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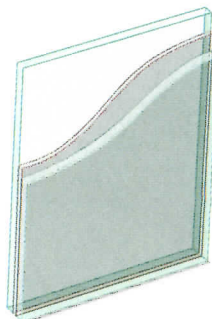


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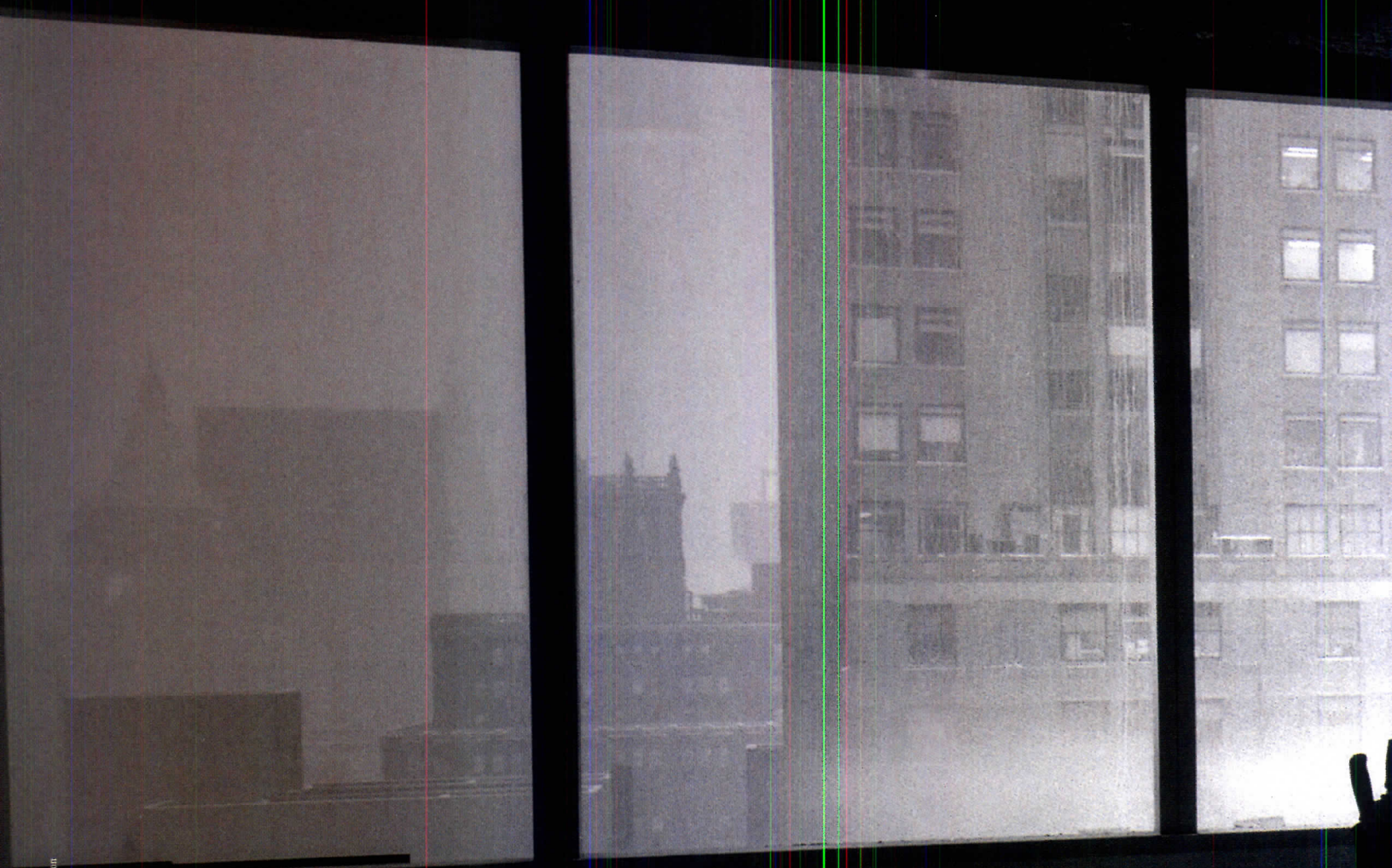


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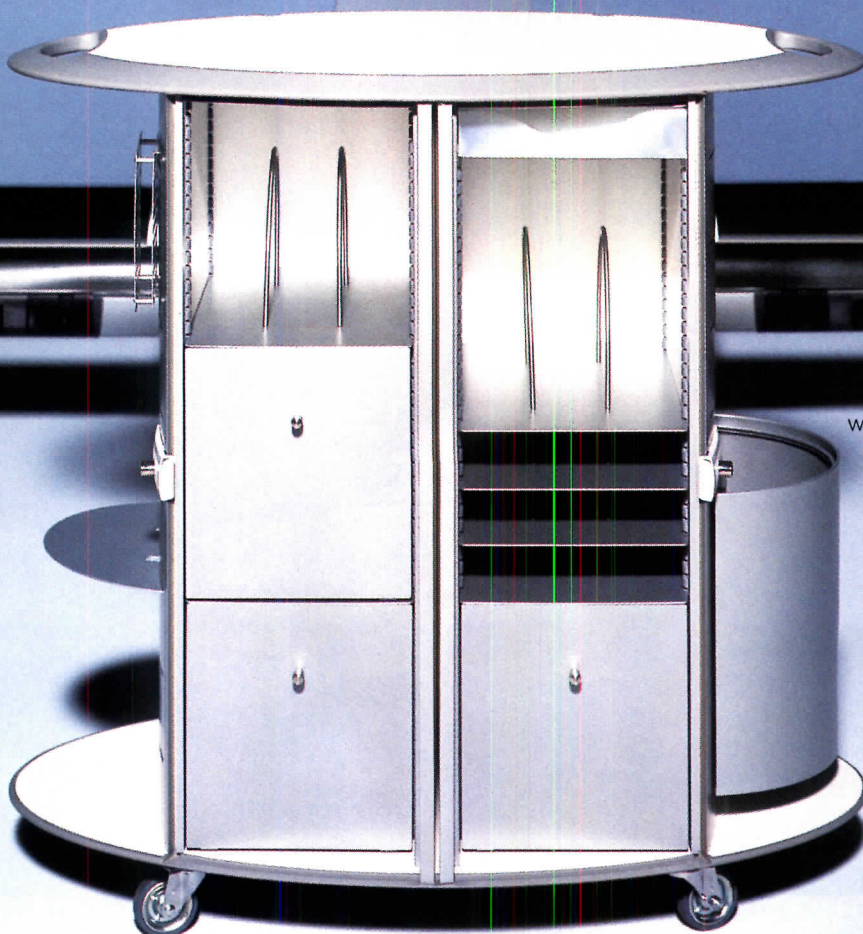
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**Right:** *COoP Editorial*, by Pugh + Scarpa. Photograph by Marvin Rand & Associates

### News

- 35 Calatrava joins WTC team**
- 44 Wright's plans for Baghdad explored**

### Departments

- 21 Editorial: Facts and crystal balls\***
- 25 Letters\***
- 63 Dates & Events\***
- 75 Archrecord2: For the emerging architect** by Kevin Lerner\*
- 79 Correspondent's File: Costa Rica** by Clifford A. Pearson
- 83 Critique: Remembering Doug Michels** by Michael Sorkin
- 87 Practice Matters: Altruism in architecture** by Jane F. Kolleeny
- 97 Books: History lessons**
- 103 Snapshot: Kiesler's unforgettable interior** Ingrid Whitehead
- 228 Profile: Alfredo Häberli** Josephine Minutillo\*

### Features


- 110 Set Pieces** by Raul A. Barreneche  
Theater, opera, and dance sets may not be built to last, but architects are designing them to be astonishing and memorable.

### Building Types Study 825

- 123 Record Interiors: Introduction** by Sarah Amelar\*
- 124 Shoebaloo, the Netherlands** by Tracy Metz\*  
*Meyer en Van Schooten*  
A 19th-century building gets a luminously futuristic shoe shop.
- 130 Bohem Foundation, New York City** by Raul A. Barreneche\*  
*LOT/EK*  
Retrofitted shipping containers make for a reinvented art gallery.
- 136 Restaurante Les Cols, Spain** by David Cohn\*  
*RCR Arquitectos*  
Steel is the key ingredient in a daringly designed restaurant.

- 142 Carlos Miele Flagship Store, New York City** by Sarah Amelar\*  
*Asymptote*  
Sculptural forms meet Brazilian culture in a New York City shop.
- 148 Duane Street Loft, New York City** by Clifford A. Pearson\*  
*Marpillero Pollak Architects*  
A loft goes from dark and narrow to open and filled with light.
- 156 COoP Editorial, Santa Monica, California** by David Hay\*  
*Pugh + Scarpa*  
A video-editing house gets rooms as freestanding objects.

### Building Science & Technology


- 165 Radiating Creature Comforts in Buildings**   
by Barbara Knecht\*  
Alternative systems of thermal conditioning can ensure that heating, ventilation, and air-conditioning work together efficiently.

### Digital Practice

- 177 News & Trends**
- 179 At Long Last, Hospitals are Going High-tech** by Alan Joch\*  
Innovations are changing how health care is delivered—and how hospitals are designed.
- 187 Digital Architect: WESKetch Architecture**  
by Deborah Snoonian, P.E.
- 189 Digital Products** by Deborah Snoonian, P.E.

### Products

- 197 Walls and Ceilings**
- 201 Product Briefs**
- 206 ICFF Review**  
by Rita F. Catinella
- 224 Reader Service\***
- 210 SIDIM Review**  
by Ingrid Whitehead
- 214 Product Literature**
- 226 AIA/CES Self-Report Form**

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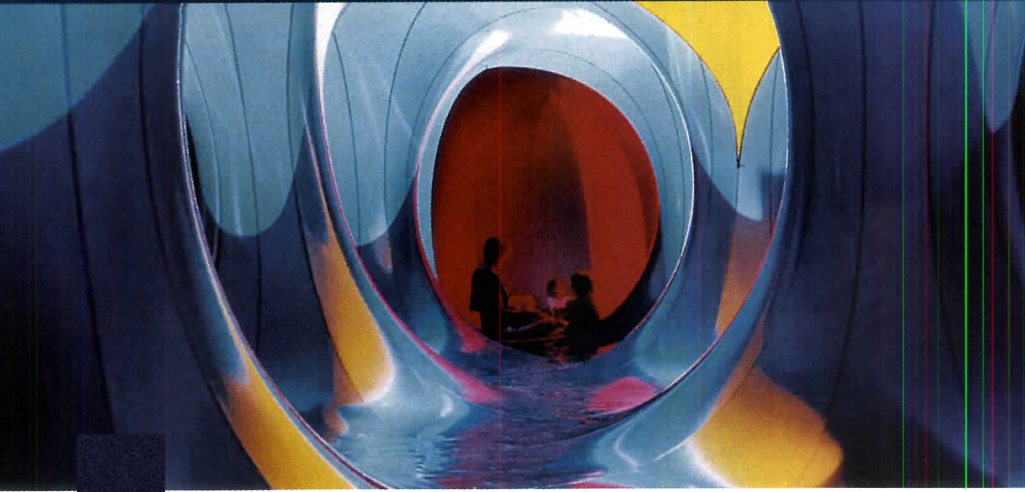
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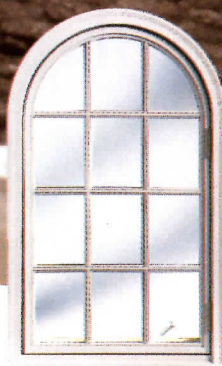
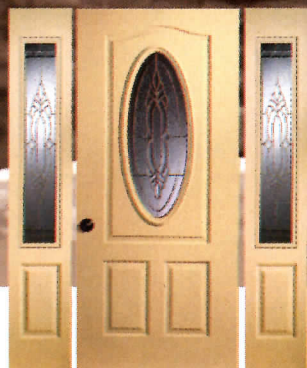


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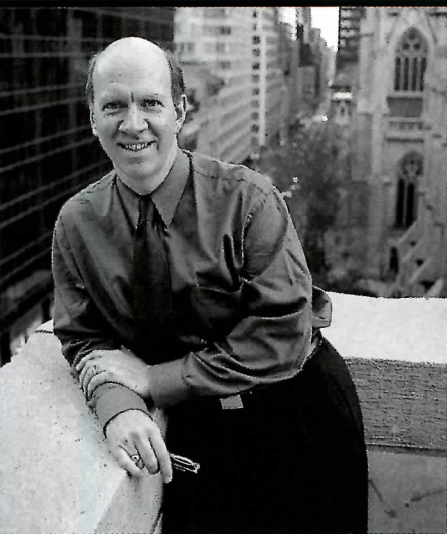


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## Facts and crystal balls

# Editorial

By Robert Ivy, FAIA

**O**n Thursday, August 14, the AIA's chief economist and occasional prognosticator, Kermit Baker, hopped off the train, just before the blackout. Blithely unaware of what lay in store for us all, he wanted to share preliminary findings from the AIA Firm Survey several weeks before its fall publication. Conducted every three years, the firm survey, compiled with help from McGraw-Hill Construction, has proved to be an invaluable research tool, offering a multidimensional snapshot of the architectural office.

Baker let us in on several key points that should fuel at least a year's worth of further professional conversation. Obviously, he reported, the recent financial contraction has affected most offices. Architect's billings have been growing at only about 2 percent per annum, he reported, or just barely keeping up with inflation. No surprises there. However, the number of firms overall declined by 8 percent over the past three years, a meaningful statistic. Are you still in business?

Movement toward the extremes continues: Both large and small firms consumed increasing percentages of the marketplace, with medium size firms feeling the pinch. The big get bigger: Firms with 50 persons or more now account for 60 percent of all architectural revenues. Conversely, the small company can dig its own niche, so to speak, carving out a limited range of targeted offerings for its clients. Clearly, it is becoming increasingly more difficult for the 20-person practice to be all things to all people. The paying customers, it seems, want breadth, heft, or focused expertise.

Ready for a pleasant surprise? According to Baker, we make most of our money doing what we do best. It sounds obvious, but common wisdom has suggested otherwise. Pundits, magazines, consultants, and professional forums have preached diversification of services for a decade, exhorting us to offer everything to our clients from "visioning" to color theory—à la carte. Baker's research bears out the reverse: Basic design remains the most lucrative, profitable segment of practice, generating 50 percent of the most profitable billings; construction management, the least.

Our heads snapped to when he reported a reversal of fortune.

Whereas three years ago, the most newsworthy finding in the survey had been the decline of the single practitioner, this survey found the opposite to be true: an increase in the single-person practice. Who could have predicted that outcome? It raises the question of intent and economics, making us wonder if we have suddenly found our inner Howard Roark, or have we found ourselves on the street in a downsizing sweep, armed with a shingle marked "One size fits all." We suspect the latter.

Baker and McGraw-Hill Construction's economic wing agree that the pain many companies still feel masks a real turn for the better: Both the general and the construction economies are slowly veering upward, leading us out of what has been a relatively mild recession. Unfortunately, most firms lack forecasting acumen or deep pockets, basing business decisions on the jobs actually walking through the door—new contracts that provide the necessary collateral for bank loans and paydays—rather than on the more fragile, though very real, hopes for the future.

Baker brought a dose of good news. Having verified that at the core we succeed by pursuing what we love, and encouraging us to build our companies for the better days ahead, he lifted off with the West Wind, downtown, just in time for the blackout. Where he spent the night is anyone's guess, since even an economist's crystal ball apparently has its limits. For our part, we gathered up our survival kits, untouched since 9/11, and wandered out into the summer evening, armed with a flashlight, a paper mask, and a whistle. Who could predict what we might encounter on the way home?



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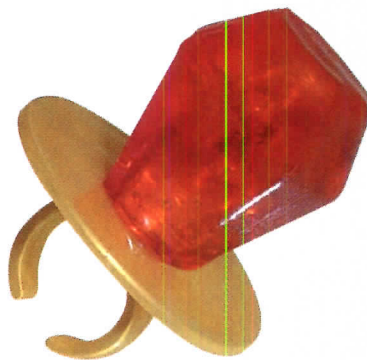
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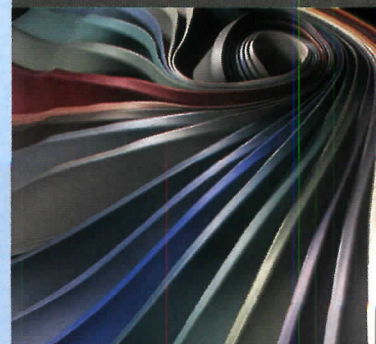
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# Letters

## Cover words

Thank you so much for putting into such elegant words your thoughts and hopes and admonitions for the design of the first tower of the World Trade Center site [Cover and Editorial, August 2002]. You've captured the yearning we all feel for this tower to rise and uniquely represent a host of emotions and ideals felt around the world.

We will all be watching, from every walk of life, from young child to the elderly, and I truly hope all the players involved will heed your warning to not get caught in a fast track of compromise, but to give us the design so many of us have applauded.

—Jane Felsen Gertler  
Spectrogroup  
New York City

As regards the design for the World Trade Center site, I have not recognized myself in those plans, which, as you say, offer a vertiginous, gritty, angular view with dizzy energy. I wonder what Sir Banister Fletcher would have to say about such descriptions of architecture. Apparently, you have assumed you have the right to speak for all architects in this country. Count me out of your statement.

—Richard Croxwell  
Metter, Ga.

## The writer responds

In his letter to the editor [Letters, August 2003, page 21], Gavin Wall writes that I haven't talked to students, don't understand SCI-Arc's unique character and its presence in the Downtown community, and should frequent the school to cor-

rect my ignorance. Had Mr. Wall scratched the surface, he would have discovered that I have taught at SCI-Arc, have sat as a thesis adviser, and have frequently attended reviews and lectures when I'm in L.A. I was instrumental in the award of a five-figure *New York Times* grant to SCI-Arc, and I engineered an exhibition of SCI-Arc work at New York's Grand Central, which was widely noted and aired on television.

Possibly before Mr. Wall was born, I first started writing about SCI-Arc as architecture critic at the *Los Angeles Herald Examiner*, when the school was still in its Santa Monica location. Mr. Wall will hardly find a better-informed supporter of SCI-Arc. When the school was inexplicably looking to relocate

to San Pedro, I actively lobbied then-director Neil Denari to look for a location Downtown, providing possible site addresses, realtor telephone numbers, and other contact information. As for speaking with students, I still have the unreimbursed telephone bills to prove the conversations (they preferred to remain anonymous). I also spoke with members of the board, not to mention the current director and the architect of the project (Denari was out of town and unreachable). In short, I interviewed in breadth and depth before forming my own independent opinion as a critic. As a supporter of SCI-Arc, it's my obligation to be discerning and not to just cheerlead. I was not criticizing the school pedagogically, and was certainly not SCI-Arc-bashing: I was

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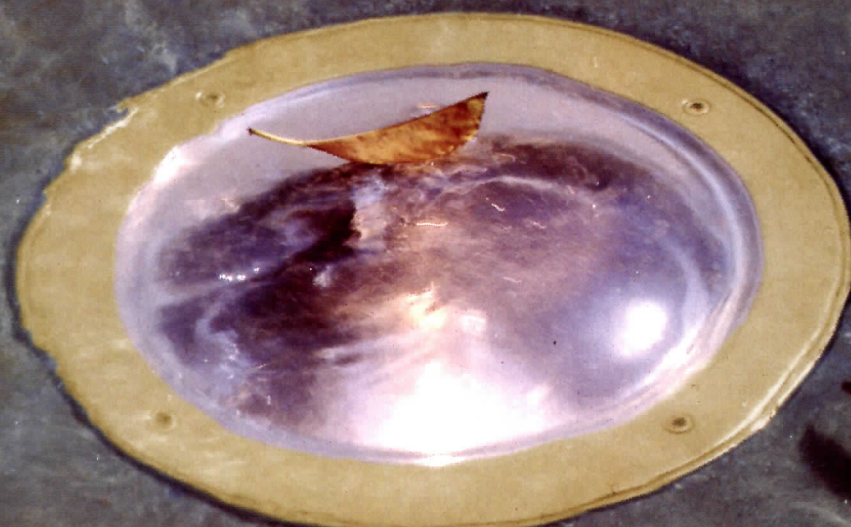
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## Letters

simply critiquing the design. That a visitor can't tell which is the front door means to me that the school symbolically discourages the outside voices necessary to keep a school from becoming hermetic.

—Joseph Giovannini  
New York City

### And the debate continues

I read the article about SCI-Arc [Building Types Study, July 2003, page 136] with some amusement, but no real surprise. I would call this project a recipe for disaster from the beginning. Even so-called progressive architecture schools are usually prescriptive and somewhat closed-minded to any mode of thinking not following the stated goal of the school. If the intent of selecting an architect is to inject some of the conformity that a progressive architecture school espouses, the last place to look for a designer is in that

same school. How could a reasonable person assume that an architect who never left academia could be presented with a very challenging project, involving reuse of a particularly unique building for a radically different program, and come up with anything other than another studio project?

—Jonathan Sones  
Largo, Fla.

### No Modern for the masses?

Can Thomas Mellins ["The Gap Between the Promise and the Prototype," July 2003, page 74] seriously believe that the main reason neo-Modern home design hasn't been more popular is because it is too expensive? This, in a country that has made Thomas Kinkadee the wealthiest painter who has ever lived, and Martha Stewart a billionaire? Even *Star Wars*, the ultimate popular science-fiction fantasy, avoided

Modern architecture and favored Classical and traditional design as the predominant architecture of the future (the evil people got Modern). Modern architects have made the same mistake that classical music composers were making 30 years ago in creating a completely self-referential aesthetic system. The number of people who want Modern homes is probably directly proportional to the number of classical music enthusiasts who get excited about listening to Morton Feldman. The market is certainly there, but it is small and elite.

The truth is, neo-Modernism is an elite upper-class cultural signifier that has completely failed to connect with the majority of Americans. In spite of our continuing love for gadgets, neo-Modernist architects have failed to take into account that our relationship with technology has changed profoundly on a psychic and mythic level in the past 100 years.

In his letter, Donald Rattner is right on in calling for traditional design with certain freeing aspects

of Modern architecture. Ideas such as freedom of form and use of new materials and technology must reinvigorate the Classical tradition.

Architects have to abandon their own science-fiction spaceship fantasies and start designing for the *Lord of the Rings*/*Harry Potter* majority.

—Alan Martinez, AIA  
San Francisco

### Corrections

In the August issue, the article on the Rosenthal Center for Contemporary Art [page 86] should have given credit to both Iñigo Manglano-Ovalle and Douglas Garofalo, FAIA, for the artwork entitled *Cloud Prototype*. Also in August, credit for the Tacoma Art Museum photos [page 110] should have read Lara Swimmer/ESTO. The May Building Science article [page 181] should have listed 1881 as the completion date for the Tweed Courthouse in New York City, which houses the office of the New York City Department of Education.

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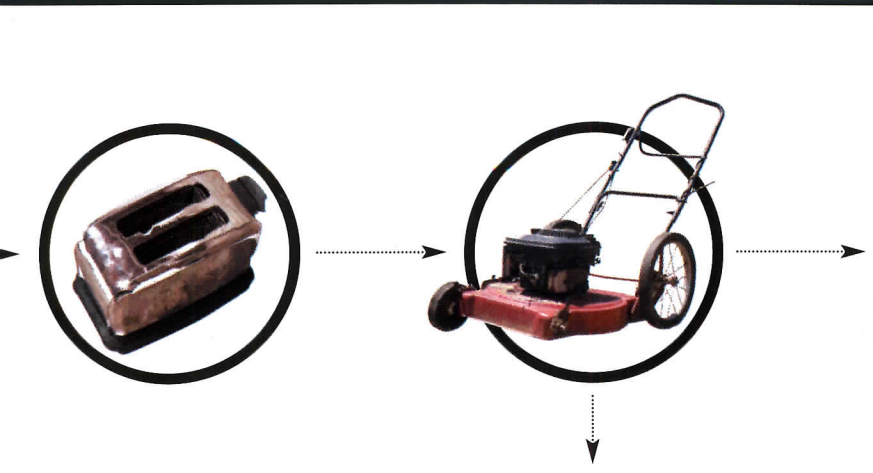
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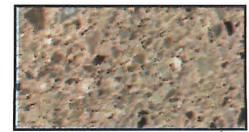
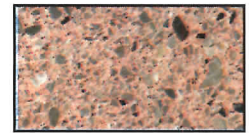
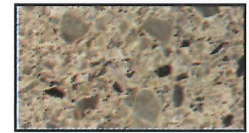
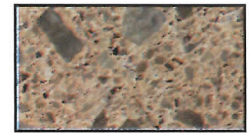
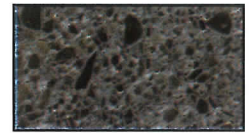
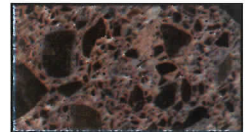
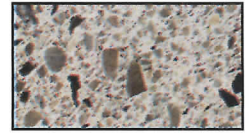
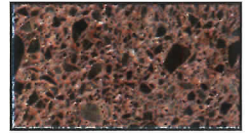
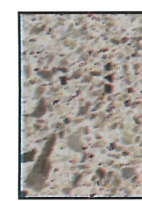
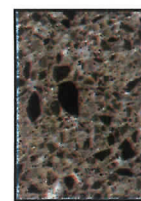
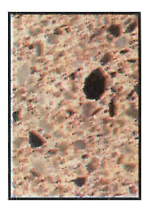
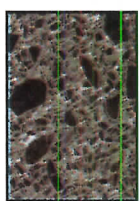
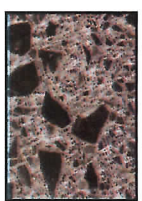
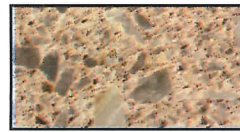
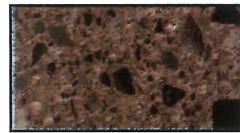
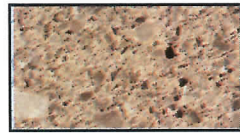
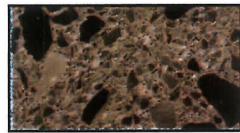
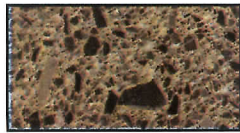
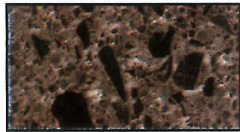
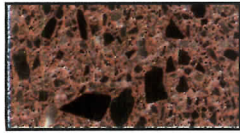
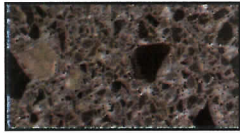
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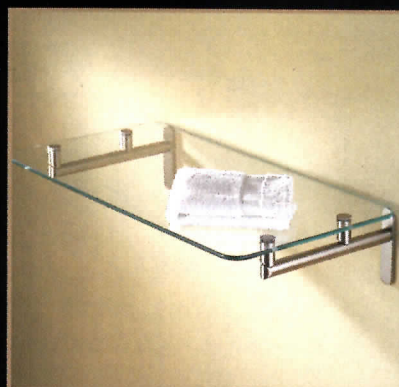


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imagination at work



# Record News

Highlights **Women architects surveyed** p. 39  
**Possible Guggenheim in Taiwan** p. 40  
**Wright's plans for Baghdad explored** p. 44  
**Gehry building towers in England** p. 48

## On Track: Calatrava Joins WTC Team

Spanish architect Santiago Calatrava was selected by the Port Authority of New York and New Jersey to be part of a team to design the \$2 billion transit hub at the World Trade Center site.

The Port Authority's board voted on Thursday, July 31, to begin negotiations with Calatrava and the engineering firms DMJM + Harris and STV Group. The teams will collaborate on the project with Daniel Libeskind, the site's conceptual leader. The terminal is expected to be finished by 2006.

"I think it's a fantastic choice. I think it's going to raise the architectural level of everything on the site," said Libeskind of the new team.

Calatrava is well known for designing soaring, sculptural transportation architecture, including the Oriente Railway Station in Lisbon and the Stadelhofen Railway Station in Zurich. His most recent project in

the United States was a heralded addition to the Milwaukee Art Museum, completed in 2001.

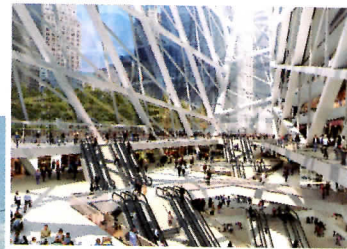
The new transit station, located along the east side of the World Trade Center site (between Greenwich and Church Streets) will include PATH service for more than 67,000 people daily, as well as 14 New York City subway lines as part of the downtown concourse, the Port Authority said.



Calatrava

"We are recreating the lifeline that was essential to economic viability of Lower Manhattan," said Port Authority chief architect Robert I. Davidson, FAIA.

Calatrava pledged in a written statement to help create an inspiring structure. "The world's great transportation hubs are places of gathering as much as transit. Full of life, movement, and beauty, they can not only serve the needs of many thousands of people each day but also elevate their spirits. The Port



Construction on the temporary PATH station at the WTC site (left); Studio Libeskind's early design for the transit hub (above).

Authority Board of Commissioners has clearly expressed its aspiration to create such a transportation hub ... to ennoble this utilitarian facility and make it worthy of this ground," he said.

To serve commuters in the interim, the \$224 million, four-level temporary PATH station at the World Trade Center site (and an adjoining pedestrian bridge crossing West Street, whose ground breaking took place on August 20) is expected to be completed by November.

Meanwhile, officials, including Governor Pataki of New York, have

decided to locate the proposed 1,776-foot "Freedom Tower" on the west side of the site, away from the proposed transit hub. Developer Larry Silverstein, who holds the lease to the tower site, had wanted to place it closer to the transit center. Libeskind said his location preserves uncluttered views of the tower, a powerful reference to the adjacent slurry wall, and visual references to the Statue of Liberty and to the rest of the city.

Construction on the tower is expected to begin in fall 2004, with topping out expected by fall 2006. *Sam Lubell*

## WTC Briefs

### Memorial Advances

The Lower Manhattan Development Corporation (LMDC) announced on July 17 that 17,200 submissions were received for its World Trade Center Site Memorial Competition, making it the largest design competition in history, the LMDC said.

The jury includes Vietnam Veterans Memorial designer Maya Lin, Rockefeller Foundation president Vartan Gregorian, and Susan K. Freedman, president of the Public Art Fund. A final design is slated for October.

Meanwhile, at an August 14 meeting, the LMDC's board of direc-

tors authorized spending \$1 million to help refine memorial finalists' designs and approved \$250,000 in spending to hire a firm to help create an exhibition of the designs.

### Tribute in Light returning

Mayor Bloomberg and Governor Pataki announced on August 11 that the *Tribute in Light*, the twin beams of light projected from the site of the former World Trade Center, will be returning on September 11 to commemorate the anniversary of the terrorist attacks.

The tribute was originally coor-



The original Tribute.

inated by local organizations Creative Time and the Municipal Art Society in spring 2002. This year's tribute will take place at sundown on September 11. The tribute will return on successive anniversaries of the attacks, officials said.

### JFK link explored

At its August 14 meeting, the LMDC board authorized the corporation to "enter into an agreement" with SYSTRA Engineering and Parsons Transportation Group to conduct a study to "identify and evaluate opportunities to link

Lower Manhattan to John F. Kennedy Airport and Long Island." The link is part of the WTC master plan, said Port Authority chief architect Robert I. Davidson.

### Possible WTC delays arise

According to a report in *The New York Daily News*, World Trade Center developer Larry Silverstein may delay rebuilding unless The Port Authority buys out his lender, GMAC Commercial Mortgage Corporation, with whom he has been battling in court since 2002.

Silverstein's spokesman, Harry Rubenstein, said, "We continue the negotiations with GMAC so we can move forward with the rebuilding." S.L.

## OFF THE RECORD

Harvard University's Faculty of Arts and Sciences announced the selection of **Skidmore, Owens & Merrill** as the architect for two new science and laboratory buildings on the north end of the campus. The buildings will make up one of the largest architectural projects on Harvard's campus.

The Rhode Island School of Design has chosen Boston-based firm **Machado and Silveti Associates** to design a new entrance and addition to RISD's museum of art. The \$4.1 million Benefit Street extension, slated to open in fall 2005, is the first phase of the \$46 million project anchored by **Jose Rafael Moneo's** RISD Center.

**Jennifer Moulton, FAIA**, 53, the city of Denver's longtime planning director, died on Monday after struggling with amyloidosis, a rare blood disorder. She was well known for encouraging the city's commitment to downtown redevelopment.

Construction starts increased 9 percent in June, according to the **McGraw-Hill Construction Dodge Index**. The most dramatic growth came in the nonbuilding construction sector (public works and electric utilities). Tempering this forecast, **The American Institute of Architects** has found that architectural firms' billings were down in July. Decreased billings were reported by 28 percent of firms, while 18 percent reported increases.

On July 18, the Anchorage Museum of History and Art selected London-based **David Chipperfield Architects** to design its \$90 million expansion. The expansion will be roughly 100,000 square feet, doubling the museum's size.

The **African American Cultural Center of Greater Pittsburgh** announced **AI** of San Francisco as the winner of the design competition for its new center in Pittsburgh. Ground breaking for the 80,000-square-foot, \$32.7 million center is planned for fall 2004.

## An Interview with Daniel Libeskind

*Daniel Libeskind is the master-plan architect for the World Trade Center site.*

### ARCHITECTURAL RECORD:

*Have you met with the teams from David Childs's office yet? Mr. Calatrava? What has been discussed?*

**DANIEL LIBESKIND:** We're working hard with the engineers, discussing mechanical systems, sustainability issues, the program of the tower and gardens, public spaces, and antenna functions. It's going to intensify as the process moves forward. We have not yet met with Calatrava.

**AR:** *Obviously, it is not easy to share your vision with other architects. How will you merge your plans for the Freedom Tower with those of Mr. Childs, or for the transporta-*

*tion station with Mr. Calatrava's?*

**DL:** I think you have to be like Solomon. You have to weigh things carefully. You have to balance and know what is important and know what compromises are necessary. Know how parts of a vision evolve. You maintain a dynamic equilibrium from various elements. Compromise is not a dirty word. I call it evolution. **AR:** *How has your collaboration with Mr. Childs progressed so far?* **DL:** I have only high praise for my conversations with Mr. Childs. I think he has an understanding of the situation and what needs to be done. We all have to work together, and there's no reason why architects can't do the same. I think he has his vocabulary and oeuvre of work and I have mine, and it's great to bring together two bases of experience. It's not the forced marriage people are saying it is. It will lend an energy to the task. We will make the most fantastic tower ever created. One that creates an identity for the entire city.

**AR:** *Are you afraid that your original designs for the Trade Center will*

*be too greatly altered?*

**DL:** Not at all. I think everything is confirming that the plan will be very robust and will move forward in the right direction. **AR:** *And you look forward to working with Mr. Calatrava? What will be your relationship with him?* **DL:** I think Mr. Calatrava is a fantastic choice. I think the structure has to be profound and robust and important and at the same time we have to maintain flexibility when working with someone of the stature of Mr. Calatrava. We have to concentrate on how to make engineering part of an architectural experience. **AR:** *You've never built a skyscraper before. Do you think this makes you unprepared to help design the Freedom Tower?* **DL:** When I built the Jewish Museum in Berlin, I'd never built a museum before. It's about architecture. Either you have it or you don't. You don't have to be Albert Einstein to absorb the lessons of how a skyscraper is built. The idea is how to make a tower that is special. S.L.

## An Interview with David Childs

*David Childs, FAIA, a consulting partner at Skidmore, Owings & Merrill, is the principal architect and project manager for the World Trade Center's Freedom Tower.*

**ARCHITECTURAL RECORD:** *What will be your relationship with Mr. Libeskind?*

**DAVID CHILDS:** At the end of the day, it was important that there be one of us who would be the design architect, not two. You don't want two halves of a building merged into one. He can give his input, and he should, and I think I will respond to that.

**AR:** *Do you think the relationship will be a good one?*

**DC:** I have nothing but optimistic hope for it. Our hearts are in the right place. We all want the same thing, and we can't let egos get in the way of that.

