, private supplementary insurance, and simultaneously, the national hospital service hired a slew of project managers tasked with keeping construction strictly on budget. The grand new public building at Provincial Hospital Graz-West, designed by Domenig/Eisenköck/Gruber, should convince both patients and administrators that the public system in Austria is entirely capable of delivering top-notch hospitals cost-effectively.

Program

As part of an effort to provide smaller, decentralized health-care facilities throughout the region, the

Liane Lefaivre is the chair of the History and Theory of Architecture Department at the University of Applied Arts in Vienna.

The architects conceived the wings as low volumes of steel, glass, and concrete, scaled to harmonize with surrounding fields and distant hills. Separate components of the facade, clad in differing materials, push and pull against one another, creating an impression of quiet drama (right and below).



In a nod to nature's healing powers, the architects placed patient rooms along the perimeters of each wing (top); some even have balconies (bottom). Brushed metallic louvers (at right in bottom photo) prevent excess heat gain and minimize the need for air-conditioning.

program called for outsourcing short-stay, basic-care services—such as emergency surgery, physiotherapy, radiology, internal medicine, same-day surgery, and lung disease treatment—away from the larger University Hospital in Graz, located in the eastern part of the city. The new building's site in Graz's western outskirts consists of wheat and corn fields, with a few rustic buildings in the distance and hills as a backdrop, all set against a vista of open skies.

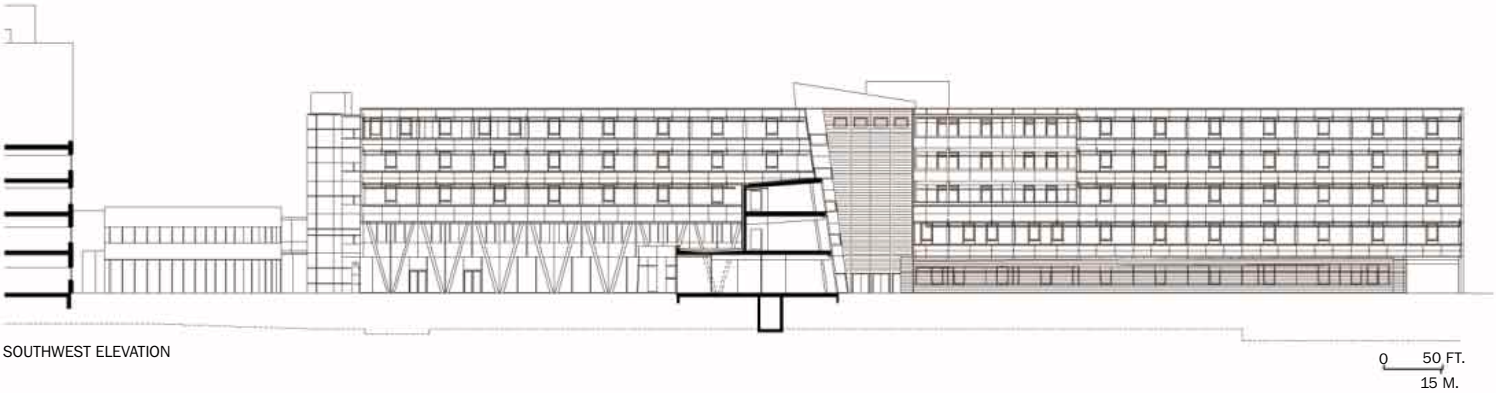
Solution

The three-story, 260-bed hospital smacks of luxury. Approaching it, a visitor can't help thinking it's not a hospital, but rather a home-furnishings shopper's paradise, recalling Ben Thompson's famed Design Research Building in Cambridge, Massachusetts. Nighttime heightens this impression, thanks to the brilliant (literally and figuratively) use of artificial lighting, both inside and out. The facades of buffed, meshed, and ribbed stainless steel, as well as concrete structural elements and finishing, are impeccably crafted and detailed, giving an impression of state-of-the-art technology within.

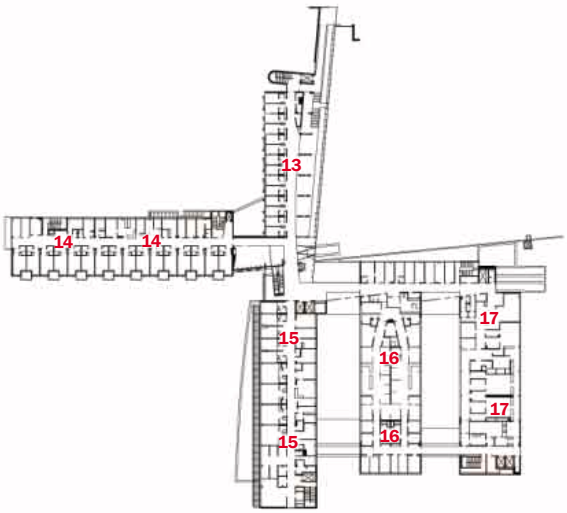
Roughly cross-shaped in plan with a hub-and-spoke logic, the hospital comprises a centrally located lobby, three patient wings, and a fourth wing that houses operating and recovery rooms, along with the emergency services area, radiology department, and parking garage.

Inside, visitors enjoy a sense of abundant air, space, and light. The spacious quadruple-height lobby has a coolly luminous northeastern orientation. Hans Kupelwieser's bright red plastic sculptures (all public facilities in Austria have an art budget) boost its upscale design patina.

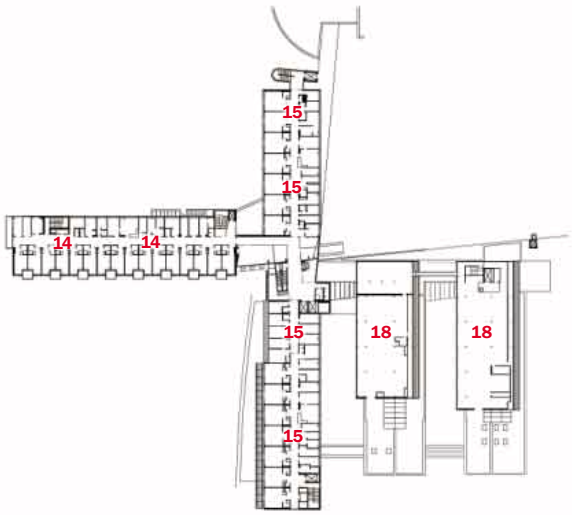
PHOTOGRAPHY: © PAUL OTT, EXCEPT GÜNTHER LINSHALM (PREVIOUS SPREAD, BOTTOM)



SOUTHWEST ELEVATION

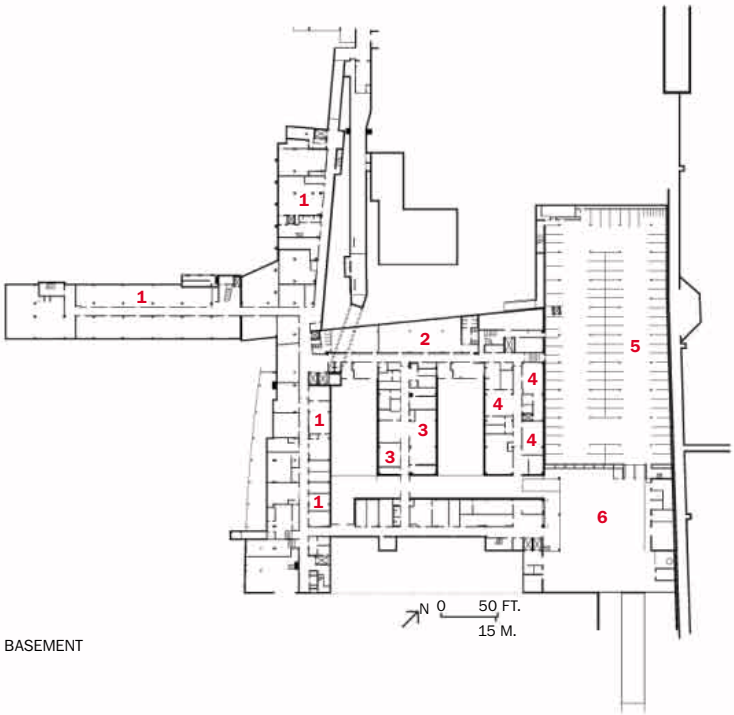


FIRST FLOOR

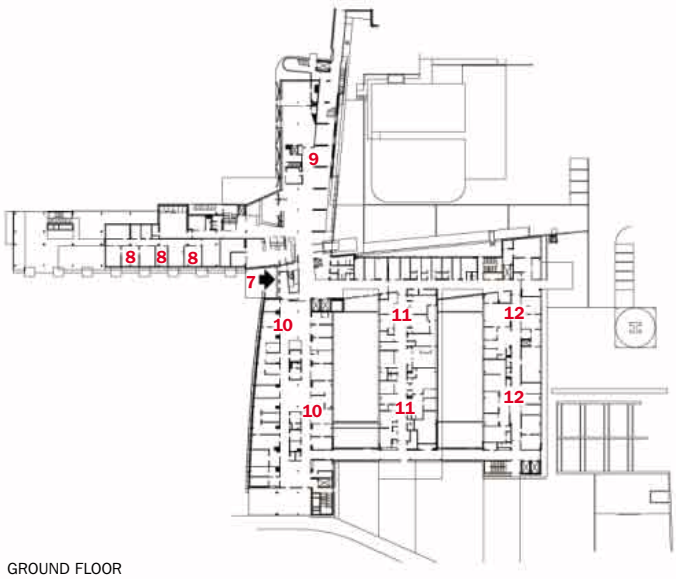


SECOND FLOOR

1. *Equipment/stockroom*
2. *Laundry/wardrobe*
3. *Pharmacy*
4. *Stockroom*
5. *Parking*
6. *Delivery area*
7. *Main entry*
8. *Administration*
9. *Dining hall*
10. *Outpatient services*
11. *Radiology*
12. *Pathology*
13. *Readiness rooms*
14. *Patient wing (private)*
15. *Patient wing (public)*
16. *Intensive care unit*
17. *Operating rooms*
18. *Equipment area*



BASEMENT



GROUND FLOOR

Designer furnishings lend an upscale aura to a simple waiting area (above). Sculptures adorning the entry (right) were modeled on red blood cells. Generous glazing brings daylight into visitor rooms and public seating areas (opposite and this page, top).

Partitions in the reception area, including the elevator shafts, are made of glass, whether clear, tinted, or frosted. Even the ends of the corridors parallel to the long axes of each wing are glazed, so that neither patients nor staff ever lose sight of the bucolic outdoors. The architects used metallic louvers outside and oriented the building to minimize the need for air-conditioning. Natural cross ventilation in the patient wings adds to the delight of abundant natural lighting.

Spaces for medical staff and services are located on the street side of the hospital, reserving the superior outdoor views for patients. Rooms in the public-sector wings accommodate four patients each and are equipped with refrigerators, cloaked in sleek, pear-wood veneer consoles, as well as bathrooms with glazed partitions and fixtures worthy of high-end Milan apartment buildings. The shorter wing for patients with private insurance, which extends perpendicularly toward the back of the building, is even more sumptuous. Rooms are generally single or double occupancy, with outdoor balconies big enough for a few chairs. Visitors and patients can relax in visiting rooms at the far end of the corridor, which boast designer furniture and sweeping views of the fields and hills.

Commentary

Hospital administrators report that the new building is highly functional. Moreover, the director remarks that, in spite of its well-appointed appearance, the project didn't exceed its budget by one euro cent. Its cost-effectiveness, combined with abundant natural light and ventilation, luxurious materials, and site friendliness, make this no ordinary hospital. Domenig/Eisenköck/Gruber had already proved its credentials with the public hospital in Bruck an der Mur (1987–94), but this project has raised the bar further, setting new functional and aesthetic standards for patient well-being. ■

3.06

Naval Hospital
Bremerton, Washington

4

NBBJ EVOKES THE FORM OF A NAUTICAL QUARTERDECK FOR AN ATRIUM THAT CONNECTS A NEW FAMILY-CARE WING WITH AN EXISTING HOSPITAL.

By John Pastier

Architect: *NBBJ—John Pangrazio, FAIA, partner in charge; Richard Dallam, AIA, design principal; Charles Kolb, project manager; Jerry Yin, Wayne Hiranaka, Robert Dooley, Cam Allen, Andris Lapins, Angel Fernandez, Duane Jonlin, Gretchen Harriott, Michael Gale, Amy Baker, Catherine Farrington, Thomas Bender, Don Schuman, Kimball Bergerud, Jay Halleran, Laurel Rech, Taylor Simpson, Brodie Bain, Carl Tully, Stephen Bettge, Ross Leventhal, Noel Whorton, project team*
Client: *U.S. Navy*
Consultants: *Magnusson Klemencic Associates (structural/civil engineer); Notkin (mechanical engineer); Sparling (electrical engineer, lighting); Anderson & Ray with Kathryn Gustafson (landscape)*

Size: *126,800 square feet*
Cost: *$24,885,220*
Completion date: *October 2001*

Sources
Curtain wall: *EFCO*
Glazing: *Hartung Glass Industries*
Doors: *RACO; VT Industries; WON Door; Total Door*
Hardware: *Falcon; Norton; Monarch*
Acoustical ceilings: *USG*
Resilient flooring: *Armstrong; Mannington*

For more information on this project, go to Projects at **www.architecturalrecord.com**.

As it is in the civilian world, health care in the military is a growing enterprise that requires facility expansion to keep pace with demand. The armed services clientele doesn't differ much from the larger population, since spouses, children, and retirees are provided with care. Similarly, military facilities are incorporating the amenities and consumer values found in the larger universe of American health care. NBBJ's addition to the Bremerton Naval Hospital, in Washington, one of about 20 U.S. Navy hospitals around the world, embodies these values and is a model for future planning. It consists of a new family-care outpatient clinic attached to an older, more traditionally conceived hospital. Located in a nearly rural zone on the western fringe of metropolitan Seattle, the hospital serves 60,000 military families in Washington and Oregon.

Program

The 63,200-square-foot addition expands a 250,000-square-foot naval hospital built in 1980, which occupies a gently sloping wooded site on Washington's Kitsap peninsula, overlooking Puget Sound's Ostrich Bay. The new building contains family-care clinics comprising 66 exam rooms, seven procedure rooms, and 32 medical offices; a pharmacy; three large waiting areas; and a new entry joining the old and new buildings. Support functions include medical-records storage, a wellness center, staff lounges, and an allergy/immunization clinic. NBBJ also partially renovated the older hospital. Among the project's goals were creating a patient-focused healing environment, a pleasant work space, clarity of circulation, integration with the natural context, expression of naval motifs and traditions, and sustainability within a tight budget of $200 per square foot.

John Pastier is a Seattle-based architectural writer whose work has been published in the U.S. and abroad.

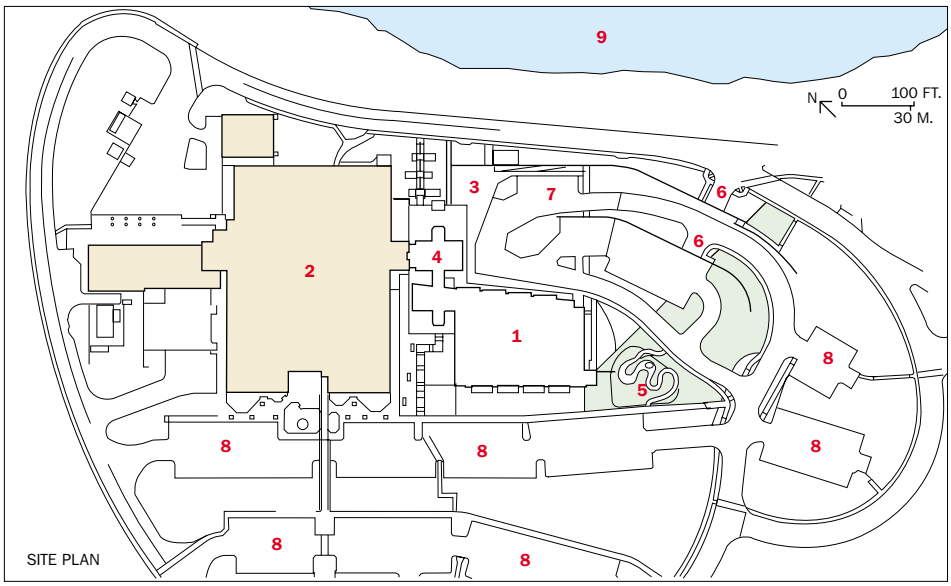
Solution

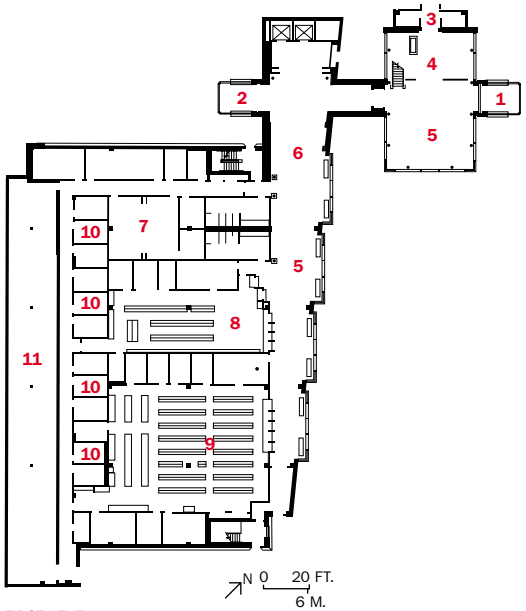
Early in the design process, NBBJ persuaded the Navy to modify its existing campus master plan to enable expansion parallel to the shoreline, rather than in an inland direction, to

PHOTOGRAPHY: © ASSASSI PRODUCTIONS, EXCEPT AS NOTED

A glass-walled atrium (below) connects the new wing (opposite) with a partially renovated 1980s hospital. A "healing garden" conceived by landscape designer Kathryn Gustafson meanders through part of the forested site to the south of the clinic (plan, right).

1. *New clinic*
2. *Existing hospital*
3. *Entry plaza*
4. *Quarterdeck*
5. *Healing garden*
6. *Parking entry*
7. *Underground parking*
8. *Existing parking*
9. *Ostrich Bay*





FIRST LEVEL

SECOND LEVEL

1. *Main entry*
2. *Secondary entry*
3. *Access to existing hospital*
4. *Quarterdeck*
5. *Waiting room*
6. *Resource center*
7. *Classroom/education*
8. *Pharmacy*
9. *Patient records*
10. *Offices*
11. *Mechanical/service*
12. *Clinic rooms*
13. *Staff lounge*
14. *Bridge*

The maple flooring of atrium bridges and stairs recalls ship decking and is painted white to pay homage to Navy whites, the service's dress uniform (above). Towering curtain walls offer light and views to clients waiting in the new family clinic wing (left).

preserve a wooded hillside and afford the new building views of the bay. Helping to preserve the site further, a multilevel underground garage provides protection from the elements in the rainy climate and can also serve as an emergency shelter.

The key visual motif of the complex is a glass-walled atrium, dubbed the "quarterdeck"—a Navy term for the main entry area of a ship or a command, usually decorated with flags and serving ceremonial as well as circulatory functions. Here, the quarterdeck acts as a "knuckle" joining the old hospital with the new clinic by means of freestanding, intricately detailed steel stairs and second- and third-story bridges that float within a spacious three-story volume.

"Externally, this concept grew out of the form of an aircraft-carrier control tower—'the island', in Navy parlance," says NBBJ project designer Jerry Yin. "Internally, the bridges and stairs are like a ship's catwalks."

The clinic wing is organized on a 30-foot-by-30-foot planning module and displays an impressive clarity, considering the more than 200 cubicles and functional subdivisions required by the program. The linear waiting areas, extending the full length of each floor, have generous northeast-facing window walls yielding natural light and sweeping water views, and form spines to which five cross-corridors connect on each upper floor. The latter are glazed at each end, providing orientation cues as well as visual relief and a link to the outdoors.

Commentary

Relating the addition to the existing seven-story concrete monolithic hospital was a challenge, given its heavy expression and a volume four times as large as the new wing. The new quarterdeck provides a welcome light touch at the center of the complex, and buffers the clinic building from its bulky sibling. Its bright, airy main-circulation and waiting-room spine is a big improvement over the original building's darker internal corridors. NBBJ's expansion is humane and enlightened, bringing natural light and inspiring water views to everyone. ■

PHOTOGRAPHY: © EDUARDO CALDERON (RIGHT)

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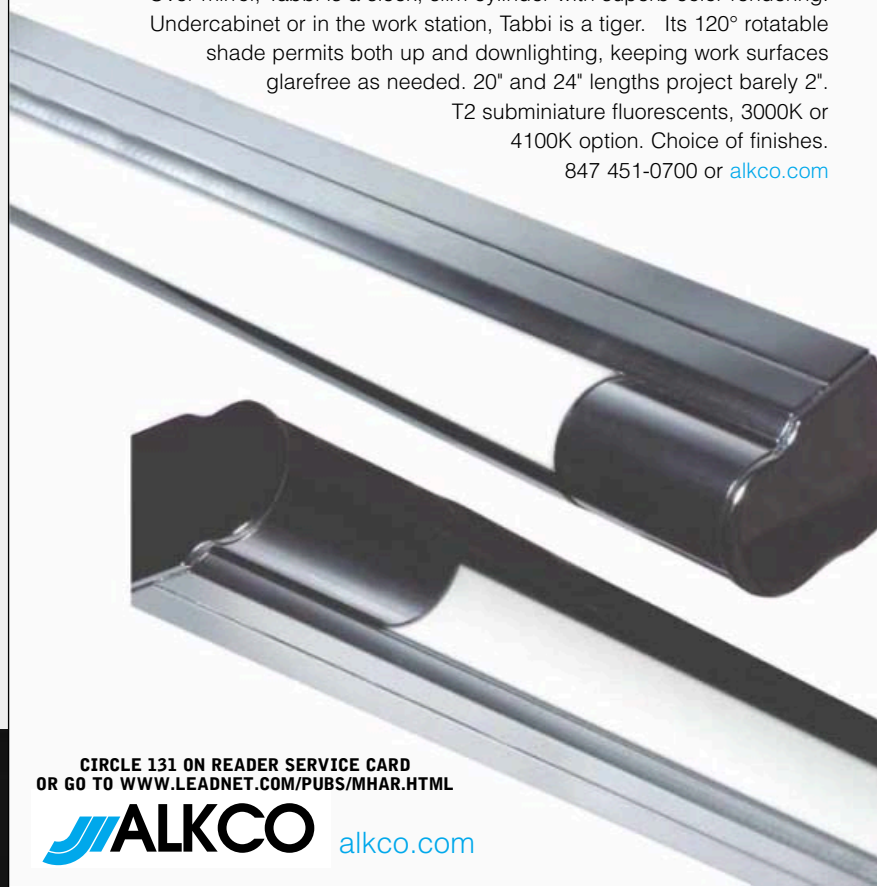

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The **Truth** About Steel Pricing & Availability

MYTH *I can't get steel for my project*

REALITY **Structural steel is readily available**

Structural steel is readily available from both mills and steel service centers. In fact, the construction market in the United States could grow by more than 25% and wide flange structural shape would still be readily available. The current pricing volatility in the steel market is not an indication of availability—just as the current increases in the price of gasoline are not related to availability.

MYTH *Only steel prices have increased*

REALITY **Construction costs have increased for all materials**

According to ENR magazine: "Contractors are struggling with a large and broad-based materials price escalation. A surge in steel prices during the first quarter was followed by steep price hikes for stainless steel, copper, concrete, wallboard and other products." If you're looking at a job today, remember to compare **current** steel prices to **current** concrete prices.

MYTH *Steel prices have increased by 40%*

REALITY **Material prices are up 40%, framing prices by 12%**

Mill material costs are up by 40%. But mill prices make up only about 30% of the entire steel package. That means your structural steel package is up about 12% and the increase in your project cost as a result of structural steel price increases is about 1.5%. Similar cost increases are occurring with concrete framing systems as a result of price increases for rebar, plywood forming, and cement.