**AR:** *What will be your changes to the Freedom Tower?*

**DC:** You are constantly going back and readjusting and changing. The conceptual nature won't change. This will remain the world's tallest building. It will maintain its relationship to the Statue of Liberty. It will retain its lightness, its soaring quality, the inclusion of public spaces, observation decks, restaurants. Will it look exactly like the illustrative sketch he drew? No. I don't think it will be square cut with an angle on the top. But I assure you that we want to help carry out the basis of that concept and make it the best it can possibly be.

**AR:** *Will you share any of your design ideas for the building?*

**DC:** Its structure should be clearly expressed and it should be beautifully sculptural as well. But I think style is less important than the basic concepts here. I feel very strongly that this building should incorporate ways of looking at the environment that haven't been done before. We're looking at waste-water treatment, cool ceilings. And why not take advantage of the wind?

**AR:** *How do you respond to people who say you had an inside track on this job all along?*

**DC:** When you design your house you get to pick your contractor. Larry had an agreement. I can't imagine a private developer who couldn't pick his architect.

**AR:** *Will commercial interests interfere?*

**DC:** I don't accept the natural evilness of the developer as a client. He will have input. You need a client to make a building.

**AR:** *Will your design for the LMDC competition be a model for this one?*

**DC:** No. It was for an idea competition. It has nothing to do with the master plan we're now working with. S.L.

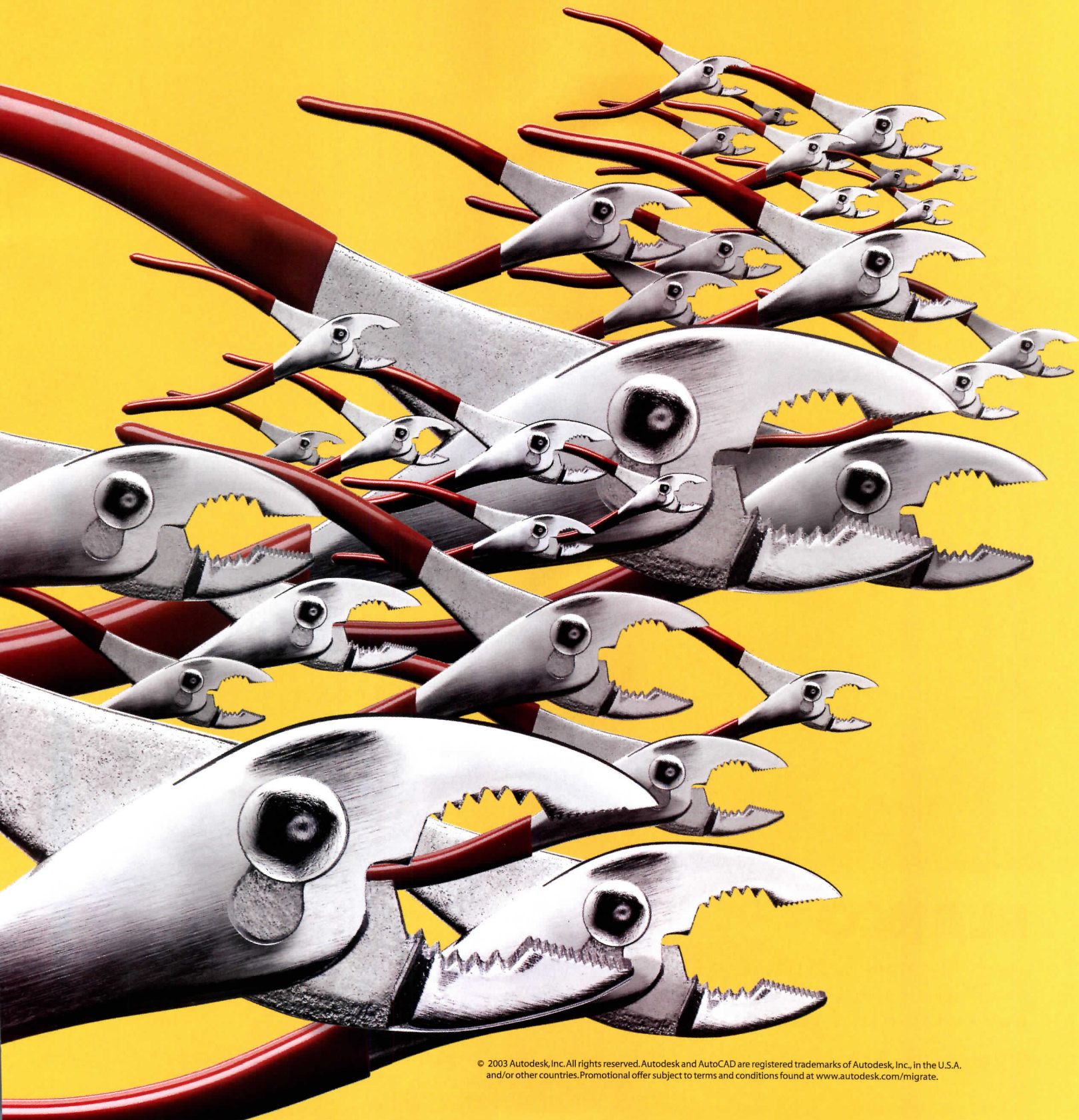
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## Record News

### IIT campus transforming thanks to new additions

Just in time for school, Chicago's Illinois Institute of Technology (IIT) opened a new student residence complex on July 23. The development, State Street Village, is part of an expansion that also features Rem Koolhaas's soon-to-be-opened McCormick Tribune Campus Center. Together, the new buildings—the first at IIT in almost 40 years—will transform the relatively untouched landmark Ludwig Mies van der Rohe campus.

State Street was designed by Helmut Jahn, of Murphy/Jahn Architects. The six-building complex features suite and apartment-style units for 367 IIT students. Construction began in May 2002, at a cost of \$28 million. The buildings are made of poured-in-place concrete and clad in glass and corrugated-stainless-steel panels. The simple, even elegant dorms, which also feature rooftop decks, fill an intense need for living space.

"We're running out of beds," said IIT president Lew Collens.

Koolhaas's \$48.2 million campus center, an 85,000-square-foot building located in the center of campus, will be dedicated on September 30. It is made largely of glass and steel, and prominently fea-



A dorm at Jahn's State Street Village.



Koolhaas's campus center is nearing completion.

tures a tubular metro stop and a large glass curtain wall. Other elements include an auditorium, ballroom, dining facilities, a bookstore, and student activities offices.

IIT's campus was initially developed by Mies van der Rohe according to his comprehensive master plan of 1938. The most recent construction on the campus was the 1966 Engineering 1 and Stuart buildings, designed by SOM.

Few other buildings have followed, explained president Collens, because Mies's original campus designs allowed for renovations rather than replacements. The new additions, Collins said, remain in sync with Mies's original vision.

"I think Mies would be very happy with these buildings," said Collens. "He was a creative genius, and he would be the last person to say, 'You can only build what I did.'" S.L.

### British Report Explores Why Women Leave Architecture

A report called "Why Do Women Leave Architecture?" commissioned by the Royal Institute of British Architects (RIBA) reveals that women are leaving the profession. They comprise 38 percent of architecture students in Great Britain but only 13 percent of registered architects. So what becomes of the missing 25 percent?

Many of the architects who participated in the report, carried out at the University of West England, complained of paternalistic attitudes, overwork, and underpay. These factors, the study says, has led to an exodus of women not because of poor skills but because of unhappiness.

Further results from 176 questionnaires and a number of anonymous interviews revealed that British architects tolerate a culture in which long hours ostracize all but the totally committed—especially damaging to working mothers. Helen Taylor, of London firm Curl la Tourelle Architects, said, "I've known two women architects who've given birth and returned to work within two weeks, because they wanted to be seen to be equally dedicated as their male colleagues."

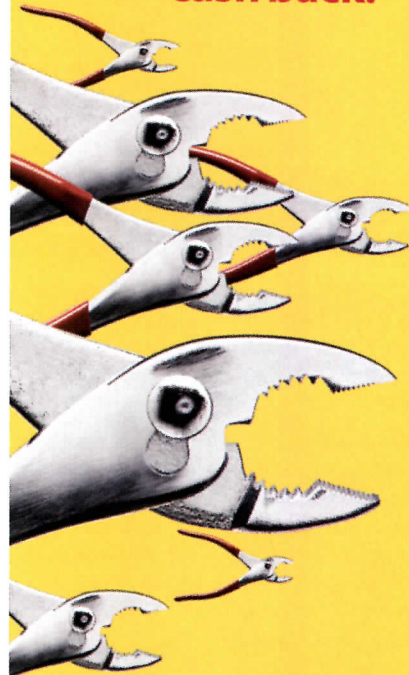
Unfortunately, female marginalization starts early, the survey shows, with a lack of female lecturers at universities. "There are hardly any role models for women to look up to," says Sumita Sinha, who runs her own small practice, Eco=Logic, and also chairs Architects for Change, a RIBA umbrella group that represents marginalized architects.

George Ferguson, president of RIBA, said he is appalled by the findings and is dedicated to "breaking down this macho culture" in British architecture. *Adam Mornement*

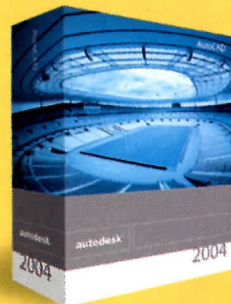
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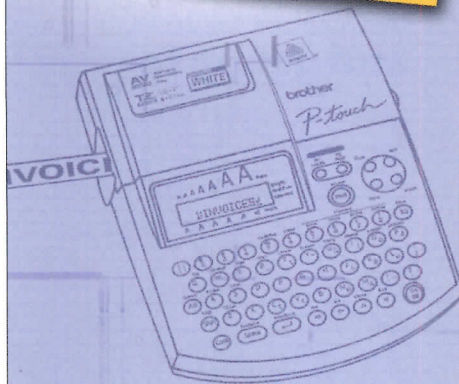


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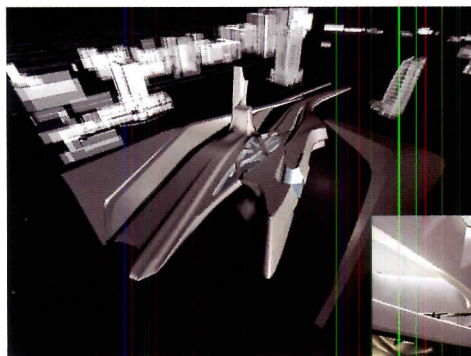
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## Record News

### Guggenheim Exploring Expansion in Taiwan



Zaha Hadid's renderings of a possible Guggenheim in Taichung, Taiwan.

Despite difficult economic conditions and the recent closing of its museum in Las Vegas, the Guggenheim Foundation is seriously considering an expansion into the central Taiwan city of Taichung. The foundation is nearing completion of a one-year feasibility study, which should be complete by the end of the month, said museum sources.

The study is being undertaken by three separate entities: McKinsey & Company is managing a market feasibility study for the project; IDOME, the construction manager for the Guggenheim Bilbao, is performing cost estimates. Architect Zaha Hadid

has put together a tentative blueprint for the museum that includes a highly sculptural building meant to softly emerge from the surrounding landscape in an almost fluid manner. The design also contains moving elements: An entire piece of the building's west wing is designed to move on rail

tracks or an air cushion, while the building's "cantilever" gallery will have retracting louvers that will control the intake of daylight.

Responding to questions of the project's financial feasibility, Guggenheim officials point out that the study is being paid for by the

governments of Taichung and Taiwan and that if the project goes forward, they will pay for the building, as well (the estimated cost is \$180,000,000).

"No new museum is opened until it has demonstrated it will be self-supporting and that a partner is available to pay for 100 percent of the costs," said Anthony Calnek, deputy director for communications and publishing.

Taichung may prove to be an architectural powerhouse regardless. The city is exploring an opera house by Jean Nouvel and a city hall by Frank Gehry. S.L.

### Vienna Hadid show heralds artist's advancements

Unless you're Frank Gehry, it helps to be dead to have an architecture show in a major museum in the United States. But museums in Europe are not so risk-averse to the living, and the Museum of Applied Arts and Contemporary Art in Vienna (known as the MAK) has pursued one of the most discriminating and daring exhibition programs in Europe.

This spring and summer, the MAK mounted *Zaha Hadid, Architecture*, a retrospective ending August 17 that was the most comprehensive to date documenting this unusual and original talent. The production started with the work of Hadid as a student and continued through such now-legendary designs as the Peak and Cardiff Opera House, the Museum of Contemporary Art in Rome, the Wolfsburg Science Center, and a BMW plant in Leipzig.

The show amply clarified the major role of models in Hadid's spatial investigations: Her unique wall-mounted paper reliefs, her models, and her computer renderings. Clearly, the computer is both



*Ice Storm*, featured in MAK's Hadid show.

facilitating and accelerating the evolution of her work. A sprawling, computer-generated environmental installation, *Ice Storm*, occupies the cavernous space of the MAK's main *Kunsthall*. It is a lithe, sculptural piece, constructed in rigid foam, that flows, oozes, drips, and spurts.

Architecture shows are frequently cool because they represent buildings that are elsewhere, but *Ice Storm* drives home the experiential quality of Hadid's environments. The arc of the show, and her career, shows that Hadid is not recycling her triumphs, but that she is impelled by a creativity that seems inexhaustible. *Joseph Giovannini*

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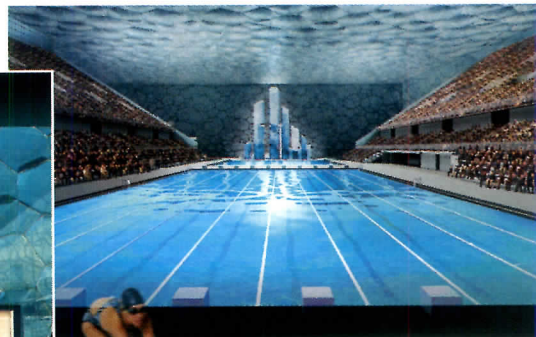
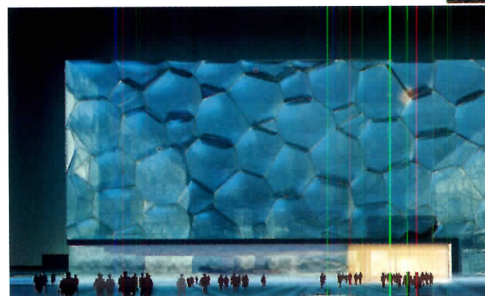



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## Record News

Renderings of the Beijing Olympic Swim Stadium, designed by PTW.



### Beijing Olympic Swim Center Designers Chosen

Sydney, Australia-based PTW has been chosen to be part of a design and engineering team that will build a futuristic, \$100 million swim center for the 2008 Beijing Olympics.

The team won a competition for the building on July 25. Known as the Watercube, PTW's building will have a massive rectangular shape whose surface structure mimics the geometry of water bubbles. The building's blue skin will be made of ethylene tetrafluoroethylene (ETFE), a transparent teflonlike material designed to reflect lighting and projection, for entertainment, and to help provide natural heating, trapping much of the solar energy that falls on the building.

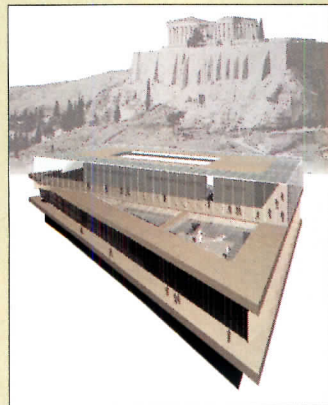
"We thought to ourselves, what is a good way to use new materials to create a more imaginative and efficient structure?" said PTW's Andrew Frost.

Arup Engineers (engineers of the Sydney Opera and Guggenheim Bilbao) and the China State Construction Engineering Corporation are working closely with the firm to complete the engineering-intensive structure. The 376,000-square-foot, 17,000-seat center will be located to the west of Herzog and de Meuron's Olympic Stadium—its blue, square shape serving as a striking counterpoint to the red, circular shape of that structure. *S.L.*

### Despite Protest, Acropolis Museum Construction Continues

Commenting on the now infamous delays in preparation for the 2004 Olympics, former Athens mayor Dimitris Avramopoulos quipped, "It's not like Sydney, where you could do anything you like. Here, you find seven layers of ancient civilization."

So it was no surprise when archaeologists preparing the foundations for the new \$38 million, Bernard Tschumi, AIA-designed Acropolis Museum uncovered ruins from the Early Christian Roman era this spring, prompting the government to stop construction. The surprise came instead in mid-July, when the Greek Council of State and Ministry of Culture reversed their earlier decisions to halt work on the building.



Particularly loud protest has come from the International Committee on Monuments and Sites (ICOMOS), which is demanding an end to what it calls a corruption of the nearby site, Makrigiani, and a possible intrusion onto the Acropolis itself. In an earlier statement, ICOMOS asserted: "The foundation works of the museum and the antiseismic measures will undoubtedly destroy the archaeological heritage presently preserved."

The museum (left), whose angular design rises out of the ground at the foot of the Acropolis, has been designed specifically to hold the Elgin Marbles, which are now in the British Museum in London. Tschumi's plan features a glass-enclosed, nitrogen-air-conditioned hall to house them, if they happen to show up. Construction on the Acropolis Museum started in spring 2003 and is expected to be at least partially completed in time for the 2004 Olympics. *Alexander Antoniadis*

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## Record News

### London employing architecture to pursue 2012 Olympics

The city of London has assembled an architectural "dream team" in its effort to become host of the 2012 Olympic Games. A newly formed international design committee, chaired by Richard Rogers, will oversee architectural standards for the Thames Gateway region located in east London. Panel members include Will Alsop, Terry Farrell, Norman Foster, Richard McCormac, Foreign Office Architects, Mohsen Mostafavi, David Adjaye, Josep Acebillo, and Meccano Francine Houbin.

The committee is to ensure that a coordinated and consistent creative design approach is adopted across all projects planned for the area.

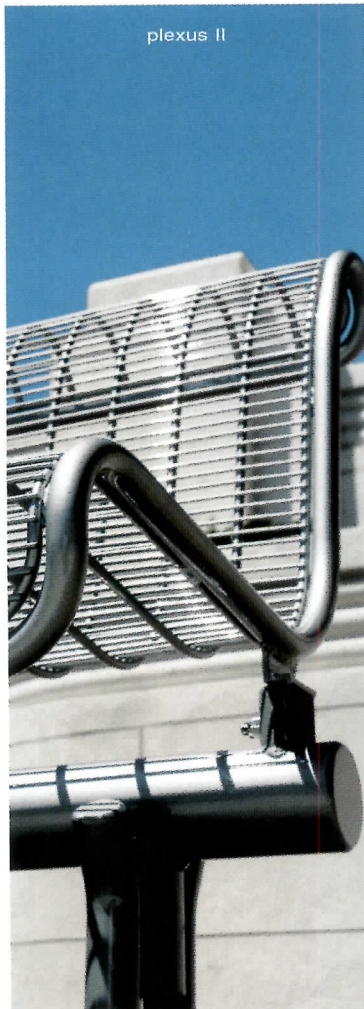
Meanwhile, a team led by EDAW, along with HOK Sport, Foreign Office Architects (FOA), and Allies and Morrison, has been named to design the master plan for the city's proposed Olympic village, located on 1,500 acres in the Lower Lea Valley, extending for more than a mile north to Hertfordshire on the edge of London, and south

through Stratford to the community of Canary Wharf and the River Thames.

The master plan, which will provide a blueprint for new venues, public spaces, and infrastructure in the area, must be ready in time for the city's Olympic questionnaire submission, which is due January 2004.

For its design blueprint for the Lower Lea Valley, one of the poorest regions of the U.K., the team will not "rely on the typical, sanitized Olympic campus," as Alejandro Zaera-Polo of FOA describes it, but bring out the inherent strengths of the valley's landscape, with its many waterways and arcadian green spaces.

"London stands an excellent chance of winning the games," says London Mayor Ken Livingstone. "Some of the best-known and most-experienced practices in the world have demonstrated enormous enthusiasm for [our] Olympic bid." *Tony Illia and Lucy Bullivant*



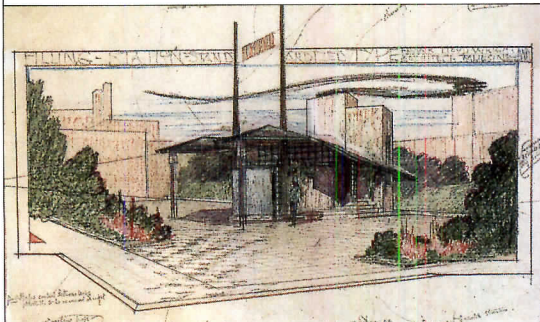
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**A sketch by Frank Lloyd Wright for a gas station, which is about to be built in Buffalo, N.Y.**

fill-ups, but as an exhibition kiosk and visitor center for the several Wright-designed houses in the area.

The design is being developed by former Taliesin apprentice Anthony Puttnam, AIA, in collaboration with Buffalo architect Patrick Mahoney, AIA.

Reconstructed from 1:8 scale plans and a perspective in the Frank Lloyd Wright Foundation's archives, Wright's design calls for poured-concrete piers under an angular copper canopy topped by twin spires. These 45-foot "Illuminated Totems," with the Tydol sign suspended between them, were to be lit with the then-cutting-edge technology of neon tubes.

Puttnam sees Wright's interest in cars and gas stations as part of his "fascination with long-distance transportation, by rail and motor, as a feature of the landscape," a fascination also expressed in the 1929 Automobile Objective and 1930s Broadacre City projects. One other Wright gas station exists, a Phillips 66 station near Duluth, Minnesota, built in 1956 and derived from a Broadacre prototype. "Watch the little gas station," Wright wrote in 1930. "Wherever service stations are located naturally, these so often ugly and seemingly insignificant features will survive and expand." *Thomas De Monchaux*

### Frank Lloyd Wright-designed gas station to be built in Buffalo

Only five blocks from the site of his famously demolished Larkin Administration Building, and only 75 years behind schedule, a gas station by Frank Lloyd Wright is under construction at the corner of Michigan Avenue and Seneca Street in Buffalo, New York. Designed for Buffalo's Tydol Oil company in 1927 but not built due to a combination of economic and domestic woes experienced by client and architect, the station is being erected as part of a planned \$7 million, 60,000-square-foot expansion of the nearby Buffalo Transportation/Pierce-Arrow Automotive Museum.

The two-story, 1,200-square-foot station features an observation deck with two fireplaces and, alarmingly adjacent, an overhead tank that was designed to gravity-feed gasoline to cars below. In deference to present-day fire codes, the station will open in the summer of 2004 not for

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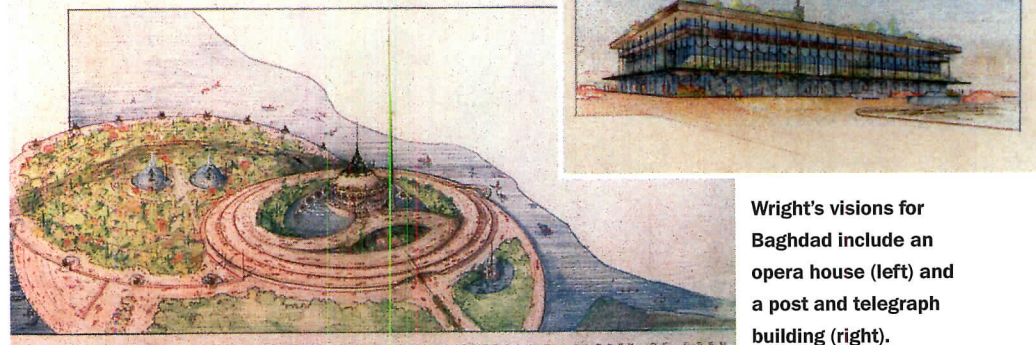
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## Record News

### Frank Lloyd Wright's 1957 plans for Baghdad back in the limelight



Wright's visions for Baghdad include an opera house (left) and a post and telegraph building (right).

The world is holding its breath as the United States prepares to help rebuild Iraq, fresh after knocking much of it down. But the question remains: how to rebuild?

In replacing much of the imperialist architecture of Saddam Hussein, many architects are calling for designs that are more representative of the people, culture, and history of the country.

One model being offered by a scholar at the Library of Congress, and getting nods from some U.S. officials, comes from a master architect with few peers in the field. He also happens to have been dead for about 45 years: It is Frank Lloyd Wright.

Back in 1957, Wright submitted plans for the city, which he called "Plan for Greater Baghdad," to then-king Faisal II and to a new administrative body called the Development Board. The plans included an opera house, an auditorium, a museum, and a public garden, all designed in a style that merged the cultural richness of the country with Wright's keen sense for breaking new ground.

Unfortunately, Faisal was killed a year later, Wright died a year after that, and the plan never came to fruition. Mina Marefat, Rockefeller Scholar at the John W. Kluge Center at the Library of Congress, discussed the plans in a chapter of the 1999 book *Frank Lloyd Wright: Europe and Beyond* (University of California Press). The book got little attention at the time, but now that building in Baghdad is back in vogue, it is being passed around at a brisk pace.

The buildings in Wright's plans, Marefat points out, are technically sophisticated, using groundbreaking construction methods and materials. The opera house is built in the shape of cupped hands for maximum acoustics, and the plan's post office uses green building techniques, such as rooftop gardens and a "wall" of greenery

shading the building's windows from the sun.

Perhaps more importantly, Wright's designs utilize the cultural legacy of the area without copying architectural styles, creating astonishingly original forms. Marefat points out that Wright was incredibly knowledgeable about the Middle East, citing copious notes in his writings that reflect his scholarship on the area. The opera house, for example, has a crescent shape (a well-known Islamic symbol) over the proscenium, and a domed roof with a single spire, similar to most mosques. The building was also oriented toward Mecca. Many of the other designs are based on the organizing principle of a ziggurat and include shapes and symbols from Persian and Arabic history.

The plans, she explains, could be a helpful model to build from, especially at a time when most Iraqis are eager to embrace their roots rather than adhere to Western standards.

"He was very aware of the inherent values of that culture, and instead of invading and destroying it, he actually proposed something to mediate it," she says (unlike the architectural plans for Baghdad buildings by Wright's contemporaries Corbusier, Gropius, and Aalto). "He was able to reach into the past to create something that had never been there and was completely of the future."

An important rebuilding official has taken notice. Kevin Murphy, chairman of the Iraq Reconstruction Taskforce at the U.S. Department of Commerce, has seen the plans and said he intends to pass them on to U.S. officials in Iraq.

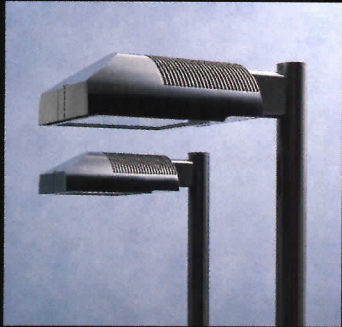
"I thought the designs were intriguing, and I especially liked his concept for keeping in line with the Iraqi culture and traditions. We can make sure that the folks on the ground are aware of these so they can pass them on to the governing body."

In the end, says Murphy, the decision will be up to the Iraqi people. S.L.



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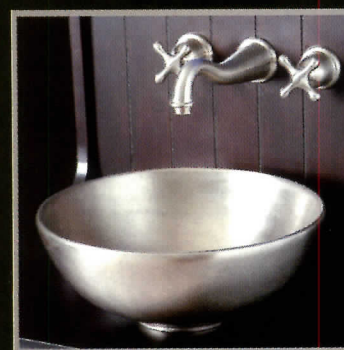
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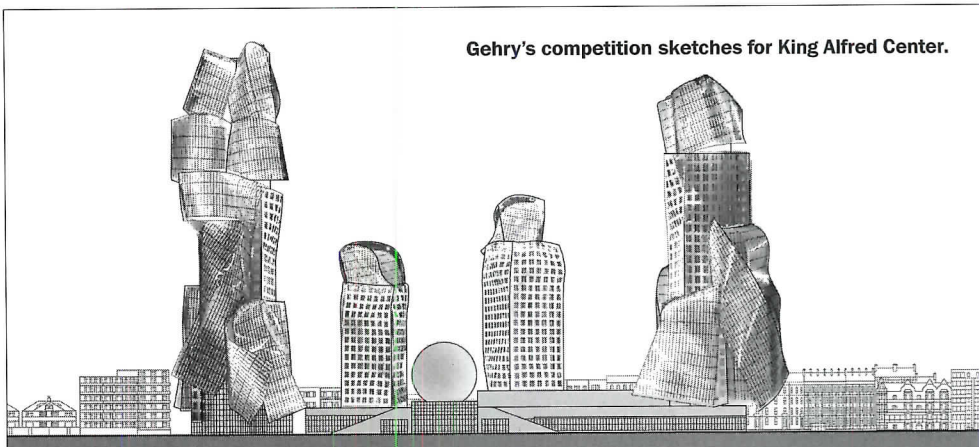
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## Record News



Gehry's competition sketches for King Alfred Center.

### Next stop for Gehry: Brighton and Hove in England

Frank Gehry remains busy putting his transformative mark on cities around the globe. Next in line: Brighton and Hove, a historic town in England, which on July 26 awarded the architect a contract to work on a massive complex known as the King Alfred Center.

The multiuse project, Gehry's first in England, is being developed by local developer Karis and ING bank, and designed by Gehry, HOK Sport, and the British firm CZWG. The complex, still in planning stages, is currently slated to consist of four residential towers, up to 38 stories high, providing 438 apartments. The design also contains a sports and entertainment complex, and a large public

gathering space. Completion is scheduled for 2009. Gehry's competition models for the project displayed the architect's usual gift for sculpturally twisting structures, only here at a very lofty level.

City Council members and local architects agree that bringing in Gehry shows that Brighton and Hove, a seaside town that has long been a well-known bastion of preservation, is ready to move into the future with a highly contemporary landmark. It also shows that the world is not yet Gehry-ed out.

"You need some push. Frank seemed the architect to bring Brighton and Hove forward," says Piers Gough, Partner at CZWG. S.L.

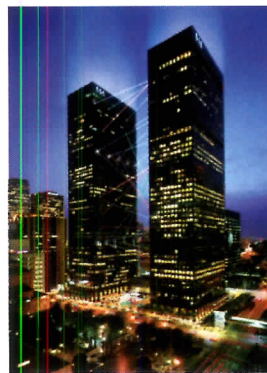
### L.A.'s Arco Plaza to get \$125 million, laser-filled makeover

California-based firm AC Martin Partners is making plans to envelop relatively deserted Arco Plaza in downtown Los Angeles in neon, water, and bustle, transforming it into a vibrant gathering place at a cost of \$125 million.

The architects, who designed the original 52-story landmark towers and 80,000-square-foot plaza in 1973, have been commissioned by Thomas Properties Group, which bought the towers and their plaza in January of this year.

The plans, explains architect David Martin, FAIA, intend to draw people into the plaza, which seemed lost on the original design.

"The attitude of the corporations then was quite insular. They wanted to build their landmarks. They weren't too concerned about how



Rendering of the future plaza.

that would fit in with the city."

Compelling structures on the plaza include translucent canopies, outdoor restaurants, and a fountain of "dancing waters" (assembled by WET Design). The plans also call for compressing the size of the underground shopping plaza, which had drawn people away from the public space. Surrounding the plaza will be a laser-beam system linking the office towers with multicolored lights at night.

The lighting plans, says Martin, were inspired by the neon lights that once adorned the city when he was a child. "The notion of the corporate light show was something I always remembered as a kid," says Martin, who grew up nearby. S.L.



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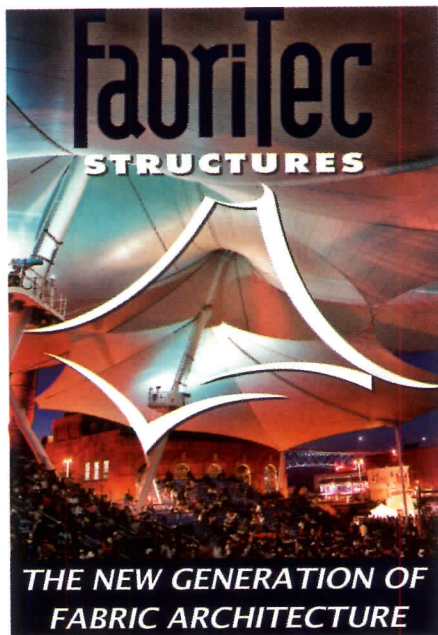
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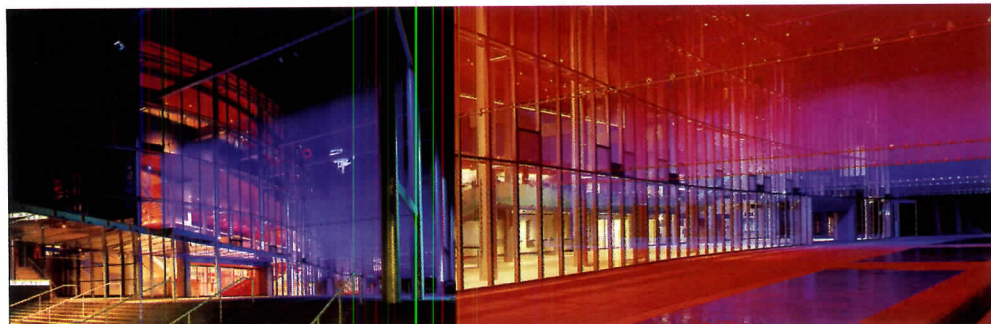


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## Record News



### Seattle's theatrical new opera house welcomes all

Seattle has long been known for coffee, rain, and Mount Rainier. But certainly not for its opera hall, an uninspiring 60s redesign long considered mediocre.

The city has made a valiant effort to change that, with a \$127 million redevelopment by Seattle-based LMN Architects. The design for Marion Oliver McCaw Hall includes a complete restructuring of the interior plan and exterior envelope, featuring bright colors, theatrical lighting, and unusual shapes. To many, these are unexpected elements for an opera house—but that's the point, say its designers. The opera would like to make the space welcoming to everyone.

"Operas like the Garnier in Paris were built around a culture of aristocracy. They're palaces for exclusive users," says Mark Reddington, FAIA, principal architect at LMN. "This building is

built for the beginning of the 21st century in a progressive American city. We wanted to make it alive and relevant to contemporary culture."

The acoustics in the 2,900-seat auditorium have been lauded, but the interior, which includes a gradually darkening progression of lighting from the entrance to the stage, and a lobby with a 5-story serpentine glass wall intersected by a field of lit metal scrims, is designed to give people a theatrical experience even when they're not seeing a show.

"It certainly challenges people to expand their preconceptions about how to experience theater in their lives," Reddington says.

The hall hosted its first opera, *Parsifal*, on August 2. S.L.

**Marion Oliver McCaw Hall's entranceways and lobby feature theatrical lighting and design (above).**

### Harvard Club completed, still controversial

The impassioned controversy over the now-complete addition to the landmarked Harvard Club of New York is not over. While for some, the Modernist-style glass and limestone exterior respects the original neo-Georgian brick clubhouse built in 1894 by McKim, Mead and White, for others, the addition is a desecration.

Members opposed to the Davis Brody Bond addition went to extraordinary lengths to kill it before construction started. They sued in court, and even attempted to take over the club's board.

Now that it is built, some disgruntled members detest the new design more than ever. "I think it's worse in reality than it was on paper," says Lloyd Zuckerberg, a club member who campaigned against the Bond addition. Stephen Raphael, a club member who served on the New York City Landmarks Commission from 1991 to 1997, says he would have voted against the Bond addition if he were still a commission member. He preferred a design similar to the original.

But project architect J. Max Bond, Jr., FAIA, sees his design as a more considerate way to add to a historic building. "It demeans the existing buildings to mimic them," he says. "All architecture reflects the spirit of its time." Brian Hogg, director of preservation at the Landmarks Commission, embraces the shift in building on landmarked sites: "These are clearly designs from today; they are identifiable as new buildings, in contrast to something that is trying to recreate a town house from the 1890s." Alex Ulam





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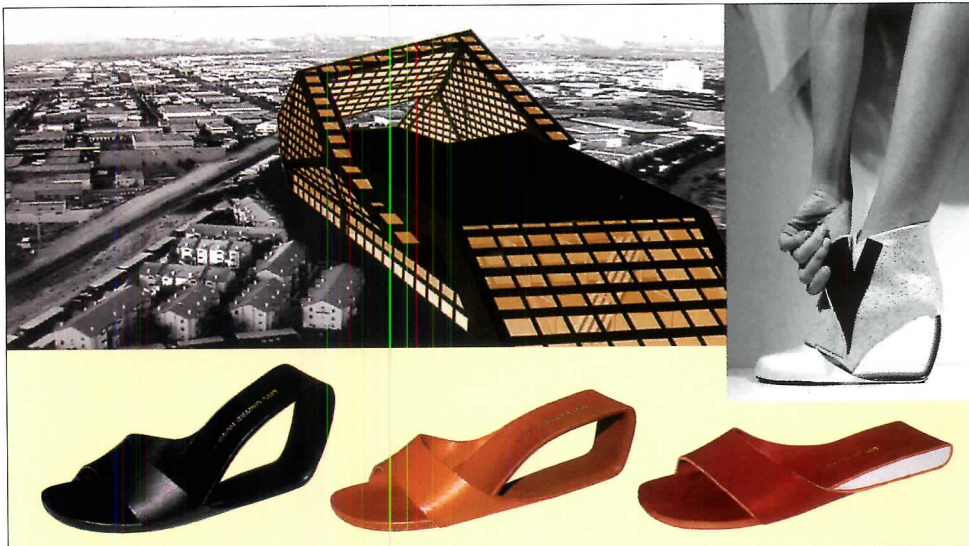
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## Record News



### Younger Koolhaas designs truly architectural shoe



Rem D. Koolhaas has finally done it. He's designed his own brand of shoes. Called Mobius, the trendy, sleek piece of leather and fiber is inspired by the bending

shape of Mies van der Rohe's Barcelona Chair. His company, United Nude, is a collaboration with well-known shoemaker Galahad Clark and has already sold 10,000 pairs since being released at the beginning of the year.

By the way, this Rem Koolhaas might not be who you were thinking of. He's the nephew, and namesake, of the famed Pritzker Prize laureate. This Koolhaas wears shirts unbuttoned to show off his chest, sports several necklaces, and is a DJ in his spare time.

Koolhaas, too, was trained in architecture: He has a master's of architecture from the Technical University of Delft, in Holland. But he prefers the intimate scale and the immediacy of shoe design to building design.

"The problem with architecture is that it takes so much time. If you look at the guys doing what they actually want to in design, those guys are all over the age of 50."

So he's using his architectural expertise to bring something completely new to fashion.

"A shoe designer would never have come up with this design," he says. "Shoe designers have to come up with new styles for every season; they don't have enough time to really be creative."

Koolhaas took years to put the design together. For his thesis in architectural school, he incorporated the shoes into designs for chairs, houses, large buildings, and even urban plans.

His shoes, which retail for \$175 and up, come in a plethora of colors, such as burgundy, black, tan, and chocolate brown. They are made in low, medium, and high sizes and have velcro attachments that allow them to cover the leg. Koolhaas's next plans, he says, are for furniture.

Meanwhile, his United Nude/Terraplana store, on Elizabeth Street in SoHo, New York City, just blocks from Prada and other designer boutiques, is selling the shoes like hot cakes. The store was spruced up by Koolhaas, who installed new lighting, painted, and put in display windows that feature the shoes spinning on top of record turnstiles. S.L.

**Rem D. Koolhaas's Mobius shoe (top) comes in a wide variety of colors and sizes. Its design even inspired a building, although it was never built.**

### In more Koolhaas news...

**Rem D. Koolhaas's uncle, the architect Rem Koolhaas, was awarded the 2003 Praemium Imperiale Architecture Award. The lucrative prize of \$125,000, handed out by the Japan Art Association, honors lifetime achievement in categories including architecture, sculpture, theater, and music. Koolhaas received the award in Rome on July 3. S.L.**

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### September 16 Merrill Elam, AIA

Principal of Mack Scogin Merrill Elam  
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### September 22 The Digital Statue of Liberty: A Three-Dimensional Documentation

Elizabeth I. Loudon, associate dean of  
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## Record News

### St. John the Divine may lease nearby land

Mired in an overwhelming deficit, Cathedral of St. John the Divine in New York City has begun an "exclusive conversation" with Columbia University to potentially develop two land parcels on the grounds of the cathedral's close.

The revenue generated from the leases would help with necessary repair and construction costs and end what the dean, The Very Reverend Dr. James A. Kowalski, calls the cathedral's "decades' old, hand-to-mouth existence."

According to executive vice president of the cathedral Stephen Facey, the idea of leasing out part of the close "has been on the table for many, many years." Internal studies, he says, have suggested that a ground lease would alleviate a "huge backlog of deferred maintenance" estimated to run \$16 to \$18 million. It is also hoped that a possible deal could fund the completion of the church, which is still just three-fifths finished.

A list of more than a dozen proposals to develop the site was whittled down to Columbia University, the cathedral's Morningside Heights neighbor. Facey insists there is "no deal, no plan" as of yet but recognizes that Columbia is a "natural partner" for the project.

Following the cathedral's designation as a landmark in June 2003, construction would be subject to regulations detailed by the cathedral and the Landmarks Preservation Commission. Two spaces—one on the cathedral's north side



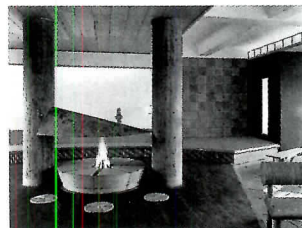
and one on the southeast—have been set aside for leasing and can be filled roughly two-thirds by structures. One space is two and a half city blocks from the cathedral, while the other is about 73 feet from the building. Height limits have been set: On the north site, volumes can't be higher than 145 feet. On the southeast site, volumes can't be higher than 200 feet.

While a local Web site, Morningsideheights.net, calls not landmarking the close "the single greatest historic-preservation disaster since the demolition of Pennsylvania Station," cathedral officials maintain they are working closely with the community, and all new building will be unobtrusive and "congruent" with the extant buildings.

Facey stresses that any new architecture would be of "the highest quality." As he puts it, "Something hopefully they'll want to landmark in 35 years," he says. *Diana Lind*

### University in Tokyo is tearing down Noguchi masterpiece

Isamu Noguchi's Shin Banraisha room and garden at Keio University in Tokyo is being dismantled by the university as part of a plan to expand its law school. Designed in 1952, the postwar work of art and architecture (pictured, right) honored Noguchi's father, a prominent Japanese poet and Keio University instructor. With Japan recovering from war, Shin Banraisha was regarded as an important symbol of regeneration and a milestone in 20th-century art.



director Shoji Sadao.

According to the foundation's president, Isaac Shapiro, a proposal by the university to relocate Shin Banraisha was unacceptable, because it would have "changed its original concept and the relationships

of its components." Confirms Sadao: "It's site-specific, and it has got to remain where it is."

Public outcry led to the creation of the International Committee to Preserve Shin Banraisha, while the school's art faculty filed for a court injunction against the destruction. Even the law school faculty signed a preservation petition circulated by the university. The foundation is now investigating legal action to force a restoration of the site. *Caroline Mitgang*





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### SmartWrap at Cooper Hewitt

Buildings in the future will be clad in lightweight plastic polymer sheets that both shelter and insulate interior spaces and incorporate lighting, information displays, and power.

That's the vision of Stephen Kieran, FAIA, and James Timberlake, FAIA, partners in the Philadelphia architecture firm KieranTimberlake Associates, which has designed the inaugural presentation of the material as part of a series of exhibitions at the Cooper-Hewitt, National Design Museum in New York City. Called *Solos: SmartWrap*, the installation is a 16-foot-square-by-24-foot-high pavilion in the museum's Arthur Ross Terrace and Garden.

On display through October 10,



SmartWrap on display.

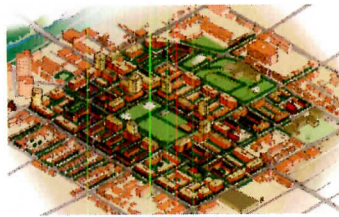
the pavilion is clad in SmartWrap on an aluminum frame.

A polyester-mixture (PET) film acts as a base for the other layers, including phase-change materials for heat storage, Organic Light Emitting Diode (OLED) to provide lighting and information displays, thin film solar cells for power, and conductive ink for activation.

Kieran and Timberlake will speak about SmartWrap at the Cooper-Hewitt on September 25. Visit [www.si.edu/ndm](http://www.si.edu/ndm) for more information. *John E. Czarnecki, Assoc. AIA*

### Toronto tears down infamous housing projects

Toronto is about to follow the lead of Hope VI initiatives in American cities by tearing down its decrepit



### New plans for Regent Park complex.

public housing towers and replacing them with a low-rise mix of housing with a regular network of streets and blocks.

Toronto City Council approved a 15-year, \$300 million redevelopment plan in late July for Canada's oldest social housing complex, Regent Park.

Located on the northeastern edge of the city's downtown, Regent Park was an urban-renewal project begun in the late 1940s that included block towers ranging from 14 to 27 stories without through streets. Crime is rampant in the area, and the buildings are in disrepair.

New housing will be built on a regular grid of new streets and blocks, with a 6-acre park as well as smaller parks. The proposed plan, developed chiefly by Canada-based GHK International, calls for the replacement of the 2,087 existing housing units with 4,500 mixed-income apartments and town houses. The plan awaits final approval from the province of Ontario, but construction could begin in 2005. *J.E.C.*

### Tony Fitzpatrick dies

Structural engineer Tony Fitzpatrick, 52, chairman of Arup Group's Americas Division, was killed in a bicycling accident on July 26.

London-born Fitzpatrick joined Arup in 1972 and worked with Norman Foster, Richard Rogers, Jean Nouvel, and Renzo Piano.

Fitzpatrick's greatest acclaim came for his repair of London's once-wobbly Millenium Bridge.

*Tony Illia*



Tony Fitzpatrick

PHOTOGRAPHY: COURTESY COOPER-HEWITT, NATIONAL DESIGN MUSEUM (LEFT); MARKSON BOROAH HODGSON ARCHITECTS (TOP); ARUP (PORTRAIT)

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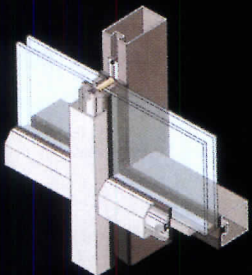
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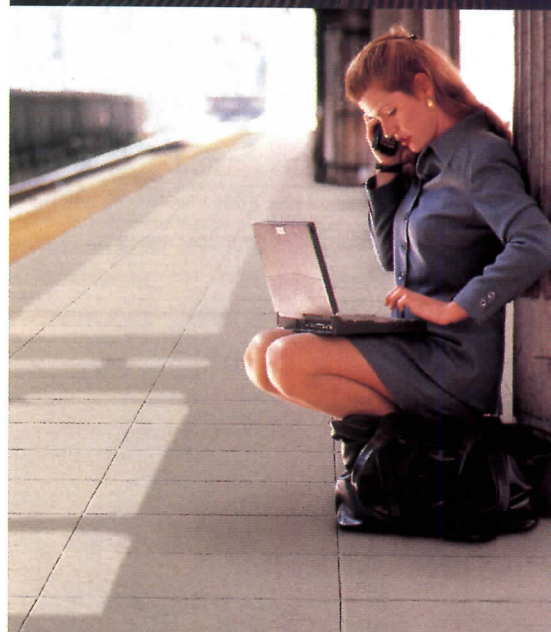
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# Dates & Events

## New & Upcoming Exhibitions

### **Solos: SmartWrap** **New York City**

August 5–October 10, 2003

The first show in a new series, *SmartWrap* features a pavilion by the Philadelphia architecture firm Kieran Timberlake Associates in the Cooper Hewitt Museum's Arthur Ross Terrace and Garden. *SmartWrap* is a concept for a customizable building material that would incorporate a building's facade as well as emerging technologies in heating, lighting, and solar energy. At Cooper-Hewitt, National Design Museum. Call 212/849-8400 or visit [www.si.edu/ndm](http://www.si.edu/ndm).

### **Absence Into Presence** **New York City**

September 3–October 3, 2003

An exhibition showcasing the art, architecture, and design of remembrance. The exhibition will look at works of funerary architecture; demonstrate how great architects have used the memorial genre to develop their own talents and theories; and consider a range of aesthetic, cultural, and political issues that impact the process of remembrance. In the Arnold and Sheila Aronson Galleries at Parsons School of Design. Call 212/229-8987 or visit [www.newschool.edu](http://www.newschool.edu).

### **Up, Down, Across: Elevators, Escalators, and Moving Sidewalks** **Washington, D.C.**

September 12, 2003–April 18, 2004

The exhibition will explore how these ubiquitous technologies have transformed our buildings, our cities, and our lives. Though these devices are mundane by virtue of our familiarity with their daily uses, *Up, Down, Across* brings to light the enormous impact they have on architecture and movement throughout the world. For further information, call 202/272-2448 or visit [www.nbm.org](http://www.nbm.org).

## Ongoing Exhibitions

### **Of Our Time: 2002 GSA Design Awards Show** **Washington, D.C.**

March 27–October 19, 2003

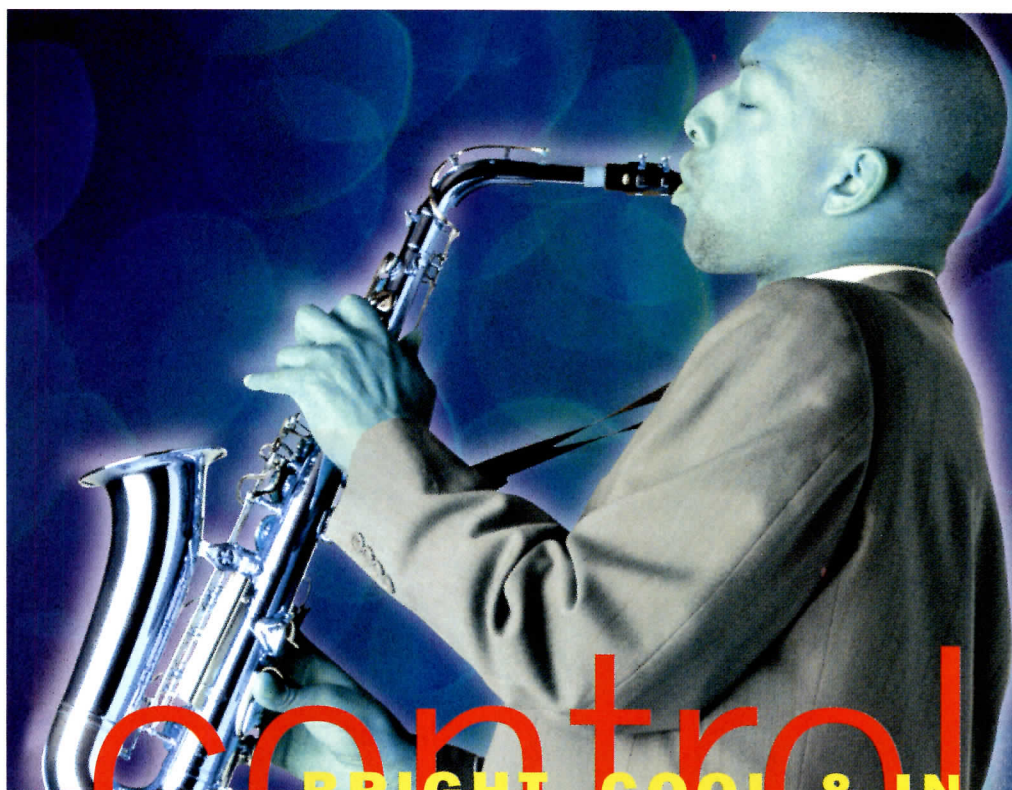
Through models, drawings, and photographs, this

exhibition documents the 24 public projects that received the design award honor last year. The projects demonstrate how regional heritage can be integrated with the latest building technology to create dynamic, functional, and attractive structures, spaces, and artworks for the 21st century. At the National Building Museum. Call 202/272-2448 or visit [www.nbm.org](http://www.nbm.org) for more information.

### **National Design Triennial 2003: Inside Design Now** **New York City**

April 22, 2003–January 25, 2004

The Triennial is a review of cutting-edge trends and future horizons in the fields of design practice, from architecture, interiors, and landscape design to product design, graphic design, fashion,



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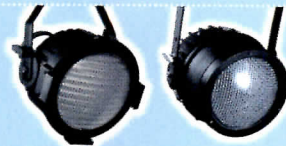
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## Dates & Events

and new media. At the Cooper-Hewitt, National Design Museum. Call 212/849-8400 or visit [www.si.edu/ndm](http://www.si.edu/ndm).

### **Katie Grinnan: Adventures in Delusional Idealism** **New York City**

*July 24, 2003–January 4, 2004*

Evoking contained, self-sustaining ecosystems and utopian communities, Grinnan uses moldable plastic and computer-altered images of corporate spaces to create large-scale photo sculptures and

installations that envelop the architecture of the Whitney Museum at the Altria Sculpture Court on 42nd Street. Call 917/663-2453 or visit [www.whitney.org](http://www.whitney.org).

### **Celebrating Saint Petersburg** **New York City**

*June 11, 2003–January 25, 2004*

Reflecting the splendor and cosmopolitan culture of the czarist court, the selection of approximately 75 objects, dating from about 1700 to the early 20th century, includes exquisitely crafted

furniture, silver, porcelain, jewelry, and other luxury items of Russian, as well as French, English, Swiss, and German manufacture. At the Metropolitan Museum of Art. Visit [www.metmuseum.org](http://www.metmuseum.org) or call 212/535-7710.

## Lectures, Conferences, Symposia

### **Rail-Volution: Building Livable Communities with Transit**

**Atlanta**

*September 11–14, 2003*

Attendee's of this year's conference will see a strong emphasis on melding the broad and the focused—on addressing global problems that affect every community and then taking a hands-on approach to developing local, specific solutions. More than 50 workshops covering a wide range of topics will be featured. Call 302/436-4375 or visit [www.railvolution.com](http://www.railvolution.com).

### **Density: Myth & Reality**

**Boston**

*September 12–14, 2003*

Density can play a role in containing sprawl, reviving urban centers, and creating a sense of place. The Boston Society of Architects will host a conference on the topic, exploring design for density in settings that range from cities large and small to older suburbs. Visit [www.architects.org/density](http://www.architects.org/density).

### **Building a Federal Legacy: Design and Construction Excellence**

*September 16, 2003*

The U.S. General Services Administration's chief architect, Edward Feiner, FAIA, discusses projects demonstrating innovations in design, sustainability, security, and construction. At the National Building Museum. Call 202/272-2448 or visit [www.nbm.org](http://www.nbm.org).

### **Spotlight on Design: Merrill Elam** **Washington, D.C.**

*September 16, 2003*

The Atlanta-based firm of Mack Scogin Merrill Elam Architects is known for a wide range of award-winning projects around the world. Merrill Elam, AIA, will discuss her firm's work, including recent commissions for the Music Library at the University of California, Berkeley and the Bank for International Settlement in Basel, Switzerland. At the National Building Museum. Call 202/272-2448 or visit [www.nbm.org](http://www.nbm.org).

### **Different by Design: Modern Architecture and Community** **Houston**

*September 17–October 8, 2003*



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## Dates & Events

A forthcoming lecture series to be presented by the Rice Design Alliance will explore what role architectural design plays in constructing community identity. These talks will address the issue of modern architecture's representation as well as its reception. At the Museum of Fine Arts. Call 713/348-4876 or visit [www.rice.edu](http://www.rice.edu).

**Hitoshi Abe**  
**New York City**

September 18, 2003

An architects forum featuring noted architect

Hitoshi Abe, of Atelier Hitoshi Abe in Sendai, Japan. Abe is known for highly innovative public buildings and residential structures, including Shirasagi Bridge in Shiroishi, Miyagi; a stadium in Miyagi; and most recently, a community center in Reihoku, Kumamoto. At the Japan Society. Call 212/752-3015 or visit [www.japansociety.org](http://www.japansociety.org).

**The Ninth Annual 2003 Designer's Fare**  
**New York City**

September 19-28, 2003

Showcasing the work of outstanding interior and

landscape designers, the ninth annual Designer's Fare will be a major fund-raiser for the Mount Vernon Hotel Museum and Garden. Leading interior designers will create exciting spaces that focus on all aspects of entertaining, from traditional to trendsetting, while landscape designers present their displays in the museum's garden. At the Mount Vernon Hotel Museum and Garden. Call 212/838-1623 for ticket information or visit [www.mountvernonhotelmuseum.org](http://www.mountvernonhotelmuseum.org).

**The Centre Georges Pompidou:**  
**The Big Escalator**  
**Washington, D.C.**

September 21, 2003

The Centre Pompidou is the world's most visited center for the arts. By pulling the escalators to the building's exterior, the architects created one of the world's most distinctive facades. This film complements the exhibition *Up, Down, Across*. At the National Building Museum. Call 202/272-2448 or visit [www.nbm.org](http://www.nbm.org).

**The Digital Statue of Liberty**  
**Washington, D.C.**

September 22, 2003

Texas Tech University's School of Architecture is one of the first public entities to use light detection and ranging (LIDAR) scanning equipment to document historic structures, completing the first precision-measured documentation of the Statue of Liberty. The school's associate dean of research, Elizabeth I. Loudon, will discuss the project and show how this technology can be used throughout the preservation field. At the National Building Museum. Call 202/272-2448 or visit [www.nbm.org](http://www.nbm.org).

**The 2003 Design Awards Symposium**  
**New York City**

September 22, 2003

The AIA New York Chapter is pleased to announce the 2003 Design Awards, a moderated discussion that presents and honors the finest examples of architecture, interiors, and unbuilt projects submitted by local firms and design individuals. At the New Kimmel Center. Call 212/683-0023 or visit [www.aiany.org](http://www.aiany.org).

**Productive Buildings: Sustainability and High Performance**  
**Washington, D.C.**

September 23, 2003

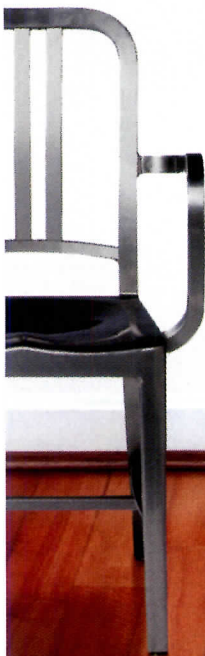
Gregory Kiss, principal of Kiss + Cathcart Architects in New York City, will discuss his firm's evolving approach to "productive architecture": buildings that benefit the environment, economy, and the human spirit. At the National Building Museum. Call 202/272-2448 or visit [www.nbm.org](http://www.nbm.org).

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## Dates & Events

### FIAM 2003

#### Valencia, Spain

September 29–October 4, 2003  
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### CERSAIE

#### Bologna, Italy

September 30–October 5, 2003  
The international exhibition of ceramics for the building industry and bathroom furnishings will promote profitable commercial exchange and new ideas for industry specialists, architects, and designers. Call 39051/66-46-000 or visit [www.cersaie.it](http://www.cersaie.it).

### McGraw-Hill Construction Architectural Record Innovation Conference New York City

October 8–9, 2003

Inventors, scientists, and visionaries will come together to address architects and builders about how advances in materials science and manufacturing technology are poised to change building design and construction. Speakers and panelists include world-renowned architects, a Nobel Laureate, a nanotechnologist, a world-class inventor, plus innovators/designers from Audi, Boeing, DuPont, Permasteelisa, Arup, and more. At the Westin Hotel. To register, call 212/904-4634.

### 18th IAKS Congress Cologne, Germany

November 5–7, 2003  
The International Congress for the Design, Construction, Modernization, and Management of Sports and Leisure Facilities will cover sports facilities for the Olympics 2006 Soccer World Cup

in Germany, and other topics. Visit [www.saia.org.za/kznia/18thIAKScongress.html](http://www.saia.org.za/kznia/18thIAKScongress.html).

## Competitions

### The Tilt-Up Concrete Association's 11th Annual Achievement Award Mt. Vernon, Iowa

Deadline: September 15, 2003  
This year's program introduces new considerations for building program and budget, as well as consideration for technical innovation and achievement. Call 319/895-6911 or visit [www.tilt-up.org](http://www.tilt-up.org).

### The 2003 Pinnacle Awards Competition Cleveland

Deadline: September 19, 2003  
The Marble Institute of America is accepting entries for its awards competition, honoring excellence in natural-stone commercial and residential projects around the world. Call MIA at 440/250-9222 or visit [www.marble-institute.com](http://www.marble-institute.com).

### Rome Prize Competition New York City

Deadline: November 1, 2003  
The American Academy in Rome, one of the leading overseas centers for independent study and advanced research in the arts and the humanities, invites applications for the prestigious Rome Prize competition. Call 212/751-7200 or visit [www.aarome.org](http://www.aarome.org).

### Palisades Glacier Mountain Hut Competition Berkeley, California

Deadline: December 5, 2003  
An international competition for the design of a 60- to 80-person wilderness-base-camp facility for overnight stays near the trailhead leading to the Palisades Glacier in the Sierra Nevada Mountains of Central California. Visit [www.ced.berkeley.edu/competitions](http://www.ced.berkeley.edu/competitions).

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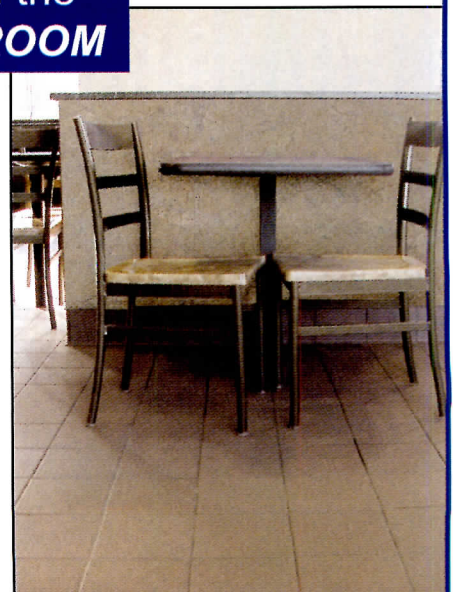
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Architect Chuck Simmons  
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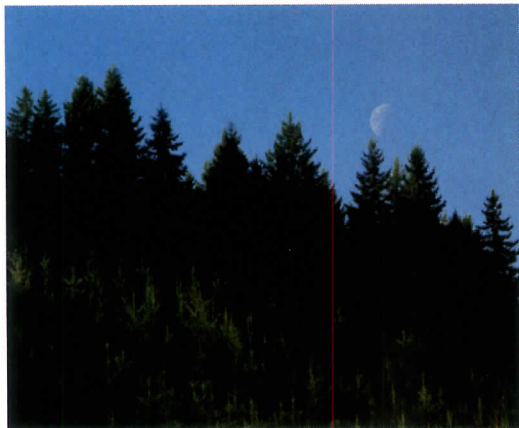
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# Forests for the Ages

**Here's how North America's leading sustainable forestry program balances environmental responsibility with sound, sustainable business practices.**

A decade ago, no matter where you were in the supply chain for forest products, any question about the environment was a red



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Initiative®, or SFI®, program follow strict environmental policies that promote well-managed forests, safeguard endangered forests, help eliminate illegal logging, and continuously nurture the growth of forests.

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programs. More than 136 million acres of forestlands in North America are enrolled in the program, and program participants plant 650 million trees a year on that acreage. Currently over 96 million acres are third-party certified. And the program influences additional millions of acres of forest through the training of more than 75,000 loggers and foresters in best forest management practices. The SFI program has also earned endorsements from

leading environmental groups. With continually improving standards and widespread adoption, the SFI program is recognized as one of the most vigorous and sustainable conservation programs of its kind, enabling program participants to support environmental policies established by office supply retailers, home improvement outlets, and thousands of other businesses in North America.

## A Sustainable Program

In less than ten years, the SFI program has shown incredible growth and achieved remarkable results. In addition to more than 200 participants, including companies that supply the nation's vast majority of paper, pulp, lumber, and wood products, the SFI program has worked to create and sustain abundant forest resources. In fact, the United States currently boasts 747 million acres of forestland, more than it had a century ago.

While sustaining a healthy supply of trees makes good business sense for everyone along the forest products supply chain, the SFI program has ensured a long-term commitment to sustain-

able forestry by establishing an independent governing body of environmentalists, academics, and forest industry leaders, called the Sustainable Forestry Board, or SFB.

As an independent, nonprofit organization, the SFB manages the Sustainable Forestry Initiative Standard, as well as the program's third-party certification process, dispute resolution, and quality control, while continuously working to refine and improve those efforts.

Recent refinements have led to more stringent policies and standards regarding the protection of wildlife, improved water and air

*In less than ten years, the SFI program has shown incredible growth and achieved remarkable results.*

quality, elimination of illegal logging, protection for imperiled forests, and promotion of forest best management practices on lands not under SFI-participant control.

More specifically, companies seeking SFI program certification must now develop and implement plans to protect ecological com-

munities, biodiversity hotspots, and major tropical wilderness areas that exist in forests worldwide, based on information developed by NatureServe and Conservation International.

Specific to the issue of illegal logging, which occurs in parts of the world where sustainable forestry has yet to take root, SFI program participants are now required to work with governments and conservation organizations to promote better forest management practices.

As the SFB continues to evaluate and refine the SFI Standard, with input from forestry experts, conservation groups, landowners, governments, participating members, customers, and the general public, the ultimate payoff is productive, responsibly managed forests that assure a reliable and affordable supply of paper, pulp, lumber, and wood products for generations to come.

For more information about the Sustainable Forestry Initiative program, please contact: American Forest & Paper Association®, 1111 Nineteenth Street, NW, Suite 800, Washington, DC, 20036; 202-463-2744; [www.aboutsfi.org](http://www.aboutsfi.org).

You can also find out more about the Sustainable Forestry Board at [www.aboutsfb.org](http://www.aboutsfb.org).



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FOR THE EMERGING ARCHITECT

If this month's edition of archrecord2 has a theme, it would be "play," and in more than one sense of the word. In **Design**, meet Thread Collective, a firm with partners who not only ponder the interplay of their three principals, but have also designed a space specifically intended for play. In **Live**, Oren Safdie, the son of Moshe, left the world of architecture to write plays. With his most recent, he returns to architecture—as a theme. On the **Web**, as always, you'll find our forum, **Talk**.

## DESIGN

### An uncommon Thread

Gita Nandan, Elliott Maltby, and Mark Mancuso—together known as Thread Collective—have occasionally made efforts to explain their firm's name, and when asked about it, they attempt to do so again.

"The 'thread' part is about coming together with different ideas," offers Maltby, "though that's probably overused as a metaphor. The 'collective' part is about allowing us to collaborate in any permutation."

On the other hand, Nandan says, "We really only think about it now when we're making phone calls and people ask us, 'Who are you again? What do you do? Do you weave blankets?'"

There's one other minor drawback to the name: "People hear it wrong all the time, too," Mancuso says. "I had one conversation where the whole time, the guy kept addressing me as 'Fred.' Only afterward did I figure out why he thought my name was Fred."

None of these small misunderstandings have held Thread Collective back. Nandan and Mancuso, who had gone to college together, met Maltby in graduate school at the University of California, Berkeley. Nandan and Mancuso earned master's degrees in architecture; Maltby earned hers in landscape architecture. While there, the three knew that their working styles and design sensibilities were compatible, but they worked for separate firms upon graduation. After all three had moved to the East Coast, though, they decided that they should set up shop together. They now share an office (and some living space) in the Williamsburg neighborhood of Brooklyn.

Their clients, so far, have come mostly through word of mouth. And so far, they have mostly been women, according to Nandan.

"Or at least the women have been dominant when there's more than one client," Mancuso says. As the only man among the principals, he often finds that contractors bypass Nandan and Maltby to ask him questions. Yet, after a long discussion, the three principals are unable to find any other way that having more women than men in the firm has affected their work.

"Well," says Maltby, after this conclusion has been reached, "we do have a project where you go through a tunnel to get to a room called 'the womb.'"

Although the architects of Thread Collective do feel that something of their personalities can be seen in their designs, they want their work to be



Sydney's Playground,  
New York City, 2003

*A vibrant orange tunnel leads to a child-scaled urban play space of row houses and real tree trunks topped with fabric-mesh canopies. The abstract urban design allows children freedom to imagine. Beyond that is a "womb" room for infants.*

regarded as more reflective of their clients. "I think our projects would be less great if the client were uninvolved," Mancuso says.

They push their clients to take on more progressive design, though they wouldn't push so far as to alienate a client. "Maybe you can find a desire that they couldn't articulate," Maltby says. "You can give them a language in which to say it."

For the moment, this three-person firm is happy being a three-person firm, but they would eventually like to grow and to take on more work. They sense a conflict between their wish to take on more suburban, ground-up work and their own personal desire to live in the city—but they would be more than willing to work through that conflict and to expand someday, maybe taking on some interns to lighten the load.

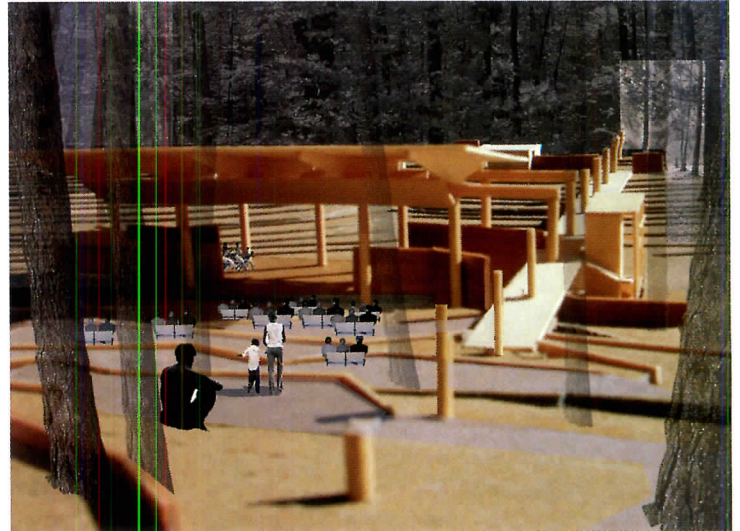
"I want to treat our interns right," Maltby says. "We've spent too much time working hard and being underpaid. Actually, we're still underpaid."

Whether or not future clients understand what "Thread Collective" means, the firm should get that chance to expand, and



Field Day, *blue 1* installation, Riverhead, New York, 2003

Conceived with designer Alina Preciado, this installation would have been central to the canceled Field Day music festival.