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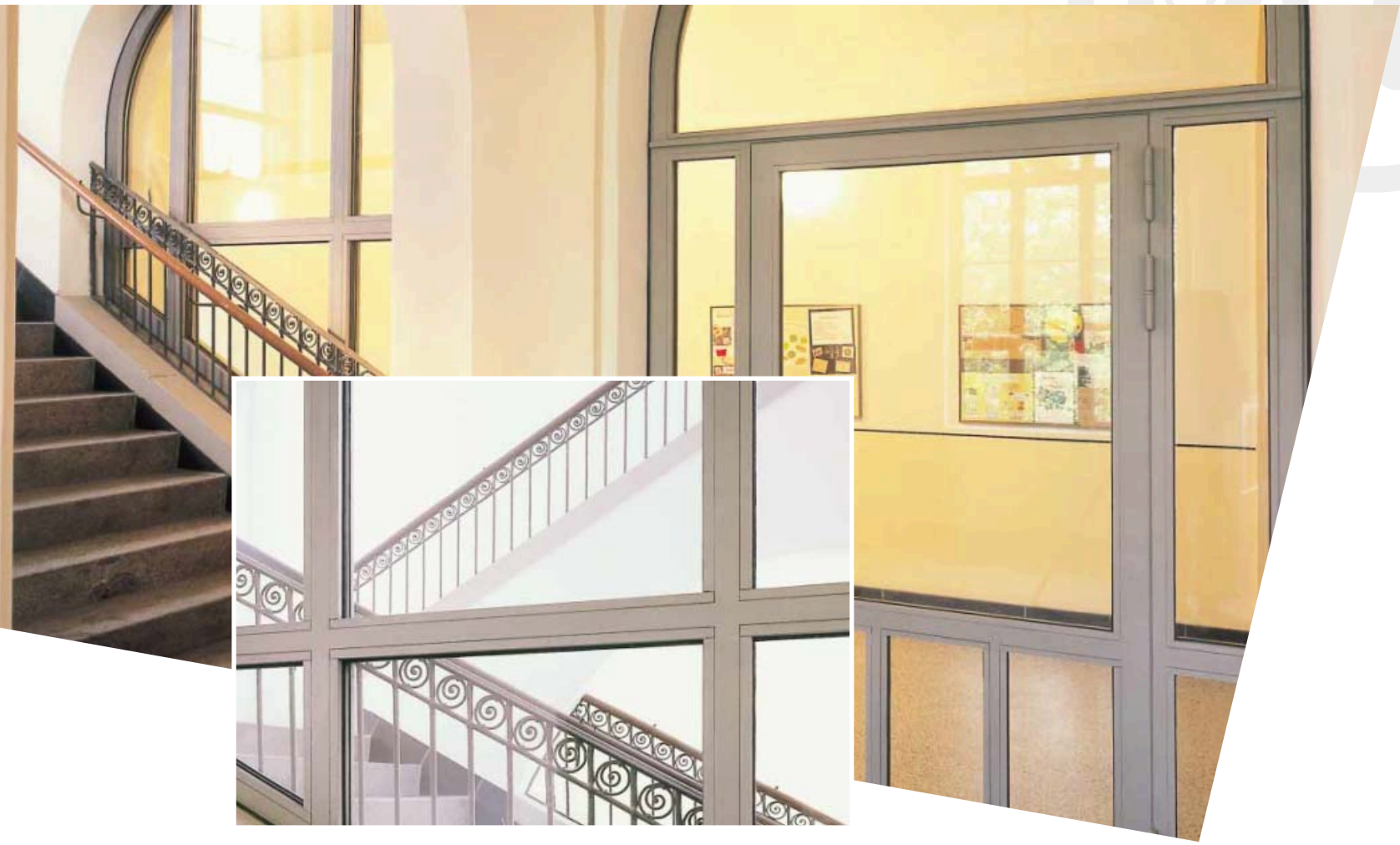

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Designing for Disassembly and Deconstruction

INNOVATION, FUELED BY ECONOMIC INCENTIVES AND SUSTAINABILITY GOALS, HAVE INSPIRED THE BUILDING INDUSTRY TO REDUCE CONSTRUCTION WASTE

By Barbara Knecht

It's the right thing to do. Recycle, reuse, reduce. Experts and advocates spout convincing statistics about how construction waste and demolition debris (C&D) chokes our landfills and harms the environment. In the U.S. and Western Europe, a half ton of construction waste and demolition debris is produced per capita annually. The fact that the U.S. demolition industry takes down 200,000 buildings every year explains why activities related to the built environment generate 30 to 40 percent of all waste.

Experts also say that instead of demolishing a building and dumping the remains in landfills, we should reuse and recycle old building materials. This practice has a long history. Roman and Greek columns and capitals showed up in buildings built by successors all over ancient Europe, North Africa, and the Middle East. Today, houses throughout the U.S. contain the recycled lumber of dismantled structures. It is only in the last half century that this country abandoned the art of recovery and reuse for the expediency, predictability, and standardization resulting from complete demolition and new construction.

At the Phoenix C&D Recycling Facility in Des Moines, demolition waste is loaded on the screening deck and conveyor. Sorters inspect their picks and drop them into nearby bins.

Does it make economic sense? There is a lot conspiring against it. Building components are difficult to separate without damaging them; salvaged materials have low value; buildings are rife with hazardous materials; and equipment, transportation, and disassembly time and labor are costly.

Barbara Knecht is an architect and journalist based in New York and Boston. She contributes regularly on technology issues.

CONTINUING EDUCATION

Use the following learning objectives to focus your study while reading this month's ARCHITECTURAL RECORD/ *AIA Continuing Education article. To receive credit, turn to page 188 and follow the instructions. Other opportunities to receive Continuing Education credits in this issue include the following sponsored section: "First Impressions: Knowing Your Options Makes It Easy to Create Magnificent Openings," sponsored by JELD-WEN, page 192.*

LEARNING OBJECTIVES

After reading this article, you should be able to:

1. *List problems associated with disassembling buildings.*
2. *Discuss current and future incentives for reusing and recycling building materials.*
3. *Describe benefits of designing for disassembly and deconstruction.*

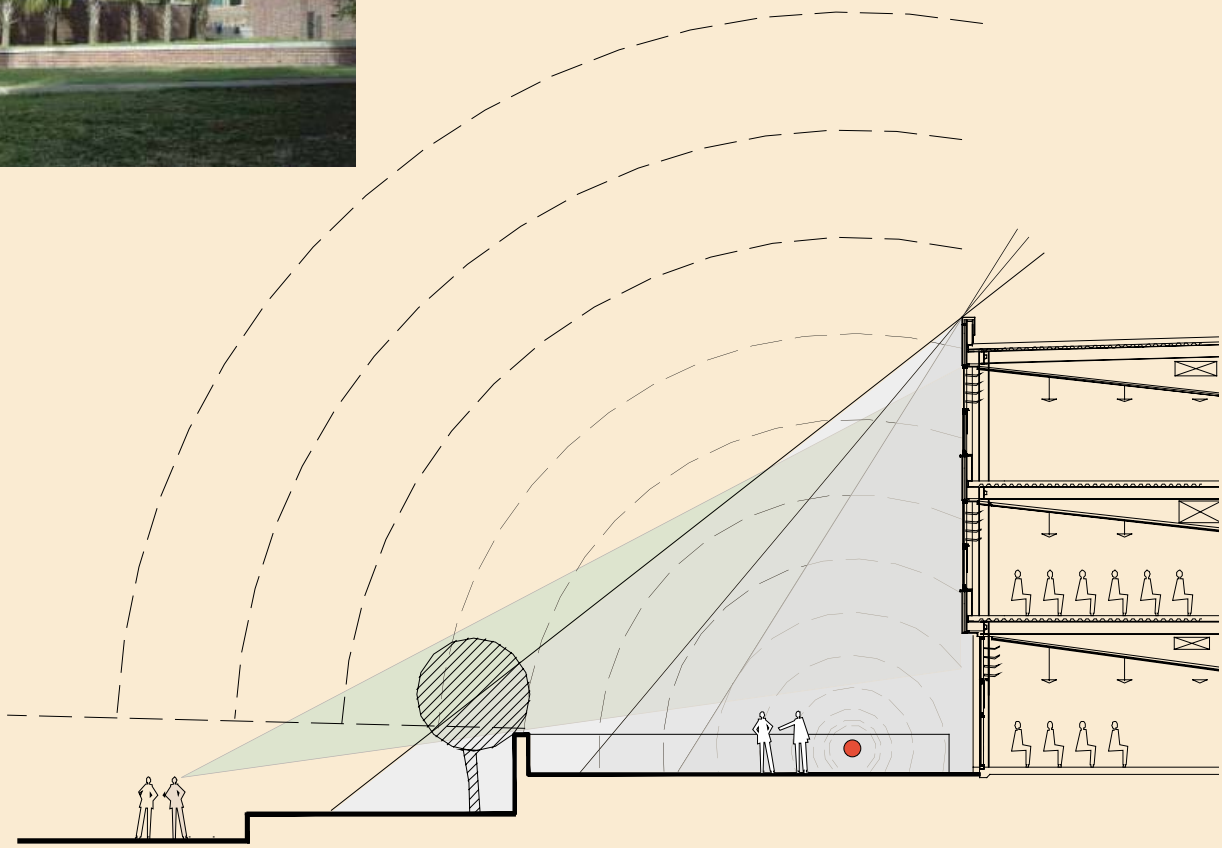
For this story and more continuing education, as well as links to sources, white papers, and products, go to **www.architecturalrecord.com**.

Bob Brickner, senior vice president at Gershman, Brickner & Bratton (GBB), a solid-waste management company in Fairfax, Virginia, dates the increased attention on C&D waste back about 15 years. His company wrote an Environmental Protection Agency (EPA)–funded manual on recycling and diversion of C&D waste in 1993 (www.swana.org).

Demolition contractors have always been salvagers to the degree that it does not interfere with clearing a site as fast as possible. Thus, they prioritize big, bulky, and valuable items, such as structural steel, followed by materials that are easily recovered, such as glass and concrete. Demolition contractors have knowledge of the market and the value of salvaged materials but have never been in the position to influence an energy-efficient demolition process. Their charge has been to get it off the site and out of sight.

In the last decade, however, new incentives have emerged to divert more types of materials from demolition into the reuse-and-recycling market. Existing landfills have reached capacity, and new ones are hard to locate and permit. Tipping fees have risen, especially for hazardous materials, and the LEED scoring system encourages waste diversion. "These factors have boosted the market for materials separation and, in turn, the growing market has brought the entrepreneurs and equipment engineers to increase receiving markets and develop better handling methods, both of which improve cost-effectiveness," says Brickner.

PHOTOGRAPHY: COURTESY ROBERT BRICKNER/GBB



At Rinker Hall at the University of Florida (above), the Croxton Collaborative designed for disassembly by eliminating multiple layers of material and leaving structure exposed when possible (opposite two). The architects created an outdoor room (right) for construction-related activities that takes advantage of climate, building effect, topography, and organization.

Controlled demolition

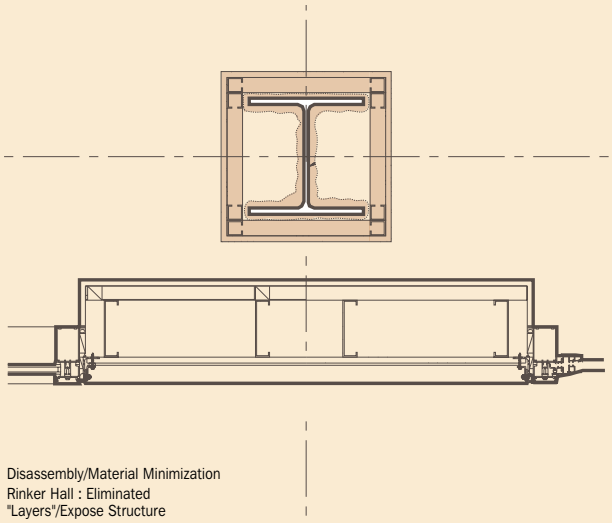
A dismantling and demolition project starts with an assessment of the construction methods and materials. Items of value, and those that are reusable and recyclable, are all identified. An analysis of hazardous material content will reveal limitations on materials reuse and disposal, and then a judgment is made on the extent of demolition. GBB recently completed a waste diversion and demolition at the Nashville, Tennessee, Thermal Waste-to-Energy Plant. Brickner describes the key elements of the Nashville process: "The first action was an auction of all the old equipment and spare parts. The auction raised $983,000, and purchasers were required to remove items at their cost. The primary construction materials on-site were concrete and steel, including the 200-foot-high smokestack that was taken down by controlled demolition. Overall, we charted a course for the demolition contractor that recycled 90 percent of the materials. We had the benefit of time to run the auction. Because of that, the demolition phase was considerably shorter than if the whole site had been crushed, and we added the benefit of generating nearly a million dollars for the owner."

GBB required the contractor to produce a weekly report of all the value and weights of materials that they pulled from the site, their destination, and their sales price. This data complements a directory that GBB compiled for the metropolitan Nashville government of construction materials, and the local and regional materials markets for reuse and recycling.

Cost-effective materials disposition depends on local and regional disposition of materials to ready markets. Contractor costs go up if materials need to be transported some distance to find their markets, or if they need to be stored for any length of time before reuse. The U.S. lags behind Europe and Canada, which have a much larger and more well-developed network of materials handlers and brokers. In Europe, forces encourage separation of materials and reuse. The land is scarcer, the value of materials higher, the availability of raw materials more restricted, and the regulations tighter. In the Netherlands, there is no such thing as demolition debris; it all has to be reused, and they have a robust "downcycling" market for materials to be reused in lower value applications. Brickner and GBB, in their training function, constantly promote the need for awareness of material markets and opportunities for reuse.

European environmental legislation also requires producer responsibility for collecting, sorting, and recycling of discarded products at the end of their service life. Manufacturers work with recycling companies and their own supply chains to manage the reuse and recycling of their products to control the life-cycle costs. While the U.S. operates far below this standard, American product companies increasingly see that it is sound business practice to take back and reprocess their own construction

DISASSEMBLY/MATERIAL MINIMIZATION
EXPOSED STRUCTURE



These details (right) show the traditional method of fireproofing (spray, steel studs, drywall, cornerbeads, spackle, paint), which inhibits disassembly. The architects substituted a sprinkler system in order to leave the materials exposed.

Disassembly/Material Minimization
Rinker Hall : Eliminated
"Layers"/Expose Structure

IMAGES: COURTESY THE CROXTON COLLABORATIVE

waste. Developing routine methods for reuse is part of developing a truly "closed-loop" environmental system—one where every material has an ongoing useful life, and waste is diverted from landfills.

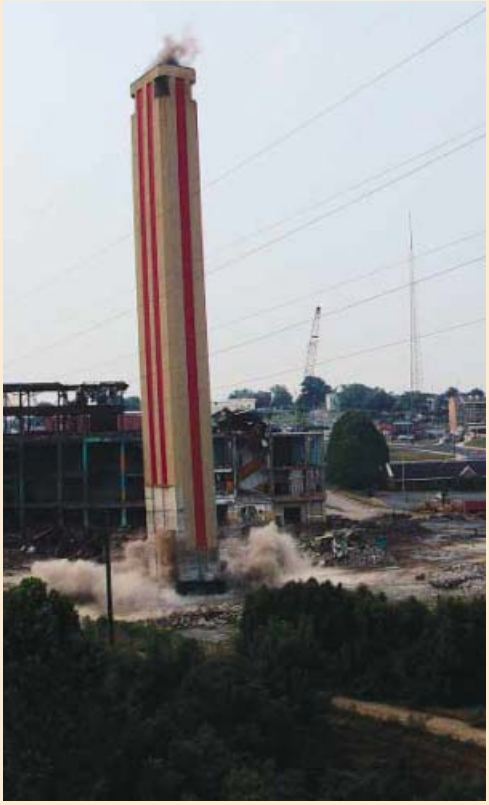
Designing for deconstruction

According to Charles Kibert, founder and director of the Powell Center for Construction and the Environment at the University of Florida in Gainesville, "We are starting to do a good job of diverting construction waste, but we are not yet very good at preventing waste in the first place." Kibert points out that the LEED system, which has proved to be a huge catalyst for diversion of waste materials during construction, has been in place considerably less than a decade, but we have hardly begun to address the companion movement—Design for Deconstruction or Disassembly (used interchangeably)—that integrates waste prevention into the design process. Together they approach the problem from material and design decisions. First, individual building products should produce little waste in their use and installation and have high value for reuse and recycling; and second, the building itself should be designed with its disassembly or deconstruction in mind. As Kibert points out, we don't yet have an integrated system to deal with all aspects of construction waste prevention and recycling, but it isn't for lack of talent dedicated to providing solutions.

Kibert was the owner's representative, and the Croxton Collaborative/Gould Evans was the architect for Rinker Hall, home of the M.E. Rinker, Sr. School of Building Construction at the University of Florida. It was an opportunity for both Kibert and Croxton to explore Design for Deconstruction ideas. Randy Croxton, principal of the Croxton Collaborative, advocates an approach that he calls "materials minimization." In Croxton's words, "There are three aspects to our design philosophy. The first is that we look for ways not to build; that is, we explore solutions to programmatic requirements that don't create fully enclosed, energy-consuming space. The second is that we minimize in design and detail by avoiding glued and composite systems and by using assemblies of resources that can be retrieved and reused at the highest value. And finally, we facilitate disassembly by avoiding situations that require destructive demolition."

At Rinker Hall, the philosophy led to the selection of steel over concrete, while avoiding layers of fireproofing, Sheetrock, and other finishes. Floor slabs are concrete, but sealed and left exposed or covered only with resilient floor tiles rather than layers of carpets and pads. Partitions do not engage columns, anticipating and facilitating change and reuse. One of the hallmarks of Design for Deconstruction or Disassembly is a respect for change over the lifetime of a building.

Renovation and remodeling make up the lion's share of that



The 200-foot-tall smokestack at the Nashville Thermal Transfer Corporation facility was brought down using controlled demolition. Electrical equipment from other parts was auctioned off as part of the demolition and dismantling of the entire complex.

huge volume of C&D waste. According to some EPA statistics from 1996, demolition and renovation constitute 92 percent of construction waste. That is a tangible incentive to increase the life of the building and its materials by designing a building that can respond to changing programmatic needs. According to Croxton, "If a building doesn't support change and reuse, you have only an illusion of sustainability. You may have excellent building orientation and other energy-saving systems, but the building must also be able to be flexible to meet a change in curriculum." Indeed, building types that were once thought of as fixed, from research labs to university classrooms, have become examples of the imperative of flexible planning [see RECORD, August 2003, page 147].

Mechanical systems that typically run in false ceilings or are otherwise bound to the structure complicate disassembly and may necessitate destructive demolition for renovations. At Rinker, the Croxton Collaborative created a "highway" for the mechanical runs and placed them overhead, but they are masked from sight by manipulations of architectural elements such as the roof slope. Open and accessible to facilitate nondestructive changes, they are also generously sized to provide maneuvering room for unanticipated technologies. The resulting spaces are open and flexible to meet with a strong connection to the external environment and the changing patterns of light and shade through large windows and facade screens. Open, flexible spaces that are readily adaptable coincide with the goals of the internationally emerging Universal Design movement [discussed in RECORD, January 2004, page 145].

Planning ahead

Another university-practitioner partnership is creating a school designed for dyslexic children in California. Bradley Guy from the Penn State University Hamer Center for Community Design in Philadelphia and Scott Shell of EHDD Architecture in San Francisco are using a grant from the EPA to explore strategies and details for Design for Disassembly at the Chartwell School in Seaside (Monterey County), California. The exploration began with a matrix (see chart on page 188) of likely and typical construction materials and components, an analysis of their characteristics that rates ease of recovery and value after recovery. The chart of variables was a guide for material selection in the design of the building. Wood was selected for the structural framing. It is widely used in California and has a high economic value, but typical wood construction can be labor intensive to salvage and reuse. Design for Deconstruction suggests that connections should be simple, and fasteners should enable disassembly. One of the explorations at the Chartwell School that Shell and Guy have undertaken is how to keep to that principle and meet the requirements for building in earthquake zones.

Shell's earlier experience in school modernization sparked a particular interest in solving the problem of periodic window replacements. Typically, the cement plaster that encases the windows has to be destroyed, along with their weather tightness, to remove them. A simple window replacement for a large school would routinely grow into a major construction project that could not be completed during a summer break.

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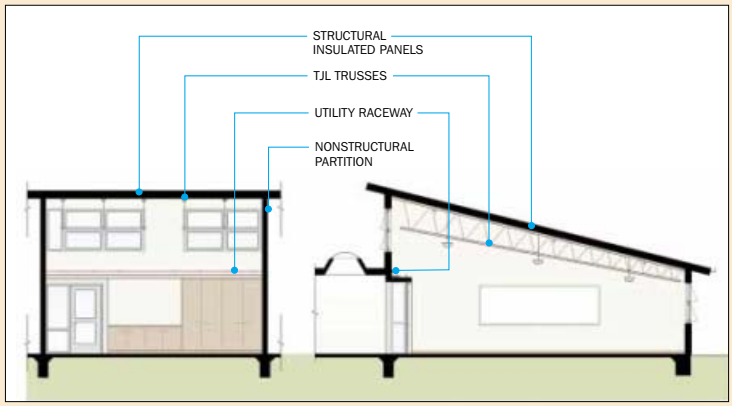
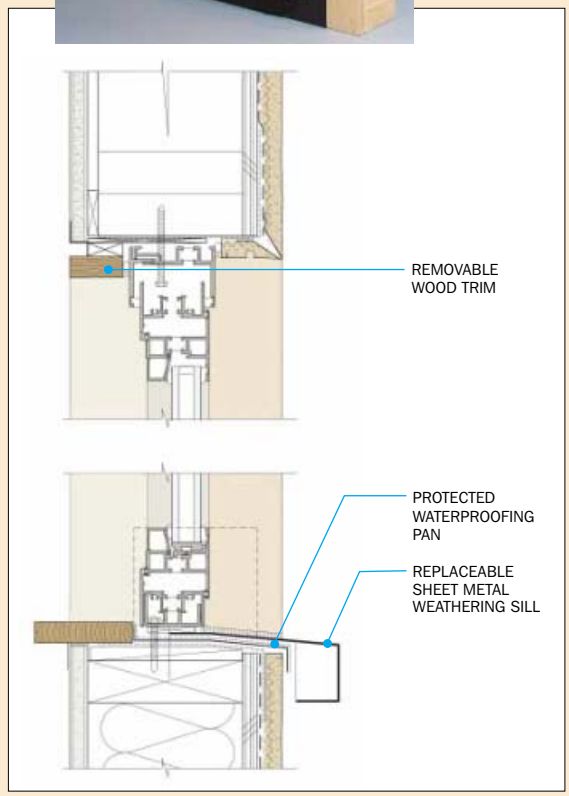
The Chartwell School (bottom) received an EPA grant to research Design for Disassembly strategies. As shown in the section (below), utilities are segregated from wood framing to allow for easier disassembly and to reduce holes in the framing, thereby increasing future salvage value. The Design for Disassembly window detail (right and diagram, below right) allows the window to be replaced by simply removing the wood trim, and without disturbing the adjacent finishes.





Students would be moved to portable classrooms, and the whole process was a classic example of wasted materials, time, and money. To reduce time, the windows at Chartwell are detailed for disassembly with a minimum of waste. Similarly, the wood siding is fastened with clips that are screwed into the backing for ease of disassembly.

According to Guy, in separating systems and unlayering materials in a building, there are circumstances that require that either the design be rethought or a higher tolerance for deterioration be accepted. "If the building isn't caulked or painted at every conceivable place, for example, I might rethink how an area is protected by an overhang or some other building element. Or I may tolerate some wear or deterioration because I have created a system in which I can replace materials or components as needed without destroying the zone around it."

One area where there is no tolerance is worker safety. Dismantling buildings can be extremely hazardous, and it doesn't take much experience to understand that they are not designed to be taken apart. Besides toxic materials, assemblies give way suddenly, and infrastructure that is deeply integrated with structure is difficult to extract. When materials must be destroyed to be dismantled, workers are endangered by the released pollutants and dust. Dismantling roofs or other high building sections is much safer if they can be removed in large sections and brought down intact for disassembly.

Guy is researching generic methods and guidelines for disassembly. Separating infrastructure from large components and roofs is one goal. Wood-frame construction is typically riddled with holes drilled for utility lines, making disassembly painstaking handwork that would never permit a roof to be removed easily for dismantling. At Chartwell, as at Rinker, the structure and the systems are separated and exposed. Utility lines are run in a raceway located just inside the classrooms above the casework, where it is available but not generally visible. Buildings are an assemblage of systems that create an integrated whole, which will be more efficient if it is designed for a life cycle of construction, repair, maintenance, and adaptation of its components.

The difficulty of end-of-life disassembly of current buildings makes it obvious that better material choices need to be made in future buildings. Design for Disassembly experts add another voice to the growing chorus of architects who encourage the profession to take a leading role in determining the materials that will be used in buildings. Michael Stacey [see RECORD, July 2004, page 153], Croxton, or Shell might choose different materials, but they would all be likely to agree that the selection and employment of materials must be specific to programmatic and construction requirements and closely tied to manufacturing processes.

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EHDD Architecture prepared this matrix as a means to analyze the value and recovery feasibility of materials and components prior to design.

DISASSEMBLY MATRIX FOR THE CHARTWELL SCHOOL

Spec section	Component	Expected life span in years	Ease of recovery as detailed*	Recovered for salvage or recycling?	Value after recovery	Quantity of materials	Weight	Weight of materials	Embodied CO_2/Ton	Total Embodied CO_2	Salvaged materials available?
3300	Concrete	100	easy	recycling	low	536 cubic yards	2.025 tons/cu. yd.	1,085 tons	0.3/cu. yd.	160.8 tons	yes (aggregate and fly ash)
5100	Reinforcing steel	100	easy	recycling	medium	24,443 linear feet	.88 lbs/sq. ft. of concrete	9.5 tons	1.05/cu. yd.	10 tons	no
6120	Agriboard	100	easy	salvage	medium	16,372 square ft.	13 lbs/sq. ft. (8" panel)	106 tons	0 **	0	no
6170	Wood—wall studs	100	medium	salvage	medium	21,000 l. ft.	27 lbs/cu. ft.	23.6 tons	0	0	yes
6200	Wood—siding	50	easy	salvage	high	241.5 cu. ft.	26 lbs/cu. ft. (Fir)	3.14 tons	0	0	yes
7210	Batt insulation	50	medium	recycling	low	15,000 sq. ft. (wall) 4,500 sq. ft. (roof)	.28 lbs/cu. ft. (R-19)	3.1 tons	1.5/cu. yd.	18.9 tons	no
7412	Metal roofing	25	easy	recycling	medium	11660 sq. ft. 8745 l. ft.	2.2 lbs/l. ft.	9.6 tons	1.05/cu. yd.	10.1 tons	no
8212	Flush wood doors	50	easy	salvage	low	12 doors (3'x7') 252 sq. ft.	5.3 lbs/sq. ft.	.67 tons	0	0	yes
8520	Glass	50	medium	recycling	low	8,250 sq. ft.	3.28 lbs/sq. ft.	13.5 tons	1.3/cu. yd.	17.6 tons	no
9250	Gypsum board	50	medium	recycling	low	38,500 sq. ft.	2 lbs/sq. ft.	38.5 tons	0.2/cu. yd.	7.7 tons	no
9550	Bamboo flooring	50	medium	salvage	high	4,609 sq. ft.	2.04 lbs/sq. ft.	4.7 tons	0	0	no

* assuming adequate maintenance of weather envelope ** wood and other agricultural products sequester carbon

Guy notes that we have had two significant and plaguing problems in 20th-century materials—asbestos and lead. Their toxicity has made building disassembly and materials reuse expensive, and sometimes impossible. Techniques for stripping lead paint from wood exist, but it can only be cost-effective if the wood has a high value architectural reuse: It is not cost-effective to strip wood for framing studs. Lack of standards for how to reuse some recovered materials is another barrier to achieving a closed-loop system. Wood grading and stamps have existed only since World War II, so structural integrity, moisture content, and species can only be surmised in materials pulled from older buildings.

Ultimately, it is what we build with now that will expedite future deconstruction. Some proponents would banish drywall, a composite of low-value materials that are completely destroyed in disassembly. Guy would argue that the closer a material is to its natural state, the higher its potential for reuse, and he advocates for simpler materials.

The entire industry will need to participate as we move toward zero-waste building construction. Perhaps in the future, architects will also produce deconstruction drawings and conduct deconstructability reviews. Materials will arrive at the site either ready to use, and therefore leaving either no waste or recyclable waste, or they will be packed in materials that can be returned to the product manufacturer for reuse or recycling. Building components will be labeled or bar-coded with disassembly instructions and constituent materials. Costs for demolition and deconstruction will plummet as waste disappears. ■

AIA/ARCHITECTURAL RECORD CONTINUING EDUCATION

INSTRUCTIONS

- **Read the article "Designing for Disassembly and Deconstruction" using the learning objectives provided.**
- **Complete the questions below, then fill in your answers (page 244).**
- **Fill out and submit the AIA/CES education reporting form (page 244) or download the form at www.architecturalrecord.com to receive one AIA learning unit.**

QUESTIONS

1. Why did the U.S. abandon the art of recovery and reuse?
a. there were tax benefits for demolishing old structures
b. it is less expensive to buy new materials
c. to gain the predictability of new materials
d. there was a shortage of available reusable materials

2. Construction activities generate what percentage of waste?
a. 5–10 percent
b. 10–20 percent
c. 20–30 percent
d. 30–40 percent

3. Which statement is true regarding the economic value of disassembly?
a. building components are easy to separate
b. buildings contain few hazardous materials
c. salvaged materials have a high value
d. disassembly time and labor are costly

4. Reasons to reuse or recycle demolition include all but which?
a. landfills have reached capacity
b. fees for disposing hazardous materials have risen
c. the LEED system encourages new products
d. it is hard to get a permit to create a new landfill

5. Which factor encourages more material reuse in Europe than the U.S.?
a. the availability of raw materials is more restricted
b. regulations are looser
c. land is plentiful
d. the value of reused materials is lower

6. Which is a description of a closed-loop environmental system?
a. waste is diverted to landfills
b. each material has a finite life
c. a manufacturer reprocesses its own construction waste
d. products are discarded at the end of their service life

7. Materials minimization advocates all except which?
a. do not build fully enclosed spaces
b. avoid assemblies that can be reused
c. avoid situations that require destructive demolition
d. avoid glued and composite systems

8. EPA statistics show that demolition constitutes which percentage of waste?
a. 30 percent
b. 50 percent
c. 72 percent
d. 92 percent

9. Design for Demolition suggests doing what to facilitate wood reuse?
a. painting it
b. using fasteners for connections
c. not using wood
d. caulking it at joints

10. What endangers workers during demolition?
a. falling hammers
b. pollutants and dust
c. angry bats
d. electrical malfunctions

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Tech Briefs

From balloon frame to CAD-tailored: Japanese precut framing technology comes to the U.S.

Advances in manufacturing technology are bringing mass customization closer to reality for home building. For a number years, building suppliers have manufactured made-to-order components with a high degree of automation. Now, a supplier called MF Technologies is using a CAD-driven system called MasterFit, developed in Japan, to churn out custom-cut, engineered wood frames for single- and multifamily houses.

The Minneapolis-based company opened its first fully automated U.S. plant in June 2004. Company officials tout the system's frugal use of materials, which makes for less factory waste, as well as its ability to produce tighter frames and shells, reduce production and assembly time, and simplify labor requirements.

The MasterFit system consists of a proprietary CAD tool (an AutoCAD add-on) to which data from standard CAD files, hard-copy drawings, or sketches are added. The tool then lays out the frame and cuts studs, joists, rafters, and trusses from engineered wood using a computer numeric control (CNC) system. Frame components are labeled and shipped to building sites as a kit of parts. Because they are assembled with interlocking metal pegs and plates, the frames can be erected by construction teams with minimal training, rather than skilled laborers. (Prefabricated building panels used with the frames must be attached with nails or screws, however.)

The Albert Lea, Minnesota, factory can turn around an order in about two weeks. Once components are on-site, the shell of a 1,500-square-foot house can be erected and enclosed within three days, according to MF Technologies president Santos Martin.

MasterFit Frames (right) are shipped to a site and assembled with joinery included in the kit. The house above was built by seven women enrolled in a carpentry-training program in Duluth, Minnesota, who had only one week of experience.

PHOTOGRAPHY: COURTESY NORTHERN COMMUNITIES LAND TRUST (LEFT); LHB/JEFF FREY PHOTOGRAPHY (RIGHT)

Selling points, future efforts

The company emphasizes engineered lumber's sustainability and strength. "When I saw MasterFit's system in Japan, I was struck by its structural efficiency," said James Brew, an architect with LHB in Minneapolis and a consultant to MF Technologies. "A four-by-eight beam can span twice the distance and carry up to twice the load of conventional lumber." Despite these advantages, the growth of this market has been slow. While the number of engineered wood plants in the U.S. has about doubled since 1989, engineered wood still represents only 5 to 6 percent of the North American structural framing material market, according to the Engineered Wood Association.

Sustainability may end up being the system's strongest selling point. "We're using about 2 to 5 percent less lumber than typical stick-frame houses, and making the frames from trees that grow back quickly," says Martin. "And you can get a better R-value with the same insulation," he added, because the frames are tighter than stick frames. Houses built with the system also lend themselves more easily to deconstruction and disassembly for reuse, according to LHB's Brew.

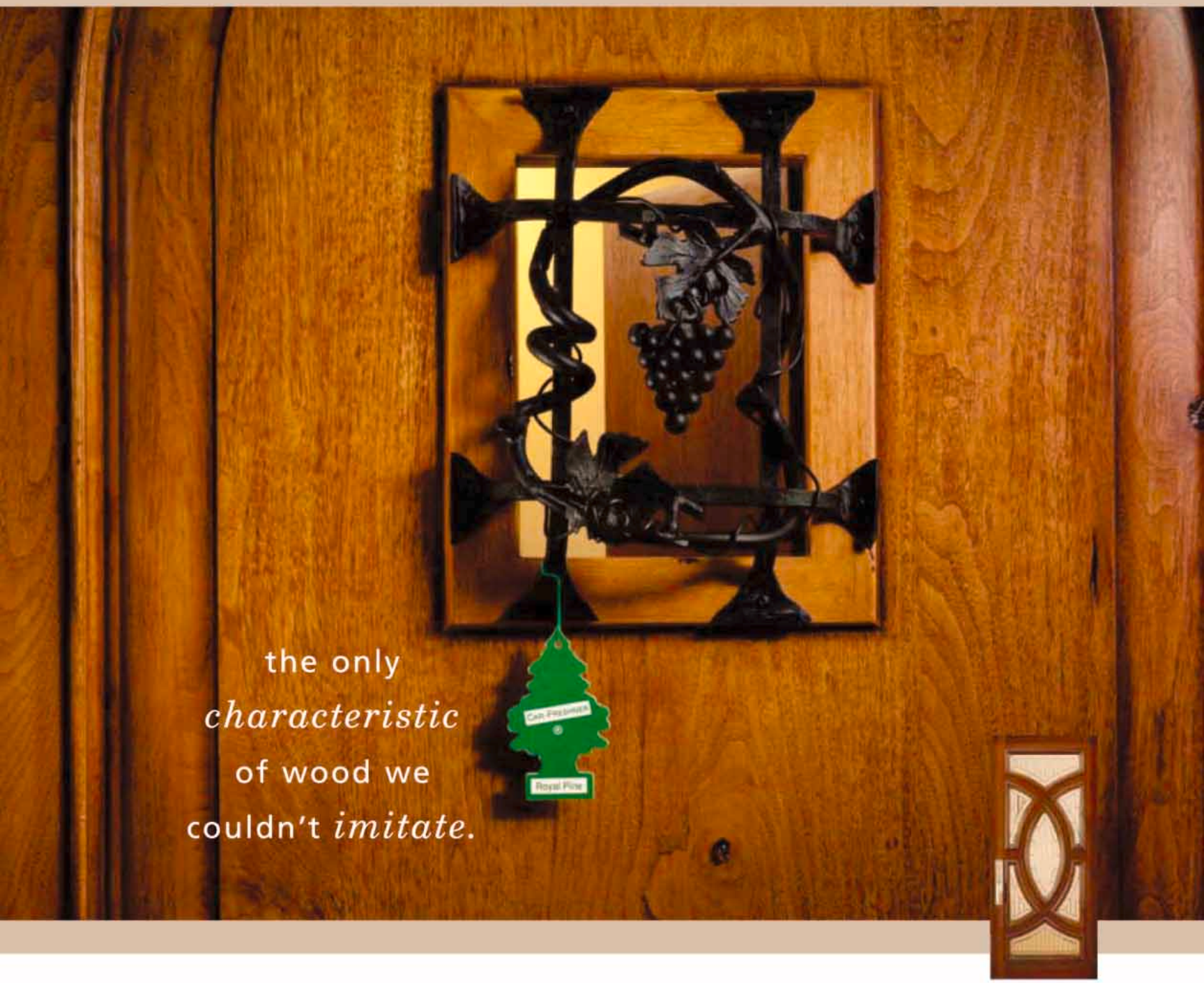
Although the process has been used mostly for single-family homes and multifamily town houses, Martin is thinking of going after the light commercial building market. "Because it's an engineered product, we can eliminate on-site errors and speed enclosure," he said.

Kicking the tires

Some who have studied mass customization point out limitations of the MasterFit system. Kent Larson, professor of architecture at MIT and director of its research program House_n, says that it lacks well-conceived pathways for utilities such as pipes and wires and doesn't address the integration of structure with interior, non-load-bearing infill partitions and cabinetry. "A process for making high-quality, mass-customized homes requires considering the whole system, from flashing to how air moves indoors." Daniel Schodek, a professor of architecture at Harvard's GSD, says, "It's a highly developed approach, but likely unadaptable to late changes that invariably occur during custom building." (LHB's Brew disputes this, saying the kits can be field-modified by the same techniques used for stick-frame construction.)

Mass production and customization for homes has long been a source of study and interest within the architectural community. Current efforts include MIT's Open Source Building Alliance, which is carrying out a research initiative into standardized, component-based designs for homes that calls for matching automated design tools with efficient fabrication, delivery, and installation methods using nonproprietary digital systems. "That is the only way we will get the economies of scale and competition necessary to change a dysfunctional industry," says MIT's Larson.

Judging from previous standards-development efforts in the computer and building industries, progress is likely to be slow and uneven. In the meantime, a system like MasterFit offers a measure of mass customization for willing designers. *Ted Smalley Bowen*



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JELD-WEN PRESENTS

First impressions:

Knowing your options makes it easy to create magnificent openings

Every designer wants to make a statement, whether the project is a $200,000 tract home or $13 million custom home. Now, you can do that, regardless of the price range of your project.

This continuing education unit is an A-to-Z guide to the options available to architects in selecting appealing, trouble-free doors. It will discuss not only door design but also materials, appropriate environment, hardware, glass and caming options, finishing and customization of both exterior and interior doors. The discussion will include garage doors, which are now becoming a design consideration for many architects and homeowners.

Any discussion must begin with the materials and their distinctive characteristics. Exterior door materials require careful analysis. Today, there are a great number of alternative door types available, and each must be considered within the context of the environment in which they will be installed.

Wood is the traditional choice. Wood is beloved for its character, warmth and style. A variety of quality hardwoods are available to suit varying architecture and styles.

Architecturally significant entry systems have historically begun with components of one of the following hardwoods:

Alder is a versatile wood that accepts stain very well and, thus, has a greater color range than many other species. Stain colors used on alder can range from a light blonde to deeply colored merlot or gunstock with varying degrees of red in the center of the range.

Alder features a fairly straight grain with areas of burl clusters and a few small knots, which add character and will show some darker textures and shades when finished. Alder is the lightest and least

CONTINUING EDUCATION

Use the learning objectives below to focus your study as you read **First impressions: Knowing your options makes it easy to create magnificent openings.** To earn one AIA/CES Learning Unit, including one hour of health safety welfare credit, answer the questions on page 197, then follow the reporting instructions on page 246 or go to the Continuing Education section on *archrecord.construction.com* and follow the reporting instructions.

LEARNING OBJECTIVES

After reading this article, you should be able to:

- *Explain the available options for exterior and interior doors*
- *Select the proper exterior door for any exposure*
- *Understand new technologies in door manufacturing*

dense of the hardwoods generally used by manufacturers but may be stained to look like its more expensive hardwood cousins, including cherry.

Historically viewed as an overabundant weed tree, Western red alder now sustains a major hardwood industry, centered on the Northern Pacific Coast. Red alder has become the most abundant broadleaf tree in the Pacific Northwest. It now accounts for seven percent of the total timber inventory and 61 percent of the hardwood inventory in western Oregon, Washington and British Columbia.

American Black Cherry, from forests in the Northern United States, varies in coloration from rich red to reddish brown in color. It is occasionally found with thin gum pockets and small clusters of pin knots and random streaks of blonde-colored sap wood, which give this hardwood a distinctive appearance. Cherry is a strong, stiff wood with a fine, straight, close grain and smooth texture. It stains easily and smoothly.

Northern Red Oak, from U.S. sources, is a high grade and exhibits consistent color and grain patterns. It is a widely utilized and immediately recognizable hardwood. Northern Red Oak is known for its dramatically pronounced grain pattern and offers a wide color range, making it similar to alder in its versatility. The species ranges in color from light straw to honey with a light pink tint, and it accepts stain very well.

Honduras Mahogany, now generally imported from Central and South America, is the most stable of the hardwoods, with less expansion, contraction and moisture absorption than any other species. Mahogany varies in color from several shades of reddish brown, to deep, rich red. It stains well for an excellent finish. The grain can vary, ranging from straight to interlocked, and it shows a prominent growth ring figure.

For years, mahogany has been the number one cabinet wood of the western world due to its stability and appearance. This reddish heartwood deepens with age to rich reddish-brown. It is often fine-textured although somewhat variable, and it often has ribbon striping that is sometimes curly or wavy. It is excellent for lumber and veneers. Mahogany finishes very well and is moderately resistant to termites.

Walnut is a durable wood harvested from the Eastern United States. It is traditionally used for fine furniture, gunstocks, musical instruments and boatbuilding and is becoming popular for doors. It features a color range from rich dark brown to purplish black with highly attractive blonde streaks of sapwood within the darker tones. This wood normally has a straight grain, and occasional waves or curls are sometimes present. Knotty walnut is also available with its distinctive features.

Hard Maple is often the choice to lighten a room. It has a predominantly creamy white color, a fine grain texture and is hard enough to resist abrasions and wear.

Few woods have the distinct character of maple. It is bold, handsome, unique and is marked by dramatic variations in grain pattern and wood color, often within an individual door, drawer front or frame component. Maple is increasing in popularity for home interiors.

Hickory is a strong and varied-grain wood. In a natural or light finish, its color can change wildly, from white to dark, even chocolate brown. Random knots, worm holes and mineral streaks add even more character and boldness to hickory's natural beauty.

The sapwood of hickory is white, tinged with brown, while the heartwood is pale to reddish brown. The wood is known for its strength and shock resistance.

Appropriate exposure: A critical consideration

A critical consideration in choosing an appropriate entry door or "entry system," a package that includes a transom and sidelights, must be the exposure of the entryway to the elements.

Despite the architectural appeal of hardwood entry systems, there are situations where exposure is too extreme for hardwood. For those situations, there are a number of alternatives. "Composite," fiberglass or steel doors are specifically designed to withstand even the harshest of elements in the most extreme conditions.

It is prudent to ask the following questions to determine whether you have special performance needs:

- *Are you designing for a climate with extreme temperatures?*
- *Are there seasonal high winds or hurricanes?*
- *Are exposures northern, southern, eastern or western?*
- *Is controlling noise levels outside the home an issue?*
- *Does the front entrance have an overhang?*
- *Have you thought about fire ratings?*
- *Is energy efficiency a priority?*

Technically advanced, low-maintenance exterior doors in fiberglass, steel and composite are also engineered and constructed to resist buckling, chalking and peeling, all common problems historically with steel and fiberglass doors.

Fiberglass, steel and composite doors may begin with a polystyrene core (an alternative to polyethylene, which was found to lose its thermal resistance over time). Polystyrene core doors are ENERGY-STAR-rated and may prove as much as 40 percent more efficient than other door types in resisting thermal conduction.

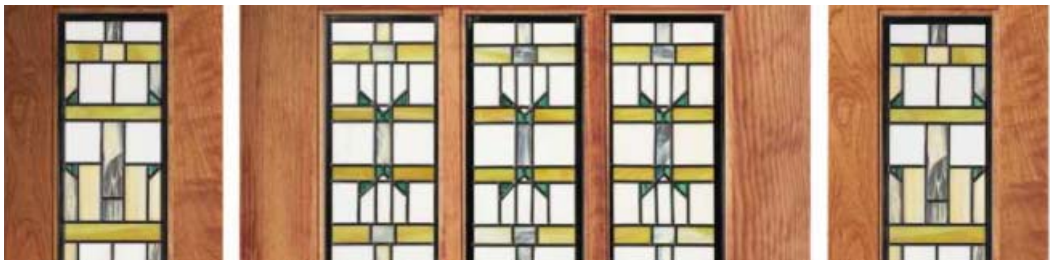
As is the case with hardwood doors, steel, fiberglass and composite doors may be enhanced with either transoms or sidelights to create entries that have the same dramatic effect as hardwood entryways.

Fiberglass exterior doors are more weather resistant than hardwood doors, and are less expensive. Because of their popularity, they are being manufactured in a growing number of designs that conform to a range of architectural styles.

The degree of absorption of ultraviolet rays is a factor to consider in selecting engineered entry systems. Because the degree of absorption varies according to color, it is critical that designers know that painted steel doors can be affected by heat. In 110-degree ambient heat, the temperature of a white steel door rises 10 to 15 degrees; a dark green door of the same material will experience a temperature rise of roughly 70 degrees.

A combination of storm doors and exterior doors will work fine in winter, but heat build-up between the doors in summer can cause distortion of the steel surfaces. The steel may expand with heat, and oil-canning or warping may occur.

Steel-edged doors offer increased safety and security by adding strength and a fire rating factor (for true protection, these doors must be used in combination with certified frames and hardware). Polystyrene-core steel edge doors are also hurricane-rated, assuming they accompany the other elements of a door system which includes (besides door slab) frame, hardware and other elements which meet the specific building code requirements for the county. Hurricane rating assures the doors will not be blown out of casings or allow an unreasonable amount of water to infiltrate.



Craftsman glass detail

Round clavos

Corner strap

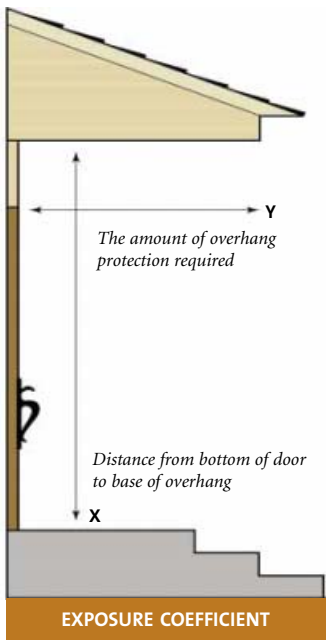
Rustic grille

Entry system with sidelights and transom

Wood composite doors offer the beauty of wood but are a low-maintenance alternative that performs well in varying climates. The wood-like surface is made to resist dents and along with advanced lumber stiles and composite rails will not rot. They are designed to perform well under pressure, some meeting the strict building codes of Dade County, Florida (see door system components above). They come in a variety of panel profiles and textures, and may include glass inserts and heights up to 8'0."

Custom composite doors move wood-alternative options into the area of high-end elegance and extreme durability. These doors, while emulating the rich appealing look and feel of solid wood doors, are engineered to withstand the rigors of nearly any environment. Also now available in French doors, this technology allows for a door nearly indistinguishable from real wood, yet equally at home in the desert or in the midst of constant coastal extremes.

If your choice is hardwood, the placement of the door will be a major factor in its maintenance and longevity. To adequately protect a hardwood door and extend its life, the designer of the entry system must do some factoring. The architect must first factor climate, then the compass direction the door will face. These will determine, for the most part, the amount of overhang necessary to protect the door from weather.



To calculate a correct overhang for moderate climatic conditions, a simple formula is "$Y=\frac{1}{2}X$," in which "Y" is the length of the overhang and "X" is the height from the base of the door to the bottom of the overhang (*see chart at left*).

Where decay or termites are of concern, another option to consider are "treated" products, manufactured through trademarked processes that insure 100 percent penetration of cut-stock to create worry-free, reliable wood doors that are protected from decay, termites and water damage.

In a newly patented treatment process, water has replaced petroleum-based solvents as the carrier for the active ingredients—tebuconazale as the fungicide, imidicloprid as the insecticide—reducing environmentally damaging VOCs (volatile organic compounds) by up to 97 percent.

Interior doors for every practical consideration

Interior doors may be made of hardwood, veneered plywood with pre-finished hardwood appearances, molded wood fiber or medium density fiberboard (MDF), which offers the polished appearance of natural wood.

Other interior options include mirrored doors that reflect natural light throughout the room and French doors.

Veneered plywood and molded wood fiber doors are available with solid cores for areas of the house where you need to deaden sound. Solid-core interior doors reduce sound transmission by as much as 50 percent.

In the manufacture of molded wood fiber doors, sawmill waste is reduced to woodchips, screened for size uniformity, softened by steam in what is called a "digester," and further reduced to fibers. After these fibers are dried, they are mixed with resin and wax and formed into sheets. Sheets are molded into designs by compressing the sheets at high temperature and trimmed to size.

Router-carved MDF doors, until recently, were available in a limited number of styles. They are now available in more than 70 standard designs. As an alternative option, designers may create their own custom MDF doors.

"Any design you can imagine, we can now create," says Chris King, product manager for a West Coast manufacturer. "The design can literally be drawn on a cocktail napkin, brought into the dealer, designed and then created. We can now provide options to fit any decor."

Router-carved interior doors can be designed to carry an architectural theme throughout the home, or to make a specific room stand out from the rest. The skin of interior router-carved doors are created from a single sheet of MDF. MDF doors have a detailed and polished appearance very similar to that of genuine wood.

The core is polystyrene, making the router-carved products one-third lighter than other MDF doors and increasing the STC (sound) rating of the door to 31, giving them the highest sound resistance of any residential door on the market.