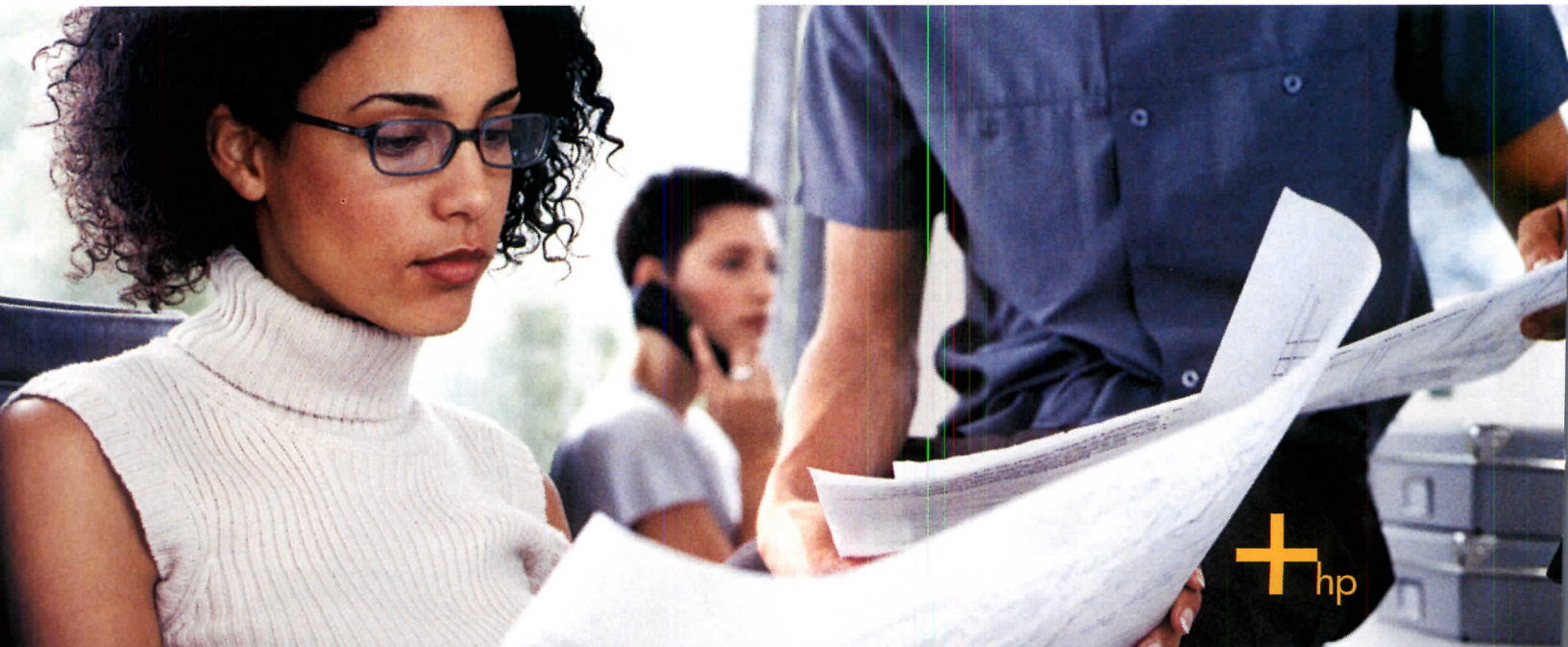


Saluda Shoals Amphitheater Competition, South Carolina, 2001

A bridge across a shallow ravine forms the spine of this theater and allows visitors glimpses of the stage as they pass from the entrance to the seating area.

they'll embrace it, though on their own terms. "I think," says Nandan, "that our ideal working style would be one where we can always take a nap in the afternoon." *Kevin Lerner*

To see more of Thread Collective's projects and to learn how to submit your own work, go to [architecturalrecord.com/archrecord2](http://architecturalrecord.com/archrecord2).



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## LIVE

### Oren Safdie's architecture play

Oren Safdie wanted to be an architect, like his father, Moshe Safdie, FAIA. He earned a master's degree in architecture from Columbia University, but in his final semester, he took a playwriting course and realized he wasn't going to follow in his father's footsteps.

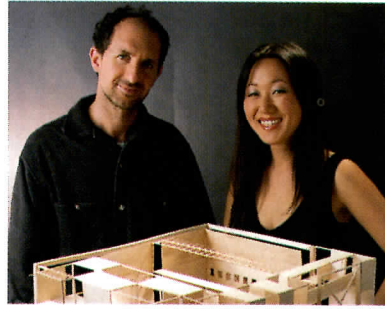
That playwriting course was the germ for Safdie to write the play *Private Jokes, Public Spaces*, a comedy set in an architecture school critique. "The grain of it started when I was switching from architecture to writing," Safdie says.

The play premiered in Malibu in 2001 and had a brief three-week run at La Mama E.T.C. Theater in New York City this past May. Now Safdie, 38, is gearing up to present the play in a longer run in the new home for the American Institute of Architects New York chapter, the AIANY Center for Architecture, in New York City's Greenwich Village. Previews of the play

will coincide with the opening of the center in early October.

In the play, directed by Craig Carlisle, an Asian-American student (played by Safdie's wife, M.J. Kang) presents her thesis to two European critics and her wishy-washy American professor. The dialogue probes male-female power and control, sexism, philosophy, and the importance of challenging tradition. The European critics seem particularly harsh, but the resilient student deflects their snide remarks and observations with grace. "It's about somebody standing up for what they believe, for not wanting to bend," Safdie says. "Architecture school prepares a person for life—you have to be able to justify things."

He wrote the play over the course of 10 days after receiving particularly harsh reviews for one of his earlier plays. "That whole episode, with all



those critics, brought up the architecture studio for me," he says. "It took me back to the feeling of being in front of a jury."

Safdie said his father was "extremely moved" when he saw the play in New York in May. "Margaret [the female student character] reminded him a little of himself," Oren Safdie says. "The philosophies in this play have a lot to do with what he's wanted to pursue in not bending to trends."

Previews begin October 10 for this limited engagement, tentatively scheduled to run through December 7, with performances every day except Wednesday. Tickets are \$45, but a discount is available for AIA members. For tickets, visit [www.telecharge.com](http://www.telecharge.com) or call 212/239-6200. For groups of 10 or more, call 212/354-6510. *John E. Czarniecki, Assoc. AIA*

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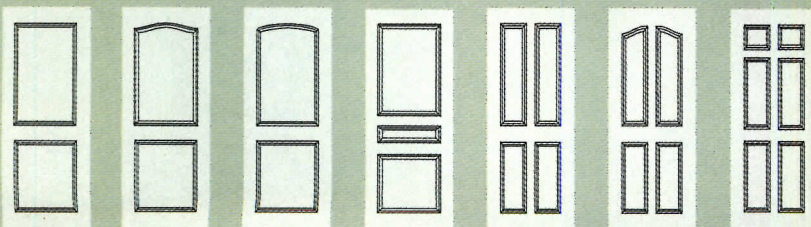
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WINDOWS & DOORS



# A design school in Costa Rica brings green into the picture

## Correspondent's File

By Clifford A. Pearson

"No artificial ingredients," announces the Costa Rica Tourism Board on its Web homepage and in promotional material. The slogan is part of the country's campaign to promote itself as a model of ecotourism and move its economy beyond exporting commodities such as coffee and bananas. So a conference on green architecture in the country's capital, San José, seemed logical to Alvaro Rojas, AIA, the founder and director of the Universidad del Diseño, a Costa Rican school of architecture that is celebrating its 10th anniversary.

Costa Rica occupies 0.4 percent of the world's landmass but has 6 percent of its biodiversity, including 850 recorded bird species and 1,400 tree species. The country's 20 national parks cover nearly 12 percent of its area; if you add forest reserves and Indian reservations to the figure, the amount of protected land goes up to 27 percent.

Costa Rica, though, does not always live up to its hype, admits Rojas. It does a good job of protecting the environment in its parks and reserves, but its capital city could serve as a poster child for reckless urban sprawl. With nearly 2.5 million of the country's 4 million residents, the greater San José metropolitan region has gobbled up much of Costa Rica's central valley and keeps growing with seemingly few planning constraints. "San José is the city of my dreams and my nightmares," says Rojas. "It's neither truly urban nor rural. It's what I call 'rurban.'"

Never an important colonial center, San José doesn't have a



**With more than half of the country's population, San José now sprawls over Costa Rica's central valley (above). Downtown San José (above right) has lost much of its vitality to the suburbs. The Universidad del Diseño occupies an old coffee plant on the outskirts of town (right).**

legacy of great old buildings erected by crown or church. Originally an agricultural backwater, it became powerful only in the 20th century with the rise of coffee as a cash crop. So it has an unusual history as a rural-based metropolis, a city pulled simultaneously by the centrifugal forces of a plantation economy and the modern centripetal attractions of a commercial and political capital.

Opposing forces continue to shape San José in the 21st century. Like many capital cities in the developing world, it has become its country's all-powerful magnet, outstripping all of its urban rivals in terms of political, economic, and cultural activity. But wealthy residents have been fleeing downtown San José in recent decades for the



suburbs. Now the capital's metro area sprawls over 1,600 square miles, says Rojas, not much less than Mexico City's 1,840 square miles. But Mexico City's population of 25 million is more than six times that of San José.

Addressing growing problems of traffic congestion, sewage treatment, and sprawl is critical to the future of San José, says Rojas. "We need to develop a denser city with a smaller footprint." Rojas, who was

born in San José but studied architecture at the City College of New York and worked for many years in the United States, returned to Costa Rica in the late 1980s. Discouraged by the state of architectural education he found there, he established the Universidad del Diseño in 1993 to provide a holistic and global approach to design.

Today the school has about 100 students and a faculty of 40 part-time teachers. It offers a five-

## Correspondent's File

and-a-half-year professional degree in architecture and a four-year degree in interior architecture. The school is in the process of establishing a masters of environmental design program, which should start in early 2005.

When Rojas established the Universidad del Diseño, Costa Rica had only four architecture schools—one at the national university and three run by a private university. Now the country has 12 schools, representing an explosion of educational opportunities that can be directly attributed to Rojas shaking things up in 1993.

To open his students' eyes to what is happening around the world, Rojas regularly invites practitioners and academics from the U.S., Europe, and Latin America to serve on juries, give lectures, and participate in conferences. For good measure, he has stocked his staff

with psychologists, sociologists, linguists, and philosophers, in addition to design professionals. The result is a heady mix of disciplines and perspectives, which challenges students to develop a holistic approach to design.

The university has established a strong internship program with important architectural practices around the world, offering students the chance to work with such designers as Michael Rotondi, Stanley Saitowitz, Enrique Norton, Carlos Jimenez, and Renzo Piano.

The school occupies a former coffee-processing plant on the outskirts of San José, which offers loftlike spaces for studios and a rakishly unkempt courtyard where students and faculty can relax and exchange ideas. The school's curriculum, which includes degree programs in architecture and interior architecture, focuses on

sustainable and bioclimatic design.

As part of his efforts to change the direction of Costa Rican architecture and planning, Rojas organized the Green Mundaneum 2003, which ran for three days in June. The third in a series of biannual symposia, the event brought together speakers from the United States, Europe, and Latin America and an audience of mostly Costa Rican and Central American students.

The speakers offered a broad range of perspectives on green design, from sculptor-turned-designer James Wines of SITE and architect-cum-critic Charles Jencks to aerospace-researcher-turned-architect Michelle Addington and engineer/politician Rolando Araya. As a result, the conference covered both the art and technics of sustainable architecture. Speakers such as architect Emilio Ambasz challenged designers to aspire to the mythic and the poetic, while others warned of the need to support claims of being green with hard facts and good science.

On the last day of the event, Araya, a chemical engineer-turned-politician who came within a hairbreadth of being elected president of Costa Rica in 2002, spoke about turning ideas into action. A new ecological approach "must start with the people and shouldn't wait for the politicians," advised Araya, who has a son studying at the Universidad del Diseño.

Spending a few days at Alvaro Rojas's remarkable school, a visitor gets a bracing whiff of change in the air. Some people have compared the place to SCI-Arc in its early days, when everything seemed new and possible. Built on a shoestring budget and tied together with smart ideas and lots of energy, the school can serve as a model for architectural education in the developing world. By thinking globally and acting locally, the students who graduate from the Universidad del Diseño may serve as catalysts for sustainable design and planning in their hometown of San José. ■

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PHOTOS BY LESLIE CARRIO

**Architect**

Centerbrook Architects  
Centerbrook, Connecticut

**Designer/Artist**

Jun Kaneko Studio  
Omaha, Nebraska

World-renowned artist Jun Kaneko was a natural choice when the Connecticut Commission on the Arts wanted someone to design an artistic terrazzo floor for the 53' wide lobby in the new Arts Sciences and Technologies Center at Manchester Community Technical College in Manchester, Connecticut. Kaneko is used to doing things on a large scale. Many of his ceramic sculptures tower over six feet, and his mosaics cover entire walls. His vision for Manchester Tech, rendered in 8 colors of 3/8" epoxy terrazzo, involves using deceptively simple elements: lines, dots, and triangles, in a rhythmic pattern. Evident in Kaneko's design is his belief that the field, or in this case the surrounding building, is an active element in the pattern. The building's architectural features, including the bold white columns, the arc of the monumental stair, even the circular space itself, are acknowledged in the terrazzo to achieve a pleasingly balanced design. Execution of this design involved creation of eight custom epoxy colors with glass and synthetic glass aggregate. White alloy of zinc divider strips in three different widths were prefabricated and mounted onto fourteen wire mesh panels for assembly on site. Then, the various colors were installed and finished as usual. The bold, eye-catching colors are sure to keep this terrazzo floor looking fresh for years to come.

National Terrazzo & Mosaic Association 2002 Honor Award

Minooka Cafetorium

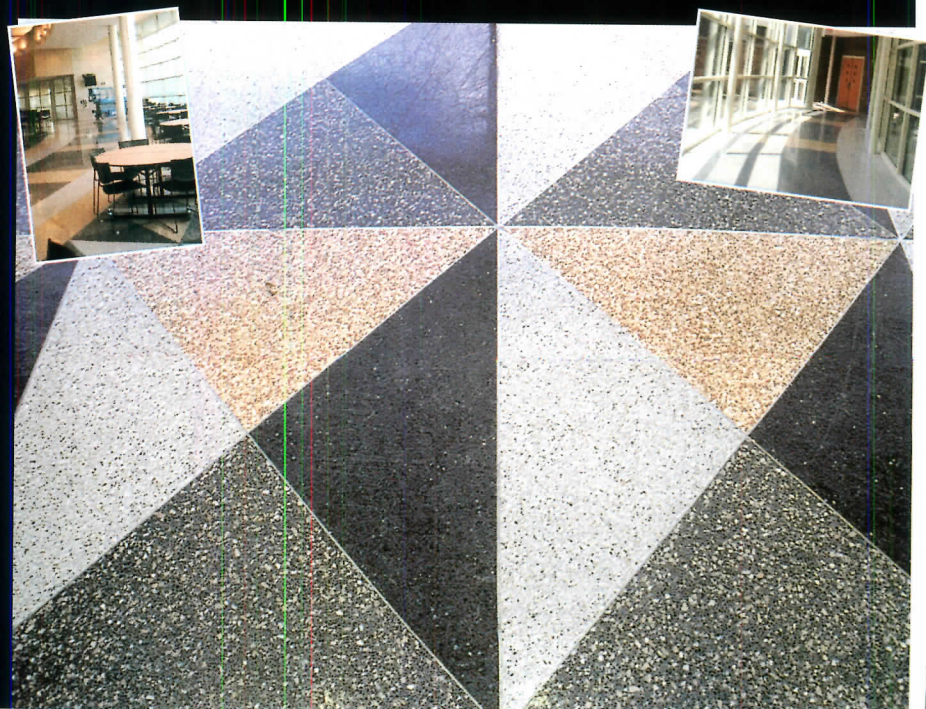
Minooka, Illinois

**Architect**

STR Partners, LLC  
Chicago, Illinois

The new cafetorium is a semicircular, 20' high space focused on a stage, a smaller semicircle from whose front and sides all areas and functions radiate. The overall area is encircled by an enclosed corridor that facilitates fluid movement and separates the main dining space from outdoor eating areas, serveries, kitchen and faculty dining room. To the back of the cafetorium and stage, two curved, glass "arms" extend the semicircular corridor to ingeniously link the addition to the learning center and surrounding areas in the existing school.

The use of epoxy terrazzo was the obvious choice for flooring material not only because of its durability and ease of cleaning, but also because of its ability to integrate well with the building's unique radial geometry. Also, the terrazzo flooring seamlessly integrated the stairs and stage areas with the dining areas for visual continuity of the space. The infinite possibilities of matrix color and aggregate permitted the architect to select a floor palette that coordinated well with the buff-colored masonry walls and cream-colored curtain wall. The pattern is loosely based on the design of the Campidoglio plaza in Rome, designed by Michelangelo.



National Terrazzo & Mosaic Association  
2002 Honor Award

T&M Supply Companies – Architectural Library  
Wheeling, Illinois

*Designer/Artist*

T&M Supply Companies  
Wheeling, Illinois

As a major terrazzo and stone supplier, this space was originally utilized to display natural stone materials. It was decided however, that this area could be better used to showcase terrazzo samples. After the existing hardwood floor had been removed, the concrete substrate was shot blasted, flattened with an epoxy fill and a full flexible epoxy membrane was applied.

A basically simple but compelling design was created to demonstrate terrazzo's design flexibility. The usage of lines, curves and colors helped to achieve striking effects and make a strong and lasting statement.

Several types and widths of divider strips were used to create the layout design, all accomplished on-site. The variety of divider strips installed also added to the floor's aesthetic appeal.

Fourteen different base colors were used along with twenty accent panels containing exotic aggregates. The result is a display area where architects, designers and even homeowners can visualize how terrazzo can be placed in their project.

National Terrazzo & Mosaic Association 2002 Honor Award

New Indiana State Museum at White River State Park Indianapolis, Indiana

*Architect*

Ratio Architects  
Indianapolis, Indiana

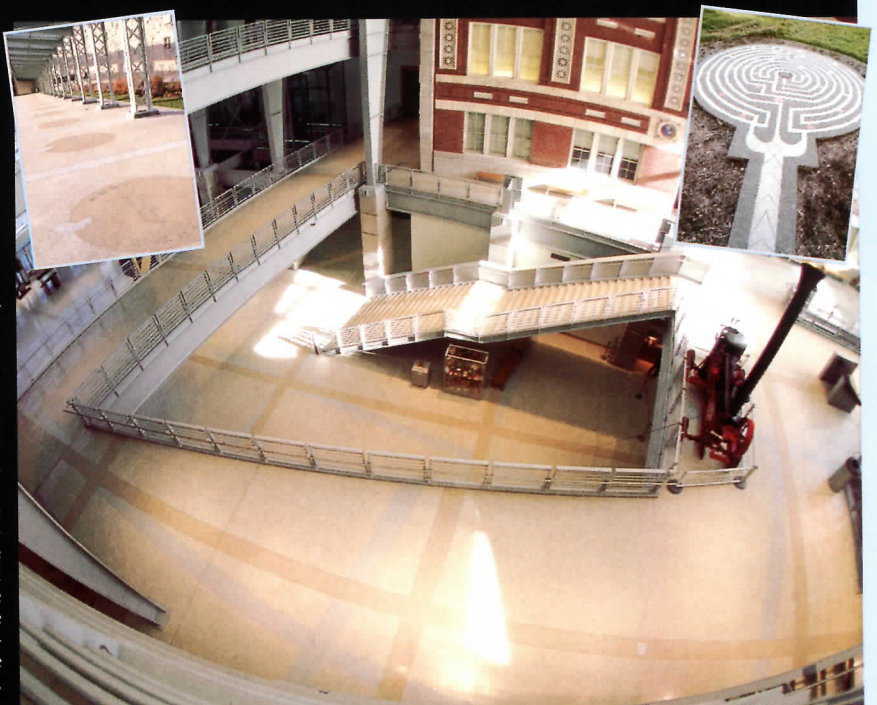
*Designer/Artist*

Ralph Appelbaum Associates  
New York, New York

From the beginning of the earth to the 21st century, the Indiana State Museum is an eclectic, ever-changing adventure in the past, present, and future. The Indiana State Museum utilizes all types of terrazzo systems. The use of the cement bonded rustic terrazzo on the exterior entry areas, ramps, stairs, patios, and artwork, and the polished and rustic cement terrazzo precast steps, along with the present day technology of the epoxy terrazzo floors; all illustrate the developmental progress of our terrazzo products, methods, and technologies.

The interior terrazzo, 78,000 square feet of 3/8" epoxy floors, flows throughout the public areas, restrooms, entries, bridges, and display areas of all three levels of the Museum Building and the adjoining Administration Building. The warm terrazzo field colors provide an inviting soft feeling, while the warm and cold accent colors define areas and orient the visitor to the many and varied attractions including the Imax Theatre, museum displays, and shops. Matching structural precast terrazzo interior treads provide easy ingress and egress to all three levels and the exterior of these buildings. The terrazzo artwork of a Foucault Pendulum and the terrazzo floor insets blend with the precast terrazzo stairs to produce a strikingly beautiful yet formally designed learning environment.

The exterior 55,000 square feet of granolithic terrazzo finish on the floors, handicap ramps, patio, and stair systems allow for artful expression, unequalled beauty, and ease of maintenance. The varied exterior terrazzo finishes also blend the soft and warm with the simple and austere colors to produce a very inviting and clean finish. Creative terrazzo artwork was used to produce five of the illustrative artwork for the "92 Indiana County" exterior display that are found all over the exterior of the building. On the north and south side of the building, rustic terrazzo is utilized to create the Nineteen State of the Union Medallions at the entrance canopy area as well as the canal courtyard entry area, ramps, and walks.



National Terrazzo & Mosaic Association 2002 Honor Award

# JOB OF THE YEAR

University of Wisconsin – Engineering Center Madison, Wisconsin



**Architect**  
Flad & Associates  
Madison, Wisconsin

**Designer/Artist**  
Scott Parsons  
Denver, Colorado

The 10,000 sq. ft. epoxy terrazzo floor at the University of Wisconsin – Engineering Center consists of 7 epoxy colors, 15 chip colors, and brass and zinc divider strips ranging from 16 gauge to 1/2". This project was originally specified as sand cushion terrazzo with a simple 4-color pattern. Sand cushion terrazzo could not accommodate the vibrant colors and strip layout that artist, Scott Parsons, proposed for this project so it was changed to epoxy terrazzo. Once the epoxy floor was approved, 900 linear feet of Precast Epoxy straight base was added to the

project, which required an 8th terrazzo color. Scott Parsons of Denver, Colorado designed the 7 color epoxy terrazzo floor that he calls "Algorithmic Tapestry". The terrazzo design is based on geometric algorithms commonly used by engineers from 20,000 years ago to the present.

Scott Parsons and his colleagues bent the divider strips for the entire 10,000 sq. ft terrazzo floor off site. They were shipped from Denver, Colorado to Madison, Wisconsin and installed by Scott & the terrazzo crews.

National Terrazzo & Mosaic Association 2002 Honor Award

Kansas City International Airport – Phase 1

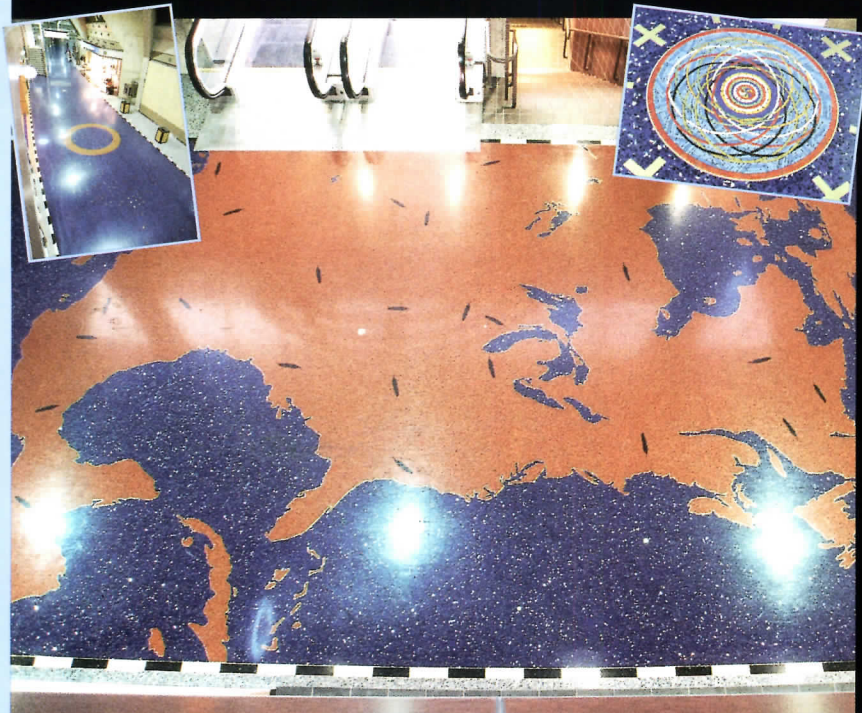
Kansas City, Missouri

Architect

HNTB Corporation  
Kansas City, Missouri

Designer/Artist

Kristin Jones /  
Andrew Ginzel  
New York, New York



This project is 160,200 square feet of epoxy terrazzo, comprising of 13 different colors, creating 20 different designs, which run the gamut from real to abstract.

The designer, Andrew Ginzel, states, “The terrazzo floor was inspired by the phenomena of flight, by dramatic shifts in perspective and by the mapping of air, of sky and land. The brass ‘plus’ and ‘minus’ symbols throughout suggests the infinite depth of space and images, which create a sense of groundlessness, of suspense, of flight, of freedom. The terrazzo is meant to represent inverted continuous bands of sky. Thus the person walking through the airport becomes and aerial viewer, like the eyes of a bird.”

National Terrazzo & Mosaic Association 2002 Honor Award

North Carolina Women’s & Children’s Hospital

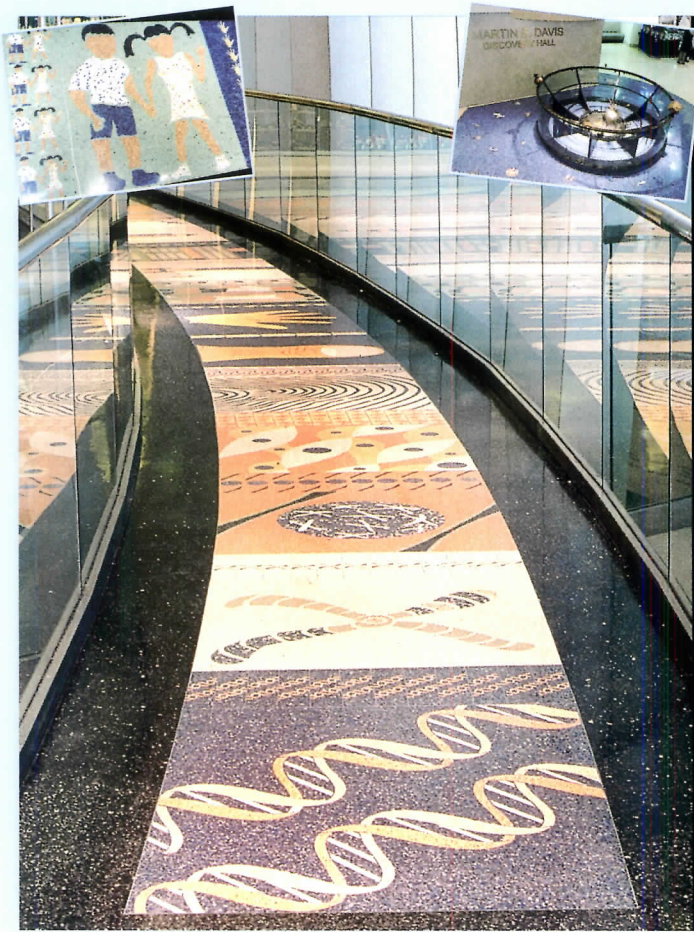
Chapel Hill, North Carolina

Architect

HKS  
Dallas, Texas

This hospital project is one of the largest public building projects in the history of North Carolina. Terrazzo was used in the new public concourse which connects two existing and two new healthcare facilities for its unique combination of design versatility and high durability. The design of the 400-foot long concourse floor is treated as a continuous canvas, which both unifies the facilities and creates a unique identity for each individual building entrance. Each lobby along the concourse features its own multi-colored, abstracted interpretation of a sunburst pattern, ranging from a playful and dynamic theme in the children’s hospital lobby and adjacent play area to a formal and dignified one in the women’s hospital lobby. Over twenty colors and five miles of zinc terrazzo strips were used to create the above floor. Terrazzo’s combination of beauty and versatility made it the material best suited to these varied and complex spaces and patterns.





National Terrazzo & Mosaic Association  
2002 Honor Award

Children's Hospital at Montefiore Medical Center  
Bronx, New York

**Architect**  
Schuman Lichtenstein Cuaman  
Efron Architects  
New York, New York

**Designer/Artist**  
Rockwell Group  
New York, New York

World-renowned architect David Rockwell from the Rockwell Group was contracted to design this hospital's interior with a state-of-the-art interactive and entertaining center. This design concept was greatly emphasized at "The Carl Sagan Discovery Center Lobby".

The terrazzo floors are one of the most important aspects of the lobby, and were designed to create a uniform, elegant flow of terrazzo floors and combine them with works of arts in terrazzo. Ms. Linda Laucirica, an Associate with Rockwell group, together with the project management team envisioned the use of terrazzo animals, figurines and organisms imbedded into the floors for creating focal points, changing the monotone colors of the terrazzo, and telling a story. Port Morris Tile & Marble Corp. and Durite Concepts, Inc. worked with Ms. Laucirica to develop terrazzo color samples, matrix, and shapes that could bring the vision to reality.

The stairs are off-white color terrazzo that Port Morris formed and cast-in-place, creating a monolithic appearance and a smooth transition between stair-tread and risers. A pendulum hanging from the ceiling registers the Earth's movements as projected on the lower lobby's terrazzo floor.

At the heart of this interactive lobby is a semi-circular suspension bridge that connects the main entrance to the split-level above. This bridge, envisioned by Ms. Laucirica and named "The Bridge of Life" tells the story of Creation and Evolution illustrated in precast "Durrazzo" terrazzo panels. The story begins with DNA fabric-of-life, to the construction of Single-Cell Chromosomes, Muscle Tissues, Human Finger Prints, Human Hand; to the Creation of Boy & Girl; and Human achievements, such as the Empire-State Building, The Montefiore Children's Hospital Building; and finally geographical location and distance such as the United States, New York State and The World showing North and South America. Each illustrated panel repeats itself in several micro-designs to the next adjacent panel, based on maintaining the same concept of distance-ratios, multiplication and scale. The fifteen 3' x 4' panels were fabricated with perfect curvatures to maintain the 12" curved black terrazzo border frame. The resulting design would have been impossible to duplicate with conventional methods.

National Terrazzo & Mosaic Association 2002 Honor Award

Charles W. Eiseman Performing Arts Center Richardson, Texas

**Architect**  
RTKL Associates  
Dallas, Texas

The terrazzo used at the Charles W. Eiseman Performing Arts Center allowed the architect greater design versatility, versus other flooring materials. The architect wanted larger spacing of panels within the simple three color pattern. This accent band patterned terrazzo provides just enough color change so as not to detract from the other clean-crisp-detailed design elements within this building. American Terrazzo Company, having worked closely with the architect through the design stage, gave vital information that allowed the architect to select the correct material choice.

The terrazzo flooring installed was 1/2" thick epoxy terrazzo, using a three color simple design pattern of white, gray, and black terrazzo. The terrazzo pattern was created using 16 gauge, 1/8" and 1/2" wide zinc divider strips. For added crack suppression of the concrete slab, a flexible epoxy membrane was used under the terrazzo floor. The terrazzo was used on all four levels in the public areas of this modernist structure. Although the terrazzo floor provides elegant detail to the lobby space, the uniqueness of the other terrazzo details clearly enhance the beauty of this building structure. There are eight stairways that utilized poured-in-place terrazzo, as well as ramps, walls and base. Of all the terrazzo details – the monumental stairway is a "work of art"! The architect created a floating stairway, which connects all levels. The terrazzo steps were poured-in-place over steel – on the tread – front, back and bottom. All ground and polished in place. The open riser creates the reality of suspension.





National Terrazzo & Mosaic Association 2002 Honor Award

Louise Obici Memorial Hospital

Suffolk, Virginia

*Architect*

HKS, Inc.

Richmond, Virginia

*Designer/Artist*

Mitchell Associates

Wilmington, Delaware



When the design of the new Louise Obici Memorial Hospital evolved to have a very large entry rotunda and atrium space, the design team felt that it should have a design impact. Because of its design flexibility, attractiveness, durability and ease of maintenance, epoxy terrazzo became the natural flooring material of choice. The six color 15,000 sq. ft. design incorporates a "kaleidoscope" effect at the entry rotunda, with axes extending into the main lobby and atrium areas. The free flowing curves accentuate the organic feeling of the main lobby and atrium space, as well as the lower level garden area. Clear, timeless design colors were chosen to coordinate with the bright rich blue of the Obici logo, at the center of the rotunda, and to work well at the first floor, as well as looking down from above. This outstanding use of terrazzo is complemented by two large precast terrazzo monumental stairways, as well as terrazzo base throughout.

National Terrazzo & Mosaic Association 2002 Honor Award

Alliant Energy World Headquarters

Madison, Wisconsin

*Architect*

Tilton Kelly & Bell  
Chicago, Illinois

The application of subtle colors into the complex design allowed the designer to express the magnitude that the four-story rotunda has on this well designed corporate headquarters. All of the strip work was formed and installed in the field creating a need for exceptional detail to workmanship. The terrazzo installation encompasses the first two floors of the area and the circular application enhances the design of the rotunda itself.



National Terrazzo & Mosaic Association 2002 Honor Award

David Allen Company - Corporate Headquarters

Raleigh, North Carolina

SPECIAL AWARD



Architect

Cannon Architects  
Raleigh, North Carolina

When David Allen Company built its new corporate headquarters, the owners wanted to showcase its terrazzo, mosaic, marble and tile as part of the building. The design team, consisting of Chris Garris, Architect; Robert Roberson, CEO; and Vicky Wilson, David Allen Company's artist; recognized that, although terrazzo has been widely used for centuries, many people of the present generation, including architects and owners, are just discovering some of the exceptional opportunities to use terrazzo in a more creative and artistic manner.

The corridors are epoxy terrazzo featuring a marble mosaic inlay design by the company's artist and executed by David Allen Company craftsmen. Decorative mosaics are features at the end of corridors. Throughout the corridors, hand-cut mosaic tiles are used for dividers, creating the old Venetian appearance.

The precast terrazzo stair risers, made of epoxy terrazzo, required casting each of the four colors in panels. The individual designs were cut out with the water jet process and individual pieces inlaid into the adjoining piece. They were then polished, providing a smooth surface.

The office floor of one executive was copied from an old Venetian decorative terrazzo floor of the eighteenth-century Palazzo Pisani Moretta, which overlooks Venice's Grand Canal, and is still in use today. A tightly packed design of oxblood red and alpine-colored circles features flowers and diamonds in yellow Verona chips on a background of Persian cream, Italian Botticino, and mother-of-pearl chips. It is decorated in the corners and on the centerline with floral motifs in the same materials. The intricate pattern was accomplished by the use of a water jet machine. Each piece of the pattern was cut into shape, applied to the subsurface, and the open spaces filled with terrazzo.

National Terrazzo & Mosaic Association 2002 Honor Award

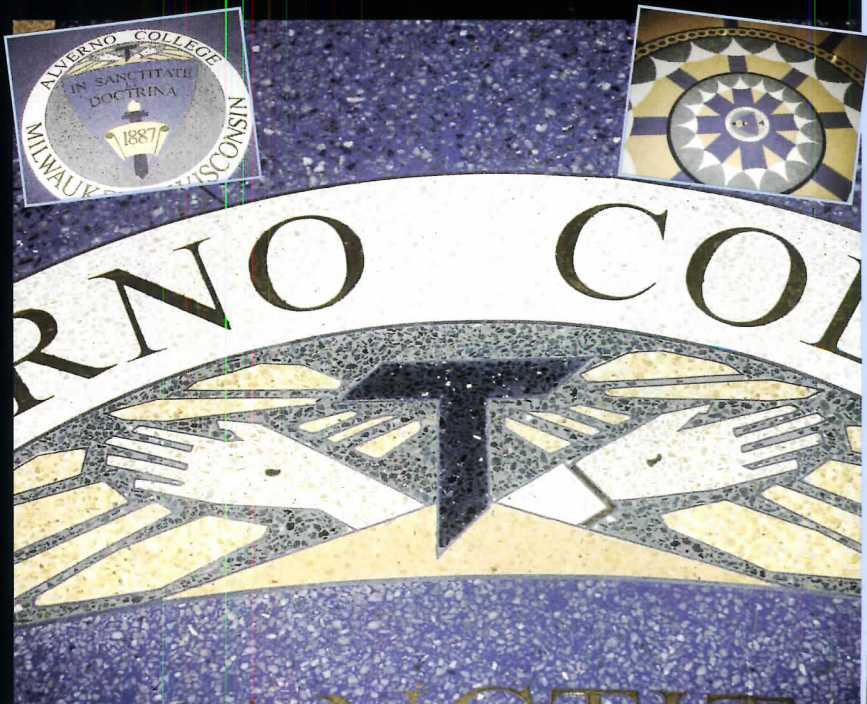
Alverno College – Teaching, Learning & Technology Center

Milwaukee, Wisconsin

Architect

Eppstein Uhen Architects  
Milwaukee, Wisconsin

This intricate design in a sand cushion terrazzo application complicated the installation of this well executed terrazzo project. The fact, that except for the center logo itself which is approximately 40 sq. ft., the entire strip application was field formed and installed in wet concrete makes this job an exercise in absolute detail and extremely critical workmanship. Terrazzo was obviously selected because of its ability to allow the imagination and creativity of the designer to be transferred from paper to the actual application and yet still be able to offer the long-term practicality of the product itself.