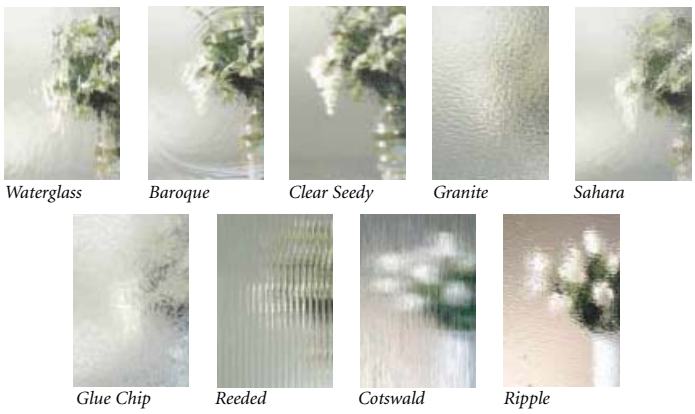
"With computerized router technology, we make door customization easy," says King, "And we do it without the cost and long lead-times of traditional custom door manufacturing."

Enhancing the wood look, custom MDF doors are available with options like sticking profiles and raised moulding, for a classic wood door look unlike anything else on the market.

All-wood edges provide superior screw holding, and the polystyrene core makes new MDF products up to 50 percent quieter than standard hollow-core doors.

STICKING AND PANEL PROFILES

PANEL CONSTRUCTION



DECORATIVE GLASS

Eye-catching glass accents add a sophisticated touch to both exterior and interior doors

In addition to a broad range of stained glass options, including multiple glazing for protection and energy efficiency, manufacturers now offer a variety of decorative glass textures, patterns and colors.

Among the options:

- ***Waterglass:*** *A fairly obscure glass, with a texture resembling subtle waves.*
- ***Baroque:*** *A unique, slightly distorting glass in a number of colors, including gray.*
- ***Clear Seedy:*** *An obscure glass in which tiny bubbles create a lively texture and natural sparkle.*
- ***Granite:*** *An obscuring glass with a surface resembling a fine rock-like surface.*
- ***Sahara:*** *A very obscure glass with the rippled texture of desert sand.*
- ***Glue Chip:*** *Another very obscure glass with a feathery, frost-like texture.*
- ***Reeded:*** *English glass roll-formed into a strong linear pattern.*
- ***Cotswald:*** *An obscure glass with a vertical pattern resembling running water.*
- ***Ripple:*** *Obscure, with a surface like wind-blown water.*

Any of the stylized glasses may be installed to fill an entire lite or may be incorporated in a variety of intricate glass designs for either exterior or interior use. They are available with brass, polished zinc, satin nickel or patina (black) caming.

Panel options and sticking patterns multiply design possibilities

Every door design is defined by its panel configuration and sticking profiles along with material. Panel options and sticking profiles determine whether the door will read as traditional or contemporary, Craftsman or Mission, elegant or old-world.

Exterior panel construction options include traditional edge-glued solid wood panels, with precise detail and deep shadow lines; or bookmatched veneer placed atop medium density fiberboard (MDF), which offers enhanced strength and stability.

Panel profiles may be hip-raised or double-hip raised, flat or scooped, depending upon the degree of relief desired. The "double-hip" reveals two beveled edges for a visual alternative.

Sticking profiles, at the edges that join the panel to stiles and rails, allow for a wide variety of design options. Beaded sticking adds a strong three-dimensional look to traditional panel design. Ovolo sticking offers a classic rounded design, and modified cove and bead sticking is a detailed relief. For a Craftsman or contemporary look, non-profiled or square sticking with flat panels gives a clean look. The door can be further enhanced by the addition of a shelf to complete the Craftsman look.

Panels can include hand-carving for a strong statement of elegance; they can also include glass insets from a large variety of decorative glass options. Traditional Craftsman-style glass includes geometrically-patterned designs in earth tones such as green, blue, gold and rust. Customization of stained glass also includes choice of caming in patina, brass and satin-nickel for a touch of architectural elegance. Beveled, grooved and sculpted glass panel options are a popular choice for almost any style of home or application within the home, such as French doors.

Panel options can also include louvered panels on either the top or bottom or both panels. These are used for laundry rooms and closets for air circulation. Staved panels allow for a planked look in the door. These can either be actual planks formed to make the panel or a planked look using grooves into a door surface. Both provide for a more informal look, and if painted are used in many cottage, Cape Cod or beach-front style homes.

Sidelights and transoms that either match or complement the door may be configured with all the same options to enhance architectural style.

Architectural hardware adds drama with rustic charm

Entry locksets along with a wide variety of metal accents now strengthen the architectural statement of old-world styled doors with their rustic, hand-forged charm. Offered in a wide variety of styles, speakeasy grilles, clavos, straps and door knockers add a distinct element of drama to wood or custom composite entryways. Hardware is available for both door and sidelights.

"No-dent" composite garage doors match any architecture

Wood composite garage doors, in a surprising range of architectural styles, provide an answer for the residential architect looking for the elegance of wood—without the maintenance; the strength of steel—without the potential for denting or rusting; and the durability of fiberglass—without the cost.

Deep relief panels, clavos or a variety of decorative hardware are now standard items in some product lines. The new door lines can turn architectural eyesores into handsome architectural statements.

High-technology garage doors begin, as do many of the new engineered exterior and interior doors, with a CFC-free, polystyrene core for heightened R-values and stability over the life of the door.

Thermal-set melamine resins are combined with refined cellulose fibers to create an exterior door skin that is resistant to moisture, cracking, rotting, sub-zero freezing, desert heat and the damaging effect of the sun's ultraviolet rays.

Advanced polymer skin and trim boards won't crack, separate, rust or dent. Also, wood-grain composite exterior skins are indistinguishable in appearance from wood.

Layered LVL (laminated veneer lumber) support rails make engineered garage doors structurally advanced, compared to even the best-made traditional wood doors. ■

CLICK FOR ADDITIONAL REQUIRED READING

The article continues online at: archrecord.construction.com/resources/conteduc/archives/0410jeldwen-1.asp

To receive AIA/CES credit, you are required to read this additional text. For a faxed copy of the material, contact Mary Anderson at JELD-WEN, (541) 850-2606 or email MaryAn@jeld-wen.com. The following quiz questions include information from this material.

AIA/ARCHITECTURAL RECORD **CONTINUING EDUCATION** Series

LEARNING OBJECTIVES

- *Explain the available options for exterior and interior doors*
- *Select the proper exterior door for any exposure*
- *Understand new technologies in door manufacturing*

INSTRUCTIONS

Refer to the learning objectives above. Complete the questions below. Go to the self-report form on page 246. Follow the reporting instructions, answer the test questions and submit the form. Or use the Continuing Education self-report form on *Record's* website—*archrecord.construction.com*—to receive one AIA/CES Learning Unit including one hour of health safety welfare credit.

QUESTIONS

1. A main consideration in choosing an appropriate entry door is the exposure.

a. true
b. false

2. Which of the following is not a characteristic of polystyrene cores? They are:

a. highly insulative
b. sound resistant
c. lightweight
d. fire resistant

3. Glass panel options include:

a. beveled
b. grooved
c. sculpted
d. all of the above

4. Router-carved interior doors are made of:

a. MDF
b. IWP
c. LVL
d. melamine

5. In 110-degree ambient heat, the temperature of a white door will gain 10 to 15 degrees; a dark green door of the same material __ degrees.

a. 30
b. 40
c. 50
d. 70

6. Which of the following is not a performance consideration in choosing a door:

a. Are you designing for a climate with extreme temperatures?
b. Are exposures northern, southern, eastern or western?
c. Does the front entrance have an overhang?
d. Is the architectural style traditional, contemporary or old world?

7. The benefits of wood composites are:

a. wood-like appearance
b. strength
c. durability
d. all of the above

8. _____ doors are hurricane-rated.

a. polystyrene-core steel doors
b. wood composite doors
c. a and b
d. none of the above

9. Melmac is the trade name for what component of UV and moisture-resistant garage doors?

a. polystyrene
b. melamine
c. urethane
d. none of the above

10. New treated wood products offer decay, termite and water-damage protection at what penetration of cutstock?

a. 50 percent
b. 70 percent
c. 97 percent
d. 100 percent

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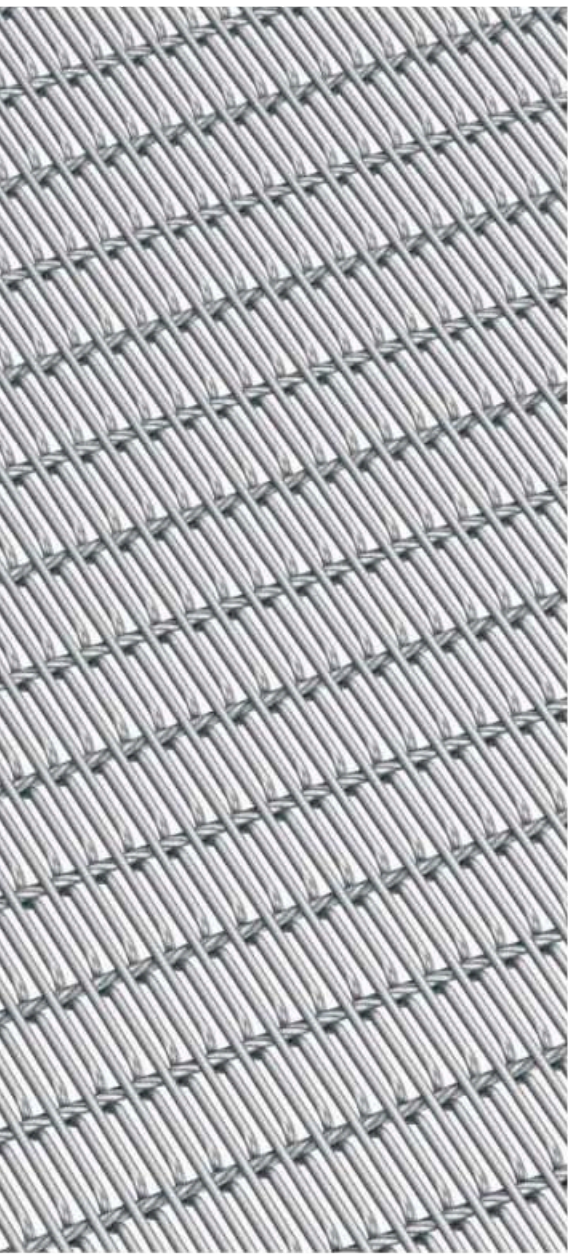

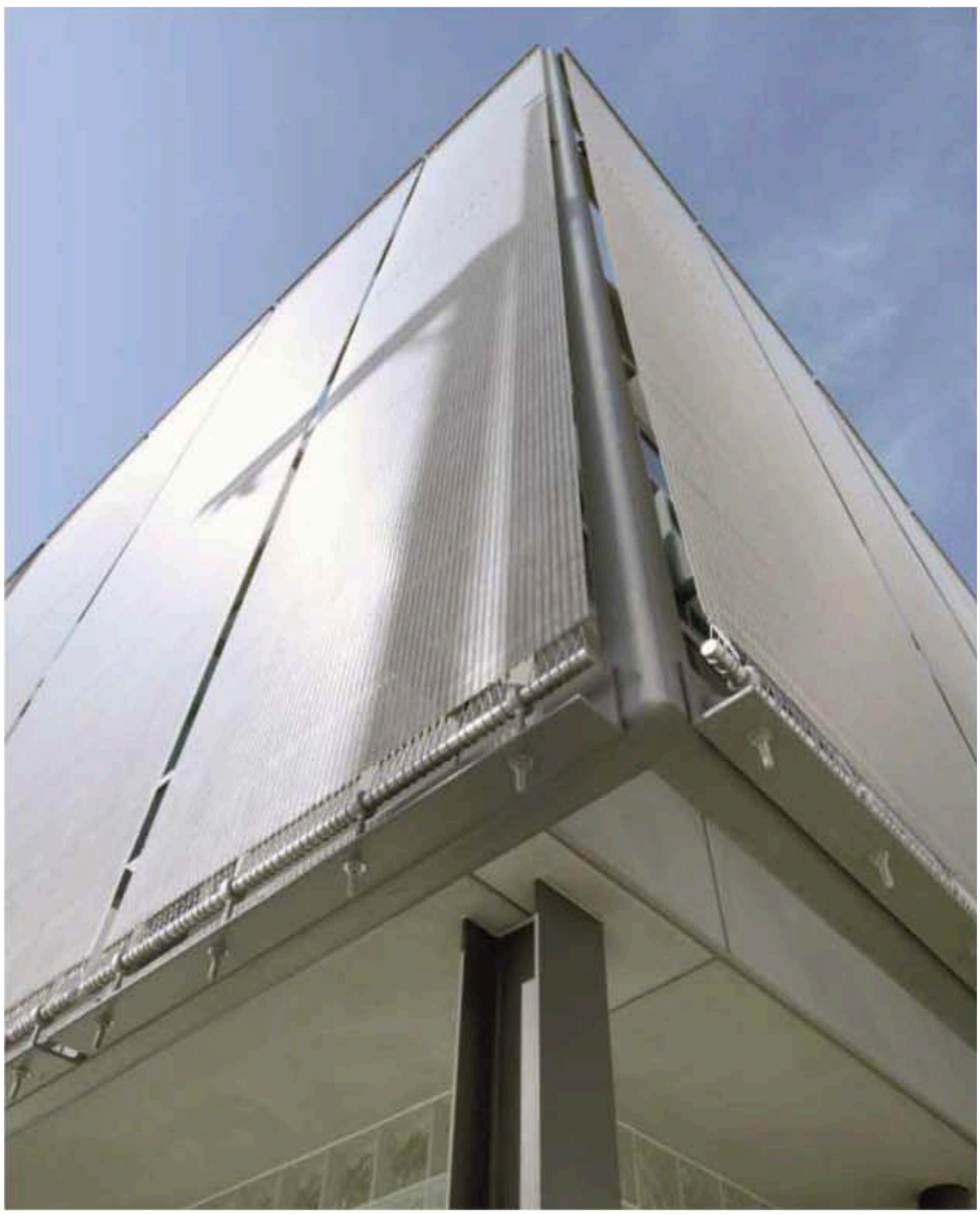

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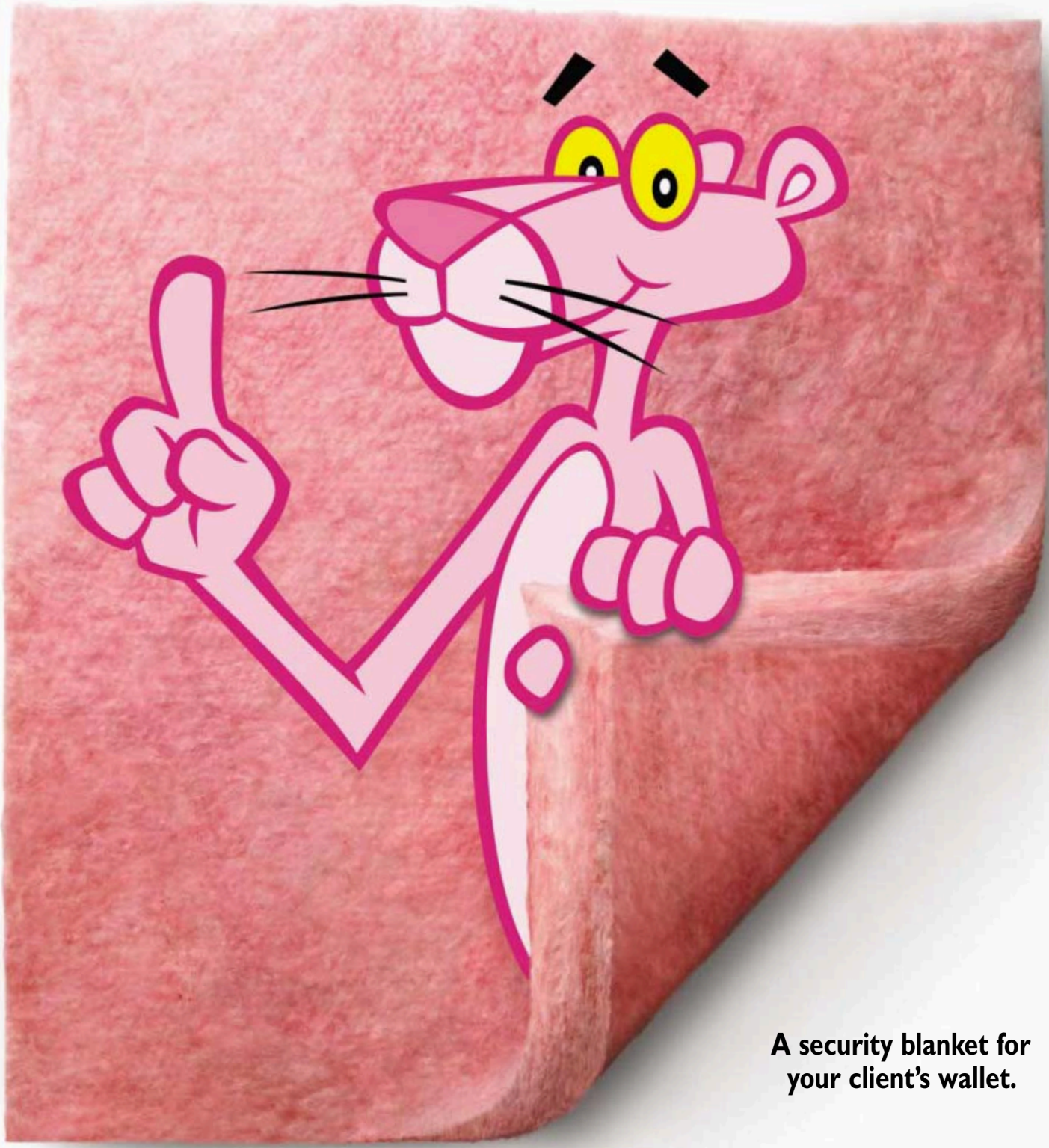

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BRIEFS

A Constructive Madness For more than a decade, Frank Gehry worked on the design of the Lewis House, whose bold forms and materiality rival the signature houses of Frank Lloyd Wright and Ludwig Mies van der Rohe. When the estimated cost of the house hit $82 million, however, owner and long-time Gehry supporter, Peter B. Lewis, pulled the plug. The design process is documented in *A Constructive Madness*, a film written by Jeffrey Kipnis, curator of architecture and design at the Wexner Center in Ohio. Information at www.aconstructivemadness.com.

New zero-energy houses fight pollution The Department of Energy seeks to help solve pollution problems with houses that have zero electricity requirements. Last month, it partnered with Habitat for Humanity to build a fourth near-zero-energy house for less than $100,000. The average daily energy consumption cost is 82 cents, as opposed to the typical $4 to $5. More information can be found at www.energy.gov.

Design-build in Kansas City Modular House One in Kansas City is the latest project of Dan Rockhill, a professor and practicing architect, and Studio 804. The design-build program at the University of Kansas, founded by Rockhill in 1995, allows students to apply classroom learning to real life. The studio focuses on innovative, affordable housing. Twenty students constructed Modular House One in 18 weeks for roughly $130,000. The prefabricated house is finished in a deep Brazilian redwood. To learn more, go to www.studio804.com.

Residential architects join together Noting that most Americans live in poorly designed and constructed homes, many of which are hazardous to health, this summer the Congress of Residential Architects convened to provide a forum to enhance residential architecture in the U.S. by sharing knowledge among constituents, increasing awareness of good residential design, and providing advocacy to designers. The group will host a discussion entitled "The State of Residential Architecture" in L.A. this December. Visit www.reinvention2004.com for more information.

Utopian living flourishes in Moscow Erick van Egeraat and Zaha Hadid plan residential complexes in Moscow in the coming years. Egeraat's design includes five apartment towers, each inspired by the work of an avant-garde Russian artist. Hadid's project will sit on an embankment and is slated to cost $180 million. The Capital Group of Russia sponsors both projects. For further information, visit www.capitalgroup.ru/eng. *Audrey Beaton*

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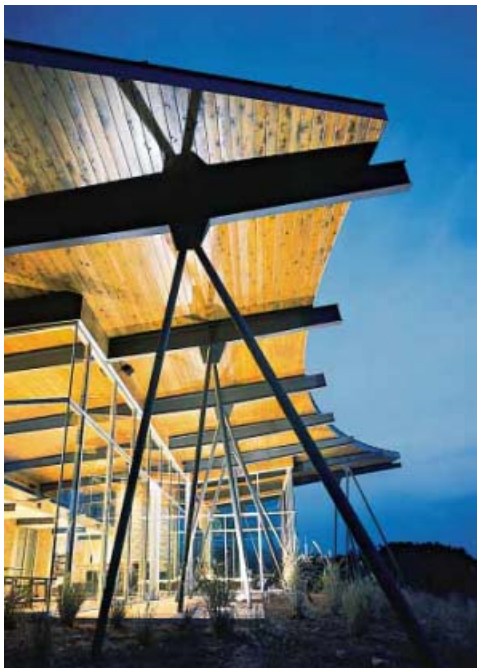
Houses sited off the beaten track share an obligation to provide a setting conducive to serenity and solitude. Leaving civilization behind involves a gradual shedding of pavement, signage, telephone poles, and crowds. Along with these signs of modernity, speed and strife dissolve in nature's timeless, quiet rhythms. The architectural strategies used to successfully mingle design with nature vary, but the houses discussed here have common threads. Framed and extended views of the outdoors bring the pleasures of life outside deep within. Employing indigenous natural materials and existing landscape and topography in the design, either symbolically or literally, is another way these projects incorporate nature. Whether located in the desert highlands of Texas, on a remote island off Finland's southern coast, at Wisconsin's northernmost tip, or on a rugged beach in the southeast of England—each of these houses displays a vernacular architecture that profoundly connects with its surroundings. *Jane F. Kolleeny*



PHOTOGRAPHY: © ART GRAY

Sited in a pine and birch forest, the house has framed views extending out through the tree trunks, across the broad expanse of Siikanjärvi to a narrow sound and beyond. Pallasmaa likens the pine-boarded building, with its long, curved shape, to a boat, providing protection from the elements and navigating the rise and fall of the rough terrain.

The angled roofline of Juhani Pallasmaa Architects' **House of Silence** smiles as sublimely as a cheshire cat

By Peter MacKeith

"We make our houses in our own image," Finnish architect Juhani Pallasmaa is fond of saying. This quiet ambition echoes admirably throughout the design of the House of Silence. The house embodies the shared values of the architect and client—restraint of expression, integrity, and an appreciation of the natural world. In addition, the interplay of landscape and architecture aims at a still and contemplative state of being for its occupants.

To sit and slowly breathe inside the house's moist, warm, smoke-scented sauna—feet propped up on a rail of aspen, gaze directed to the south through a horizontal slot window—makes palpable the intended stillness of the design. Overlooking the pine-and-birch-forested landscape along southeastern Finland's Siikanjärvi (Whitefish Lake), the framed view extends out through the tree trunks, across the lake's surface, and through a narrow sound to a larger lake. The resulting expansiveness of the view collapses foreground, middle ground, and distant horizon into a focus on the infinite sky.

The 2,000-square-foot, orange-stained wooden villa is combined with a modest-size, tar-blackened sauna building and several even smaller outbuildings. This grouping constitutes the House of Silence and is, in fact, the result of Pallasmaa's lifetime of research into intimate scales of design, even as he oversees construction of his master plan for the largest urban design project in Helsinki's history, a centrally located residential, commercial, and market-square district, rising above the capital's former long-distance-bus plazas. Pallasmaa's more recent house designs, including this one, have all addressed the conditions of terrain and orientation through pronounced arced forms: sliced segments of a circular geometry in plan, two levels under a mono-pitched roof in section.

The topography of the site slopes gradually southwest to the lakeshore, interrupted by immense granite boulders within the forest, still lying now as they were when strewn by the retreat of the glacier 10,000 years ago. Traversing this slope, the arcing double-height southern wall of the villa sweeps toward the lake in order to follow the daily course of the sun, while closer to the lakeshore, a counter move of the curved concrete wall of the sauna structure cuts into the granite bedrock, providing protection and privacy to those within. Pallasmaa likens the long, curved, pine-boarded shapes of the house and sauna to boats, as if the structures provide not only protection from the elements, but perhaps more important, navigate the rise and fall of the rough, granite terrain through form, materiality, and orientation.

Conceived of as both a retreat (for its owner) and a guesthouse (available for rental by the traveler), the buildings possess a desired informality in their siting and in the openness of the public spaces. Counterbalancing that quality are more formal tactics: the strong geometry of the plan, the elevational compositions of the front and back, and the spatial hierarchies of public and private activity areas. The tapered hull-like shape of the house, supported by steel columns within overall

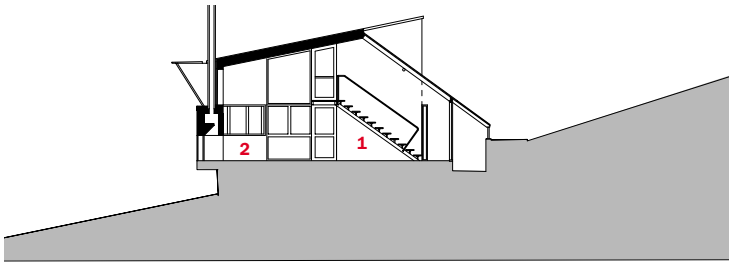
Peter MacKeith, a permanent resident of Finland, is associate dean of the School of Architecture and associate director of the Sam Fox Arts Center, Washington University in St. Louis.

Project: *House of Silence, Siikanjärvi (Whitefish Lake), Finland*
Architect: *Juhani Pallasmaa Architects—Juhani Pallasmaa, Hon. FAIA; Jukka Liikanen (design assistant)*
Consultants: *Pauli Wetterstrand (structural); Jukka Sainio (mechanical); Pasi Hakala-Rahko (electrical)*

PHOTOGRAPHY: © RAUNO TRASKELIN

The main level of the house contains an ample living room centered around a fireplace and hearth, with a horizontal expanse of windows facing south (left). A kitchen/dining area sits under a suspended mezzanine overlooking the living room (below).

1. *Entrance*
2. *Living*
3. *Dining*
4. *Kitchen*
5. *Bathroom*
6. *Library*
7. *Terrace*
8. *Courtyard*



SECTION A-A

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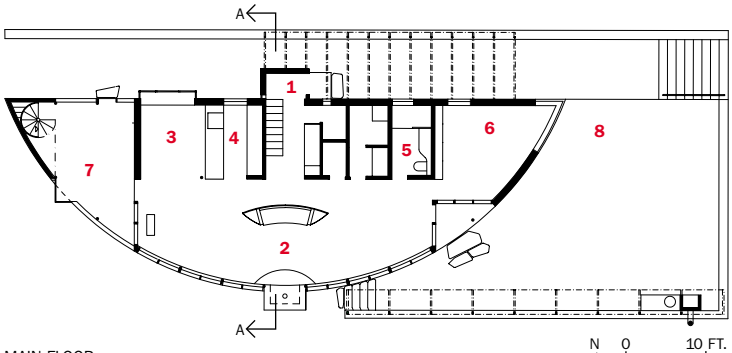

MAIN FLOOR

N 0 10 FT. 3 M.

wood framing, creates a luxurious length along the long axis—emphasizing movement and expanse—and a feeling of intimacy and immediacy by virtue of the short cross axis. On its main level, the house contains an amply sized living room, centered around an iconic fireplace and hearth; a double-height library; a kitchen/dining area; and a full bathroom. Three bedrooms upstairs align along a suspended mezzanine overlooking the living area. The mezzanine terminates in a screened and skylit porch above the main level's enclosed terrace.

The interiors are modest in their specific furnishings but refined in their finishes and details: stained pine boarding inside and out, ceramic tiling for the main level's floor, mahogany throughout the bathroom, and alderwood for the sauna's interior. The house condenses and displays Pallasmaa's interpretation of building elements and details—what he often refers to as the existential, even sensuous, "encounters" of architectural experience. These include such activities as

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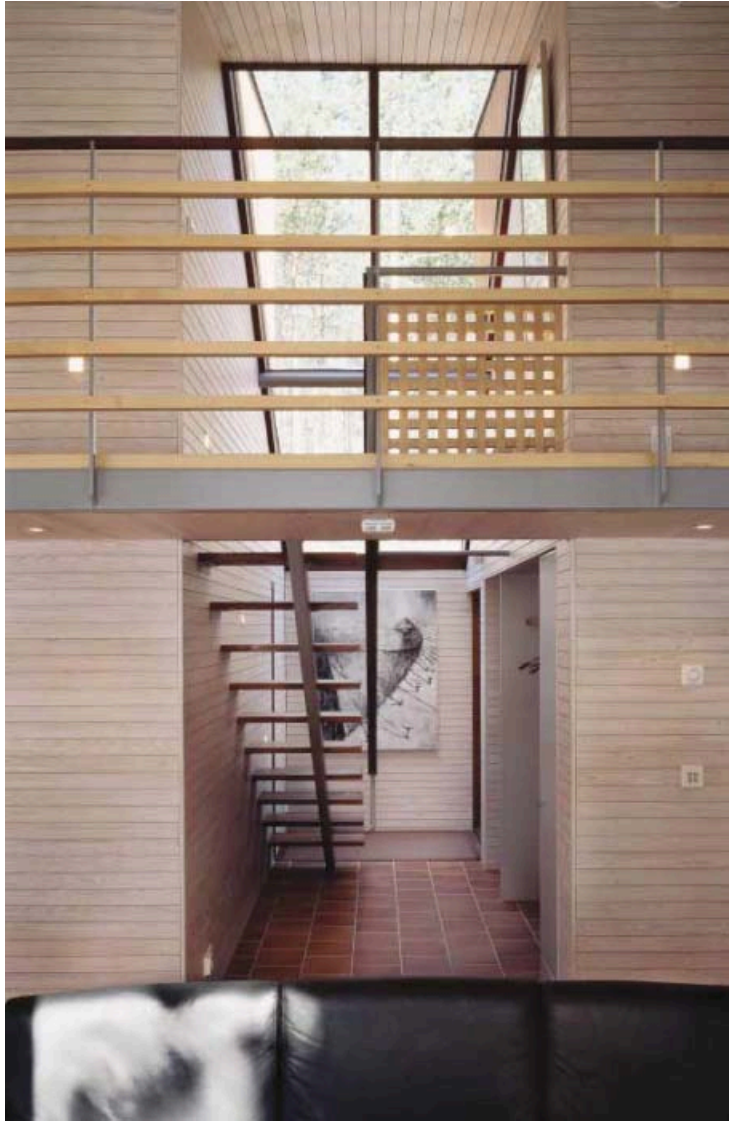

Apertures abound throughout the house, "orchestrating views and light in the manner of a cinematic montage," says Pallasmaa (top two). Along with several smaller outbuildings, an alderwood sauna features a horizontal slot window where views to the south make palpable the intended stillness of the design (below).

ascent and descent (the stair); warmth and illumination (the fireplace and hearth); dining and familial life (the table); water, bathing, and hygiene (the bath); entrance, reception, view, and illumination (the door and the window).

Apertures abound throughout the house and are used to accentuate both specific places and particular activities. "The openings are conceived to orchestrate views and light in the manner of a cinematic montage," says Pallasmaa, who has written extensively on architecture and film, "sometimes with surprising cuts." Whether reclining on the curved settee in front of the hearth, contemplating the flames in the glass-backed fireplace, or gazing at the play of water and light beyond the horizontal expanse of windows girding the southern facade, the visitor reaches a place both protected and receptive. Drowsing while immersed in the Japanese soaking bath, eyes focused on the lake's distant horizon, or falling asleep upstairs behind a sliding door and under a sliding roof-window—as the late summer breezes sway the treetops, the visitor finds harmony and quietude. ■

Sources
Wood finishes: *Siekkelin Puutyö*
Glazing: *Valkealan Lasi*
Kitchen equipment: *Miele*
Sauna roofing: *Pintakate*
Japanese bath: *Messurakenne (mahogany); Suomen Metallisilta (stainless steel)*
Heat pumps: *Carrier*
Light controls: *Lexel*
Art: *Art Center Salmela*

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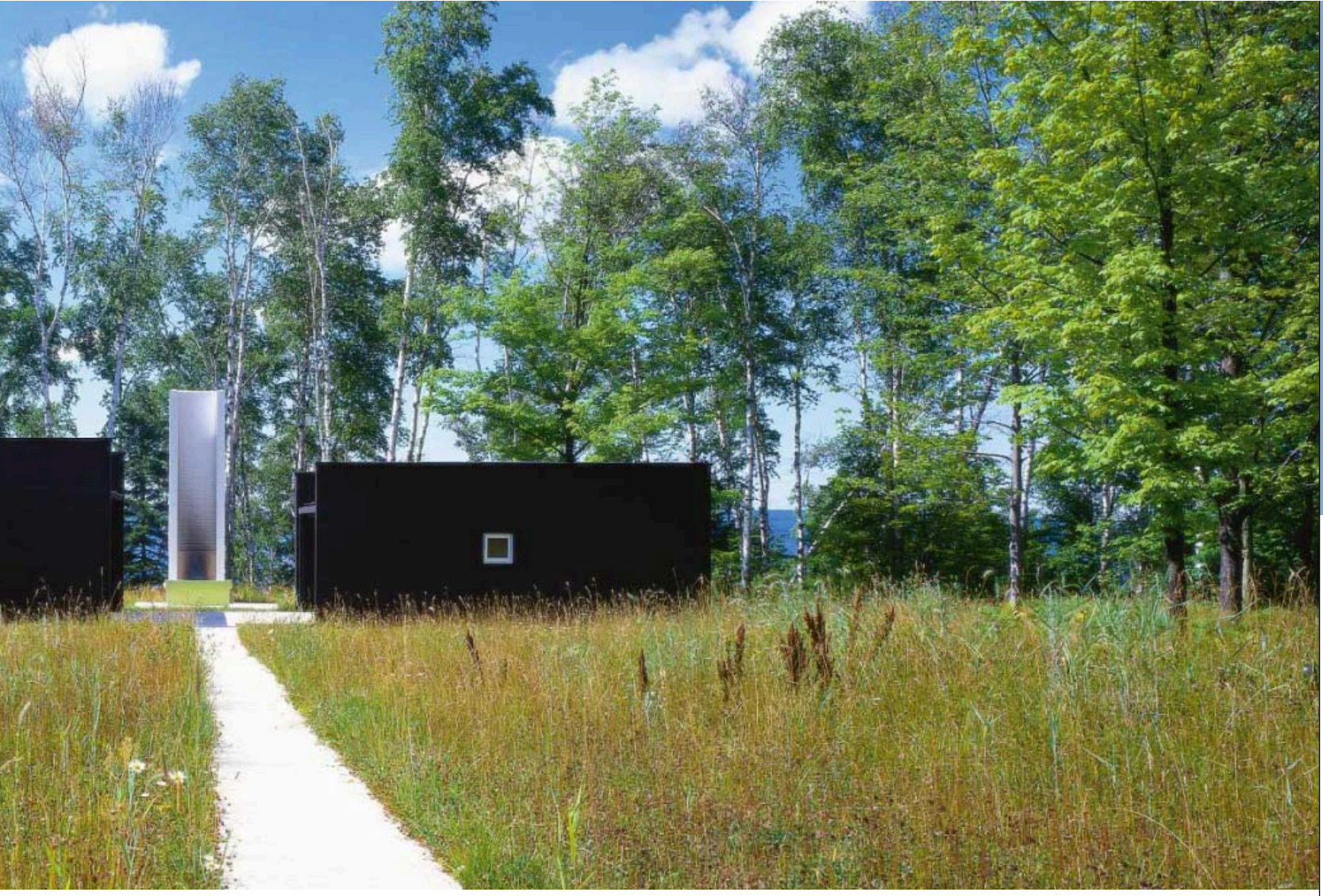
Perched in a meadow like small islands are two low, black rectangular structures whose horizontality mimics that of the lake they overlook. Separating them is a patio aligned with a channel in the distance (top spread and bottom).



PHOTOGRAPHY: © PETER KERZE

Salmela Architects' **Two Black Sheds** scrap log cabin nostalgia for a commonsense Modernist approach

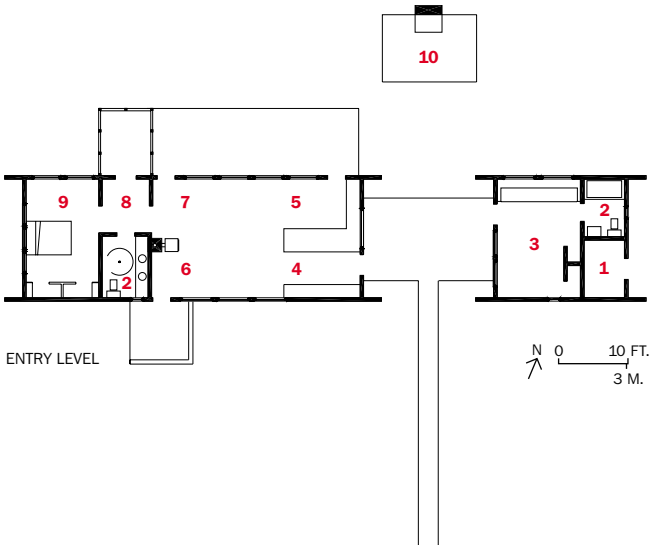
By Camille LeFevre

Off Wisconsin's northernmost tip in the chilly clear waters of Lake Superior lie the rugged, forested Apostle Islands. Of the 22-island archipelago, only Madeline Island was substantially settled, first by the Native American Ojibwa, then French fur traders, followed by missionaries who used it as an outpost. Today the island boasts an eclectic mix of 200 year-round residents and a summer population of about 2,000. Most of the year, ferries run between its only town, La Pointe, and Bayfield, Wisconsin, allowing residents and tourists to come and go, bringing in a steady stream of visitors from the mainland. Enjoyed by yuppies and hippies alike, the island's amenities range from pricey shoreline restaurants to Tom's Burned Down Café, from quaint bed-and-breakfasts to scenic campgrounds. For Bruce Golob, a retired schoolteacher, and his wife, Jean Freeman, a marketing consultant, who have a town house in Minneapolis, Madeline Island was the place for their primary home because "once you step off the ferry," Golob says, "the world just sort of stops." Similarly, a new visitor can't help but suddenly stop, with a sense of stunned appreciation, at the first glimpse of the couple's "cabin," Two Black Sheds.

Camille LeFevre writes about architecture and the performing arts for a variety of national publications.

Perched in a meadow like small islands are two low, black rectangular structures whose horizontality mimics that of the lake they overlook. Separating the structures, like a caesura, is a patio aligned with a channel between two nearby islands visible in the distance; the patio is vertically punctuated by an open, white-brick chimney, which stands tall and etched with black smoke in imitation of the surrounding birch trees. On the chimney's plinth sits a Philippe Starck–designed plastic couch, in the lime green of newly unfurled spring leaves—the finishing touch to this incongruously delightful outdoor room.

Dramatic but not ostentatious, unconventional and yet unpretentious, Two Black Sheds takes "a very commonsense, Modern approach to present-day problems," says David Salmela, FAIA. It is "just what we needed and nothing more," Golob says. The couple also wanted to feel outside when they were inside; and they wanted accommodations for guests



1. *Mechanical room*
2. *Bathroom*
3. *Bedroom/office*
4. *Entry*
5. *Kitchen*
6. *Living*
7. *Dining*
8. *Screen porch*
9. *Master bedroom*
10. *The "unchimney"*

The ceiling in the main building is mustard yellow, the casework Parma violet, and the concrete floor a deep earthy red that recalls the red rock cliffs found along the island's shoreline.

and a structure that was economical to build and easy to maintain. The materials needed to be readily accessible and transportable on the ferries.

Salmela says the dramatic elements of site, lake, and his now-signature "unchimney," as he calls it, implied that "the buildings should be abstractly simple." Their high side walls hide a wide gabled roof, angled to disperse snow and rain while creating "an appealing flat-roof element." Conversely, the screen porch features an inverted-gable roof, also to spill off the elements. Painting the sheds black (the ends are Parma violet) was an intuitive choice that turns upside down the usual expectations about Modernist buildings being white, Salmela adds.

Clad in one-by-four cedar lap siding, the 900-square-foot main building comprises a kitchen/dining/living area separated from the bathroom and bedroom by privacy walls topped with glass "to give the perception of one room, while ensuring light and privacy," Salmela says. The 360-square-foot guest cottage has a bedroom, bathroom, and storage area, and offers guests both privacy and access to the main building. While the interior walls of both buildings are one-by-six flush-tongue-and-groove pine painted white, the main building's open ceiling is a mustard yellow, the casework Parma violet, and the concrete floor an earthy red copied from Freeman's purse that also recalls the red rock cliffs along the island's shoreline.

Light is balanced throughout the 18-foot-wide main cabin via skylights and large windows to the southeast and the lakeside northwest. Because of such openness, Golob says, "when we're inside, our access to the outside is immediate and constant." And while there is a wood stove within the house, having the hearth outdoors reiterates the blending of inside and out.

A stair at one end of the 4.5-acre site leads down to Lake Superior, where the couple keeps a dock and kayaks. On the way back up, for a moment only the unchimney is in view, an arresting image suggesting the remains of a burned-down house. Next in view is the outdoor couch, which refers to a northwoods custom of retrieving discarded sofas from ditches and using them for outdoor seating, Salmela says, which "goes to show you that Modernism has a sense of humor."

As do the islanders. "On the island, anything goes. It would be inappropriate to be too predictable or conservative," says Salmela of Two Black Sheds. Adds Golob, "As David said, and we agree, the island can handle it because it's such a weird place anyway." ■

Project: *Two Black Sheds, La Pointe, Madeline Island, Lake Superior, Wis.*
Architect: *Salmela Architects—David Salmela, FAIA; Souliyahn Keobounpheng; Tia Salmela Keobounpheng*
Consultants: *Bruno Franck (structural); Coen + Partners (landscape)*
General contractors: *Northwood Construction*

Sources
Windows and doors: *Loewen*
Glazing: *Velux Skylights*
Paint: *Benjamin Moore*

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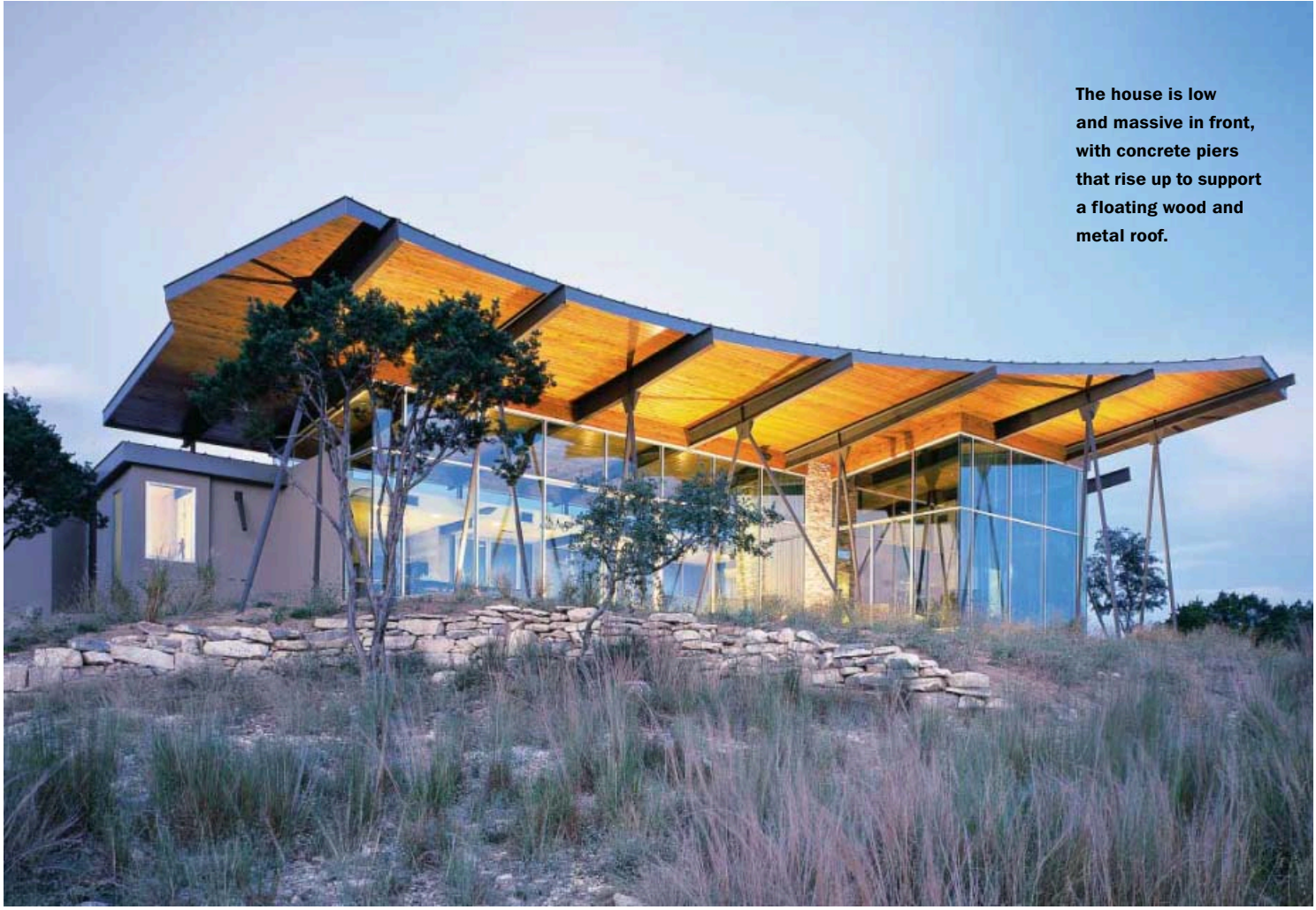


The house is low and massive in front, with concrete piers that rise up to support a floating wood and metal roof.

PHOTOGRAPHY: © ART GRAY

The **Trahan Residence** conceived by Tighe Architecture perches with dignity in the Texas Hill Country

By David Dillon

Wimberley is all about views—of low rolling hills and rocky outcroppings, of creeks, orchards, fields of buffalo grass, and clumps of live oak trees. It sits in the heart of LBJ country, a gentler and more intimate landscape than most of Texas, yet still sufficiently grand to bring out the worst in many architects. Ten-thousand-square-foot limestone houses with gratuitous forms and self-propagating roofs abound, as though the prevailing typology were the country club. Sometimes it takes an outsider to see what really matters.

Patrick Tighe grew up in Massachusetts, and after seven years with Morphosis opened his own office in Santa Monica, California. A mutual friend introduced him to John Trahan, a bachelor banker from Houston, and before long he was designing a comparatively modest (3,200 square feet) house for him in Wimberley, on the fringe of Austin. His approach to the local vernacular was appropriately skeptical and cautious.

"I loved all the stone and the standing-seam metal roofs," he recalls, "but I also felt they were so overused that they had become ordinary rather than special. So I tried to underplay those elements and introduce other materials that could be used anywhere."

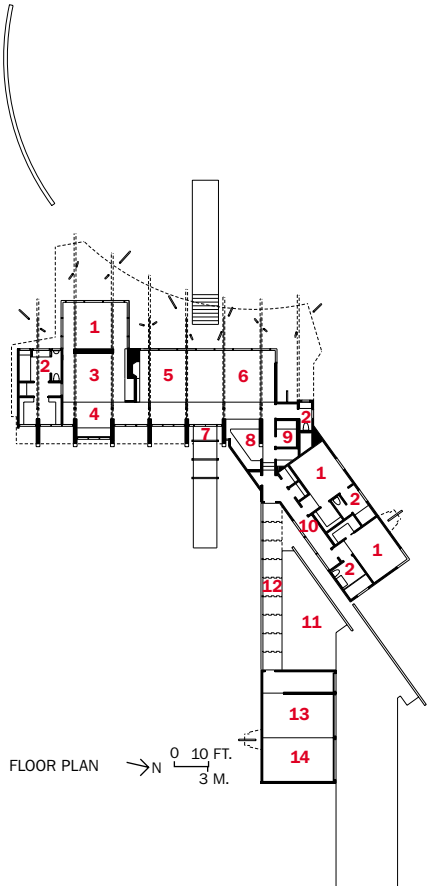
The result is a spare and abstracted Hill Country house that uses local limestone, but only in the fireplace, and that features a standing-seam metal roof, but with only one plane. Elsewhere, steel, glass, stucco, and wood transform the house into something light and contemporary.

The design is as much about siting and views as form. The architect tucked the house into the side of a hill instead of plopping it on top like a hood ornament. It reads immediately as part of the landscape, with a curving anticipatory approach that implies more than it reveals. Tighe describes the result as "a series of contradictions," but "counterpoints" is more like it. Heavy plays against light, open against closed, solid against transparent, past against present. From the front, it is low and massive, with rugged concrete piers rising from the earth to support a

Contributing editor David Dillon is the architecture critic for The Dallas Morning News.

Project: *Trahan Residence, Wimberley, Tex.*
Architect: *Tighe Architecture—Patrick J. Tighe, AIA, principal; Jason Yeager, Mike Yee, Jeff Buck, Rene Tribble, Joe Dangaran, team; Joel Miller, interior design*
Consultants: *Joseph Perazzelli, (structural); Sia Garestani, Massoud Narimir (m/e/p)*
General contractor: *Dunn & Burnette*

1. *Bedroom*
2. *Bathroom*
3. *Library*
4. *Office*
5. *Living*
6. *Dining*
7. *Entrance*
8. *Kitchen*
9. *Laundry*
10. *Gallery*
11. *Garden*
12. *Covered walkway*
13. *Workshop*
14. *Garage*



floating wood and metal roof. It seems grounded, archaeological almost, with only a narrow clerestory to hint at something different beyond.