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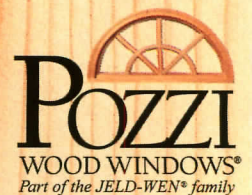
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# Of dolphins, comedy, and architecture: Remembering Doug Michels and Ant Farm

## Critique

By Michael Sorkin

On June 14, just a week shy of his 60th birthday, architect Doug Michels was killed in a freak accident. It happened in Australia, at a place called Eden Bay, where Doug was consulting on a movie about killer whales and dolphins, an abiding interest of his. He died after falling from the ladder of an observation tower where he had gone to view the marine life in the bay.

Michels was that rarest and most vital of characters: a comedian. The comedian's privilege and responsibility is to create improbable but telling cultural bifurcations, to provide a comfortable home for incompatible ideas, to insist that what can be thought can be expressed. By proposing juxtapositions just beyond what we know, comedians decenter us with our own spontaneous laughter at the unexpected.

In 1968, Doug partnered with fellow architect Chip Lord (later joined by Curtis Schrier, Hudson Marquez, and a free-floating collection of collaborators) to found that greatest of American architectural countercultural groups, Ant Farm. Responding to comedic, utopian, and critical muses, Ant Farm produced a series of immortal projects that spoke to both the hopes and anxieties of its generation. *Cadillac Ranch* (that taxonomy of caddies nose down in the desert), *Media Burn* (custom supercar crashing through a wall of flaming televisions), and *Eternal Frame* (a

*Contributing editor Michael Sorkin heads the urban planning program at the City College of New York.*

reenactment of the Kennedy assassination in Dealy Plaza with Doug playing the role of Jackie) provided some of the most indelible images of the time and were acute critiques of our culture of mediation and consumption.

Looking back on the work of Ant Farm's members recently while writing a catalog essay for an exhibition of their work set to open at the Berkeley Art Museum in California in January 2004, I was struck not simply by their incisive comedy but by their astonishing and underappreciated careers as architects and researchers. With uncanny prescience, Ant Farm undertook projects that darted in and out of the sites of invention rapidly reconfiguring the world. From nomadism to inflatables to car culture to theme parking to environmentalism to electronic space, Ant Farm was there before most of us had a clue.

Many of these projects were "real" in a way that was beyond jokey forms. Was it Lenin who said that irony and love were the qualities of a true revolutionary? Ant Farm was deeply committed to a revolution with a laugh track, not one of dour homogeneity and forced altruism. It was a revolution for freedom, self-expression, and joy; for sex, drugs, and rock and roll. And architecture. Ant Farm worked hard to envision architectures of pleasure and communion. Its members were brilliant observers of the modes by which architecture is produced and the reality of how architecture's relation-

ship to the rituals of sociability and common place is expressed. But they were eagle-eyed in their mockery of the coerced society of the media and "the Man's" styles of control.

After Ant Farm broke up follow-

studied at Yale, held a Loeb Fellowship at Harvard, taught at a number of schools but was far too subversive for tenure. Fascinated and repelled by power, he hung around the scenes of its reproduction. He lived for years in Washington, D.C., intoxicated by proximity to the druids of empire, impressed and appalled and engaged in his totally singular, wild and crazy, way.

Dolphins were a longstanding leitmotif for Doug. His obsession with them was complicated, made magic by an early offshore encounter with one during an acid



Cadillac Ranch in Amarillo (above and top) is part of Ant Farm's wry legacy.

ing a 1978 fire that destroyed its San Francisco studio, Doug simply kept going. He investigated the same conceptual edge—the band of ambiguity between official and alternative culture—designing everything from amusement parks to doll houses to bathing suits to private homes. And even as he pursued one fantastical project after another, he kept day jobs with the likes of HOK and Philip Johnson. He

trip. Doug was intrigued by their intelligence and their language, and by the possibility of interspecies communication suggested by these attributes. Somehow, for him, dolphins embodied a contemporary version of the state of nature, a paradise lost but perhaps recoverable. His appreciation for these creatures was further deepened by the fact that they had another, darker side. Flipper could be murderous, filled

## Critique

with rage. And dolphins could be deeply sexual, orgasmic.

That this attraction was obsessive was clear in the way Doug's life as an architect returned again and again to the dolphin modular. It was surely the dark side of the dolphins that humanized them, kept his interest going, and led him to do his projects to accommodate them in his architecture. Among these were his scheme for a *Dolphin Embassy* (begun during the Ant Farm days), a floating research station meant to facilitate interspecies communication; *Bluestar*, an amazing space station positioned in geosynchronous orbit and housing a crew of dolphins and humans engaged in unspecified mental experiments; and a design for a new White House for a dolphin president.

*Bluestar* was the outstanding dolphin project, an unforgettable image designed on the model of

Saturn: orb surrounded by rings. Human habitation took place in the rings, which were set in motion with the appropriate gravitational spin. Dolphins lived in a sphere of water (what liquids do in weightlessness) within a gigantic glass sphere (the ultimate think tank), where somehow a collectivized, harmonized brain was to be produced to roll back the frontiers of knowledge in a charged atmosphere of joy.

It was Doug's great genius that he never gave up pushing his dreams in the direction of more familiar styles of reality. At the time he did *Bluestar*, Doug was working at HOK and managed to persuade them not simply to let him proceed with the project but to subsidize it. The piece later attracted the attention of NASA and was displayed at the AIA headquarters in the Octagon. Its final incarnation was as a video game—unique for its non-

violent subject—which, after years of development, was destroyed by a software glitch. Had Doug lived a few more years, it would surely have found another incarnation.

A more recent project was the celebrated *National Sofa*, Doug's entry in a competition for the redesign of Lafayette Square in Washington, D.C. The sofa—several hundred feet long—was located along Pennsylvania Avenue, facing the White House. Periodically, a giant TV was to pop out of the ground to allow those seated on the sofa to interact with the president across the street. It was an amazingly incisive piece of satire, spanning questions of public space, electronic democracy, and the phony dignities of official styles of design. Classic Doug in its hilarious premise and in the ardent, deadpan style in which he promoted it.

As news of Doug's death quickly got around, an amazing electronic wake began. From all over the planet, his friends and colleagues began to write tales and testimonials. The picture that

emerged was one not just of crackling intelligence and super talent but also of enormous generosity, a willingness to reply at length to students writing out of the blue, and a tenacious devotion to friends to whom he sent the most amazing stream of words and images, festooned with weird pictures from his wonderful hand and legendary rubber-stamp collection. Doug was one of the premier correspondents of the electronic age, and a revelation of the outpouring of emotion following his death was of how many of us have a stash of postcards, letters, cartoons, and projects that Doug sent out over the years.

He wrote us to the end. Many of his friends received postcards from the now ironically named Eden Bay in the days leading up to the accident, a sad retrospective countdown. More eerie, many of us got cards even after his death had become known. And the thought we all had was the same: If anyone can communicate from the beyond, it would be Doug. ■

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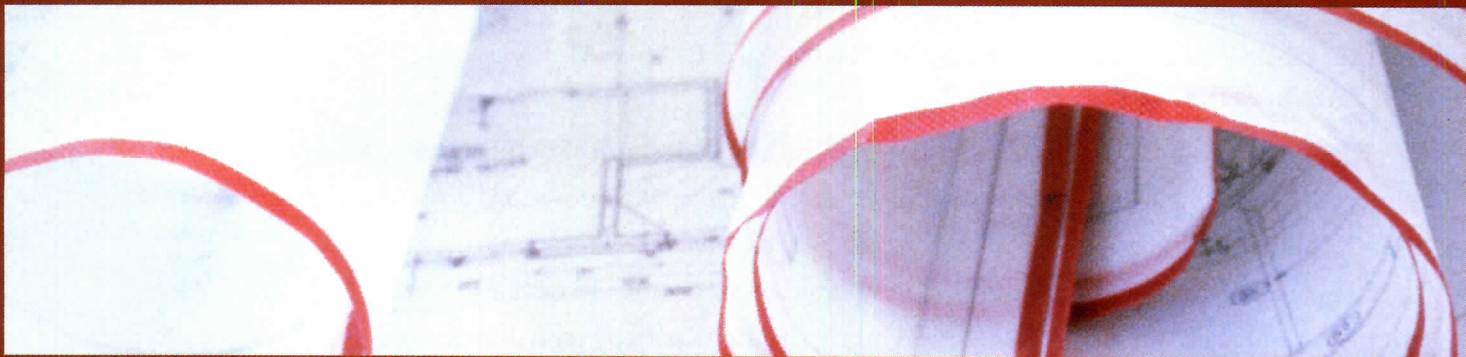
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# Giving versus getting: Altruism is alive and well in architecture

## Practice Matters

By Jane F. Kolleeny

Larry Scarpa, AIA, of Pugh Scarpa Kodama, never gave much thought to why he ended up designing facilities for the downtrodden of Los Angeles. Perhaps his blue-collar roots or watching his father work three jobs to support the family contain the seeds of his motivation. Michael Pyatok, FAIA, of Pyatok Associates in Oakland, recalls his flight from tenement-building poverty into a scholarship-financed Ivy League education in architecture, but the impact of his early origins never left him—his firm also focuses solely on architecture for those who cannot afford it.

These architects are not alone; many have a heightened sense of civic duty and design integrity that has little to do with financial gain. This article attempts to explore how architects provide services that are free or offered at a reduced cost to clients who are either nonprofits or too poor to afford services, and what means they used to accomplish it.

Discounting unintentionally donated services (often motivated by the aspiration to perfect a design), statistics show that many architects do indeed provide pro bono services deliberately. AIA's 2000–2002 Firm Survey shows 59 percent of architects for the year ending 1999 reported providing no-cost services to clients. This survey included approximately 14,500 respondents nationwide, indicating that altruism is alive and well in architecture. Yet how are these architects able to manage projects that include principled civic and humanitarian goals with accountability and practicality?

### How architects serve charitable organizations

Carol Burns, AIA, of Taylor & Burns Architects, Boston, taught at the Harvard Graduate School of Design in the early part of her career. During that time, her firm designed Casa Nueva Vida, a woman's shelter in Boston. "We devoted time to the project beyond the small fee we were paid because we believed that it was a good cause and our basic livelihood was secured as full-time faculty." Many junior faculty members at architecture schools launch independent architectural practices by banking on the relative stability of income from teaching. It's not uncommon for them to take on low-paying projects to land or complete a commission they consider important.

Finding ways to balance pro bono or low-fee work with commercially based work is common, so that the ratios allow the firm to retain profitability. Dowling Thorpe James in Boulder, Colorado, never goes over 10 percent pro bono at any time; Pyatok Associates subsidizes low-fee work with student dormitories, which typically pay a higher fee. "We have discovered that designing student housing for universities is rewarded with fees that come closer to what it takes to cover the costs of our services. Mixing this type of work with our



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affordable-housing work helps stabilize our practice."

Some architects simply volunteer. The AIA-founded committee Search for Shelter, long defunct as an established arm of the AIA, lives a healthy life in Brooklyn Center, Minnesota, where firms such as Blumentals Architecture volunteer to perform weekend design charrettes under its auspices for provider agencies dealing with the homeless.

Some firms ease into a project by offering pre-design-phase studies and advice at no charge, guiding low-income clients toward gaining the confidence and knowledge they need to undertake a project. These firms recoup their losses on the delivery end of the project. Magnusson Architecture and Planning (MAP), in New York City,

spends a minimum of 10 hours a week working on behalf of Nos Quedamos, a community advocacy group in the South Bronx. Petr Stand, a principal at MAP, notes that the architectural commissions themselves are never pro bono, "yet the firm conducts zoning studies and interviews developers, builders, and contractors interested in working with the local community group free of charge." The architects help the community that controls much of the area's development, which prepares the ground for future opportunities for themselves—a light at the end of the tunnel.

### The value of good publicity

What firm in America doesn't make an effort to let the public know it supports charitable causes? There is no doubt that altruism generates

## Practice Matters

good public relations. Architecture for Humanity, founded by Cameron Sinclair, brings attention to the needs of Third World countries through sponsorship of high-profile competitions that receive considerable publicity, encouraging architects to participate both as a show of goodwill and an opportunity to gain public attention. Some firms, such

that included a cash prize and an exhibition of the winning entries. This approach creates buzz for the architects who participate and also shifts the financial burden of sponsoring such work from the architect to funding agencies that focus on social services. Because the architect relies less on government subsidies to fund these projects, there is freedom

## RESULTS OF THE AIA FIRM SURVEY INDICATED THAT ALTRUISM IS ALIVE AND WELL IN ARCHITECTURE.

as Mostue & Associates, Boston, find that their commitment to socially meaningful work attracts high-calibre job applicants.

Livable Places, a nonprofit group in Los Angeles, undertakes charitable projects and offers high-profile attention. Under a National Endowment for the Arts grant, it hosted an urban-design competition

to decide what is best for the project without a nondesign professional imposing constraints.

The appropriately named Robin Hood Foundation, which fights poverty in New York City, developed a program with the Board of Education to build 31 libraries in public schools to combat illiteracy. It enlisted prominent architects—including Tod Williams



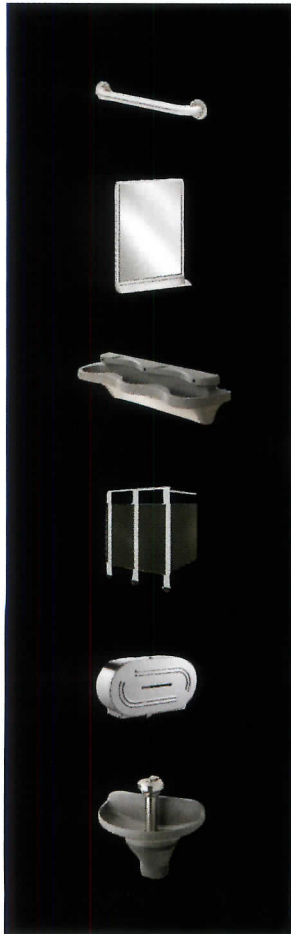
Part of a revitalization in a heavily trafficked neighborhood of Oakland, Pyatok Associates' Deborah Muse Manor includes affordable housing and community services.

Billie Tsien, Gluckman Mayner, and 1100 Architects, among others—to design these facilities at reduced fees. Quality design elevates the profile of the client's cause in the eyes of the public and provides the architects an opportunity to give something back. Tod Williams says, "We were happy to donate our first library design without pay. This year Robin Hood is compensating architects, but we continue to

do this work for less than our typical fees. We do the work because we know it is an investment in changing peoples' lives for the better."

### Help comes outside the field of architecture

Susan Fredman, a former interior designer in private practice in Chicago, made a most interesting discovery when she tentatively



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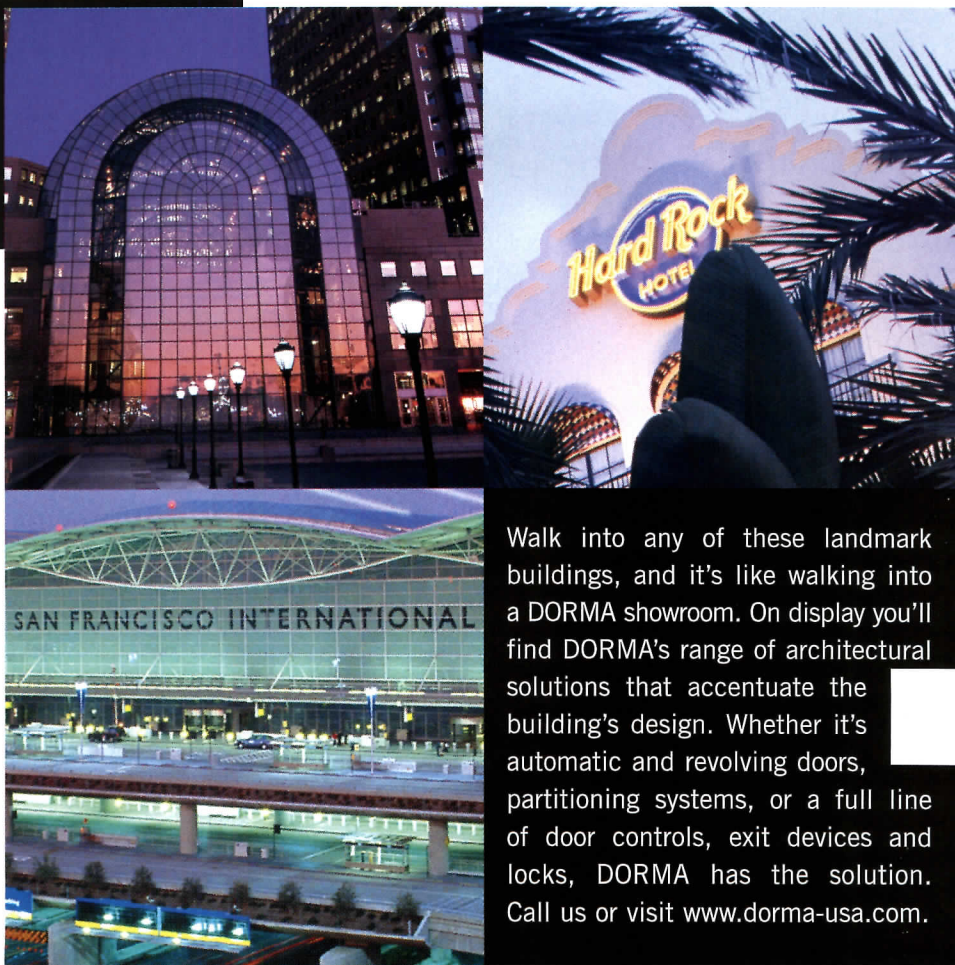
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asked vendors to donate goods to Lake County Council Against Sexual Assault, which had just undertaken the design of a facility. She discovered a great excess of products in the industry and a willingness among building-materials manufacturers to help charitable causes. She created a nonprofit organization

called Supporting the Spirit that matches vendors and design services with needy clients. It is not uncommon for large building-products companies like Whirlpool, Dow Chemical, and Hunter-Douglas to donate their products on a regular basis to Habitat for Humanity and other causes in exchange for

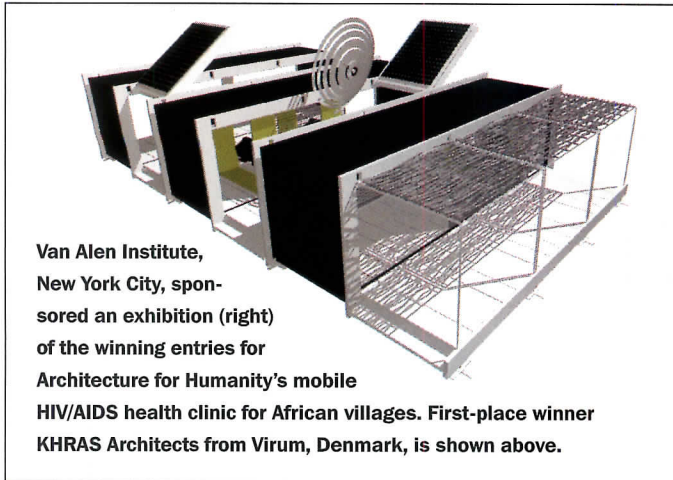
sponsorships and publicity.

Help on the client side happens, too. Some cities and states across the nation have become creative at raising money in an effort to repair the fabric of their communities. A number of interesting examples were recently noted in *The Christian Science Monitor*. The state of Kentucky uses unclaimed lottery funds to facilitate low-income families owning homes; Massachusetts,

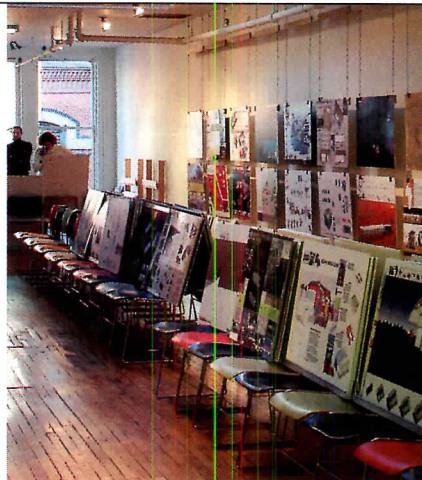
Maine, and Connecticut collaborate with the National Trust for Historic Preservation to renovate abandoned houses for the working poor; and Chicago's mayor offers incentives to employers to help low- and middle-income workers with housing costs. In Minneapolis, the mayor created a for-profit company to make prefabricated homes for the underprivileged, and in Baltimore, the city is reclaiming abandoned property to encourage developers and nonprofit groups to upgrade them. Such progressive steps on the part of commercial or institutional entities shifts or shares the burden of charity with architects.

### Roadblocks to pro bono work

Any architect who has undertaken projects for the economically challenged client will tell you there is a huge administrative stumbling block standing in the way. Assessing and understanding the vicissitudes of government subsidies, funding streams, and regulatory parameters



Van Alen Institute, New York City, sponsored an exhibition (right) of the winning entries for Architecture for Humanity's mobile HIV/AIDS health clinic for African villages. First-place winner KHRAS Architects from Virum, Denmark, is shown above.



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## Practice Matters

is essential to working for charitable organizations. Such work can have four to 10 funding sources. In addition, quality of design is at risk. Says Larry Scarpa, "HUD has their specific design guidelines, the local jurisdiction has theirs; in most cases, the guidelines conflict with each other. If you have funding from each source, you need to run the gauntlet of the most acceptable common denominator. It is hell if you aspire to provide a place of inspiration."

### THERE IS A HUGE STUMBLING BLOCK STANDING IN THE WAY OF THE ARCHITECT WHO WORKS FOR CHARITABLE ORGANIZATIONS.

In addition to administrative difficulties, there are issues of liability. Wouldn't it be ironic if your firm undertook pro bono work for a needy client and then that client or a third party sued you for dam-

ages? According to Barry B. LePatner, of the legal and business advisers firm LePatner & Associates, this could happen. The same "standard of care" applies to the work product whether or not one is paid. "The issue will be whether the design professional signed or sealed their documents," says LePatner. The only way to attempt to withdraw from liability would be for the architect to get the client to indemnify him or her from any claims, "produce design documents with-

out signing and sealing them, or label them 'not for construction,' thus shifting the burden from the architect." Most design professionals do not think about these issues, nor, according to LePatner,



Tod Williams and Billie Tsien designed the library at P.S. 101 in East Harlem, New York City, as part of a Robin Hood Foundation program to fight illiteracy.

are there any known lawsuits that have triggered such claims. "Given that architects are often generous to a fault, it behooves them to secure the added protection that is their due," he says.

Is the architect covered by insurance to the same degree as he or she would be if performing fee-based services? According to Lorna Parsons of Victor O. Schinnerer & Company, a large provider of insurance to architects, the answer is yes.

Parsons notes, "Even so, every firm should have a company stance on pro bono services, because claims out of services can impact the firm's policy. First, the architect's firm should be notified if a staff member is performing pro bono services, since it is the firm's insurance that will cover the architect." Second, Parsons warns against "moonlighting." If the architectural firm's insurance policy does not include moonlighting, the firm is not responsible.

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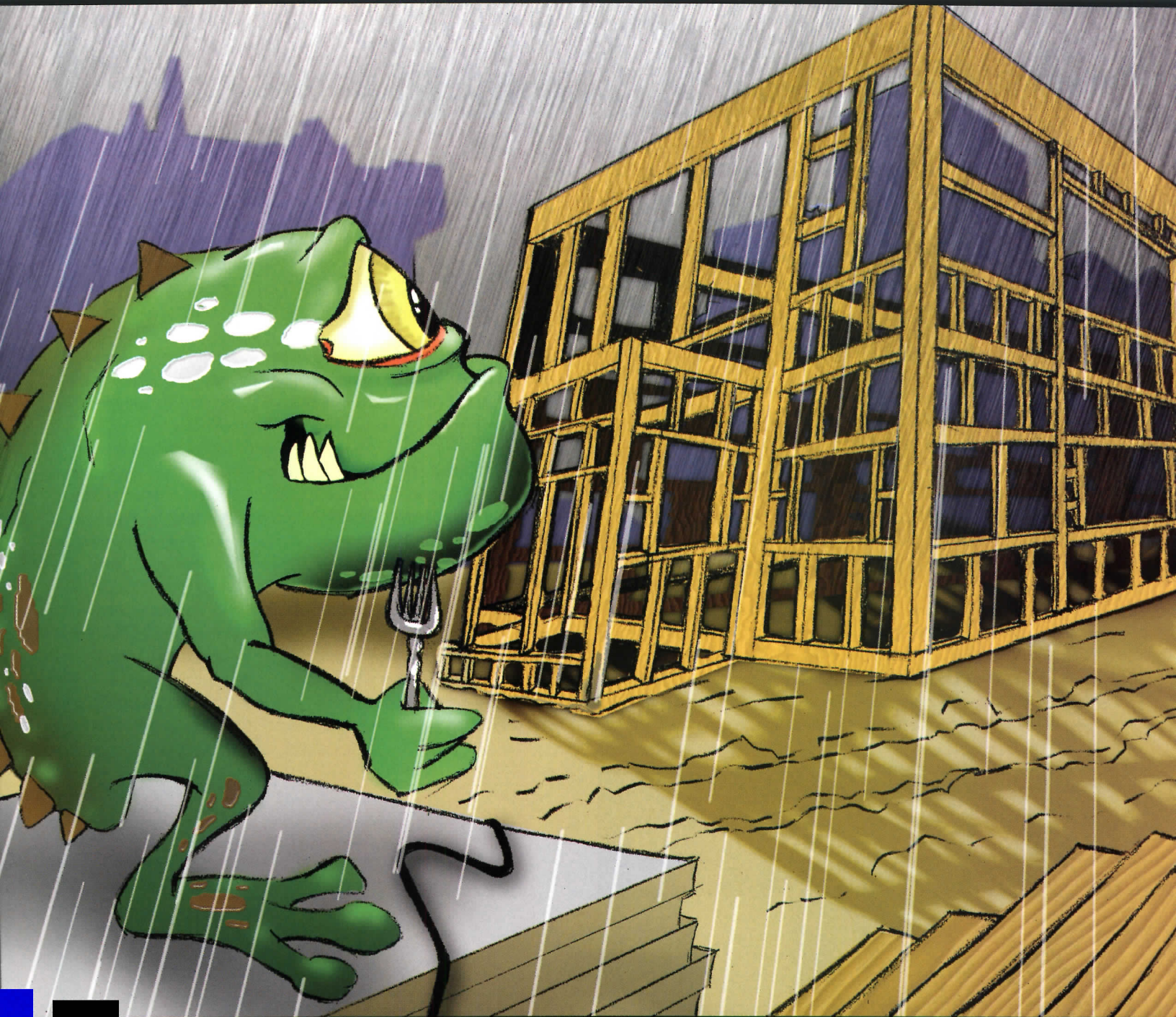
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Just as personal and corporate donations are tax deductible, one might think an architect could receive a tax benefit from offering pro bono services, but there is no silver lining here. If a professional provides no-cost services for a charity, the time provided is not deductible as a charitable contribution under the tax laws, says LePatner, but out-of-

while they have such a strong civic urge, they must nevertheless cope with tight profit margins and long working hours, causing them to question the practicality of their generosity. This, combined with liability issues and complicated red tape for low-income clients, makes being generous that much more difficult.

### THE VALUE OF AN ARCHITECT'S TIME PROVIDING NO-COST SERVICES FOR A CHARITY IS NOT TAX DEDUCTIBLE.

pocket expenses, such as the cost of transportation and/or meals, are deductible.

#### Giving or not giving it away

With all the obstacles and lack of perks, it's amazing that so many architects feel a deep commitment to the underprivileged. The bane of the architect's profession is that

One might feel that giving services away potentially undermines the value of architect's fees altogether. Victoria Beach, AIA, of Beach Design, Cambridge, Massachusetts, who is chair of the Boston Society of Architects Ethics Forum and a professor at Harvard Design School, feels this is not true, since these are services that no one will ever pay



**Dan Solomon, FAIA, has spent much of his life focusing on affordable housing and repairing the urban fabric of cities. An example of this is 101 San Fernando (above), in San Jose, Calif.**

sustain their services to others [who cannot pay]."

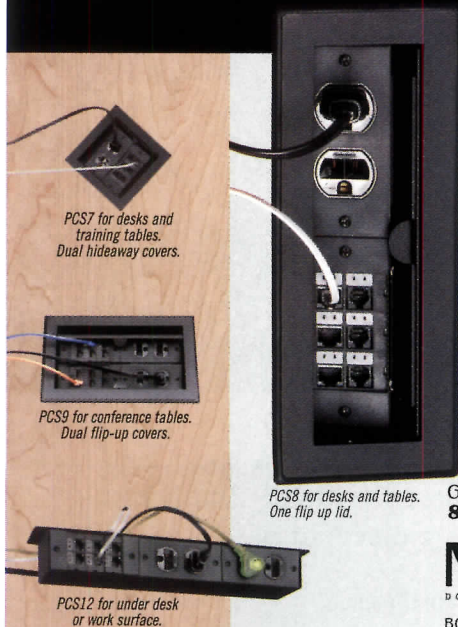
Some architects feel that charitable activity within the community does far more to focus attention on architects as meaningful change makers in society than the perpetual "black cape" architects, posing for photo-ops, ready to undertake the biggest, most prominently positioned competition for an iconic building. The field of architecture, of

(much) for and would otherwise not happen if not through volunteerism. "The very definition of the profession and its protection through licensure obliges it and deems it as vital to society, regardless of a client's ability to pay." She continues that free or reduced-rate services (including competitions) provided in order to get "a juicy commission from someone who can and will pay has wrought havoc on the capacity of architects to

course, encompasses both of these aspects of the profession and more. Princeton Architectural Press just came out with a book entitled *Good Deeds, Good Design: Community Service Through Architecture*, by Bryan Bell, and humanitarian service is the subject of the 16th Monterey Design Conference in Pacific Grove, California, on September 12-14. It seems that altruism is in the air. ■

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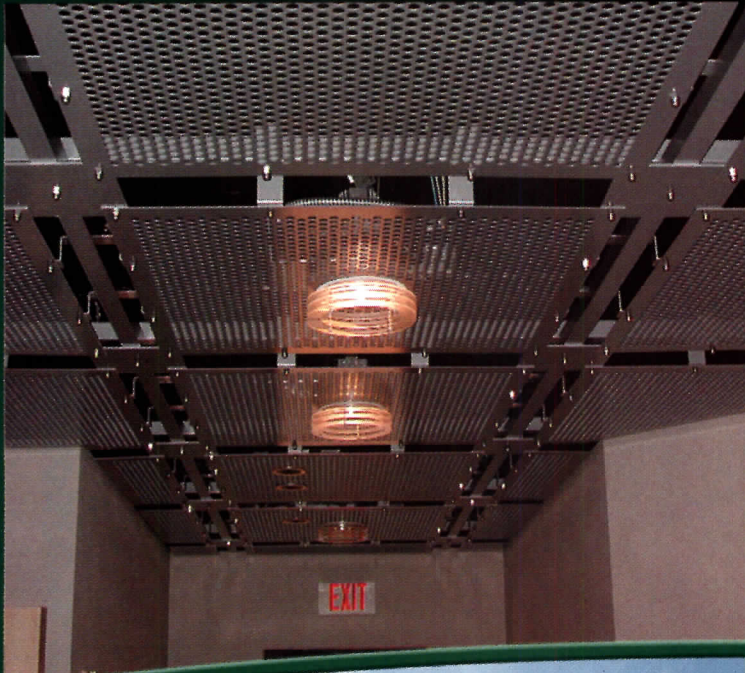
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# History lessons: From critical surveys of Modernism to the villas of Palladio

## Books

**Modern Architecture**, by Alan Colquhoun. New York: Oxford University Press, 2002, 272 pages, \$19.

During the last three decades of the 20th century, a handful of British architects helped reshape the study of architectural history in America by emphasizing its theoretical and critical underpinnings. The British invasion was arguably initiated by Colin Rowe in the 1950s, but the full armada arrived on these theory-parched shores in the late 1960s and early 1970s, when Kenneth Frampton, Anthony Vidler, Robin Middleton, and Alan Colquhoun disembarked and headed for East Coast universities. Colquhoun, at Princeton University between 1966 and 1996, quickly established his reputation through essays for *Oppositions*, *Assemblage*, and other journals of ideas. His analyses of the philosophical and cultural contexts of architecture are clear, measured, and avoid ideology while staying closely tethered to physical and material facts.

*Modern Architecture*, written as part of the Oxford History of Art series, should be read as a sequel to Barry Bergdoll's impressive synthesis, *European Architecture 1750–1890*, which appeared in 2000. Although Colquhoun's title omits beginning and end dates—

because Colquhoun hates to confine his subject chronologically—the book begins with 1890 and ends around 1965. The analysis extends from Art Nouveau to the architecture of Louis Kahn, and focuses on the geographic areas where Modern architecture was most prevalent—continental Europe, Great Britain, Scandinavia, Russia, and the United States.

Colquhoun's discussion of the World's Columbian Exposition of 1893 is a compelling example of his search for the sociocultural ideas

influencing architecture. He explains the preference for a Classical style in the White City as a reflection of the “nationalistic and collectivist spirit” of the newly “emerging corporatism of industry and finance.” The laissez-faire economic spirit, characterized by the “individualistic creativity” of, say, Louis Sullivan's architecture, was disappearing. This was an age when monopoly capitalism and an open-door trade policy would change the American psyche, as was well understood by the fair's planner, Daniel Burnham.

And yet, Colquhoun doesn't leave Chicago without noting that, as corrupt as it was, the city was also the seedbed for “vigorous social reform.” The University of Chicago became a center for the study of urban sociology in 1892, even before Jane Addams founded

Hull House in 1897, where Frank Lloyd Wright would lecture on “The Art and Craft of the Machine.”

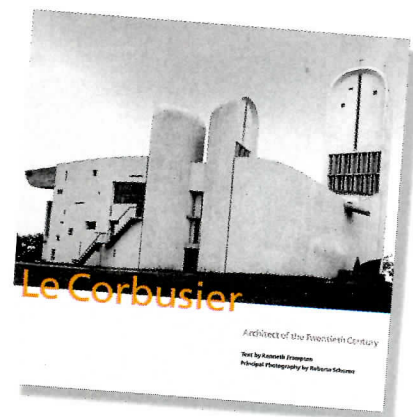
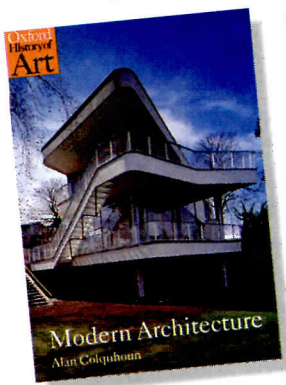
Against Wright's unifying attitude toward craft and the machine, Colquhoun pits the provocative and quintessentially ironic Viennese architect Adolf Loos. The Austrian polemicist-provocateur rejected the possibility that the useful, everyday object could or should be considered art. For Loos, craftsman and artist were separate: Art for Loos was not about social responsibility. Art (and architecture), he believed, should be concerned with a visionary and critical “free creation,” or with the embodiment of collective memory, as represented by the monument and the tomb.

In a public discussion last fall, Colquhoun lamented leaving out Stirling and Gowan's Engineering Building at Leicester University (1959–63), apologizing for the procrustean bed these types of surveys create.

While he may want to include more on British postwar architecture in a future edition, we may want him to deal more with American architecture between the wars, as well. His coverage of American buildings between the 1890s and 1945 is meager, with only quick takes on Rudolf Schindler and Richard Neutra's arrival and influence in the 1920s. As for Howe and Lescaze's significant American skyscraper, the PSFS building in Philadelphia (1932), which was the first International Style skyscraper built anywhere, you will have to go to another Brit's history—William

Curtis's *Modern Architecture Since 1900* (Phaidon, 1996)—to find out what it represented. And then there are the typographical errors (Edward Durrell—instead of Durell—Stone, Midway Pleasance—instead of Plaisance) characteristic of an age when publishing houses no longer proofread as assiduously as they once did.

Colquhoun's clear, succinct synthesis of major architectural events and ideas is accompanied by color (as well as black and white) photographs and a timeline of art and architectural events. Complementing the timeline are literary, scientific, cultural, and political high points, which add to the volume's value and contribution. *Suzanne Stephens*



**Le Corbusier: Architect of the Twentieth Century**, by Kenneth Frampton, with photographs by Roberto Schezen. New York: Harry N. Abrams, 2002, 208 pages, \$65.

The second of two books the eminent Columbia University critic and

## Books

historian has published recently on Le Corbusier, this volume consists mainly of recent large-format photographs by Roberto Schezen. They amply illustrate 17 well-known projects, which range from the architect's Purist villas of the 1920s to the late work in France and India.

Schezen's photographs are accompanied by short texts that describe the circumstances of the design of each work and, in some cases, the later vicissitudes of the buildings. The book is a useful visual resource, and the texts concisely synthesize a great deal of historical material from other sources, much of it still only available in French. These brief chapters are clear and informative, and the book serves as a good introduction for those unfamiliar with Corbu's work.

One can argue with some of the projects omitted: the Curruchet House in Argentina (1949), the

"regionalist" houses in France from the 1930s, and the Brazilian Ministry of Education and Health in Rio (1936-42), designed with Oscar Niemeyer, Lúcio Costa, Affonso Reidy. The featured works, however, which include the Villa Savoye, the Swiss Pavilion dormitory, the Unité in Marseilles, Ronchamp, Chandigarh, and the monastery of La Tourette, are well documented, and the photographs reveal new aspects of Le Corbusier's widely varying design responses over his long career.

The book also includes many of Corbu's conceptual sketches, which help to explain the ideas behind the work and address issues of site and climate in immediately comprehensible ways. *Le Corbusier: Architect of the Twentieth Century* makes a strong case for the master's continuing importance to architectural design in the 21st century.

*Eric Mumford*

**Chandigarh's Le Corbusier: The Struggle for Modernity in Postcolonial India**, by Vikramaditya Prakash. Seattle: University of Washington Press, 2002, 179 pages, \$35.

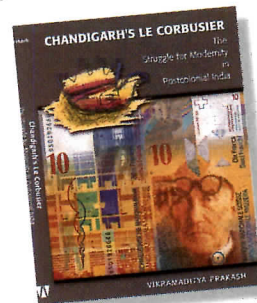
Why do we need another book about Le Corbusier? Since well before his death in 1965, the prolific French-Swiss architect has been the center of a virtual industry of publications about his work. In the case of Prakash's book, the answer is that while Le Corbusier as the hero (or villain) of Western architecture is a story that has often been told, his ambiguous standing outside of Europe and North America has seldom been thoughtfully considered. Although the Punjabi provincial capital of Chandigarh has not been the model for future Indian urbanization that Le Corbusier intended, his deep inter-

est in the problem of creating a monumental government complex for a new state in the first modern postcolonial nation has had many consequences for architecture around the world.

Prakash intends his book to be accessible not only to architects but also, as he puts it, to "multiple audiences in history and theory,"

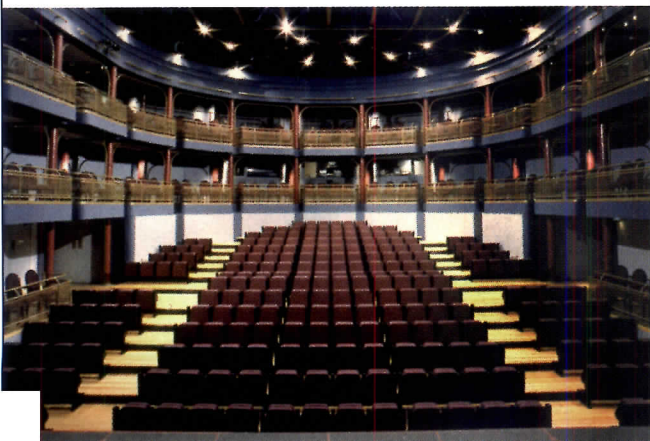
including those interested in the history of South Asia in particular. His own background as the son of one of the Indian architects involved with the design of Chandigarh has both advantages and disadvantages.

While he tries to keep in mind that the general reader has little knowledge of Le Corbusier's work, modern India, or postcolonial theory, the book in fact requires some knowledge of all three to be appreciated. Nevertheless, *Chandigarh's Le Corbusier* offers a welcome introduction to the complexities of the intersections between



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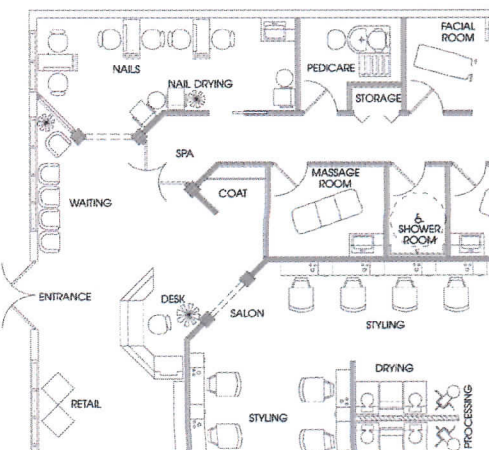
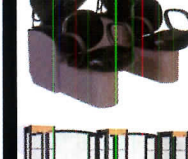
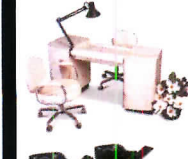


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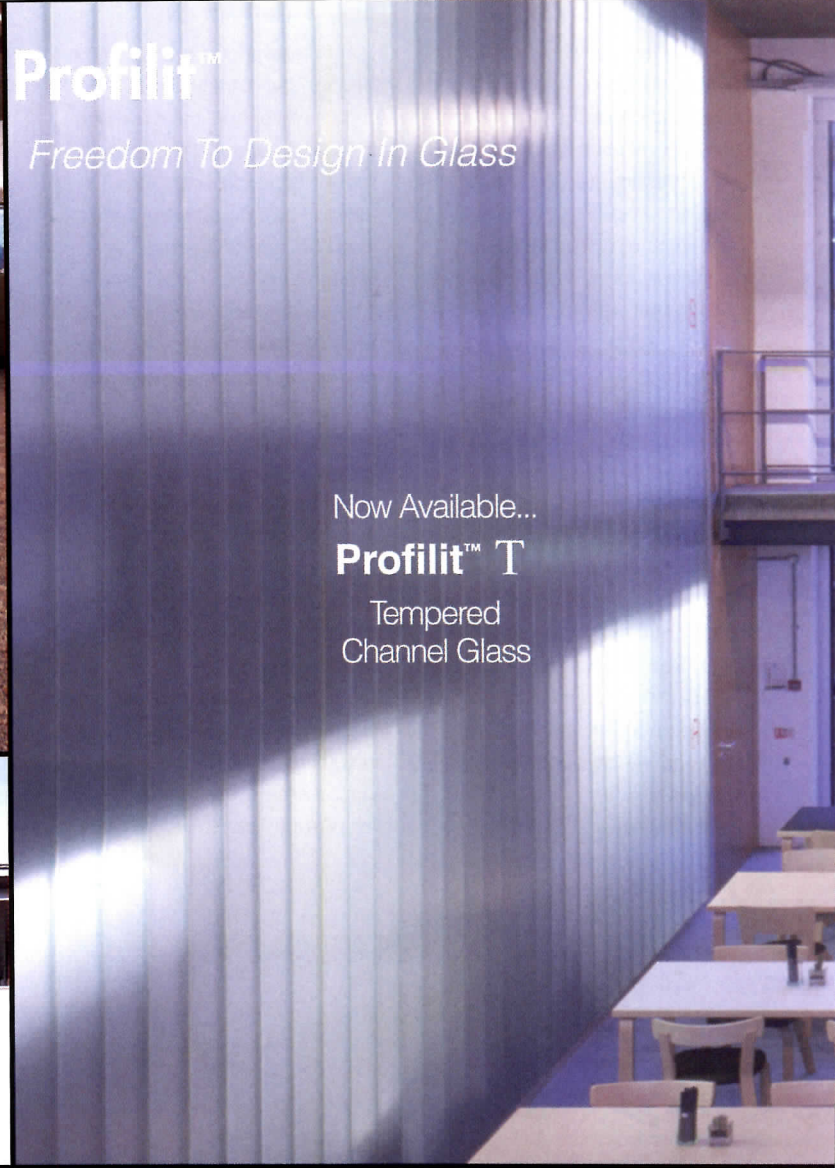
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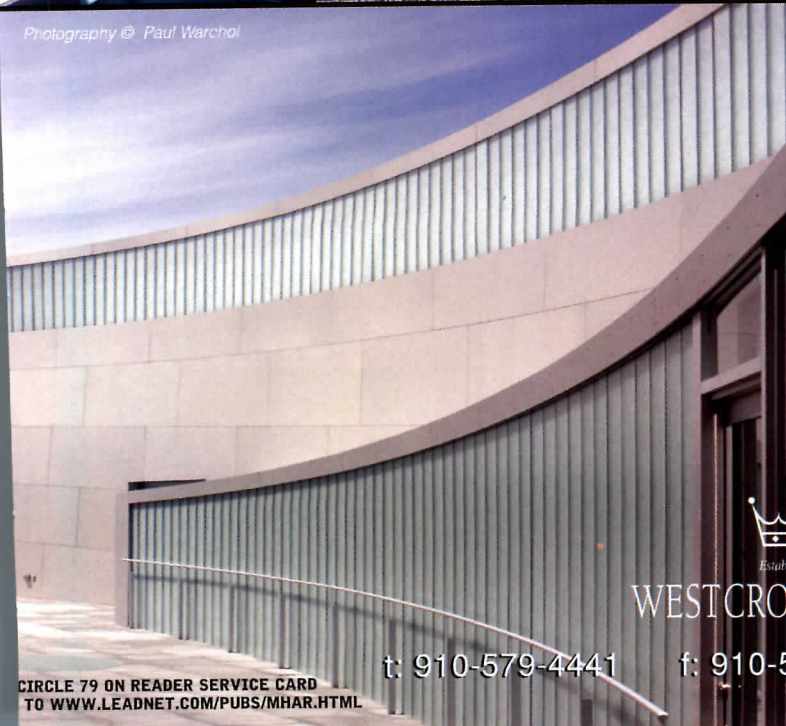


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## Books

Modern art and architecture and the non-Western world. Colonialist appropriation and condescension were usually part of such encounters, yet at the same time Le Corbusier's work in India ushered in a new paradigm for architecture whose effects in India still resonate. Charles Correa's assertion that perhaps someday Le Corbusier "will be acknowledged ... as the greatest Indian architect of them all" is now a widely shared view. Thousands of buildings ranging from the works of Correa and another member of the Chandigarh team, Balkrishna Doshi, to those of less well known figures such as Achyut Kanvinde, Shivrath Prasad, Jeet Malhotra, Harbinder Singh Chopra, Rajinder Kumar, and dozens of others testify to Le Corbusier's influence on Indian architecture, which is now a historical fact regardless of one's opinion of his work and legacy.

Prakash notes that for Prime Minister Jawaharlal Nehru, Le Corbusier's patron, the old Indian nationalist opposition between "Indian" and "European" was replaced by a dialectic between "tradition" and "modernity." Like Nehru, Le Corbusier was interested in negotiating between these newly articulated polarities, rather than simply imposing a European model, which explains much of the veneration he inspired in India. As postcolonialist views have emerged, this veneration now appears to some as an embarrassing relic of colonialism. It is to Prakash's credit that he tries to steer between glib dismissal and adulation as he moves beyond the familiar oppositions of awestruck Corbu-worship and easy postmodern rejection. At the same time, there is something a little disappointing about a book on Chandigarh that for the most part still traverses the

familiar visual terrain of the capitol complex, rather than looking more broadly at the phenomenon of its influence in India. *E.M.*

**The Villas of Palladio**, by Giovanni Giaconi, with text by Kim Williams. New York: Princeton Architectural Press, 2003, 152 pages, \$50.



An artist and professional windsurfer, Giovanni Giaconi spent seven years observing and drawing Andrea Palladio's 32 villas in and around Vicenza. The fruit of that labor is a collection of watercolor elevations: carefully scaled, meticulously detailed, lovingly colored. Each painting serves as a portrait of a building, showing the chipped

stucco, water stains, and signs of age that give an architectural face its character. Executed from 1995 to 2002, the watercolors form a wonderful historical record of the villas' condition today. Giaconi, who has worked as a draftsman in architectural studios specializing in building restoration, brings a fluid grace to his subject, perhaps acquired while riding the surf.

This handsome book places Giaconi's watercolors next to reproductions of the original drawings of Palladio's houses, offering the chance to compare what was designed with what was built. Each villa also comes with a brief text by Kim Williams that provides a historical overview of the building.

In a foreword, Williams says, "Just as Palladio's villas are best understood in the context of a larger architectural and social tradition, Giaconi's watercolors of the villas must be seen not on their own, but in the context of the tradition of architectural representations." *Clifford A. Pearson*

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# Snapshot



By Ingrid Whitehead

"We, the inheritors of chaos, must be the architects of a new unity. These galleries are a demonstration of a changing world in which the artist's work stands forth as a vital entity in a spatial whole, and art stands forth as a vital link in the structure of a new myth." So spake Frederick Kiesler, architect, sculptor, designer, theoretician, and philosopher.

In 1942, after some 20 years as a key figure in the rise of avant-garde art across Europe and the U.S., Kiesler was commissioned by Peggy Guggenheim to design a gallery museum for her collection of Surrealist and abstract art. "Dear Mr. Kiesler," said Guggenheim's note, "I want your help." Little did she know that the showcase Kiesler created for her *Art of This Century* collection, a gallery with biomorphic furniture and curved walls, would become one of the most important and most heralded art-display spaces ever created.

The collection itself was a breathtaking amalgamation of 20th-century abstract and Surrealist art. The work of such

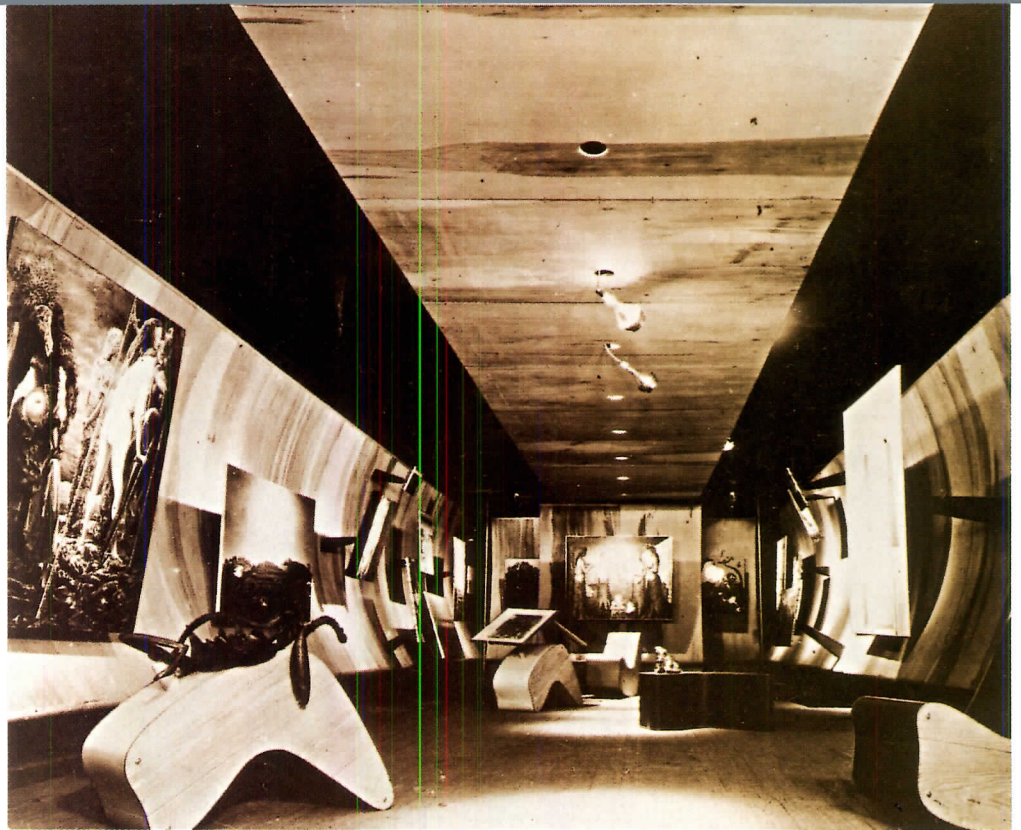
## Kiesler's unforgettable interior: The Art of This Century Gallery

## Snapshot

artists as Georges Braque, André Breton, Alexander Calder, Marc Chagall, Salvador Dalí, Marcel Duchamp, Max Ernst (Guggenheim's husband at the time), Alberto Giacometti, Juan Gris, Wassily Kandinsky, Paul Klee, Man Ray, and Pablo Picasso was there, among many other important and emerging 20th-century artists.

Guggenheim put the task of creating the gallery into Kiesler's hands entirely. "The only condition I had made was that the pictures should remain unframed," said Guggenheim (quoted from the book *Out of This Century*, 1979), "otherwise Kiesler had carte blanche." Kiesler, always one to play against convention, created the gallery to evoke the senses. What was once two dilapidated lofts on 57th Street in Manhattan became a magical space with curved walls, strobe lighting, paintings mounted on "baseball bats," peep-show mechanisms, blue walls and floor, and polymorphic tables, chairs, or pedestals that could be used in multiple ways. Kiesler borrowed from the theater, the movies, store windows, and amusement parks to create an environment that could even amaze and surprise Guggenheim herself, whose fantastical extravagance was difficult to match.

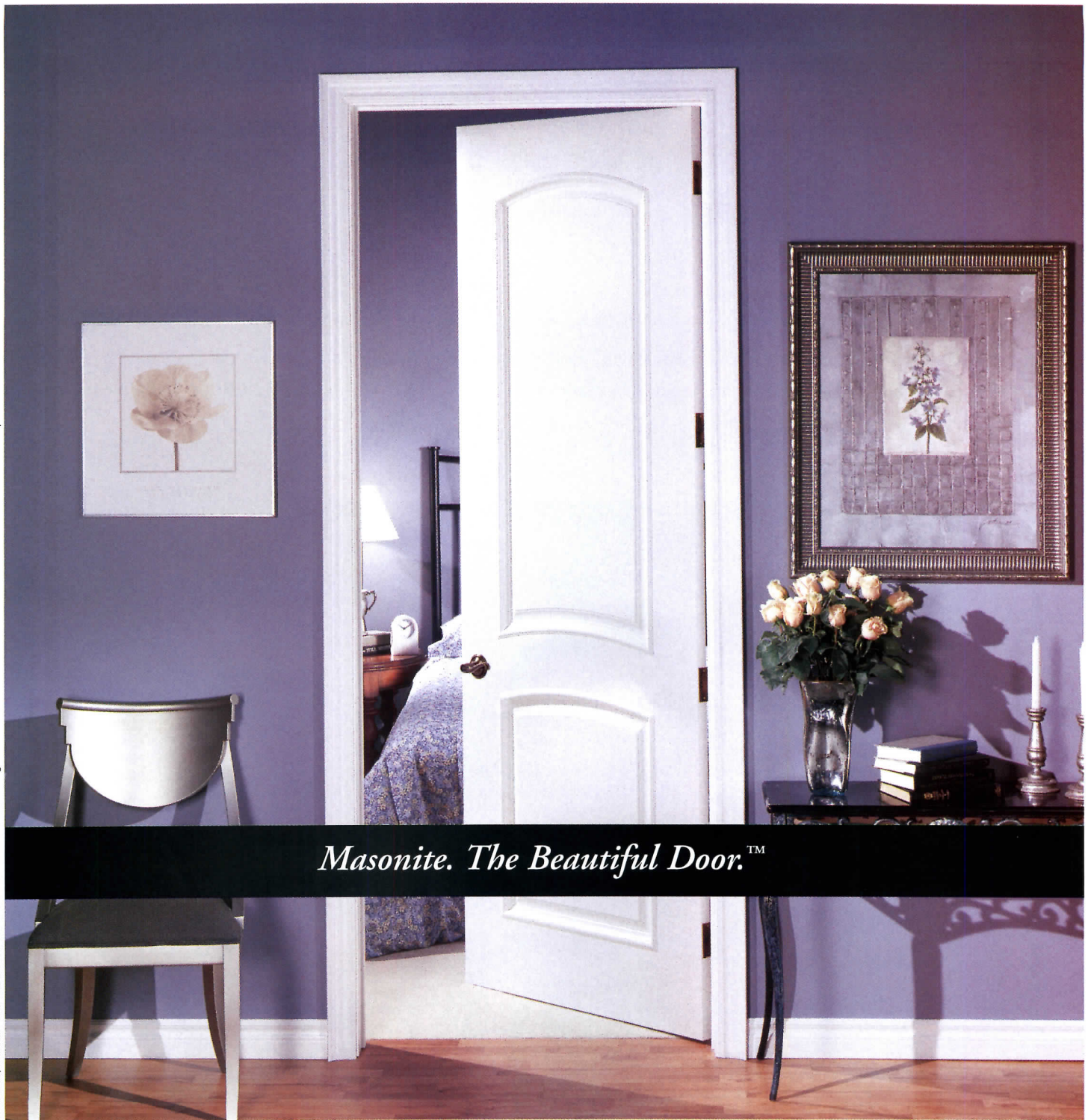
The gallery was a huge success. It was delightful, it was controversial, it was the beginning of an artistic and architectural revolution in America. Peggy Guggenheim destroyed the gallery before she moved back to Europe in 1948. Still, the legacy carries on to this day, as the bold Guggenheim brand continues to mark museums around the world. ■



**The space contained two separate galleries. In the Surrealist Gallery (above), unframed paintings were mounted on wooden slats that could be tilted at any angle. In the Abstract and Cubist Gallery (below and previous page), paintings were hung from strings, while a marine-blue curtain resembling a circus tent curved around the room.**



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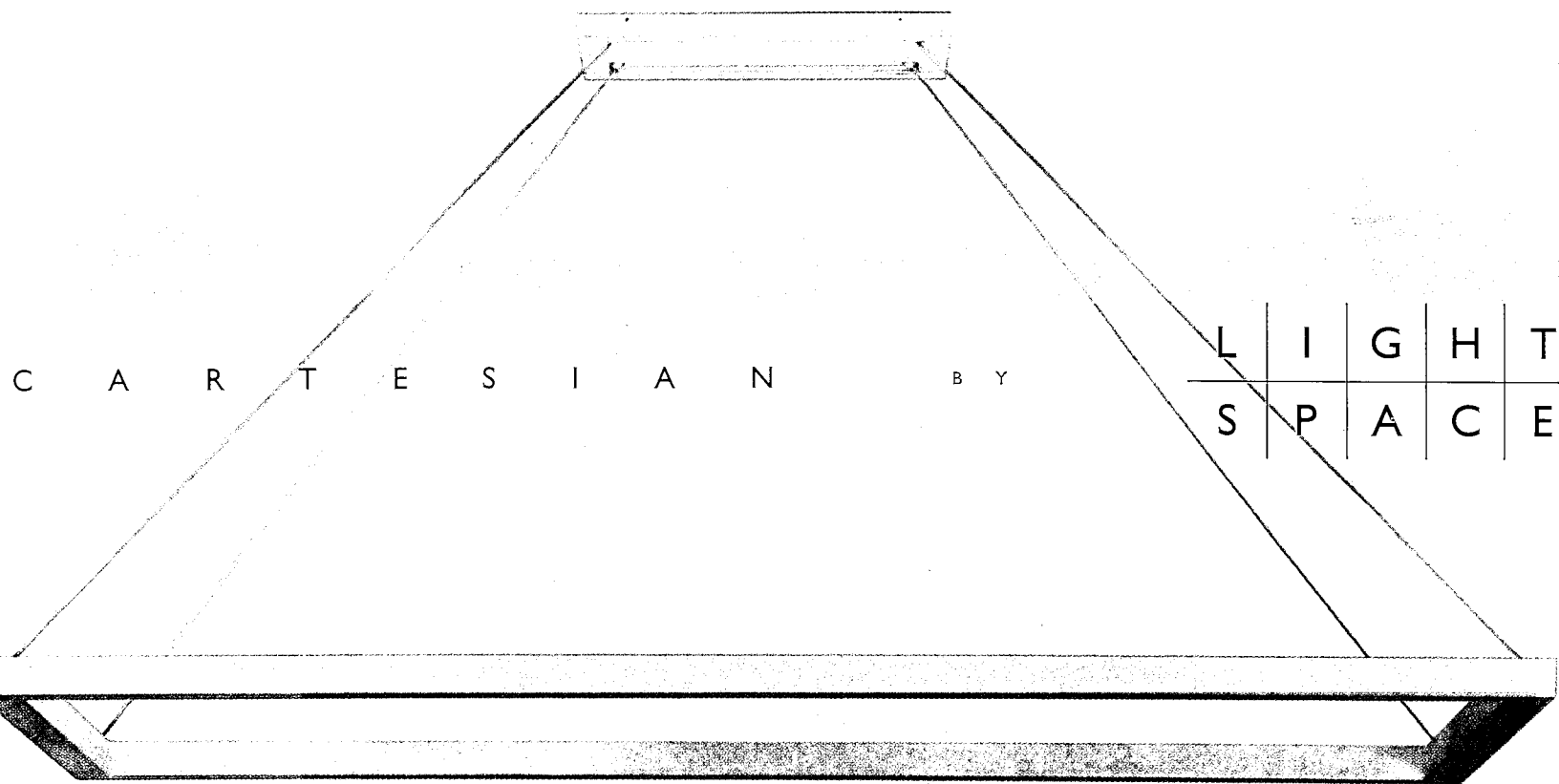
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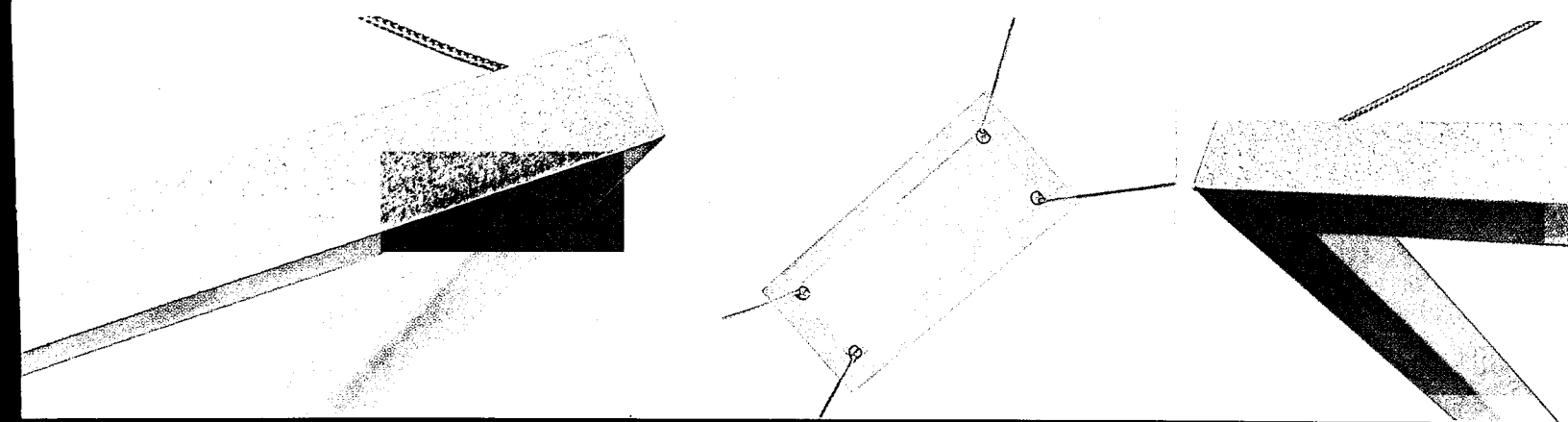


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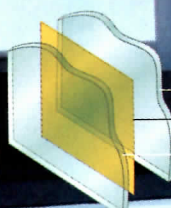
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For Frédéric Flamand's *Body Work Leisure*, Jean Nouvel created a grid with stock shelving units. Images of fire (opposite, top) and water (opposite, bottom) are projected on panels.





Architects design  
for the theater,  
opera, and dance

# Set Pieces

By Raul Barreneche

**D**avid Rockwell recently made Broadway history as the first architect to be nominated for a Tony Award, for the whimsical 1960s-inspired sets he designed for the musical *Hairspray*. Though *Hairspray* swept the awards show, Rockwell's sets didn't win the architect a Tony of his own. Still, his high-profile nomination highlights the theatrical renaissance of sorts that has a growing number of well-known architects designing sets for drama, opera, and dance. Recent works by Zaha Hadid, Daniel Libeskind, Frank Gehry, Thom Mayne, and Jean Nouvel show what happens when producers and directors look beyond the proscenium for design ideas.

Although the stage is inherently spatial and suited to the architect's eye, there are fundamental differences between architecture and sets. "In theater, everything is built to disappear," notes

*Contributing editor Raul Barreneche is a freelance writer who lives in New York City.*



Daniel Libeskind, whose opera set designs have graced the stages of the Deutsche Oper in Berlin and the Saarländisches Staatstheater in Saarbrücken, Germany. "Theater may not be made to last, but it is incredibly powerful. It creates memory and emotions that remain in the minds and hearts of the audience. This is what architecture and theater have in common. The effect is the same, only the means are different." Frank Gehry, who recently designed his first opera sets, agrees. As he told *The Washington Post*, "I think it's an area that's ripe for architects to play in, but it's a different thing, it's temporary."

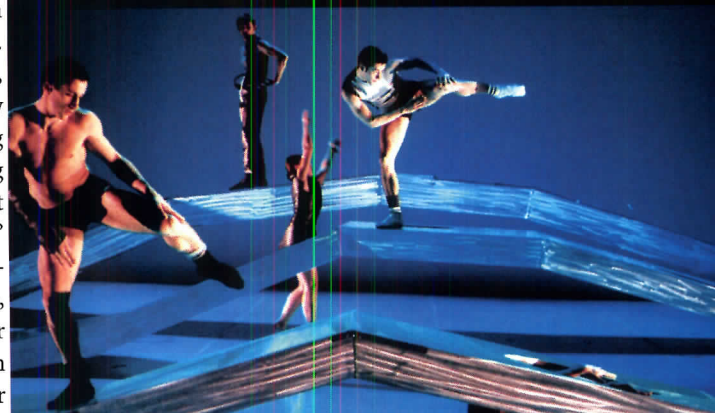
Rockwell, who goes to the theater two to three times a week, sketchbook in hand, disagrees with the notion that the issue of temporariness marks the primary distinction between architecture and stage design. "Regardless of what architects say or think, architecture isn't permanent, as we saw in New York on 9/11. Set design isn't just about making pretty pictures on the stage; it's about making sets move and change and fly. Even the most aerodynamic architecture doesn't actually fly."

Set design is rife with technical requirements unfamiliar to most architects. Craig Webb, a partner in Gehry's firm, was associate designer and in charge of sets created by Gehry for an opera performance at the new Richard B. Fisher Center for the Performing Arts he designed at Bard College in Annandale-on-Hudson, New York. Webb thought he knew something about

## IN HADID'S SETTING, PERFORMERS, SCENERY, AND LIGHTING CREATE A SPACE THAT "DANCES."

the stage's technical aspects from working on numerous Gehry-designed theaters but admits the process of constructing sets opened his eyes to lighting positions and the immense machinery required to move large pieces of scenery, some of which are fully wired and lit. Webb recalls, "I knew for sure I would learn a lot about the design of theaters by designing the sets."

Before the formal profession of set designer existed, architects created the backdrops to theatrical productions along with the theater itself. With their mastery of new orthographic perspective techniques, Renaissance architects





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RENDERING: COURTESY ZAHA HADID (OPPOSITE, TOP LEFT)

Zaha Hadid's studies for the sets of the Charleroi/Danses work *Metapolis* (opposite, top left) have the look

of origami. Hadid juxtaposed projected images with three moving bridges (above and opposite). For the

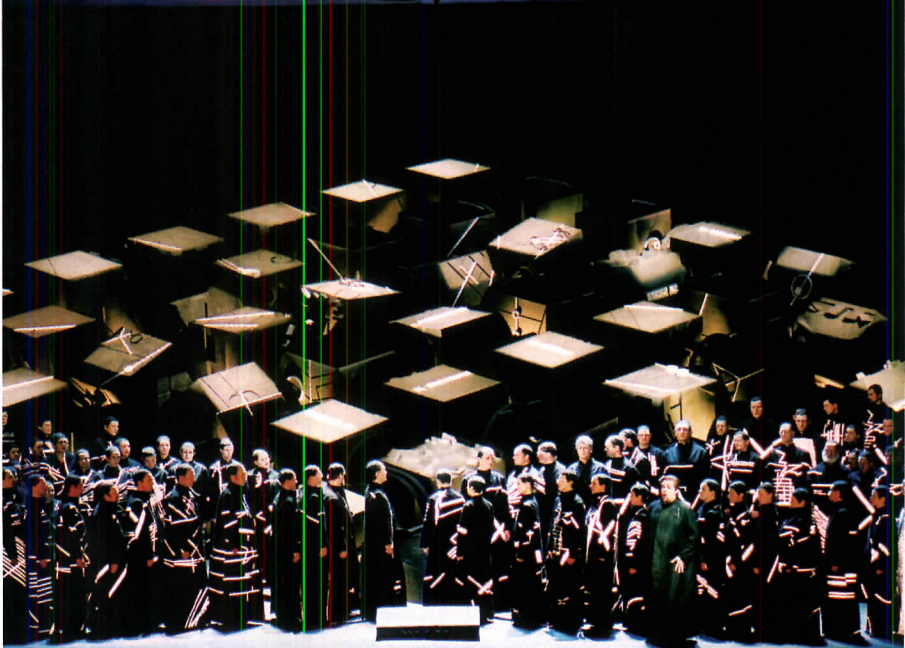
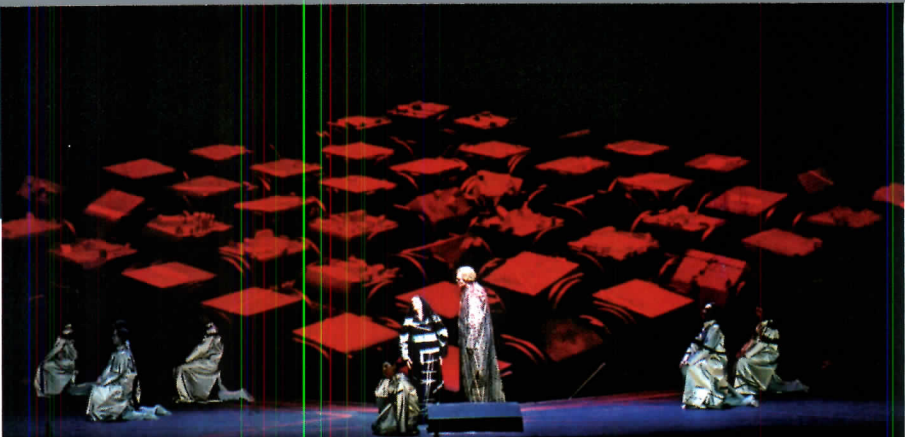
opera *Desire* (three views below), performers and hydraulics reconfigure the internally lit set pieces.



such as Sebastiano Serlio and Inigo Jones created properly Classical stage scenery for the court theaters of European royalty and other venues. Centuries later, Karl Friedrich Schinkel designed the masterful Neoclassical Schauspielhaus theater in Berlin (1821) as well as sets for Mozart's opera *The Magic Flute* and productions of Friedrich Schiller's tragic plays *The Bride from Messina* and *The Young Maid of Orleans*, which included a realistic recreation of the Gothic Cathedral of Reims.