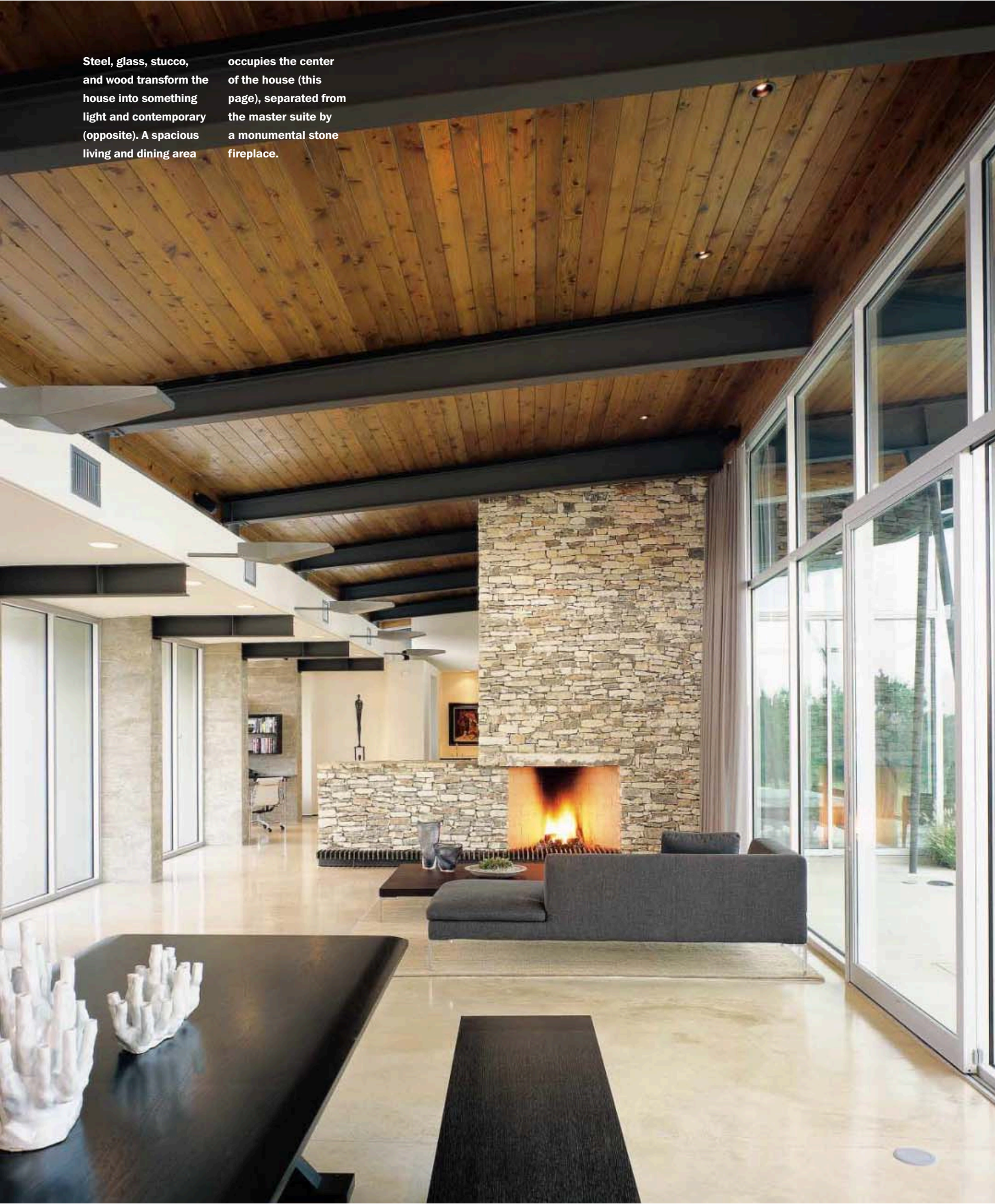
The interior, on the other hand, is as open and fluid as the exterior is dense and rooted—a 260-degree sweep of glass overlooking 14 acres of buffalo grass and live oak trees, with a small creek at the bottom. Here is the prototypical Hill Country landscape edited for maximum visual impact.

A spacious living and dining area occupies the center of the house, separated from the master suite by a monumental stone fireplace. The kitchen and guest wing veer off in the opposite direction, framing a small outdoor garden. The kitchen is intentionally small—"a one-butt space," says the owner—and the master bath won't float a Pontiac. "This house was designed for me and my lifestyle, not for the resale market," he says. "I assume I'll be able to find someone like myself if I ever decide to move."

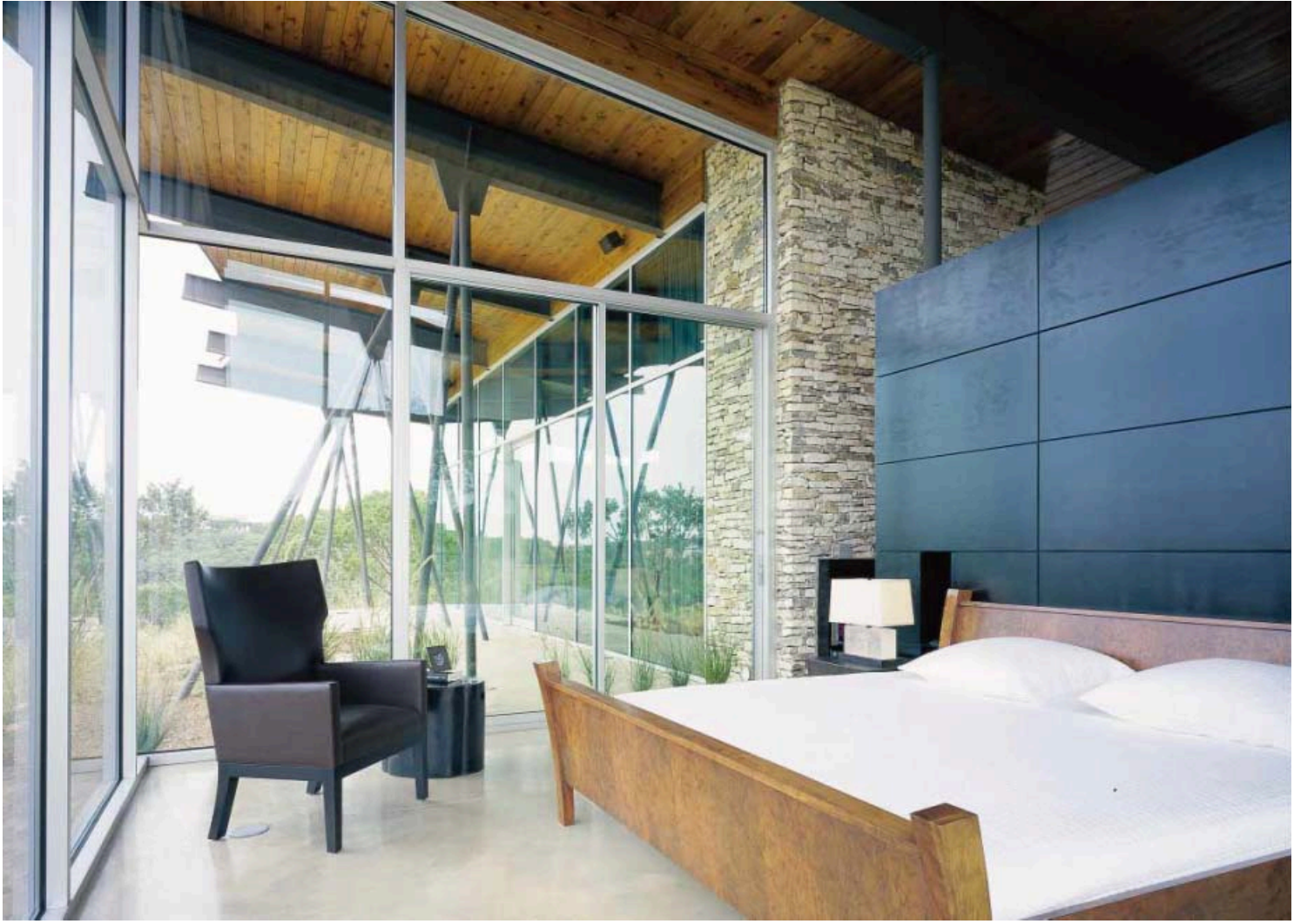
THE MASTER BATH WON'T FLOAT A PONTIAC. "THIS HOUSE WAS DESIGNED FOR ME AND MY LIFESTYLE," SAYS THE OWNER.

Glass was the biggest item in the construction budget, huge expanses of it framing the living spaces and wrapping the master bedroom, a pristine glass cube that creates the feeling of sleeping outdoors without the heat and the bugs—a Texas sleeping porch as Mies might have designed it. These spaces all face due west, generally an economically reckless move in Texas, but one that in this case seems to work because of a deep 20-foot protective overhang. The roof is supported by splayed pipe columns that provide a balletic counterpart to the concrete piers on the opposite side of the house.

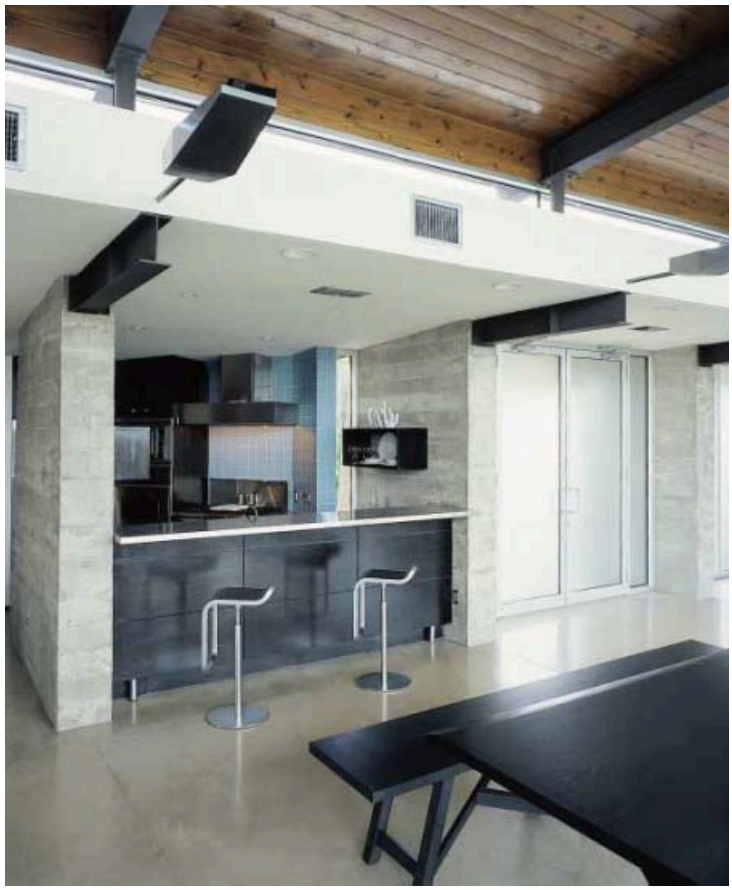
The domestic centerpiece is a massive fireplace of Wrightian grav-



Steel, glass, stucco, and wood transform the house into something light and contemporary (opposite). A spacious living and dining area occupies the center of the house (this page), separated from the master suite by a monumental stone fireplace.



The master bedroom is a Miesian glass cube that creates the feeling of sleeping outdoors (above). The kitchen (right) is intentionally small—sufficient for the needs of the owner.



ity made of limestone collected on-site and meticulously chipped and set by local craftsmen. The owner insisted on using his own stone, his father having been a master mason, and the architect eagerly complied. As both artifact and metaphor, it works beautifully.

Not everything rises to this level. The forest of steel columns on the west seems somewhat busy and distracting, especially when viewed from below. And the guest wing, foursquare and finished in tan stucco, looks a bit bland and awkward. While the desire for a simpler and less acrobatic complement to the main house makes sense, the execution is ordinary at best.

What works consistently is the way the house connects to its surroundings and combines traditional materials and building styles with contemporary ones to acknowledge vernacular precedents without lapsing into mindless mimicry. Historic Hill Country buildings, the ones that O'Neil Ford and others rediscovered and celebrated, were clean, solid, straight to the point, and strikingly modern. The Trahan House is light, open and expansive, of its place, and very much of its time. ■

Sources

Window system: *Binswanger Glass*
Roofing: *Desotex*
Bath tiles: *Ann Sacks*

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Sliding glass doors unite the interior with an outdoor sun deck along the sea-facing length of the house (top and bottom right). A view from the deck reveals the rugged desolation of the surroundings (opposite). A nearby antenna inspired the architect's design (bottom left).

Simon Condor Associates sculpted **Vista House** as a direct response to its rugged, windswept surroundings

By Lucy Bullivant

A committed community of fishermen and families live in a variety of cottage types (some made from old railway carriages) in Dungeness Beach, a locale with a raw climate and constant wind on the southernmost point of Kent in southeast England. Here, a masterful conversion of a fisherman's hut called Vista demonstrates how the careful choice of materials combined with the innovative use of new products can create domestic architecture of high quality at low cost (in this case, approximately $210,000). London-based architect Simon Condor designed the house with materials available from the local "DIY" (do it yourself) store in the manner of other nearby homeowners. The result fuses the language of neo-vernacular with a modestly Modernist bent.

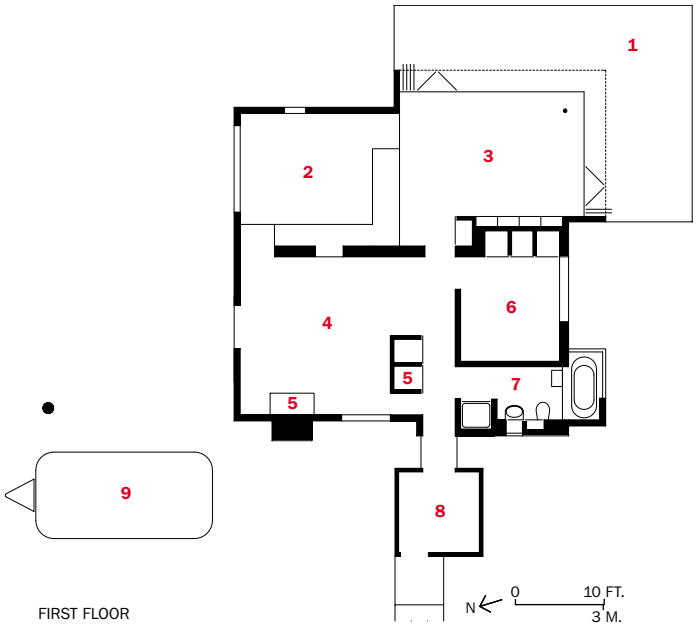
Condor, whose practice has never exceeded four people, has designed some exceptional residences and workplaces in England, the U.S., Germany, and Japan. In his reinterpretations of Modernist traditions, he is deeply influenced by the simplicity of local traditional architecture. The rationale behind Vista echoes the pragmatism of his other low-cost rural buildings. This includes the headquarters of the textile designer Georgina von Etzdorf in Wiltshire, an industrial shed clad in steel with an internal plywood structure; and the steel-framed, farmlike units of the Suffolk workshops in Stradbroke, East Anglia. Both Vista and these projects feature shedlike structures relating comfortably to the landscape.

When the clients bought the house two years ago—a basic bungalow sitting on a wide pebble beach—it had no windows on the east side to permit views of the beach and sea. The project began as a renovation, but by the time it was finished, 75 percent of the building was replaced with new timber, due to the fragility of the original structure. While its footprint remained intact, all other aspects of the house changed. Internally, priority was given to maximizing the public areas, which are clad in a modestly priced Finnish spruce plywood that is knottier than birch but that Condor made sure was fitted to the highest standards. Its consistent use throughout the house provides a sense of warmth and comfort, along with the impression of spaciousness in the living areas.

Constructed from the original shed, a new entryway retains the slight odor of old tar-slicked timber. It leads through to a glazed hallway and the first of two living rooms (called the "snug"), made cozy with a wood-burning stove. A new bathroom resides to the right, in keeping with Condor's adherence to a relative absence of windows except on the

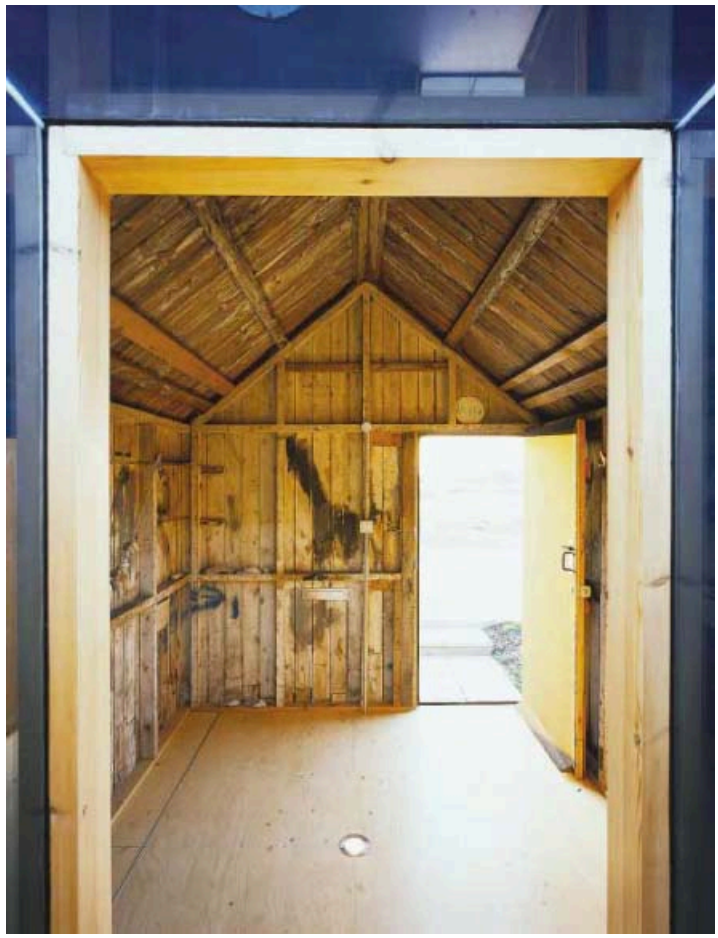
Lucy Bullivant is an architectural critic, author, and curator. She is the editor of the forthcoming book 4dspace: Interactive Architecture *(January 2005).*

Project: *Vista House, Dungeness, Kent, England*
Architect: *Simon Condor Associates—Simon Condor, Chris Neve*
Consultants: *KLC Consulting Engineers (structural)*
General contractor: *Charlier Construction; AAC Waterproofing and M R Anderson Roofing (subcontractor)*



1. *Deck*
2. *Dining/kitchen*
3. *Living*
4. *Snug*
5. *Storage*
6. *Bedroom*
7. *Bathroom*
8. *Shed/entry*
9. *Airstream caravan*

PHOTOGRAPHY: © CHRIS GASCOIGNE/VIEW PICTURES, EXCEPT AS NOTED



The silver aluminum shell of the adjacent 1954 Airstream (above) makes a striking contrast to the black house. Constructed from the original shed, an entryway retains the odor of old tar-slicked timber (right).

oceanside. Inside, he has fitted the tub itself into a box cantilevered out over the pebble beach so bathers can be at one with the surroundings.

Leading off the "snug" are the bathroom, dining room/kitchen, and a living room with sliding glazed doors uniting the indoors with an outdoor sun deck running the sea-facing length of the house. A striking soot-black Vulcanite rubber usually employed to waterproof roofs is used here unconventionally to cover two walls and the roof. Although local cottages are frequently covered in roofing felt with a coat of tar, Condor's more sophisticated contemporary use expands this idea. Here, the plywood elevations are covered in rubber with sheets that are cut to size and glued to fit each facade. The sheets were prepared in a factory in Belgium, with cutouts made for doors and windows, and delivered to the site "a bit like a child's building set," he explains. The roofing subcontractor then glued them to the plywood walls with contact adhesive. "I believe it's the first time the rubber was used to clad an entire building in this way," Condor continues. Known as EDPM (for ethylene propylene diene monomer), the material has the advantage of being fireproof, water-resistant, vapor permeable, resistant to ozone and UV, and nondegradable over time. It is considered a "green" material, as is the spruce cladding on both the interior and the exterior timber frame, chosen specifically because it came from managed forests in Finland.

If it were located in a strictly urban context, Vista would be an eye-catching scheme that achieves an innovative solution at low cost.

PHOTOGRAPHY: © STEPHEN AMBROSE (TOP)

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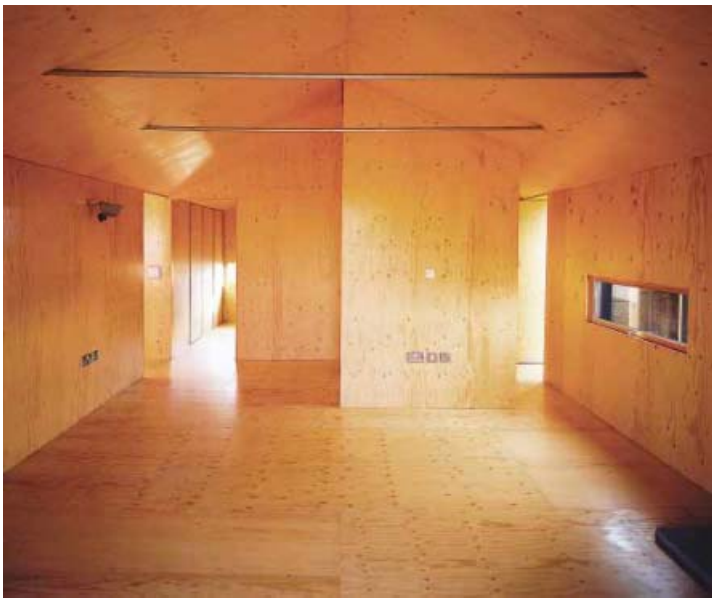
Public areas are clad in a modestly priced Finnish spruce plywood (this page). Its consistent use throughout the house provides warmth and snugness while conveying the impression of spaciousness in the living areas.



Because the design was developed in this unique, desolate environment, it has even greater singularity. Condor feels strongly that "the context is part of the story." A beach with no boundary lines is a classic "no-plan" environment where house construction is typically improvised or "bodged" (made or repaired clumsily). One reason Vista fits in and works so beautifully here is that it balances the contrasting qualities of domestic intimacy with the openness of the house to its environment in a coherent manner.

No wholly new building was allowed on the beach, so to extend their living spaces, the owners, inspired by an Airstream caravan situated in an equally barren environment near architect Josh Schweitzer's house at Joshua Tree in California, put guests up in their own 1954 Airstream. The silver of its aluminum shell makes a striking visual contrast to the tactile black-rubber-clad house. The Vista House is ideally integrated into this special context, since it so effortlessly makes a virtue out of the unconventional. ■

Sources

Exterior and interior wood: *UPM-Kymmene Wood*
EPDM black rubber membrane: *AAC Waterproofing*
Timber windows and sliding doors: *Scandinavian Window Systems*
Lighting: *SKK and Louis Poulsen*
Faucets: *Die-Pat Divisions*
Steel bath and show tray: *Kaldewei*
Wood-burning stove: *Rais*

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Today's multifunctional kitchens need to serve as communication as well as culinary centers. SieMatic's Multimedia cabinetry fits a media task center in less than 36" of floor space. Customized to fit into the most compact areas and to integrate with all of SieMatic's kitchen programs, the cabinetry provides room for a retractable, swiveling television and a computer desk with surfaces for a computer, printer, and keyboard. The cabinets shown feature tall, vertical, stainless-steel wide-frame doors with basalt-colored glass. Frames are available in bronze, aluminum, or stainless steel, with a choice of frosted or basalt glass panels. SieMatic, Bensalem, Pa. www.siematic.com **CIRCLE 204**

► Corian bathroom collection
Due to its nonporous, solid composition and thermoformable, durable nature, Dupont Corian is the material of choice for the Italian product design firm Planit. Through the use of a CNC milling machine, kilns, and a vacuum press, Planit's products offer a uniformity of material, composition, and form. The Block collection, designed by Architectural Studio Simone Micheli, is a group of bathroom furnishings made of Corian that include multiple washbasins with integrated variable lighting, toilets, bidets, showers, baths, and illuminated containers in various shapes. Planit, Balzano, Italy. www.planit.it
CIRCLE 205

Residential Products

▼ Crafty cabinet

New York designer Richard Mishaan, in collaboration with Donghia, has created the Escape Collection of cabinetry to house large plasma screen televisions and other media components. Featuring glass-paneled sides and limed or pickled oak in a variety of finishes, the cabinets come in two sizes and have multiple glass-fronted drawers that accommodate a variety of equipment, and pullout trays outfitted for CDs, DVDs, and videos. Donghia, New York City. www.donghia.com **CIRCLE 206**

► Hand-forged faucets

Sonoma Forge has introduced a line of hand-forged copper, stainless-steel, and brass faucets. One of the offerings in the line includes the WaterBridge faucet (right), inspired by the simplicity of Asian bamboo fountain spouts. WaterBridge faucets are handcrafted out of copper and brass and finished in a rustic natural copper or nickel. The lav faucets are complemented by WaterBridge fixtures for deck-mount, wall-mount, and shower/tub applications, along with a full collection of bathroom accessories. Two finishes, Mellow and Pizzazz, are available to match a variety of design themes. Sonoma Forge, Sonoma, Calif. www.sonomaforge.com **CIRCLE 208**

◄ Generate more power

Kohler has introduced two new generators designed for residential and small-business applications. The new 8.5 kw and 12 kw generators offer higher power output, easier installation, and quieter operation. The 12 kw generator is the only one in its class powerful enough to start and run a typical 48,000-BTU central air conditioner in the event of a power outage. Kohler Power Systems, Kohler, Wis. www.kohler.com **CIRCLE 210**

▲ Don't dig it up, top it off

Available in a full range of colors, Scofield Texturetop cementitious topping is ideal for restoring floors and hardscapes (above left and right show driveway before and after restoration), or to correct construction errors in commercial, industrial, or residential projects. This fast-track, low-profile topping is an economical alternative to excavating old concrete and offers high durability and abrasion resistance in interior and exterior applications. L.M. Scofield, Los Angeles. www.scofield.com **CIRCLE 207**

▲ Workhorse of a kitchen workstation

The AquaCentre kitchen workstation from Julien features an all-in-one food-preparation and cleaning center; a 16-gauge, stainless-steel sink; tilt-out drawer storage for pots and pans; and a built-in dishwasher mounted underneath the stainless-steel countertops. The workstation is offered in four different configurations, with curved or linear stainless-steel handles, and a pullout or front-opening storage door. Julien, Quebec. www.julien.ca **CIRCLE 209**

▲► Part shutter, blind, and shade

Alouette Light Louvers from Hunter Douglas combine the architectural look of a shutter (without the heavy framing), the light control of a blind, and the softness of a shade. Soft fabric louvers with an elliptical, cellular shape soften and diffuse light and tilt 180 degrees. The elliptically shaped head rail and bottom rail pivot with the louvers, allowing them to virtually disappear. Hunter Douglas, Upper Saddle River, N.J. www.hunterdouglas.com **CIRCLE 211**

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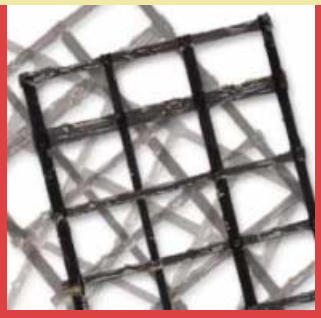
DESIGN QUESTIONS?