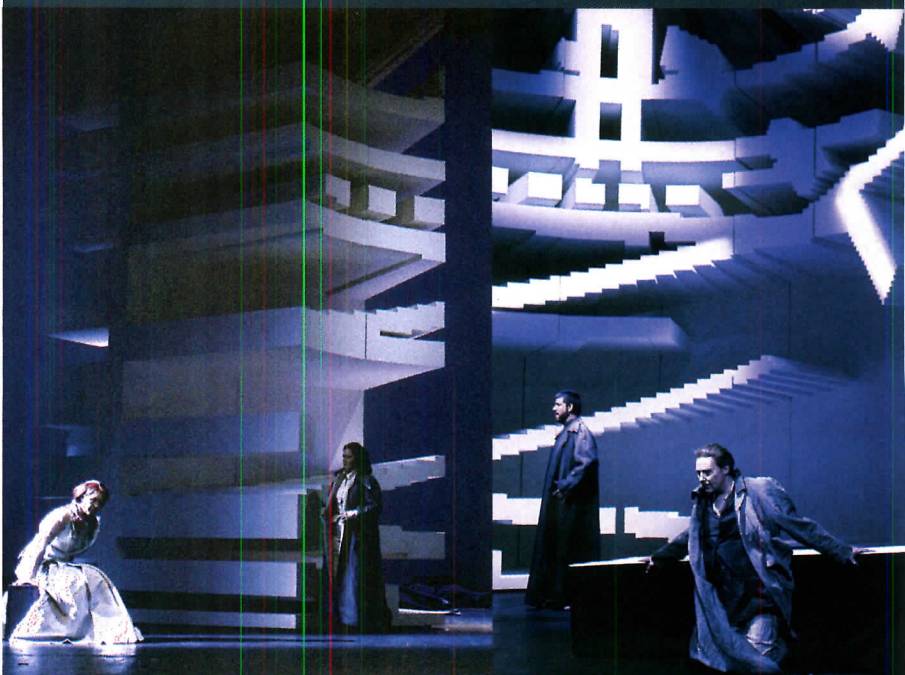
Many scenographic specialists opted for proper architectural training as a means into the theater, sometimes straddling two professional worlds. One of the most influential 20th-century architect-trained set designers was the Austrian-born Joseph Urban, who counted Adolf Loos and Secessionist artists such as Gustav Klimt and Josef Hoffmann as influences. Urban designed hotels, restaurants, houses, and Manhattan's New School for Social Research (1931), as well as more than 500 sets for the Ziegfeld Follies and the Metropolitan Opera. (He even directed some productions.) This prolific Renaissance man is an admittedly important influence on Rockwell, whose set for a New York production of Theresa Rebeck and Alexandra Gersten-Vassilaros's play *Omnium Gatherum* premieres this month.

As one might expect, commissions come to cutting-edge architects more readily from avant-garde theater and dance troupes than big-budget Broadway productions. In



For *Saint Francis of Assisi*, Libeskind's constellation of rotating cubes is a counterpoint to Messiaen's musical

score (above and top). The Libeskind set for *Tristan und Isolde* features layered towers (bottom two).



**"THEATER MAY NOT BE MADE TO LAST, BUT IT IS INCREDIBLY POWERFUL," SAYS DANIEL LIBESKIND.**

1983, Gehry made a brief foray into set design with a small commission at Los Angeles' Temporary Contemporary museum, where he designed backdrops for choreographer Lucinda Childs's production *Available Light*. Shortly thereafter, the Brooklyn Academy of Music hired several then-emerging architects to collaborate on sets for dance performances at its annual Next Wave Festival. There, Tod Williams and Billie Tsien worked with Elisa Monte Dance in 1984, and Arquitectonica with the Nina

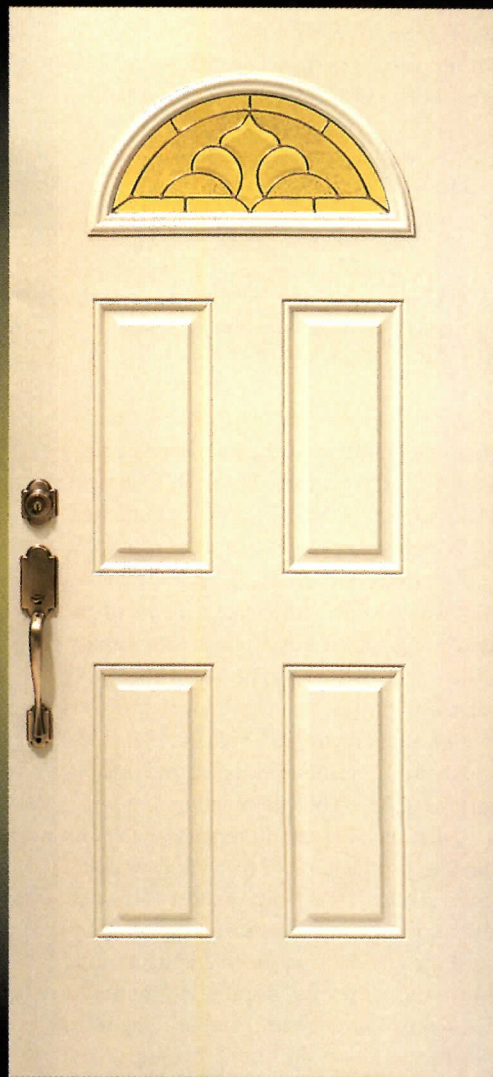
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Weiner Dance Company in 1985. But it has taken nearly two decades for the work of architects to grace dance stages again so prominently.

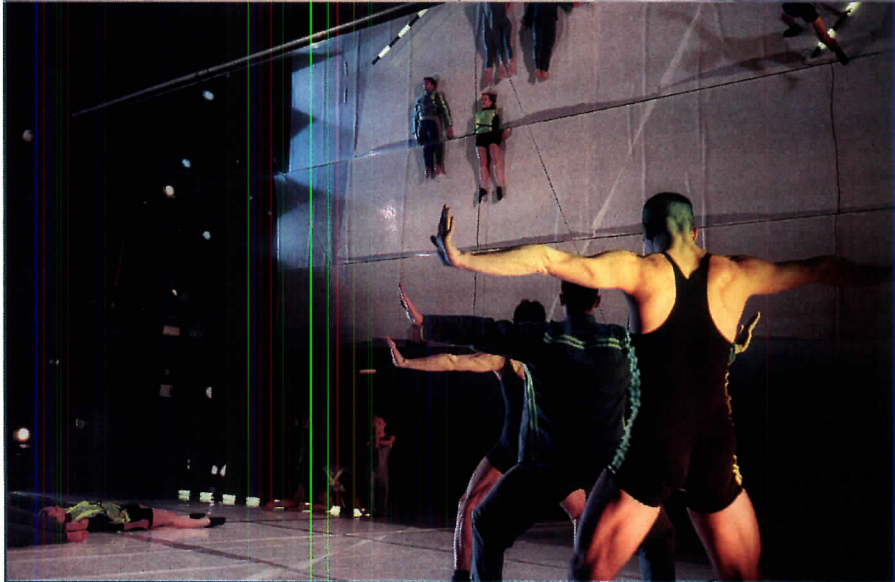
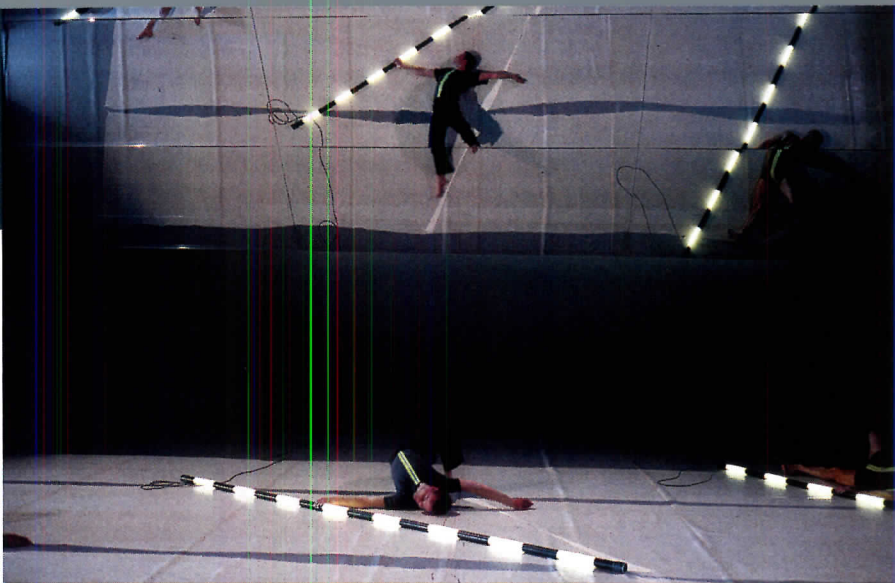
One man has been working to remedy that: Belgian choreographer Frédéric Flamand, the artistic director of the Charleroi/Danses company in Brussels, has made a name for himself by infusing dance with elements from the visual arts and architecture. He has also staged performances in unexpected settings with strong architectural character, because, as he writes, he “distances himself from the Italianate stage and its perspectivist conception.” Flamand has mounted productions in such unorthodox venues as swimming pools, steel mills, botanical gardens, and factories.

Flamand’s first architectural collaboration took place in 1996 with Diller + Scofidio, known for its own performance pieces that blur divisions between art, architecture, installation,

## DILLER + SCOFIDIO'S SETS OFTEN EXPLORE THE BOUNDARIES OF SPACE AND PERCEPTION.

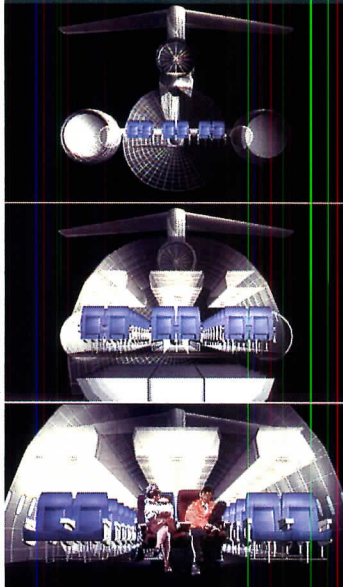
and film, such as *Jet Lag* of 1998. For *Moving Target*, a work inspired by the uncensored diaries of Vaslav Nijinsky, partners Elizabeth Diller and Ricardo Scofidio created a Minimalist but evocative set. A large mirror mounted at the rear of the stage at 45 degrees reflected the movements of dancers, which evoked the work’s theme of the “schizophrenia” created by modern communication. The pairing was a good fit, because, as Diller and Scofidio put it, “As our architecture is a critique of architecture and Frédéric Flamand’s choreography is a critique of dance, the collaboration has a good, wobbly foundation.”

In 2000, Flamand tapped Zaha Hadid to work on a production of *Metapolis* in Brussels. To design settings for his exploration of the new definitions of contemporary towns, Flamand says he was drawn to the Iraqi-born architect’s fluid buildings and drawings inspired by both the Russian Constructivists and Arabic calligraphy because he could see the “same dynamics and fluidity that are central to my thoughts about dancers’ movements. In Zaha’s work I spied ways to inspire lines of force and to structure dancers’ movements,” Flamand noted. He and Hadid



Diller + Scofidio's angled mirror for Flamand's *Moving Target* allowed dancers to incorporate horizontal

movements (above and top). The architects' *Jet Lag* plane and seascape (below left and right) were projections.





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TODAY

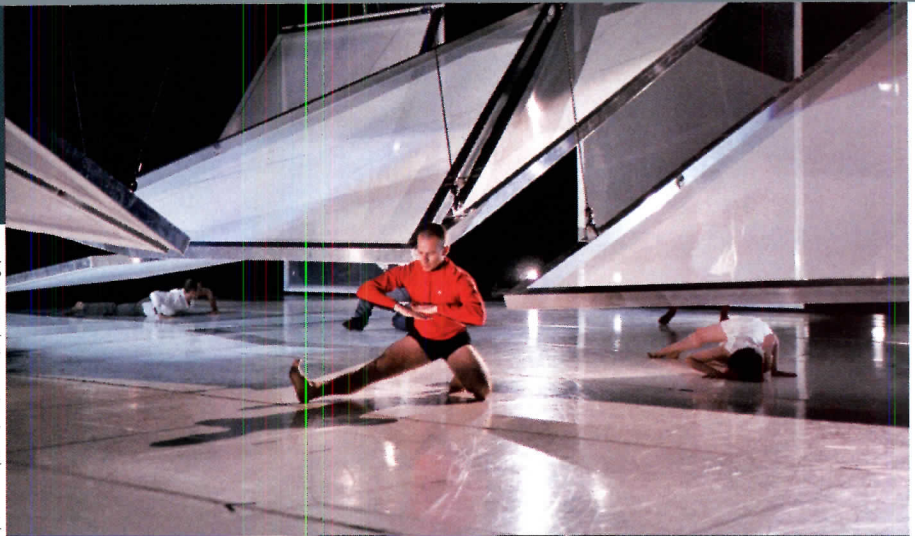
TOMORROW

TOYOTA

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wove together performers, scenery, and lighting to create a piece in which the space “dances.” Three translucent bridges spanning 33 feet slid into different configurations, “choreographed” along with the dancers’ motion across the stage. Hadid also designed an imaginary town, renderings of which were projected onstage using a blue-screen technique.

Flamand collaborated with Jean Nouvel for a dual production commissioned by the 2000 Universal Expo in Hanover, Germany, titled *Body Work* and *Body Work Leisure*. Nouvel filled the volume of the stage with modular warehouse storage shelving and translucent screens on which images were projected. Like Nouvel’s architecture, the set played with abstract layers of color, light, and reflection. Nouvel cites similarities between the repetitive grids of his sets for Flamand and his designs for the Arab World Institute and Cartier Foundation, both in Paris. “For me, the weave is never just the support for



The dance performance *Silent Collisions*, which debuted at the 2003 Venice Biennale, featured sets designed by Thom Mayne (left and above). Eleven configurations inspired by Italo Calvino’s novel *Invisible Cities* employed suspended, shardlike panels.

## THE CHANCE TO DESIGN AN OPERA FOR A THEATER HE ALSO DESIGNED ATTRACTED GEHRY.

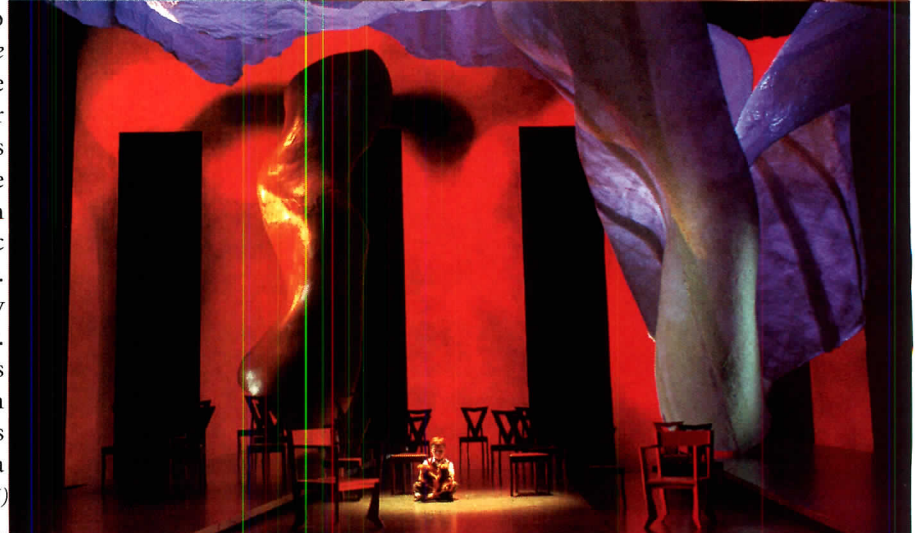
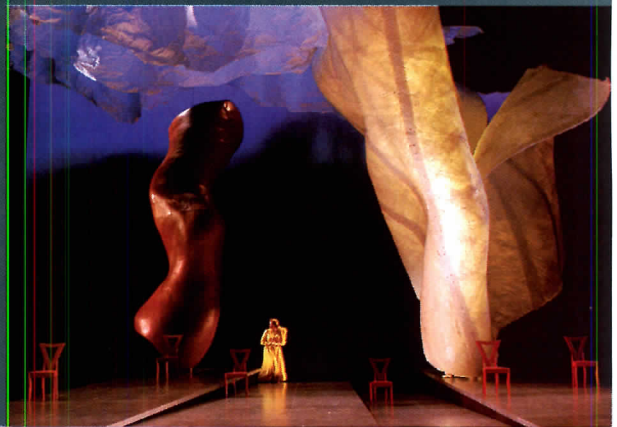
something else, like the grid on a sheet of paper. The weave . . . makes the movement more expressive, more graphic,” said Nouvel, who considers dance “an architecture of the ephemeral.”

Recently, Flamand called on Thom Mayne of Santa Monica, California–based Morphosis to create the sets for his new production, *Silent Collisions*, a work inspired by Italo Calvino’s architecturally charged novel *Invisible Cities*. Premiering at the Teatro alle Tesse Arsenale di Venezia during the 2003 summer Biennale, the collaboration filled the stark halls of the Arsenale with fragmentary, shardlike panels—fabric stretched within aluminum frames. Dancers also interacted with plastic tubes that were half-transparent, half-opaque. The sets gave form to the 11 types of imaginary cities outlined by Calvino in his mystical text.

The contemporary operatic world has also enjoyed high-profile collaborations with leading architects. Opera, which has always invited grand theatrical installations, presents a different group of con- (continued on page 216)

Frank Gehry christened the new theater he designed for Bard College by creating sets for Janacek’s *Osud* (right and below).

Though he had originally envisioned different sets for the opera’s three acts, logistics and cost required the set pieces to remain fixed.



PHOTOGRAPHS: STEPHANIE BEGGER (BOTTOM TWO)



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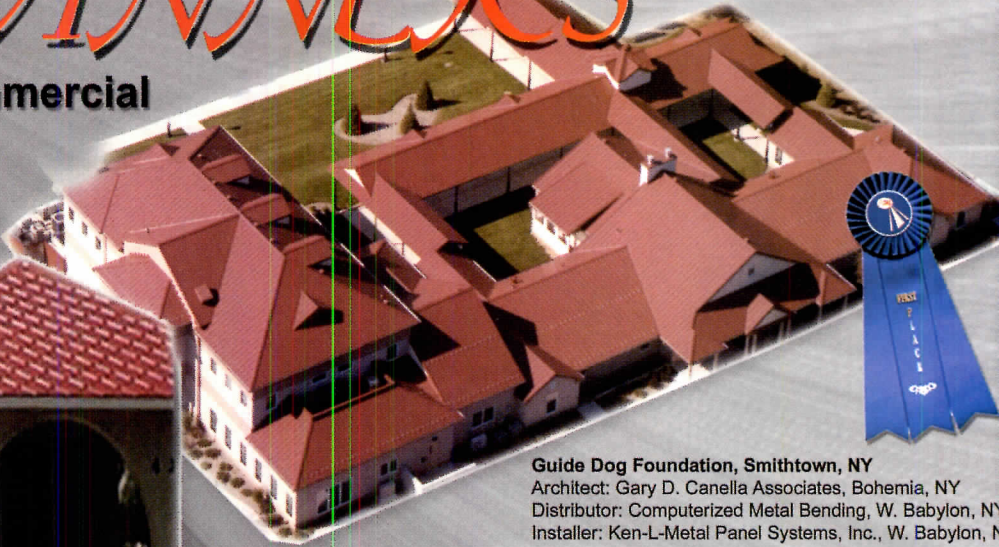


# 2002 PROJECT OF THE YEAR WINNERS

## Commercial



2. Kissimmee Keys Welcome Station, Kissimmee, FL  
Architect: Lunz Prebor Fowler Architects, Lakeland, FL  
Distributor: Bradco Supply Co., Tampa, FL  
Installer: A. Armstrong & Sons Roofing, St. Cloud, FL



Guide Dog Foundation, Smithtown, NY  
Architect: Gary D. Canella Associates, Bohemia, NY  
Distributor: Computerized Metal Bending, W. Babylon, NY  
Installer: Ken-L-Metal Panel Systems, Inc., W. Babylon, NY

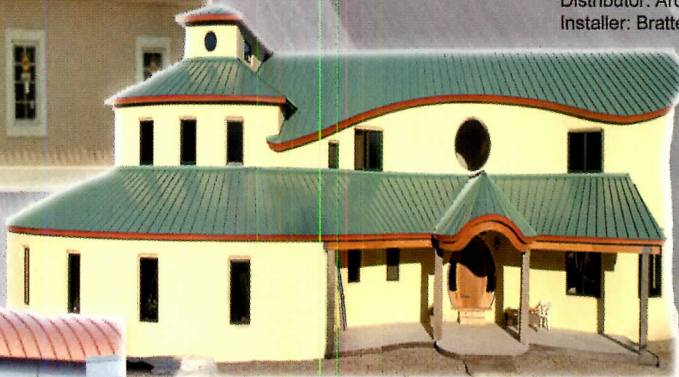


3. Springettsbury Park Amphitheater, York, PA  
Architect: Hamme & Associates, York, PA  
Distributor: Architectural Building Systems, Dover, PA  
Installer: Bratten Contracting, Red Lion, PA

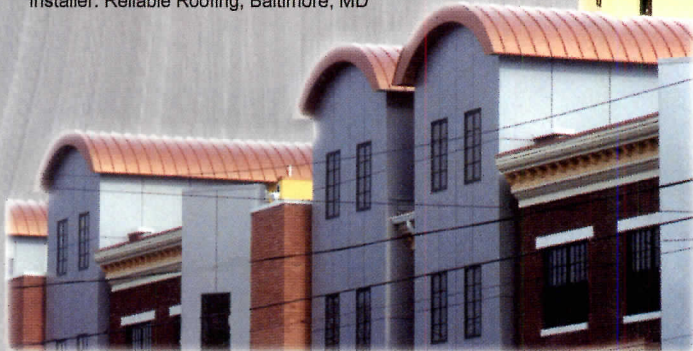
## Residential New Construction



Residence, Bethany Beach, DE  
Architect: Lane Builders, Dewes, DE  
Distributor: Morris Ginsberg & Sons, Inc., Baltimore, MD  
Installer: Reliable Roofing, Baltimore, MD



2. Residence, Freeport, ME  
Distributor: Cambridge Sheet Metal Co., Inc., Scarborough, ME  
Installer: Demmons Roofing, Inc., Portland, ME



3. Bayonne Housing, Bayonne, NJ  
Distributor: Allied Building Products, E. Rutherford, NJ  
Installer: Raffo Construction, Staten Island, NY

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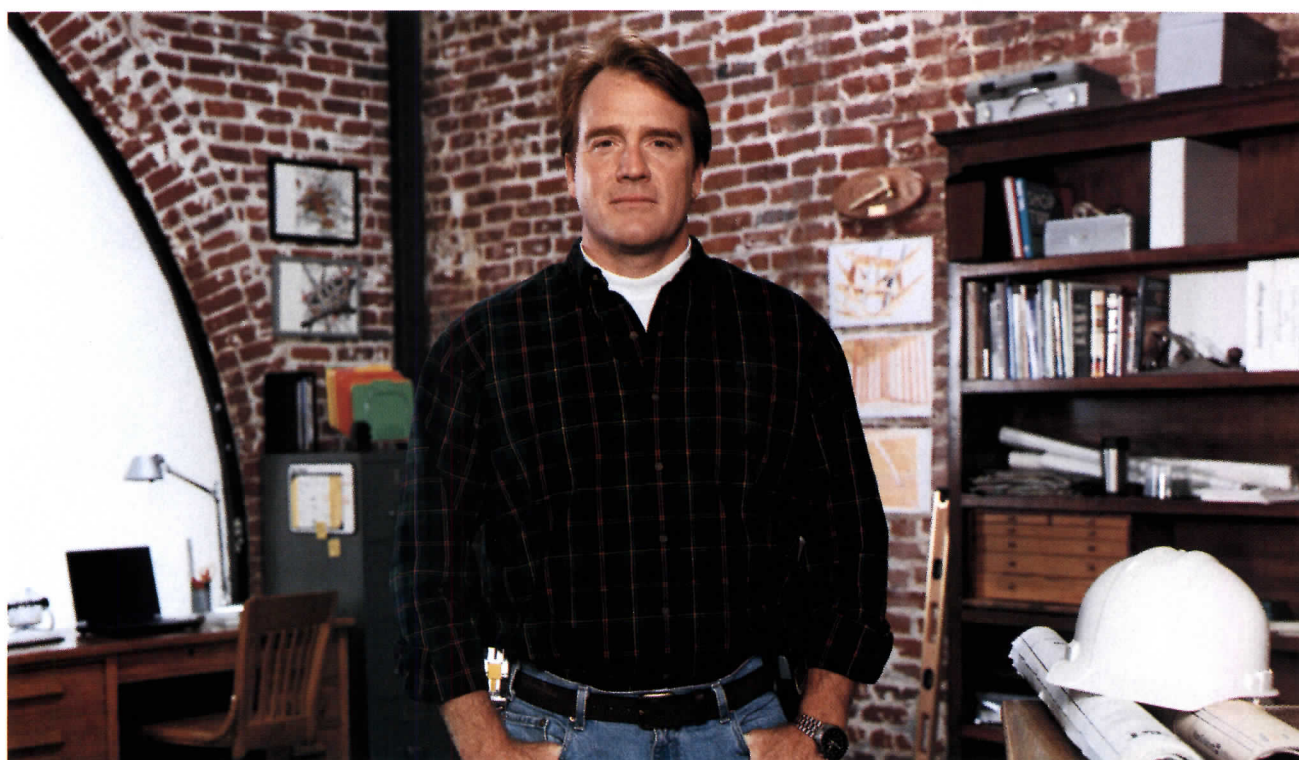


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# Record Interiors

# 2003

**I**nteriors within interiors—rooms as freestanding objects within larger venues, or space-defining shells layered inside one another like Russian nesting dolls, or a range of other variations on the theme—recur throughout this issue. Realms within realms, they take on many different forms, reflecting a spectrum of spatial solutions and motivating desires.

In some cases, as at Pugh + Scarpa's COoP Editorial in Santa Monica, California, the inner sanctums, contained in luminous, nearly cubic volumes, provide zones of privacy (and acoustic isolation) within more public areas. Here, space and daylight become just as important around the separate boxes as within them.

Sometimes interiors within interiors create theatrical, almost stage-set effects, allowing the visitor to lurk behind the scenes, as in New York City's Bohemian Foundation, where LOT/EK

takes the concept of discrete volumes to a flexible and free-floating extreme. Here, a combination of salvaged shipping containers (as rooms) and setlike wall panels on tracks not only echo the gritty industrial traits of the neighborhood, but also allow for multiple spatial configurations,

yielding an overall interior remarkably in flux.

At Shoebaloo in Amsterdam, Meyer en Van Schooten creates a tunneling, diminutive shop that's like a fuselage inserted into the raw, rectilinear form of an existing 19th-century building. Though the interstitial spaces between this insertion, or capsule, and the outer shell are not physically occupiable, a sense of depth and layering reads through—conveying the concept of transformation.

For Restaurante Les Cols in Olot, Spain, RCR Arquitectos turn a completely introverted, windowless black hole of a space into the design's glowing centerpiece.

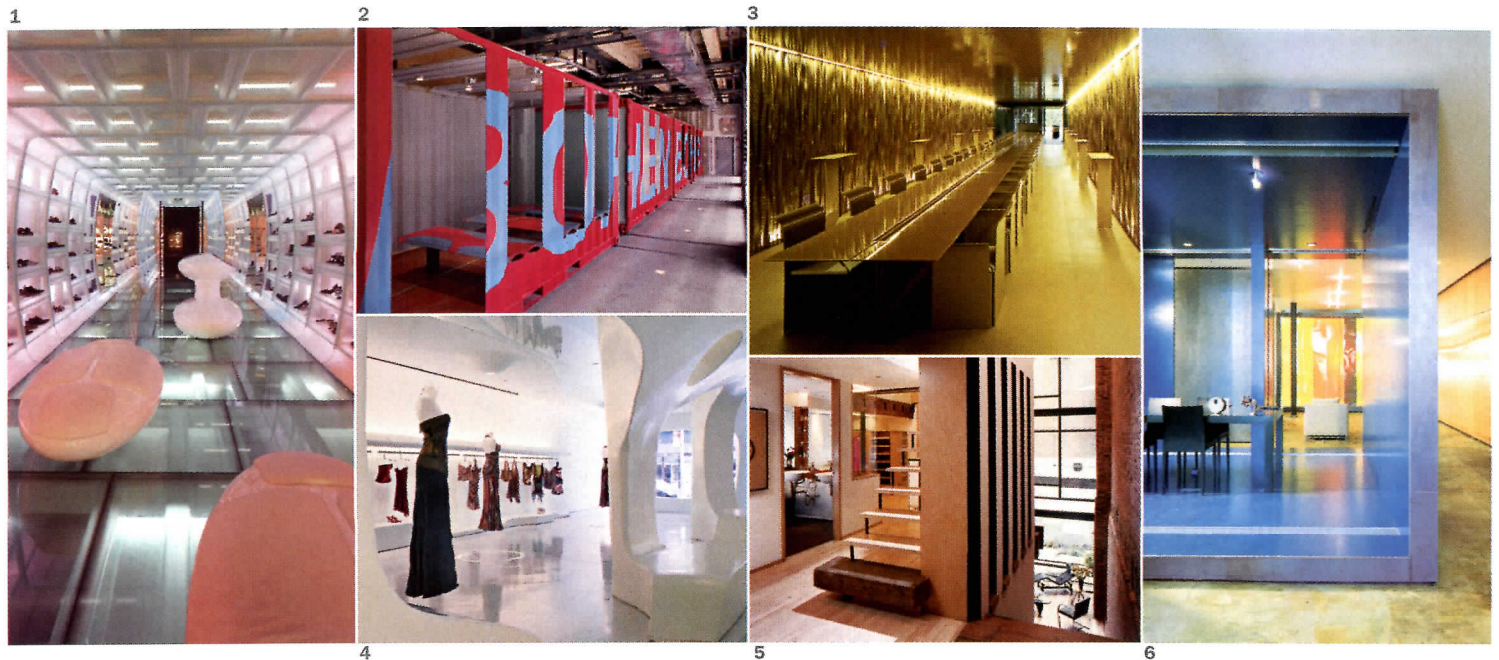
And for a sectionally complex live/work loft in New York City, Marpillero Pollack deftly swaps a patch of indoor square footage for expanded outdoor space, carving out a partially glazed inner "room" open to the sky—thus making the entire scheme possible.

Finally, at the Carlos Miele store in New York City, Asymptote devises a sculptural form that acts, in part, as abstracted street furniture, winding around to loosely define rooms and passageways within the shop.

Clearly, interiors are essential to our experience of architecture, but perhaps interiors within interiors can take you to an even deeper place. *Sarah Amelar*

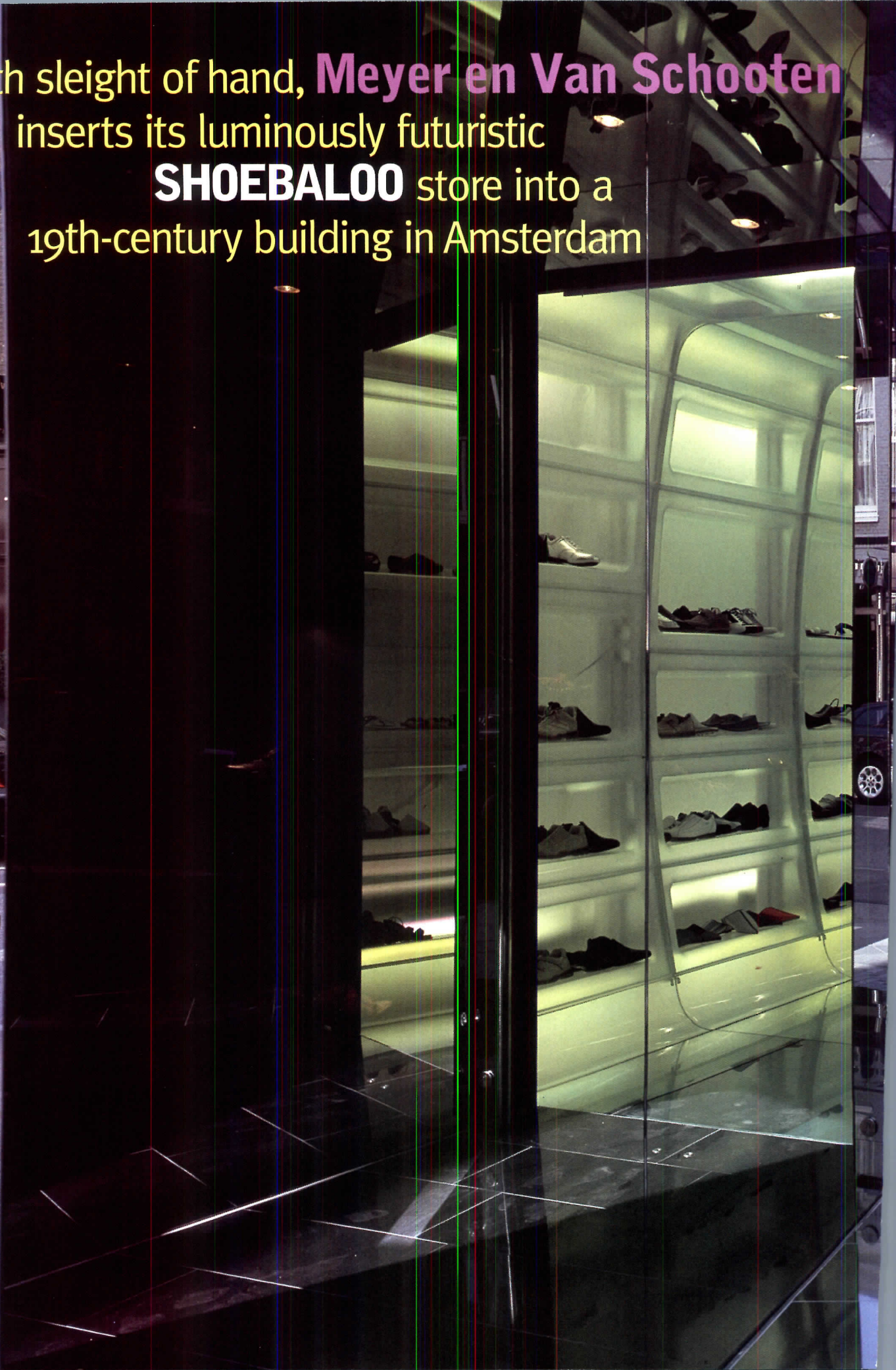
**The firms featured are:**

1. Meyer en Van Schooten
2. LOT/EK
3. RCR Arquitectos
4. Asymptote
5. Marpillero Pollak
6. Pugh + Scarpa



EUGENI PONS (3); JEFF GOLDBERG/ESTO (5); MARVIN RAND (6)

With sleight of hand, **Meyer en Van Schooten**  
inserts its luminously futuristic  
**SHOEBALOO** store into a  
19th-century building in Amsterdam





A taut, flush facade of dark, one-way glass with automatic sliding doors enhances the shop's mystique. Shoebaloo's name in blue neon appears to float (opposite, far left).

By Tracy Metz

Part futuristic, part organic, architect Meyer en Van Schooten's Shoebaloo boutique in Amsterdam evokes a high-tech fuselage and, at the same time, the inside of Jonah's whale. With diffuse illumination that fluctuates with gently shifting color, you can almost feel the place breathe. Even before commissioning partners Roberto Meyer and Jeroen van Schooten to redesign this tiny—861-square-foot—space along an ultrachic shopping street, Shoebaloo had made a name for itself with cutting-edge interiors, showcasing fashionable and pricey shoes (by the likes of Prada and Miu Miu). The company now has three stores in Amsterdam, but this one is the most spectacular.

The choice of storefront materials heightens the sense of mystery and anticipation at the shop's entry. The windows, automatic sliding doors, and the door surround are all of flush, dark glass—the kind used by police for one-way observation of suspects. The shoes in the vitrines come gradually into view—once you have worked your way past your own reflection—lit softly but directly, seeming to float in darkness, while the vertical letters of the name Shoebaloo shine in subdued blue neon.