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Products

Metal Cladding & Treatments

The following **metal-clad products** include elevator doors, roofs, column covers, and wall panels realized in bronze, stainless steel, copper, aluminum, and zinc. Also featured are **special treatments**, including coatings that enhance color retention and durability or even create an antique look. *Rita F. Catinella*

Feathers pattern shown in six separate panels (above). Engine Stripe pattern (right).

Predecorated/preformed stainless-steel elevator doors available in six patterns

Eco-Nor, a product from Northern Engraving Corporation, offers six distinctive, predecorated and preformed elevator-door facings in 18-gauge stainless steel. The competitively priced doors are ideal for remodeling or budget-sensitive projects. The finishes of all designs complement existing or new #4 stainless-steel frames. A standard size for 42" x 84" clear center openings is available, and the facings are preformed with L or J breaks on request. No prior specification is necessary for prompt lead times, according to the manufacturer.

To order, specifiers need to choose a model number, quantity, and edge configuration. The six Eco-Nor patterns include EC 001, a Feathers pattern in a ½" #4 satin full frame with nondirectional borders; EC 002, an Engine Stripe pattern in a ½" satin full frame with nondirectional borders; EC 003, a combination ½" and 2" Engine Stripe with nondirectional vertical borders; EC 005, an alternating ⅛" #4 satin and nondirectional stripes with nondirectional vertical borders; and EC 006, a Feathers pattern in three separate panels with ½" #4 satin frames and nondirectional borders. Eco-Nor, Sparta, Wis. www.eco-nor.com **CIRCLE 212**

An unusual roof of Italian copper-clad tiles

Tegola Canadese copper-clad tiles from Treviso, Italy, distributed in the U.S. by Petersen Aluminum, are part of an unusual roof for the University of Minnesota Weber Music Hall in Duluth, Minnesota. The 22,000-square-foot facility accommodates an audience of 350 plus a 70-member orchestra and 75-member chorus.

Designed by Cesar Pelli & Associates of New Haven, the focal point of the facility is an angular dome covered with 12,000 square feet of the copper-clad tiles. According to Pelli's design team, the acoustical requirements of the orchestra dictated the architectural shaping. Although the angular dome has a large number of facets with coping assemblies forming complex triangular sections, the tiles can be installed quickly and easily using traditional roofing tools.

The Weber Music Hall's roof.

The Tegola Canadese tiles feature a 99.7 percent pure copper foil coating and are constructed of eight layers of different materials, including impregnated fiberglass and natural bitumen. Over time, they will develop a protective green patina. Petersen Aluminum, Elk Grove Village, Ill. www.pac-clad.com **CIRCLE 213**

Metal wall panel profiles offer more design choice

Until recently, preformed metal wall panels offered designers a choice of only corrugated or ribbed profiles. The Concept Series is a new collection of concealed-fastener exterior metal wall panel profiles from Centria that gives specifiers more design flexibility. The panels feature a complementary asymmetrical geometry and identical side joinery permitting integration of multiple profiles within a single elevation for horizontal and vertical application. Available in 12" and 16" widths, the panels come in G-90 galvanized steel, aluminum, stainless steel, and Centria's Durallure finish system. Profile options consist of narrow ribs, medium-width ribs, and wide flat surfaces that can be used to create a single repetitive appearance or to generate a pattern or feature on a wall elevation.

Concept Series panels can be installed as part of a field-assembled wall system with liner panels or as the exterior component of an insulated wall design with a vapor-permeable air and water backup system. Centria, Moon Township, Pa. www.centria.com **CIRCLE 214**

▼ They've got aluminum surfaces covered

Gooding Aluminum offers an extensive range of aluminum materials, surface finishes, and products—including balustrade panels, ceilings, canopies, flooring, wall paneling, door cladding, and lighting—for interior spaces. Gooding Aluminum's extensive range of cladding panels were specified to create a dramatic effect at the ME2 nightclub in Omagh, Northern Ireland (below). The manufacturer's Impressional and Perforated decorative cladding panels were used on bars, columns, and the DJ podium within the space. Gooding Aluminum, London. www.goodingalum.com **CIRCLE 215**

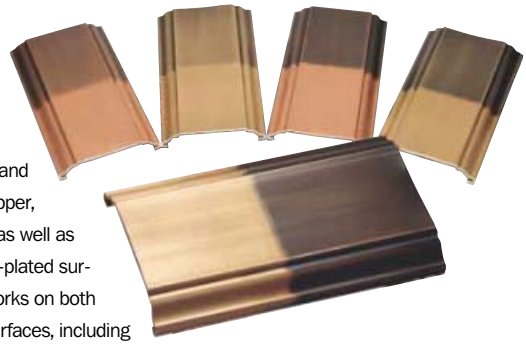
▲ Improving upon the original

Historic terne metal, used extensively throughout colonial America, inspired a Leesburg, Virginia, homeowner to design a classic colonial farmhouse with an "old tin roof" using Follansbee's Terne II. Terne II is coated with Follansbee's patented zinc/tin alloy, which acts as a barrier and helps to reduce oxidation of the surface before painting. Follansbee's Rapidri acrylic paint offers enhanced durability and color retention. Follansbee Steel, Follansbee, W.V. www.follansbeeroofing.com **CIRCLE 216**

► Protecting a landmark

New York City's landmark George Fuller Building features Art Deco metal figures and decorative features in bronze and cast iron designed by Walker and Gillette in 1929. Building Conservation Associates (BCA) was hired to clean and repaint the figures. BCA specified Series 90-97 Tneme-Zinc urethane primer, Series 73 Endura-Shield aliphatic acrylic polyurethane for the intermediate coat, Series 1078 Fluoronar Metallic for the metallic gold coat, and Series 1076 Fluoronar Clear topcoat for color retention. Tnemec Company, Kansas City, Mo. www.tnemec.com **CIRCLE 217**

► Antiquing concentrate



Birchwood Casey's M25 Antique Black antiquing concentrate can blacken and brown metals such as copper, brass, and bronze alloys, as well as zinc die castings and zinc-plated surfaces. The concentrate works on both solid and electroplated surfaces, including door and window components. The concentrate is mixed with water at 10–20 percent for blackening or browning copper and brass alloys, and at 5–10 percent for blackening zinc. Birchwood Casey, Eden Prairie, Minn. www.birchwoodcasey.com **CIRCLE 218**

◄ Aluminum composite

Moseley Architects of Richmond were commissioned to design Deep Run High School in Glen Allen, Virginia, in the style of a nearby office park. The firm was also required to incorporate sloped metal roofs on the gables of the building. The team paired brick with Reynobond aluminum composite material (ACM) installed above the windows on the second floor. Over 48,000 square feet of ACM were used as fascia/soffit and column covers and over 49,000 square feet for vertical wall panels. Alcoa Architectural Products, Pittsburgh. www.alcoa.com **CIRCLE 219**

▲ High-tech cladding

Approximately 30,000 square feet of Alucobond aluminum-composite material was chosen to reflect a high-tech image for the 12-story Acxiom River Market Tower in Little Rock. Alucobond is made of two sheets of .02" aluminum bonded to a lightweight, thermoplastic core.

Paired with precast concrete, the Alucobond material was used as part of a glass curtain-wall system, with the exterior including spandrels of various sizes. Interior applications include column covers and a balcony wrap in the lobby areas. Alcan Composites USA, Benton, Kentucky. www.alucobond.com **CIRCLE 220**

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Product Briefs

▲ One-stop information center
Philadelphia-based Cloud Gehshan Associates specializes in developing brand identities, research-based signage, and wayfinding systems for its clients. This weatherproof, computerized kiosk was created by the firm to be a one-stop wayfinding and information center for visitors at Johns Hopkins University. The touch of a finger on the aluminum map activates the LCD screen, which presents a building photo, customized map, and directions. Buttons with tactile letters and Braille aid visually impaired users, and concealed microphones and speakers connect visitors to a 24/7 help desk. Cloud Gehshan Associates, Philadelphia. ww.cloudgehshan.com **CIRCLE 221**

► Modern fountain designs
While designing outdoor spaces against the Modernist backdrop of Los Angeles, Studio Four grew frustrated with the selection of outdoor furnishings on the market. The team's exploration of materials led to the design of the Serenity line of planters and fountains. Today, Studio Four designs and fabricates Modern outdoor elements as well as interior and exterior finishes. The Water Line of indoor/outdoor fountains, created by partner Khoi Vo, is available in concrete and aluminum in five distinct designs. Studio Four, Los Angeles. www.studio04la.com **CIRCLE 223**

◄ Luminous panels
GranitiFiandre has expanded its tile and stone product range to include Geologica luminous panels. The panels are designed for installation on floor, wall, or ceiling surfaces. A stainless-steel frame surrounds the structure, which is created with opalescent, tempered glass that can withstand foot traffic. Color options include amber, white, and blue in 12"- or 16"-square panels. The thin panels use four high-intensity LEDs. GranitiFiandre, Itasca, Ill. www.granitifiandre.com **CIRCLE 224**

Product of the Month
Bas-relief Tiles

Utilizing their patent-pending Photo-Cast process, Photo-Form can create bas-relief tiles from any type of two-dimensional image. The process begins when the specifier submits a digital picture or photograph to the studio. Within three weeks time, Photo-Form creates a series of sample tiles in assorted glazes (for ceramic tiles) or finishes (for metal tiles) according to specifications. Upon approval of the prototype, Photo-Form begins production. All tiles are handmade, and a typical order will be delivered in four to six weeks.

Photo-Form is currently offering the ceramic tiles in 4" x 4", 6" x 6", and 8" x 8" formats. Custom sizes are available with a set-up charge. Gypsum-based tiles can be manufactured in dimensions ranging from 4" x 4" to 8" x 8" with an aspect ratio specified. The gypsum-based tiles must be sealed with a suitable sealer for outdoor use; for indoor applications, the tile should be sealed with wax or a clear acrylic spray to prevent oxidation. While the tiles are for wall applications only, floor tiles will be made available in the future. In addition to ceramic, metal, and gypsum-based tiles, the company works in a range of materials, including rubber, plastic, and clear acrylic. Photo-Form, Scottsdale, Ariz. www.photo-form.com CIRCLE 222

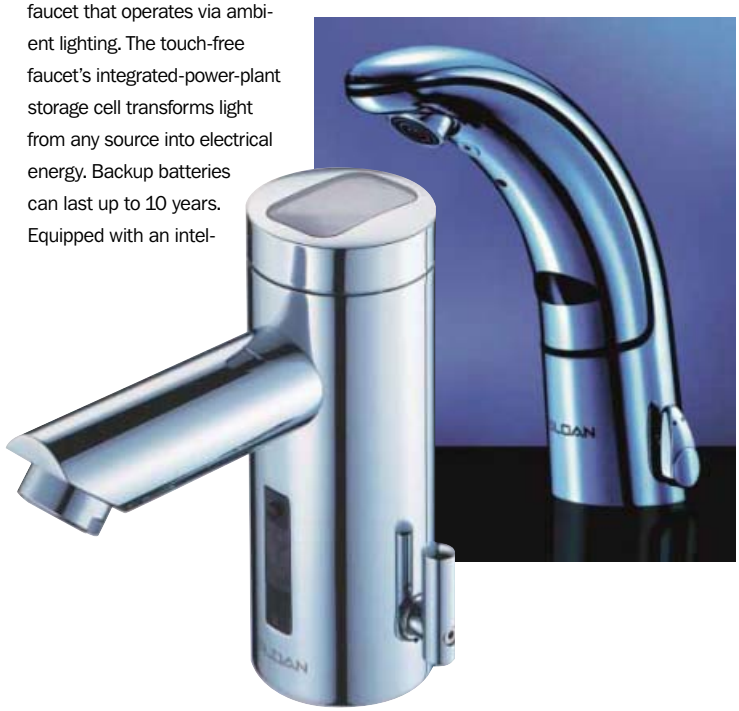
◄ Airplane-inspired airport seating
The Bernú public seating collection takes its name from Daniel Bernoulli, an 18th-century Swiss scientist who discovered the Bernoulli principle, which students of physics and aerodynamics learn is the reason airplanes fly. Constructed of cast aluminum and steel components, its engineering is based on a "peg" system that simplifies assembly and results in a completely modular system. In addition to the usual straight row units, Bernú will be available in curved configurations (left). The closed loop arm is in the shape of an airplane wing in cross section. Upholstery options include vinyl, faux leather, leather, and woven textiles. Arconas, Ontario. www.arconas.com **CIRCLE 225**

▲ Beating the clock

Flowcrete was challenged to install a 7,546-square-foot, high-performance floor for the Nilai Stadium in Malaysia in just 10 days. To start, the team used the semidry cementitious K-Screed to minimize the moisture content of the base. In order to speed things up further, they applied Flowcem, a cementitious, modified epoxy damp proof membrane (DPM) system. This system enabled the topcoat of Flowshield, a self-leveling epoxy resin, to be installed immediately. Available in gloss or matte finish, Flowshield is hard-wearing, abrasion-resistant, and easy to clean. Flowcrete North America, Houston. www.flowcrete.com **CIRCLE 226**

▼ Smarter faucets

Sloan Valve has added two new "smart" faucets to the market: the Solis solar-powered faucet (below left) and the Optima i.q. sensor-operated faucet (below right). Solis is an electronic solar-powered faucet that operates via ambient lighting. The touch-free faucet's integrated-power-plant storage cell transforms light from any source into electrical energy. Backup batteries can last up to 10 years. Equipped with an intelligent sensor, the Optima i.q. faucet uses up to 70 percent less water than manual-type fixtures and is available with a select-temperature-control adjusting lever. Sloan Valve, Palatine, Ill. www.sloanvalve.com **CIRCLE 227**



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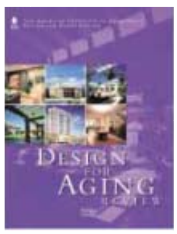

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► Another day at the beach

In response to requests for tiles that convey the feeling of a pristine beach environment, Imagine Tile has added the Beach Series to its line of ceramic wall and floor tiles. Accent shells can be used to highlight a room feature or guide foot traffic. Intended primarily as a floor tile, the collection can also be used on walls and countertops for commercial or residential projects. Imagine Tile, Bloomfield, N.J. www.imaginetile.com **CIRCLE 228**

▼ Luxurious alpaca rugs

Textile designer Rosemary Hallgarten collaborated with Peruvian artisans to produce a collection of floor coverings in alpaca. The collection includes hand-tufted and hand-knotted designs. Roman mosaic tiles washed up on the beaches of Beirut were the inspiration for the Mosaic hand-tufted rug below. Rosemary Hallgarten, Corte Madera, Calif. www.rosemaryhallgarten.com **CIRCLE 230**

▲ Colored and etched glass

Skyline Design's Vitracolor is opaque colored glass for both interior and exterior wall cladding available in 30 standard colors. Recommended for both vertical and horizontal applications, Vitracolor is available in sizes up to 72" x 144" and thicknesses of ¼", ⅜", and ½". Fotoglas is a proprietary process that etches large photographic images into the surface of the glass. Glass choices include plate, tempered, laminated, and insulated glass. The floral design above combines the two technologies. Skyline Design, Chicago. www.skydesign.com **CIRCLE 231**

▼ Design studio door handle

The Cerri #H350 handle is one of the latest door hardware designs in Valli & Valli's Fusital collection. Created by the Italian design studio Cerri & Associates, the handle is available in satin-chrome and polished-chrome finishes and measures approximately 5" long x 2" wide. It will be available in late fall/winter 2004. Valli & Valli, New York City. www.vallievalli.com **CIRCLE 229**

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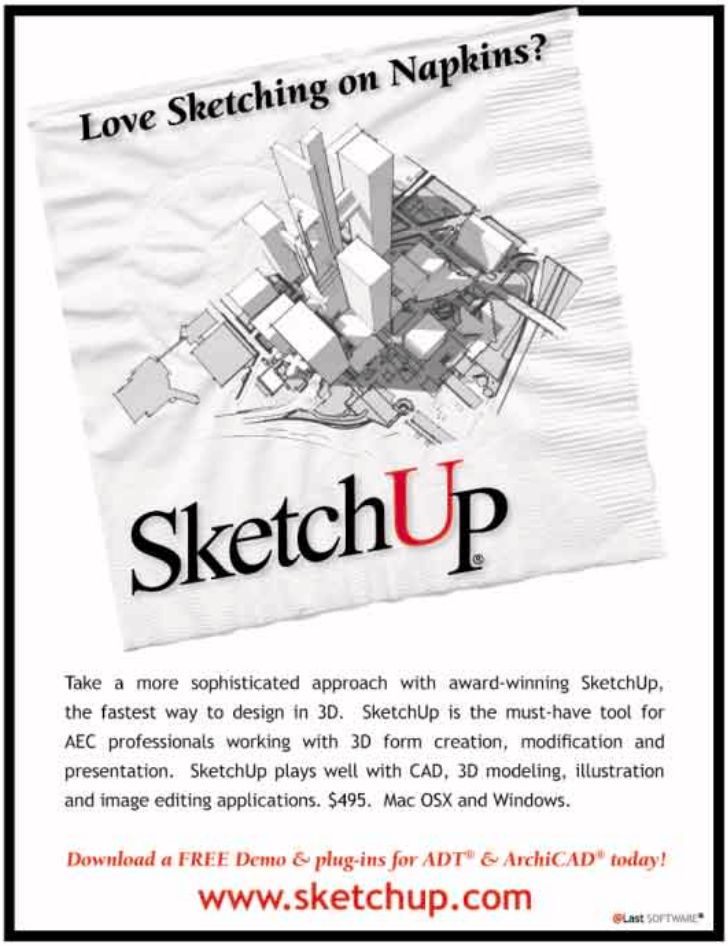

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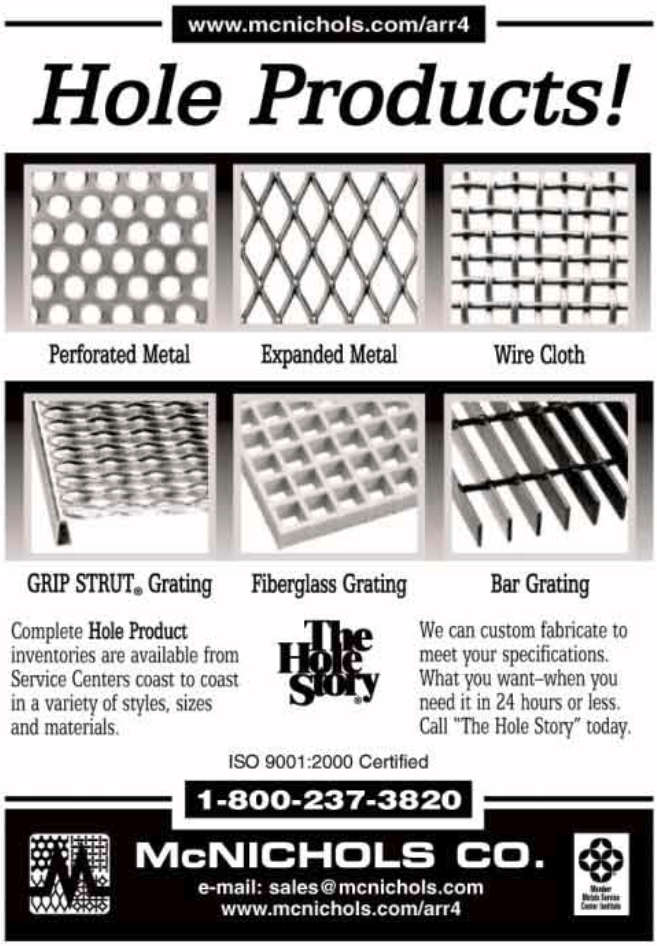

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Product Briefs

◄ Energy-efficient wall-panel system

R Steel is a structural, non-cavity wall-panel system that performs as a substrate for interior and exterior finishing. The energy-efficient, 6" and 8" wall-panel system replaces metal studs, insulation, and exterior sheathing. Exterior materials including brick veneer, stucco, stone, or metal are easily applied. R Steel's Perform Guard EPS insulation, molded to a steel core, is EPA-registered, mold-resistant, noncorrosive, and nontoxic. Butler Manufacturing, Kansas City. www.butlermfg.com **CIRCLE 232**

▼ Cornerstone donation

On July 4th, Innovative Stone's 20-ton granite cornerstone marked the start of construction for the new Freedom Tower at the World Trade Center site in Manhattan. Innovative Stone was chosen to source, cut, polish, and engrave the new cornerstone, which the firm donated to the project. Flecked throughout with crystals of garnet, the official gemstone of New York State, the stone measures 9' long x 5' high x 4' wide. Innovative Marble and Tile, Hauppauge, N.Y. www.innovativestone.com **CIRCLE 233**

▲ Lightweight stacker

Weighing in at 14½ pounds, Nimble is lightweight and can stack up to 36-chairs-high on a cart and 12-high on the floor. Ideal for applications including cafeterias, meeting rooms, libraries, the 100 percent recyclable polypropylene shell is contoured to fit the body, and the back flexes responsively to shifts in seating posture. The chair comes in four solid colors and a chrome or black frame. Allsteel, Muscatine, Iowa. www.allsteel.com **CIRCLE 234**

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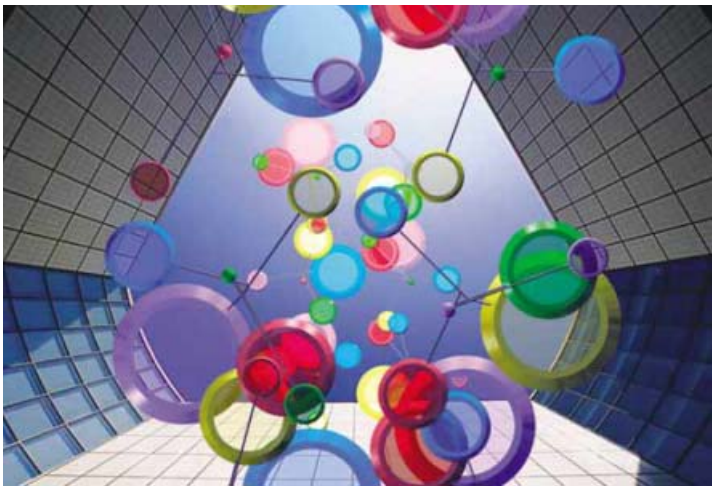
Product Briefs



▲ Kinetic sculptures for public and private spaces
Ralfonso (Ralf Gschwend) designs indoor and outdoor 3D kinetic sculptures that move in the wind, water, and by motor for public and commercial buildings and private collections. He also designs sound sculptures, suspended mobiles, and fountains. ExoCentric Spirits (above) is an indoor, suspended mobile featuring colorful disc modules in five different sizes and colors that have color-matched translucent gel lenses. Light from above casts moving color compositions on the floor, as well as colored reflections on the ceiling. RALFONSO.com, West Palm Beach, Fla. www.ralfonso.com **CIRCLE 235**

► Miami-Dade-approved doors
Total Door's Storm Sentry hurricane-rated door system recently passed extensive hurricane testing protocols designed by Miami-Dade County. Total Door claims Storm Sentry is the most cost-effective hurricane door solution on the market. The door is based on a standard full-height, semiconcealed hinge and full-height locking channel designed for superior strength and flexibility. Total Door, Pontiac, Mich. www.totaldoor.com **CIRCLE 236**

▲ Tornado-tough panels
When a deadly tornado tore through northern Indiana, Busk Brothers Furniture was in its direct path. Pre-engineered steel and masonry buildings on both sides were severely damaged or destroyed, but Busk sustained only minor cosmetic damage. The store was built with Fabcon's VersaCore precast-concrete panels, which continuously bond together the tensile strength of steel and the compressive strength of concrete. In addition to being strong, the panels guard against fire without an additional sprinkler system. Fabcon, Savage, Minn. www.fabcon-usa.com **CIRCLE 237**

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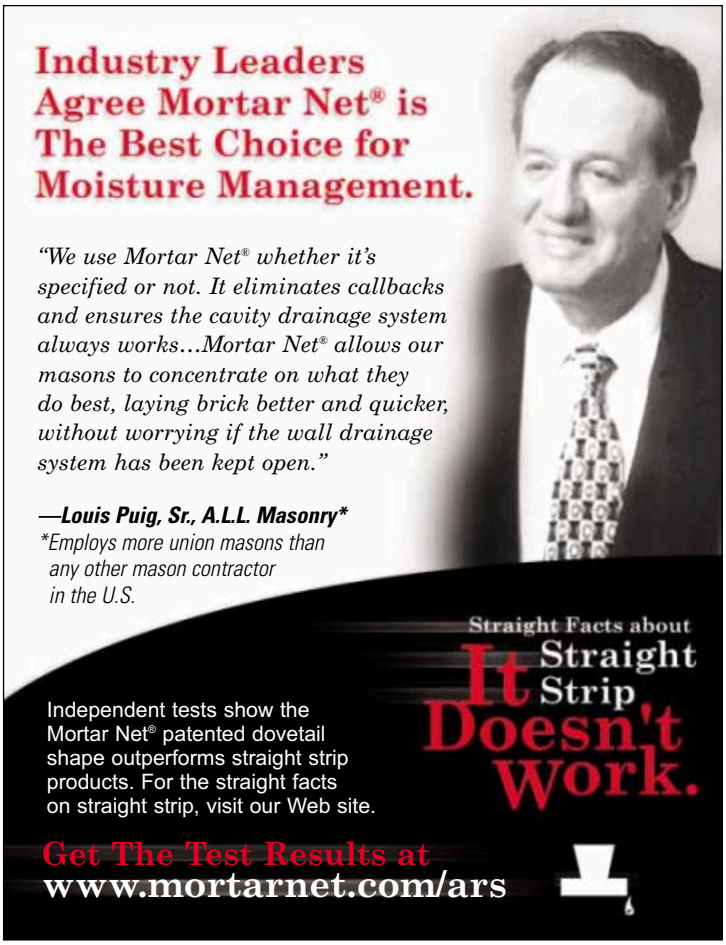

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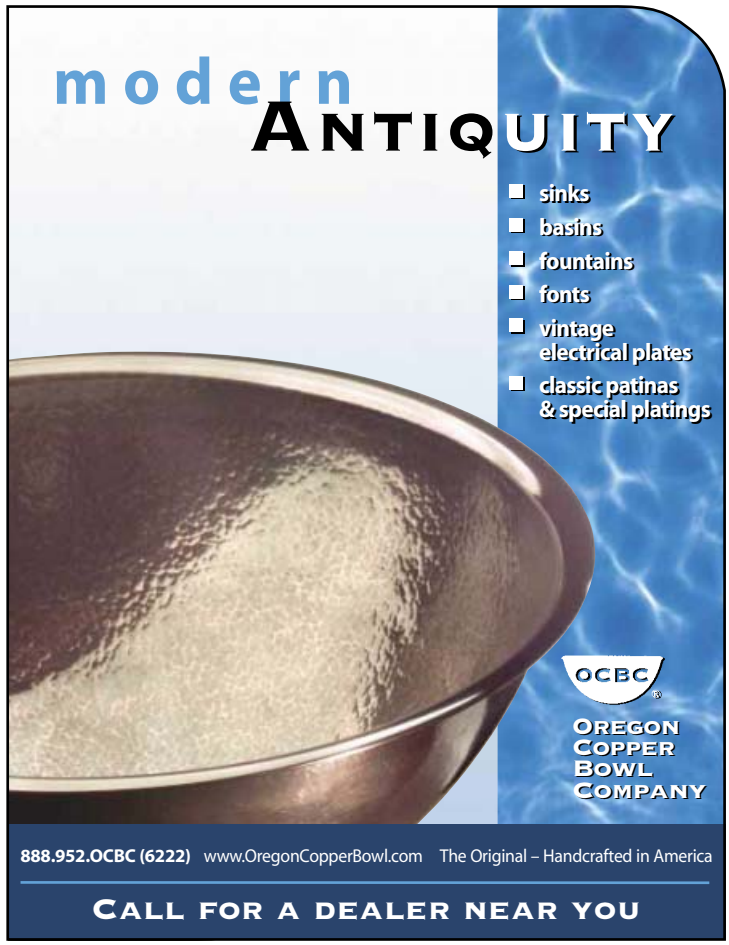

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Product Literature

Wire-mesh manual

The *GKD Wire Mesh Atlas* is a technical manual in CD format that explains the range of wire-mesh products available from GKD; their specific properties; and the possibilities for processing, installation, and handling of the mesh. The CD provides 10 construction examples, material-specific solutions for planning with wire mesh, more than 90 detailed drawings, 140 photos, and technical data for planning. GKD, Dueren, Germany. www.creativeweave.de **CIRCLE 238**

Italian furnishings catalogs

Four new catalogs from Italian furnishings manufacturer B&B Italia include photos, descriptions, and technical drawings of all the products in the collection. *One Book* includes sofas and armchairs; *Two Book* features furniture systems, living area, and wardrobes; and *Three Book* includes tables, chairs, small armchairs, small tables, and complements. The fourth catalog covers the company's Maxalto division and its Simplice and AC collection of products designed by Antonio Citterio. B&B Italia USA, New York City. www.bebitalia.it **CIRCLE 239**

NEW SITES FOR CYBERSURFING

Online showroom features products and materials for residential and commercial markets. **www.designguide.com**

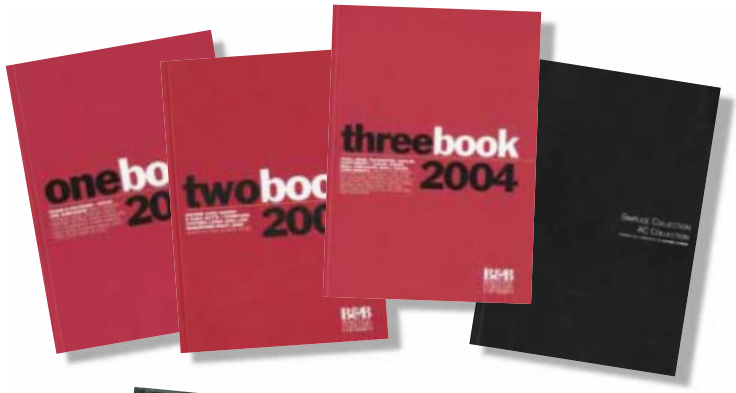
The Metal Construction Association has added an *Ask the Industry Professionals* feature to their site. **www.metalconstruction.org**

Visitors can design their own virtual restroom. **www.bradleycorp.com**

Redesigned workplace-furnishings site. **www.allsteeloffice.com**

Code update newsletter

Simpson Strong-Tie has launched a new structural-systems and building-safety newsletter entitled *Structural Report*. The purpose of the quarterly newsletter is to provide key customers, including architects, engineers, and code officials, with relevant technical and code updates, quality and safety information, product and industry news, and training opportunities. Simpson Strong-Tie, Dublin, Calif. www.strongtie.com **CIRCLE 240**



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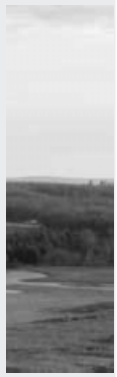

Registration September 11–December 27, 2004

To register www.flight93memorialproject.org, call 800.244.6515 or fax 800.240.0866

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Product Literature

Contemporary lighting line

To help launch a new collection of American-made contemporary and transitional lighting, Meyda Lighting is introducing a catalog featuring the all-new Metro Line. Also included is a product chart that offers more than 15,000 custom-crafted lighting designs. All products in the line are handcrafted in handsome metal finishes of Brushed Nickel, Craftsman Brown, and Vintage Copper. Made in the U.S., the line includes pendants, torchères, table lamps, and wall sconces. Meyda Tiffany, Yorkville, N.Y. www.meyda.com **CIRCLE 241**

Presentation product catalog

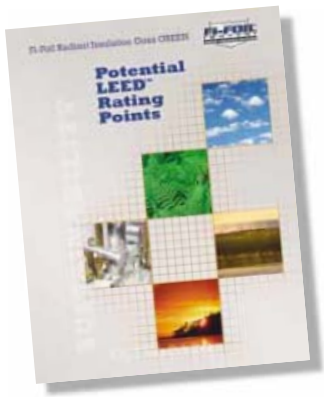
Da-Lite Screen Company has announced the release of its latest products catalog, *The Power in Presentation Products.* This 154-page catalog contains a comprehensive line of presentation products that have been divided into 12 sections. Each section contains detailed information on a specific presentation product line as well as educational information on selecting the correct projection screen for every environment. Da-Lite Screen Company, Warsaw, Ind. www.da-lite.com **CIRCLE 242**

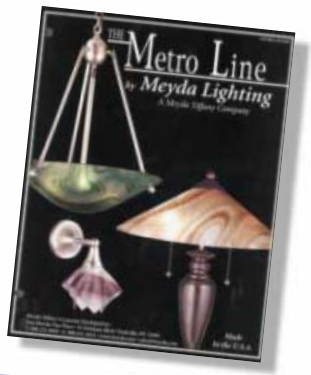
LEED potential

Fi-Foil's new brochure highlights the advantages of using reflective insulation in sustainable construction for both commercial and residential structures and addresses Fi-Foil's potential contribution to LEED-certified projects. Fi-Foil's reflective insulation products boost energy efficiency in masonry walls, vertical wall cavities, roofs, and floors in both new and existing buildings. This is achieved by a reduction of heat flow and significant reduction in the transmission of radiant heat flow. Fi-Foil Company, Auburndale, Fla. www.fifoil.com **CIRCLE 243**

Plywood standard changes

The Hardwood Plywood and Veneer Association (HPVA) has released an updated version of the *American Standard for Hardwood and Decorative Plywood* that contains a number of significant changes since the standard was last updated in 2000. The new standard includes the addition of completely new and separate tables of grade requirements for door faces and adds, revises, or clarifies the definitions of a number of terms related to hardwood plywood panels. HPVA, Reston, Va. www.hpva.org **CIRCLE 244**





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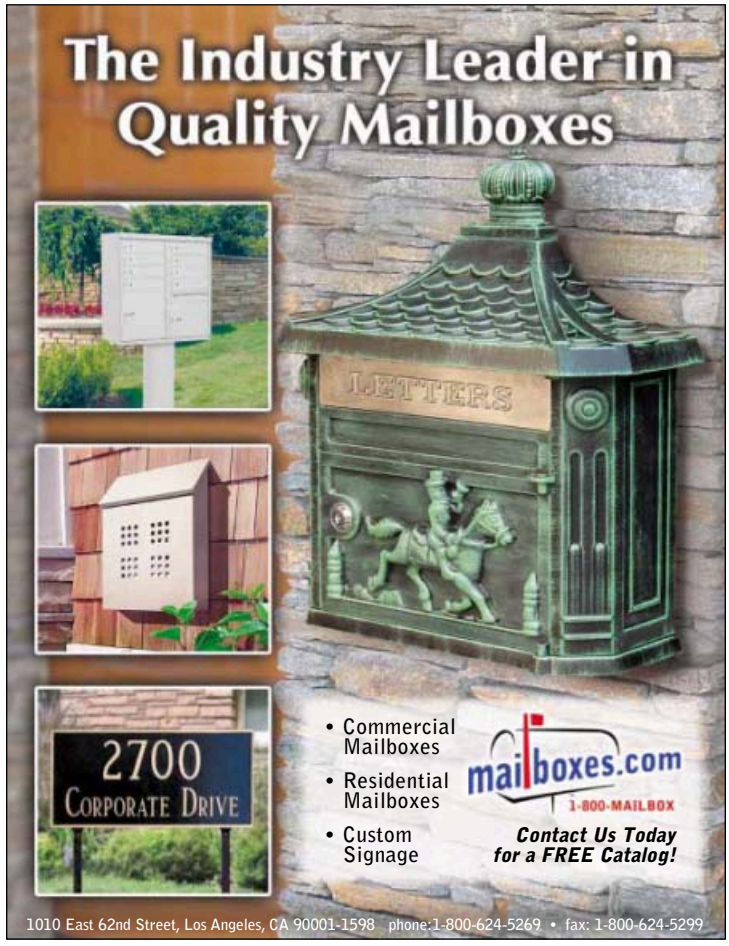

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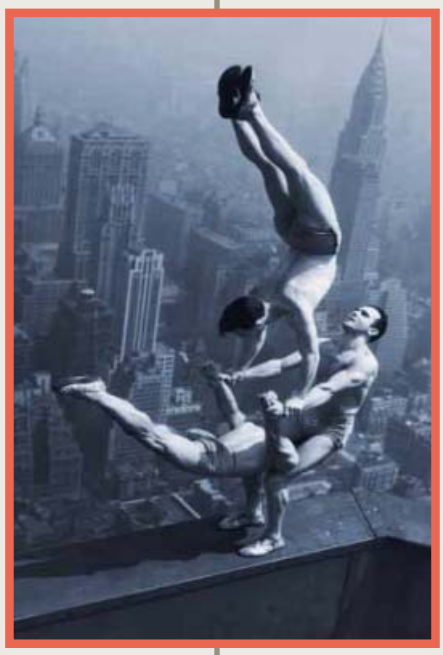

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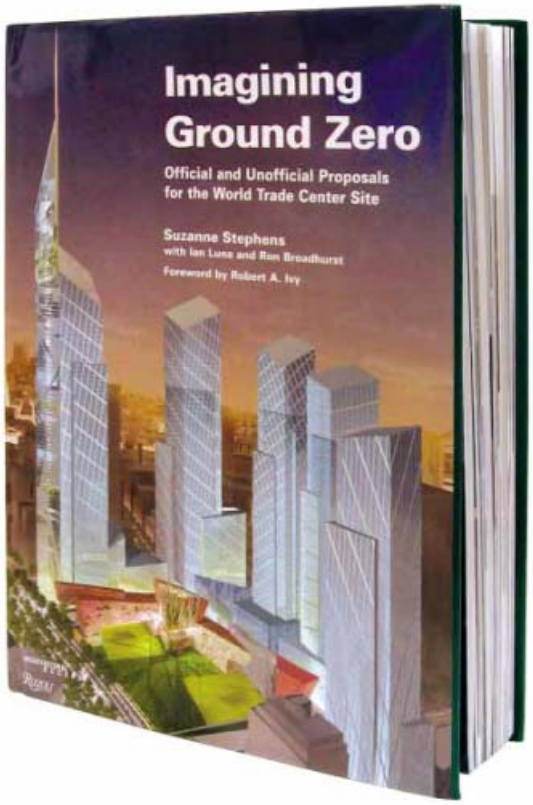

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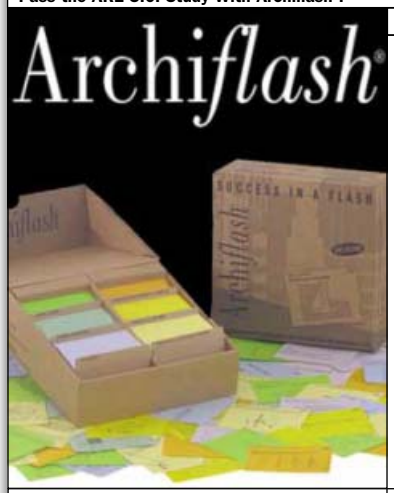

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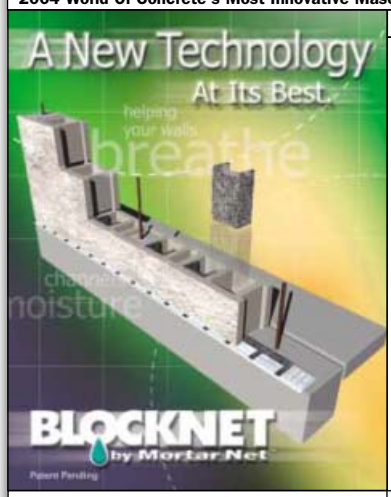

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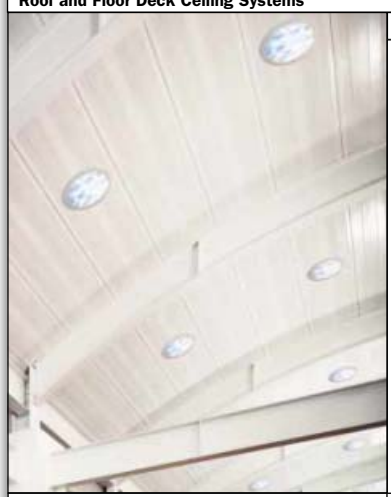

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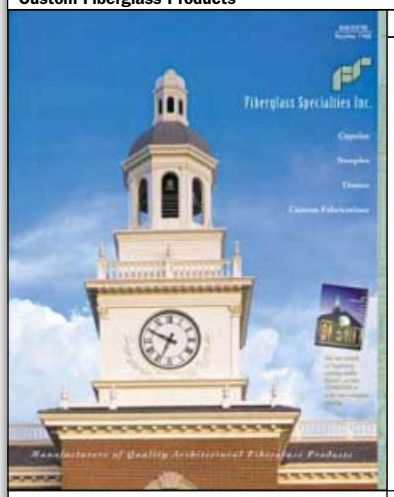

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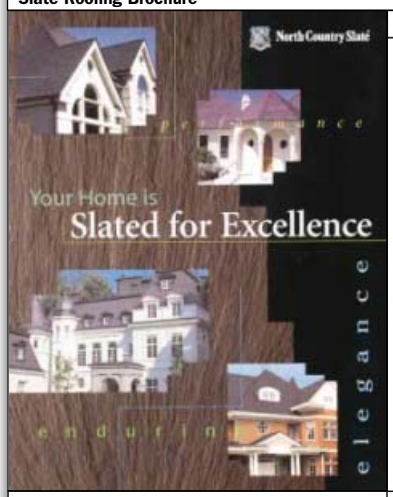

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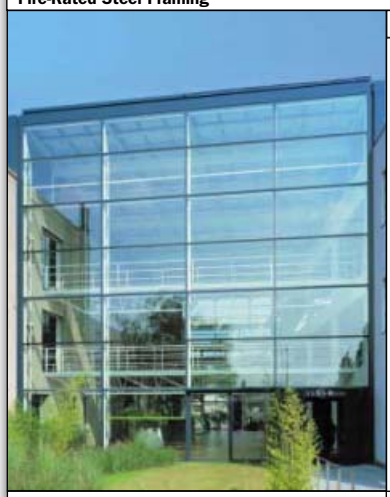

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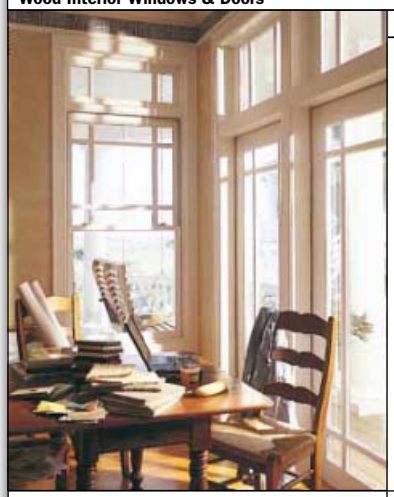

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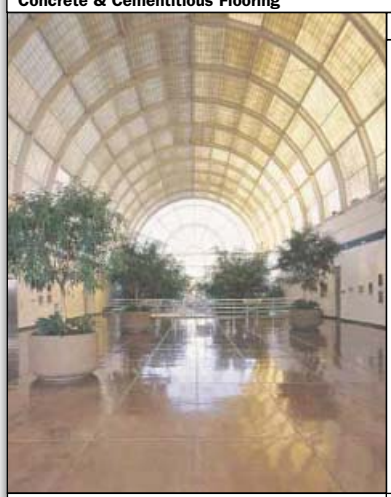

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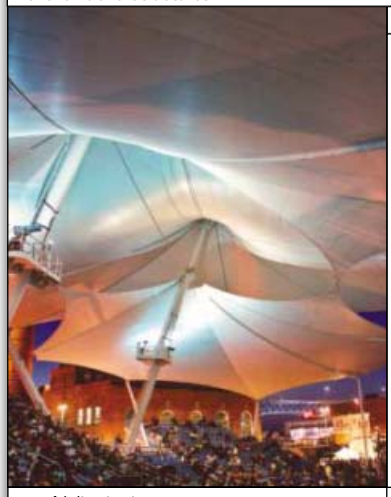

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16 Electrical

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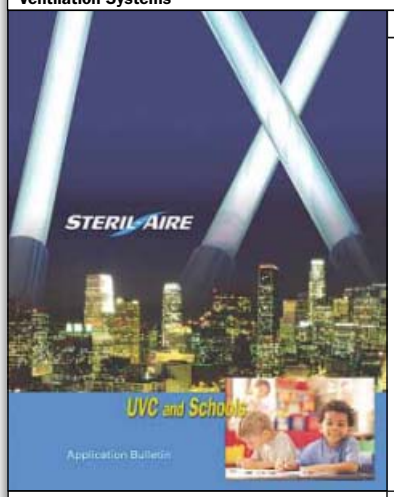

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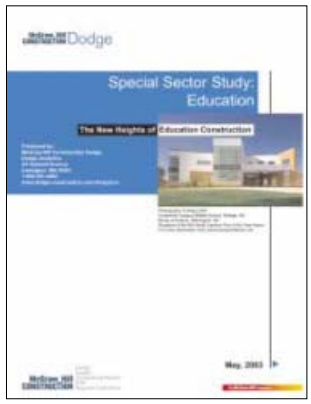

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Chase Rynd: At the helm at the National Building Museum

Interviewed by Andrea Oppenheimer Dean

Chase Rynd's knowledge of architecture was negligible in July 2003 when he became president and executive director of Washington, D.C.'s National Building Museum. He says his background as a fine arts museum administrator, promoter, and financial manager decided his selection. Rynd began his career as an investment analyst and portfolio manager in New York City. In 1976, he moved to Seattle, joined an investment firm, and—marrying a love for art with managerial skills—launched the Equivalent Gallery. His work consulting for museums, private collectors, and corporations led to his appointment as chairman of the Seattle Arts Commission and, later, to his position as executive director of the Tacoma Art Museum. Named founding executive director of Nashville's Frist Center for the Visual Arts in 1998, Rynd secured the center's financial health by attracting sponsors, and helped give it cultural credibility by forging partnerships with national and international arts organizations.

Q: *Your experience has been with fine arts museums. What surprises did an architecture museum present?* I thought the building arts were about structure and function, with aesthetics slapped on. I spent all my life being blown away by visual artists and didn't know how creative and disciplined you have to be to blend structure, function, and aesthetics. My transition wasn't as easy as I anticipated. At the building museum, we look at all the building arts: engineering, urban planning, and historic preservation—I feel like I'm immersed in intense postgraduate study.

The museum building, constructed to house the U.S. Pension Bureau in 1887, resembles a rust-red Renaissance palazzo. Does it pose problems as a museum? The building is our toughest challenge. It makes events hard to produce. When you first come into the five-story Great Hall, it's a thrill, but it's also disorienting. You don't know where to go, what to do, what's going on. We want to carve out a space on the main floor for visitor orientation. One goal is to refurbish our auditorium, an embarrassing space. And raising funds for our $8 million annual budget is never easy.

How do you explain that attendance figures for 2004 exceed last year's by 20 percent? People are venturing back to D.C. after 9/11, and school trips are back. We've gotten enormous attention from the press, which translates into attendance. The redevelopment of downtown Washington has also raised our figures. Now there's a lot to attract people: the Science Museum, the Spy Museum, the MCI Center [sports arena], and a vibrant new neighborhood.

What kinds of exhibitions and programs are most popular? We are a culture of celebrity, and the better known the lecturer, the higher the attendance. But issue-oriented programs are also a big draw. Our affordable-housing exhibition had excellent attendance, as did our show on Washington's Anacostia River and its environs.

And the future? We've done a good job of speaking to the professions; we haven't been as strong addressing a broader audience. We need to gear exhibitions and education to more varied points of view, and I want to develop an interactive gallery where people can learn the vocabulary, issues, and importance of the building arts. Our overarching direction is toward greater national recognition through developing partnerships with other institutions around the country. We're intent on contributing research and original ideas about the built environment, rather than just using other peoples' ideas.

Photograph by Matthew Girard

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