The interior itself is like a capsule or fuselage inserted into the square opening of a small 19th-century building. Translucent, greenish polyacrylic panels line this inner shell. Vacuum-formed on aluminum molds, the panels resulted from a prefab process that the manufacturer, Normania, uses for experimental car parts. The panels—plastic cassettes shaped as display niches—were clicked into place over a skeletal matrix. The client can swap cassettes to suit the season: shorter ones for shoes and sandals, taller ones for winter boots. The panels even continue underfoot, maintaining an unbroken, intriguing though disconcerting liner. A thick top surface of glass makes it possible to walk over these egg-crate forms.

The shop's actual size is, at first, difficult to discern, due to front and rear mirrors, the tunnel's curves, the visible depth underfoot, and the shifting illumination. The furnishings consist of a shiny, white, eye-shaped display case for handbags, an egglike seat, and a visually floating, two-egg object that forms a partially cantilevered cashier's counter.

The space's experiential qualities owe much to the lighting. The interstitial zone between the fuselage and outer walls houses more than 600 fluorescent tubes in four colors with nearly 100 dimmers—capable of infusing the translucent shell with all conceivable colors, in combinations and intensities determined by 10 computer programs the staff can select. It's possible, say, to make the front of the shop purple while the back glows red. In practice, the color choices have remained fairly stable: Some hues, such as red, seemed to hinder customers in judging shoe colors, and the staff found continual spectral changes wearisome.

Despite its modest scale, this six-month-old project has already influenced Meyer en Van Schooten's work, especially concerning material innovation. For two larger projects, new buildings for software company Atos Origin and office furniture manufacturer Ahrend, the firm is extending its experiments with malleable plastics to the building exteriors. The architects are overjoyed at having discovered a material and technique with expressive potential far beyond the realm of straight surfaces. Full emancipation from the flat plane and right angle seems to be imminent. ■

Tracy Metz is *RECORD's* Amsterdam-based correspondent.

**Project:** Shoebaloo, Amsterdam, the Netherlands

Oechsle, project team

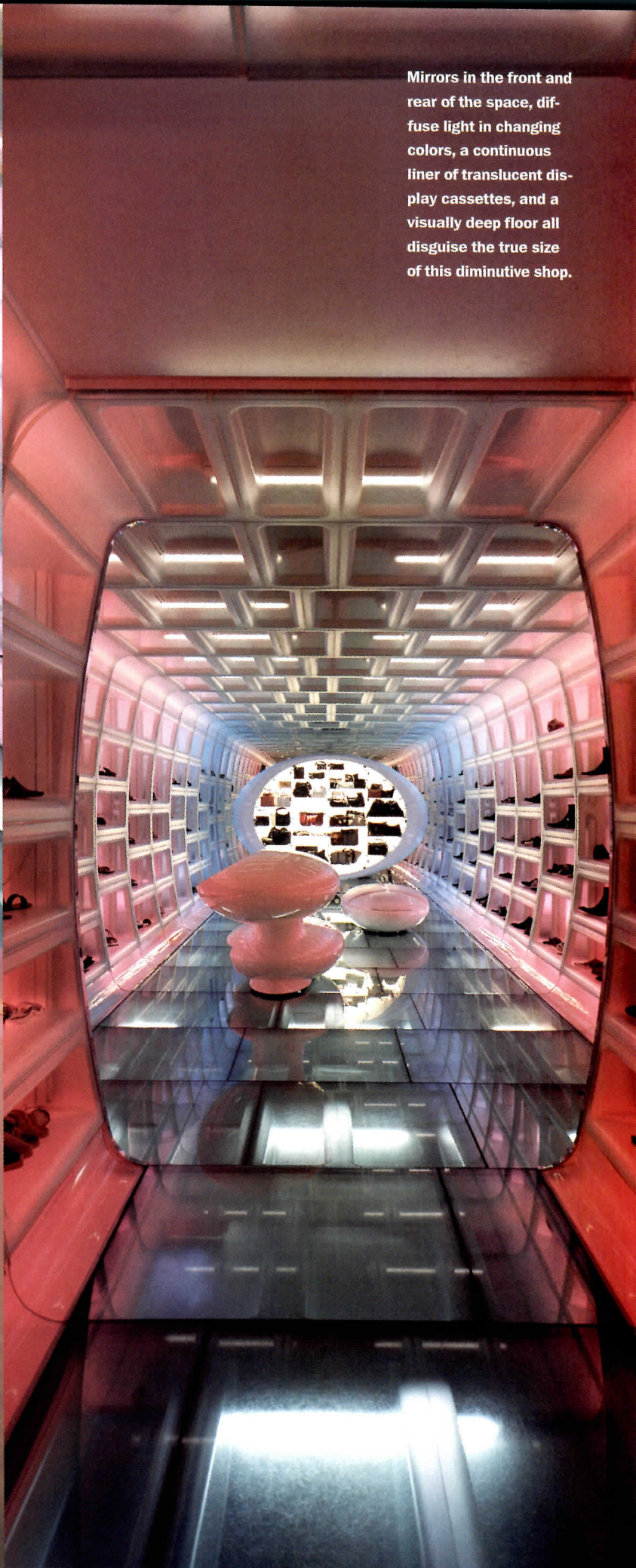
**Architect:** Meyer en Van Schooten—Roberto Meyer, Jeroen van Schooten, principals; Koert Göschel, Oliver

For more information on this project, go to Projects at

[www.architecturalrecord.com](http://www.architecturalrecord.com).







Mirrors in the front and rear of the space, diffuse light in changing colors, a continuous liner of translucent display cassettes, and a visually deep floor all disguise the true size of this diminutive shop.

The display cassettes click into a matrix and can be exchanged with different-size units to suit seasonal merchandise. The architect-designed furniture includes seating and a cashier's counter.





The alignment of containers and wall panels is highly subject to change, but sometimes the library appears through the glazed end of a staff office (this page). Cut and folded sections of the containers' corrugated steel skin form benches (below) or desktops (opposite). Overhead tracks curve to permit 90-degree rotation of wall panels. The containers bear the name *Bohen* (opposite). With roof panels permanently removed, the boxes are open to the gallery's sprinklers.



# LOT/EK reinvents the flexible art gallery at the **BOHEN FOUNDATION**, with a mobile kit of parts

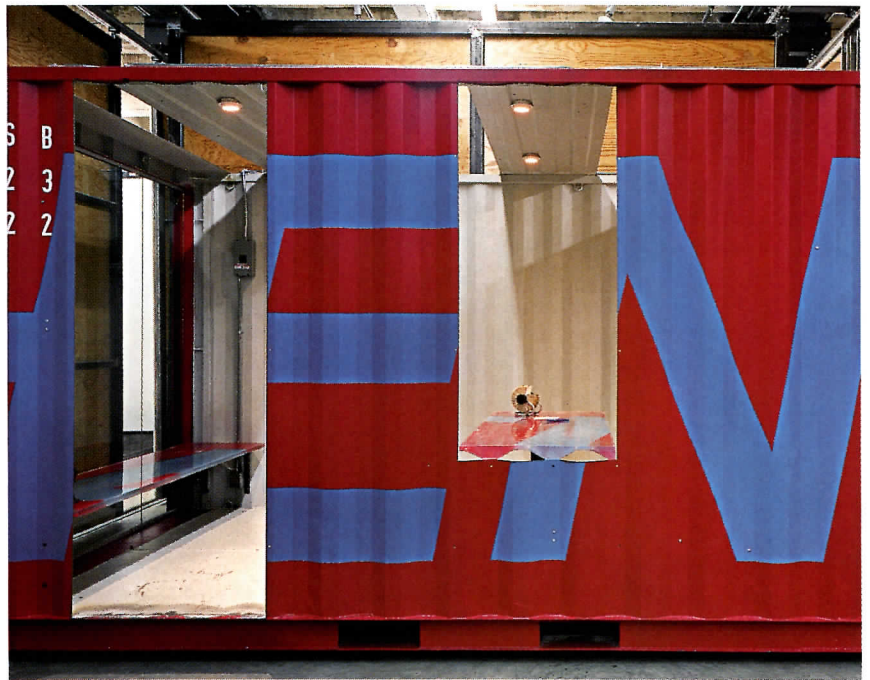
By Raul A. Barreneche

In New York's gritty Meatpacking District, surprising juxtapositions are the norm, with trendy restaurants and fashionable boutiques alongside pungent, still-functional meatpacking plants. Walk along the blood-soaked streets and you may wonder why the likes of Vitra and fashion designer Stella McCartney would pay top dollar to build among the entrails, but this district has become a choice Manhattan destination for a creative, consciously edgy crowd. The newest interloper is the Bohen Foundation, a nonprofit group that commissions film, video, and installation pieces; exhibits the work; and donates it to such institutions as the Guggenheim. Like the neighborhood itself, Bohen's new 15,000-square-foot gallery and offices, in a former print shop, presents an unexpected combination of disparate parts—here, with mobile walls and shipping containers on tracks.

Befitting the district and the foundation's unusual mission, Bohen director Frederick Henry chose unconventional architects: LOT/EK, a New York firm known for crafting apartments and art installations from scavenged fuel tanks and other industrial flotsam. From the outset, LOT/EK partners Giuseppe Lignano and Ada Tolla recall, Henry asked them for a system, not a form—for “something he could use however he wanted.”

An idea about “extreme transformability” emerged. In renovating the print shop's ground floor and basement, the architects inserted a modular and inherently changeable system within the existing oak beams and columns—satisfying the demand from artists and curators for flexibility and neutrality, without relying on a tried-and-true, white-box parti. Celebrating Bohen's openness to creating art on-site, the scheme provides the equivalent of a soundstage for artists, with visitors entering from behind the scenes. As Lignano explains, “We thought it was appropriate to do something raw for a place where art might be made on the premises.”

LOT/EK's solution is a hybrid of movable volumes and planes: two structurally and conceptually independent systems working in concert to accommodate in-house and public gallery functions. LOT/EK tucked Bohen's offices, storage, small library, video lounge, and conference room into eight, 16-foot-long shipping containers. To fit within an existing column grid, the designers cut down standard 8-by-8-by-20-foot containers. “One-time used,” the shipping boxes came from China, where most con-



tainers are built, full of cargo to make the trip worthwhile—an industry practice. The units met international specifications, ensuring a universal fit with any truck bed, train bed, or ship deck, as well as cranes or forklifts.

LOT/EK kept the boxes' original marine-grade plywood floors and gray painted interiors, but replaced the ends with glass and mounted the containers on steel rollers. This roller system, with tracks set in concrete over existing wood floors, is like the ones used to transport colossal sculptures or entire buildings. Bohen's volumes can roll within their respective “lanes,” like swimmers in a lap pool or boxcars (rotated 90 degrees) on parallel tracks. The architects also replaced a section of the gallery floor with a metal grate that can open to create a double-height slot for large-scale work.

Collaborator Marc Ganzglass painted the containers fire-engine red with *Bohen* stenciled in large letters. He cut the corrugated skin and bent strips inward to form benches, desks, and shelves, with poured tops of 2-inch-deep resin. Rather than fit each unit with costly sprinklers, the architects removed container roof panels and installed a standard sprinkler grid for the entire space. The units have individual wiring for power and data.

The second element of the hybrid design is a series of adjustable wall panels that artists can arrange as they like, creating a single undivided gallery, a suite of smaller galleries, or a combination of open and cellular spaces. The panel configuration for each exhibition takes priority and

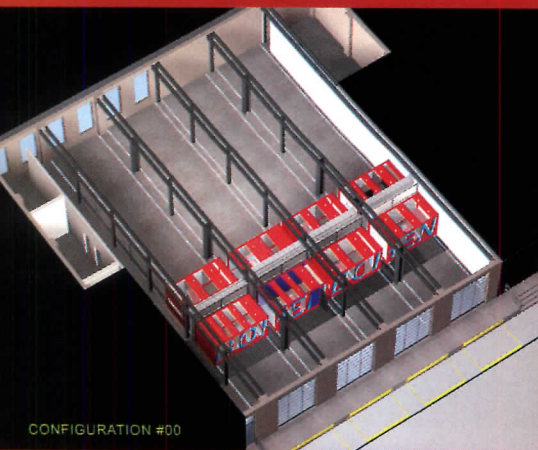
Raul A. Barreneche is a New York-based contributing editor for RECORD.

**Project:** Bohen Foundation, N.Y.C.  
**Architect:** LOT/EK—Ada Tolla, Giuseppe Lignano, principals; Maggie

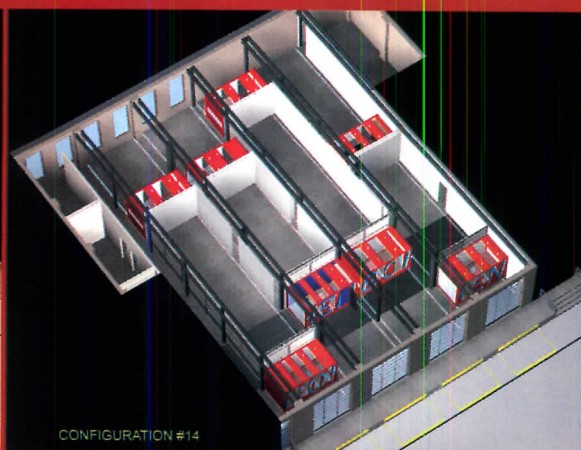
Peng, project architect  
**Engineer:** Arup  
**General contractor:** IBK Construction



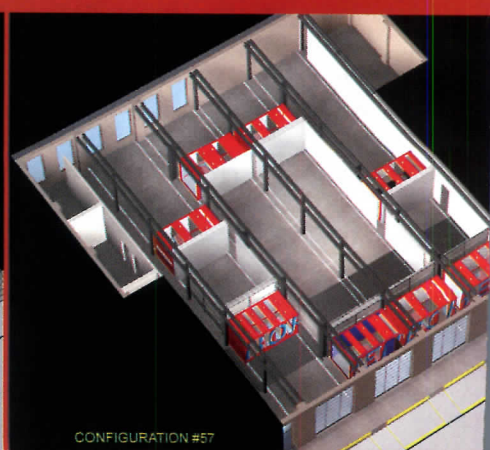
The front of the gallery meets the street with loading docks and glazed, top-rolling garage doors (above left). Unlike boxcars on railroad tracks, these containers roll with their long sides leading. With eight containers and many movable panels, multiple configurations (including the three below) are possible, allowing for a single, undivided gallery; suites of smaller exhibition rooms; or combinations of open and cellular spaces.



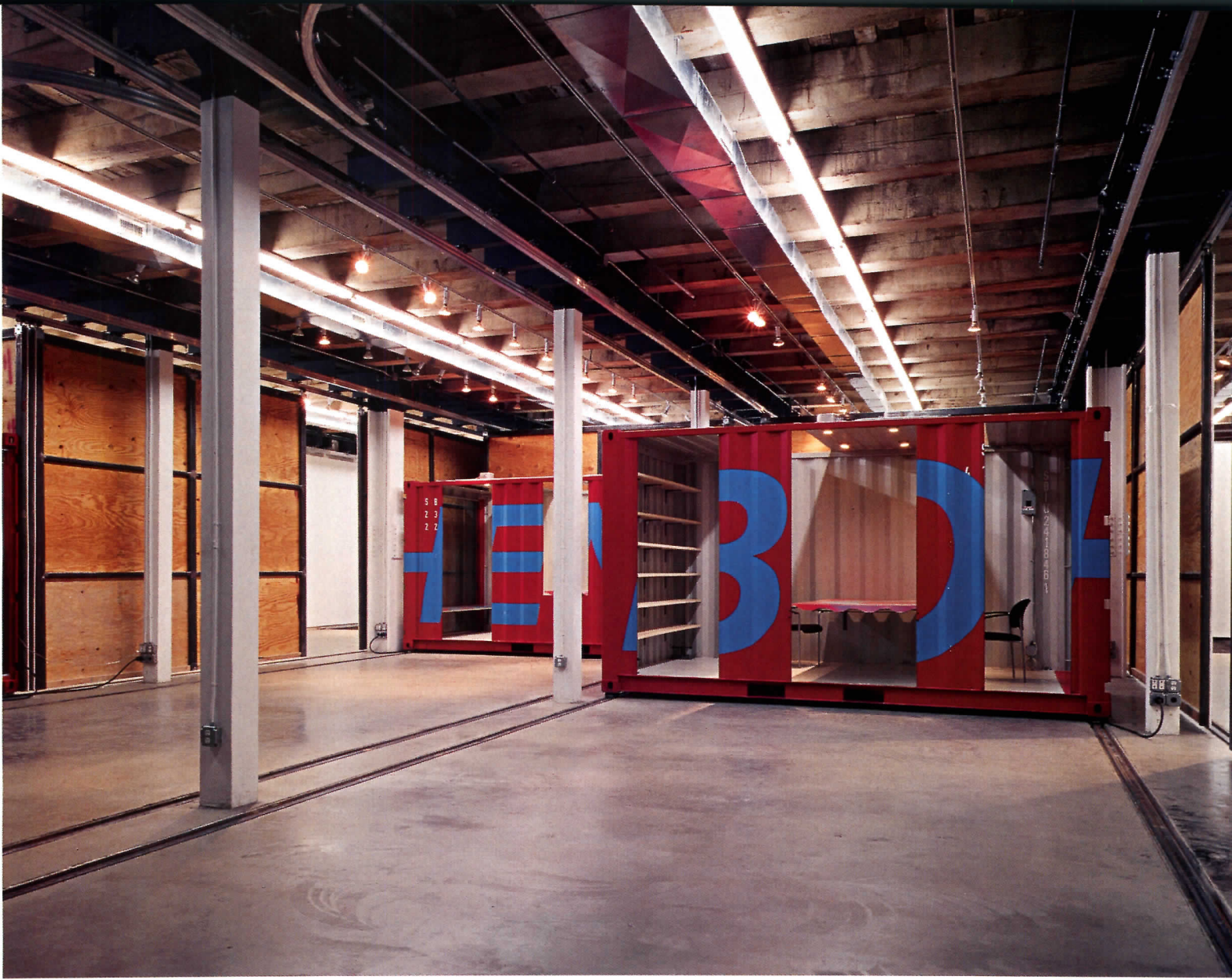
CONFIGURATION #00



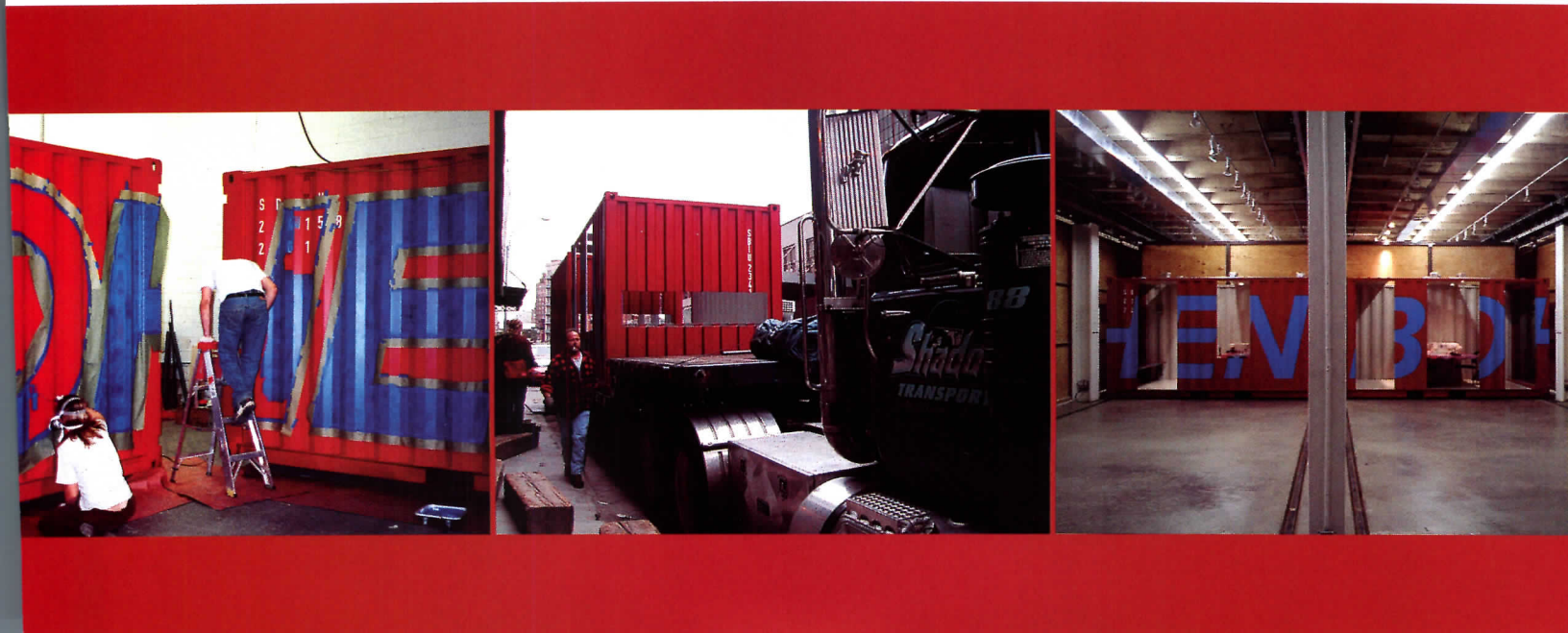
CONFIGURATION #14



CONFIGURATION #57



The shipping containers were painted red and stenciled with the Bohen name in collaborator Marc Ganzglass's shop in a Washington, D.C., suburb (below left) and unloaded from truck beds in New York City's semi-industrial (and increasingly chic) Meatpacking District (below center). Inside the gallery, visible overhead and floor tracks, with the exposed plywood backs of mobile wall panels, give the gallery a raw, behind-the-scenes character (above and below right).

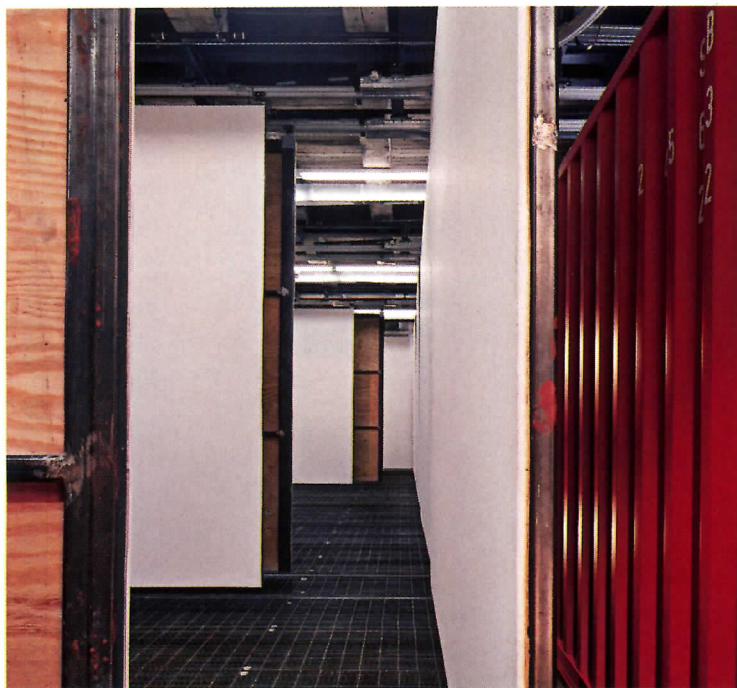




LOT/EK intentionally revealed such back-of-the-house mechanics as tracks, as well as structural underpinnings like ceiling joists and plywood backing (above right); such gritty construction-process remnants as unpainted wallboard tape and spackle (opposite, top); and steel weld marks (above left). A removable floor grate (opposite, bottom) allows for a double-height slot, nearly 30 feet high. Clear resin creates a smooth surface on folded benches (above right) and desks.







strongly influences container positions, leaving the Bohlen staff at the mercy of artists. With shipping boxes driven into unexpected public and private adjacencies, the glass end walls offer layered reflections and surprising views from, say, office into video lounge.

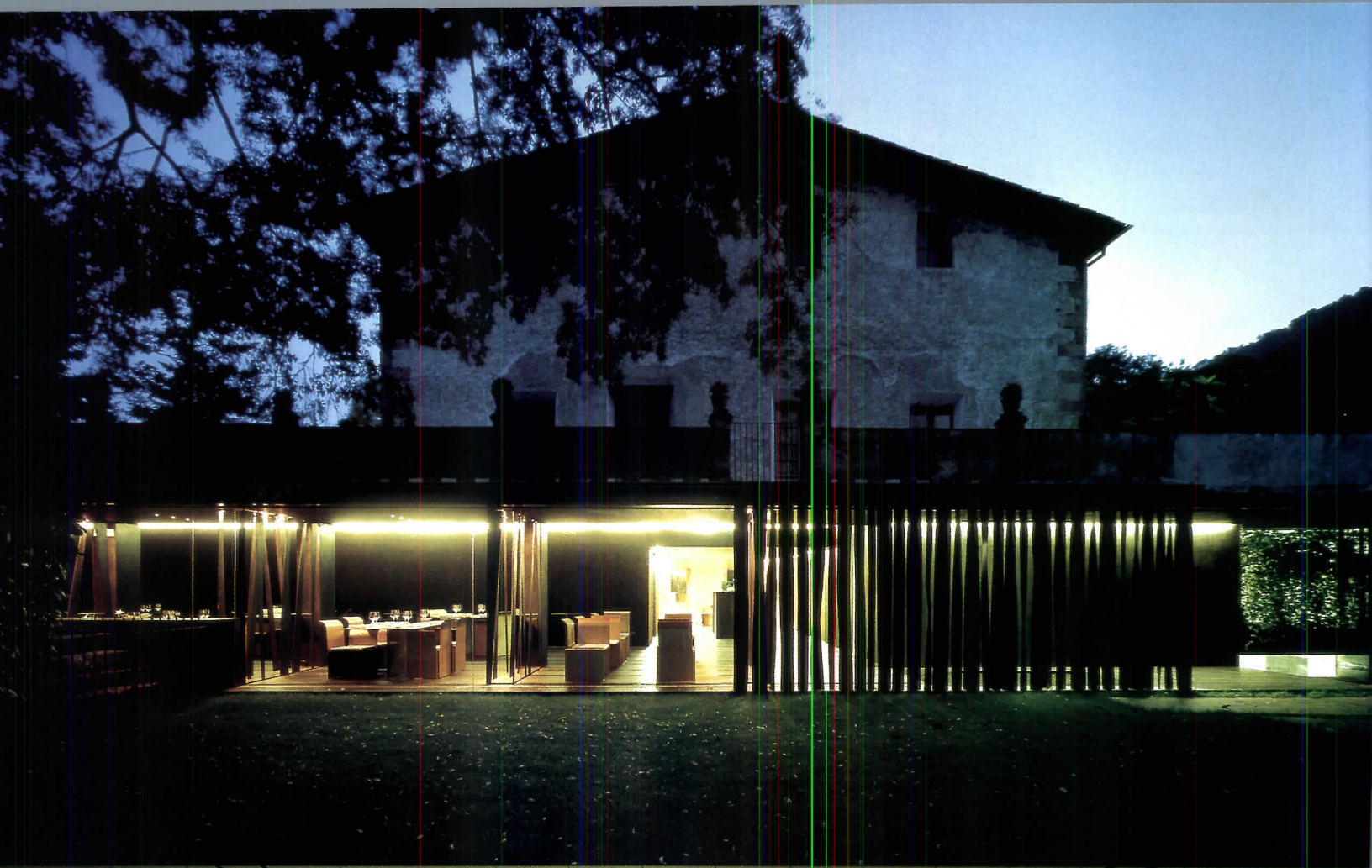
The panels—plywood and gypsum board on steel frame—hang from C-channels that curve to allow 90-degree wall rotations. Exposed plywood panel backs, beneath tracks by an Italian company that designs TV and movie sets, evoke a set's character. You're left wondering if you're seeing a real-life art gallery or a fabricated space for a film from behind the scenes.

The Bohlen Foundation remains LOT/EK's largest and best-financed project to date. Its notion of letting artists manipulate space is provocative. Exhibiting art on temporary whitewashed walls isn't breaking news, but the architects one-up the white box's neutrality with a spatial choreography of volumes and planes, displayed as a mobile kit of parts. What better signifiers of transience, mobility, and economy than recycled shipping containers? The project signals a milestone in the evolution of the gallery from Victorian salon to SoHo loft to the realm of "extreme" flexibility. ■

#### Sources

**Containers:** *Seabox*  
**Track system:** *Manfrotto*  
**Sectional doors:** *Overhead Doors*

For more information on this project, go to Projects at [www.architecturalrecord.com](http://www.architecturalrecord.com).



Occupying part of a 16th-century stone *masía*, or farmhouse (this page, top, and opposite), the main dining room opens onto a garden (above).

# At Restaurante **LES COLS**, a daring menu meets its match with interiors served up by **RCR Arquitectos** and featuring steel as the key ingredient

By David Cohn

**L**ike its adventurous menu—including duck baked in chocolate—the extravagant interiors of Restaurante Les Cols were designed to engage all the senses, provoking “strong sensations,” as its architect, Ramón Vilalta of RCR Arquitectos, puts it. Drawing on RCR’s previous experience with the material and tapping into the expertise of local fabricators, Vilalta and his partners, Carme Pigem and Rafael Aranda, chose steel for the restaurant’s floors, walls, and furniture as “a challenge, a venture into unknown territory.” Despite steel’s cost and practical disadvantages, the architects aimed to see how many different qualities they could distill from this single material and the spaces it shaped. They wanted to push it beyond its normal sensory limits, toward effects more typically associated with earth, wood, foliage, water, or shimmering, evanescent light.

Located on the outskirts of Olot, a remote town in the picturesque Garrotxa Volcanic district of Catalonia, Spain, this luxury restaurant was established in 1990 by chef-owner Fina Puigdeval. It occupies the former ground floor of her family’s 16th-century stone *masía*, or farmhouse, in spaces originally used as stables, with a modern, one-story addition. In 2001, Puigdeval approached the

## THEY WANTED TO PUSH STEEL BEYOND ITS NORMAL SENSORY LIMITS, TOWARD EFFECTS MORE TYPICALLY ASSOCIATED WITH EARTH, WOOD, FOLIAGE, OR WATER.

local firm of RCR to transform the 6,500-square-foot interior into a unique and memorable setting befitting Les Cols’s growing culinary reputation and signature 12-course meals. The architectural partners, all in their early 40s, had built several widely published houses and public facilities around Olot, with finely detailed designs that drew on the group’s early immersion in traditional Japanese culture and the Minimalist sculpture of Richard Serra, Donald Judd, and others.

At Les Cols, RCR streamlined the confused amalgam of existing spaces into a clear axial organization in the shape of a T. Following a gar-

David Cohn is RECORD’s correspondent in Spain.



den path of rusted steel plates, guests first approach the one-story wing that forms the head of the T and enter the restaurant at the crossing point of its axes. To the right, a pair of vertical openings reveal the machined precision of the kitchen, completely finished in stainless steel and arranged around a patio, walled in frameless glass, with a reflecting pool that extends into the entry garden below a screen of ivy. To the left of the entry, the earthy enclosure of the main dining room, facing the garden and bathed in daylight, appears with its dark oxidized steel walls and screens of graphite-finished, twisted steel ribbons over the windows, echoing the climbing ivy. Here, floors of lightly waxed, raw steel planks mix natural colors from different mills: deep blues, purples, reds, and browns. These somber hues set off the brilliant reflective finish of the tables and chairs, coated in hard-baked, pale gold enamel.

Straight ahead, the long trunk of the T plunges through the central structural bay of the *masía*, forming a dazzling banquet room

**Project:** *Restaurante Les Cols*, Catalonia, Spain

**Architects:** RCR Arquitectos—Ramon Vilalta, Carmen Pigem, Rafael Aranda, principals;

M. Subiràs, design team

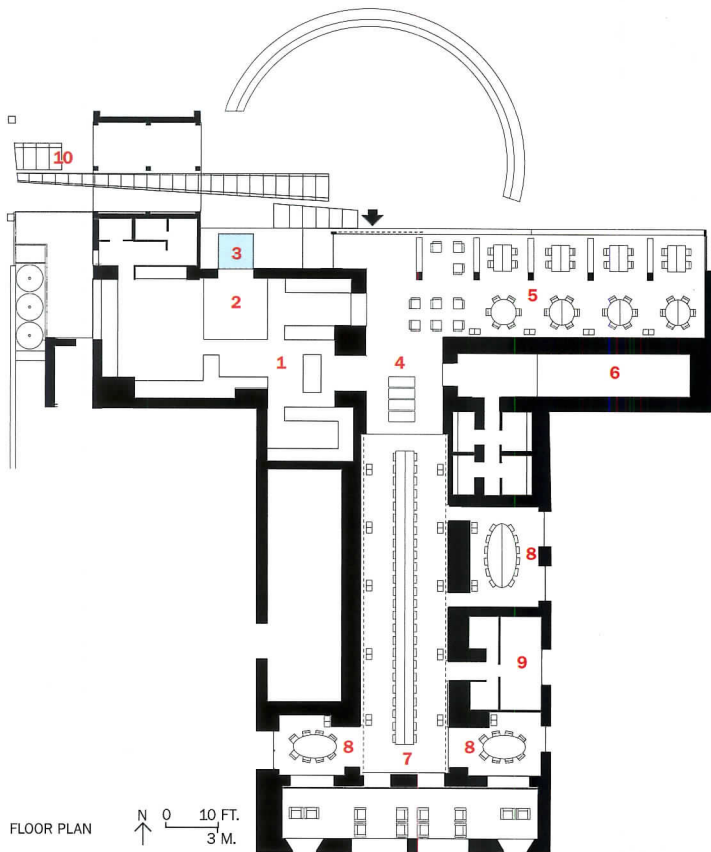
**Consultants:** Blazquez-Guantièr (structural); J. Padrosa (computer renderings); M. Subiràs (construction supervision)



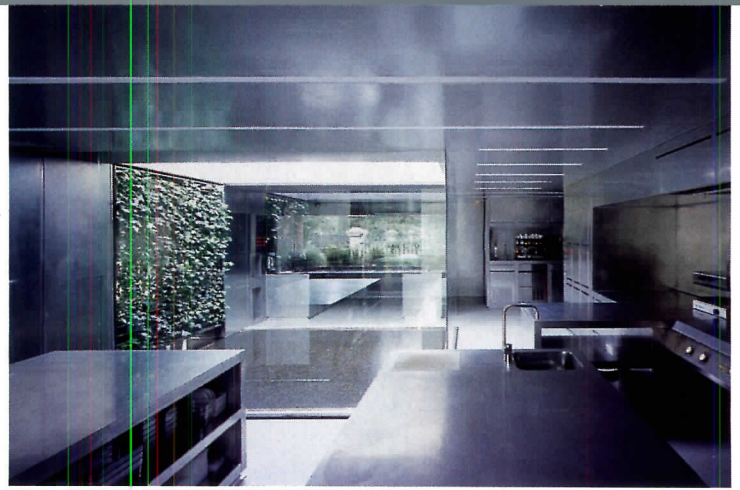


The banquet hall (above and opposite) is like an extremely lavish refectory with a grand table—at more than 55 feet long, it seats 44 diners. The architects designed all the furnishings and twisted screens. Some of the dining areas are set beneath the building's original masonry vaults (right).





- 1. Kitchen
- 2. Patio
- 3. Reflecting pool
- 4. Reception
- 5. Main dining
- 6. Wine cellar
- 7. Banquet
- 8. Private dining
- 9. Office
- 10. Pedestrian access



All stainless steel, the kitchen (top) has a cool, bluish cast and straight-edged precision that contrast with the dining areas' mix of warm, dark oxidized metal (bottom) and gold-enameled, sometimes curvy or twisted forms.

finished entirely in gold, its long table seating 44. In the private dining rooms flanking it, dark steel floors and gold furnishings are set under the original masonry vaults. At the end of the hall, doors open to a stone portico and enclosed garden.

The banquet hall was key to the design: "The original space was windowless, dark, and disagreeable," explains Vilalta. "And the big decision was to open it to the exterior and convert it into a destination." The architects decided to exaggerate its awkward length for dramatic effect, and, in a bold departure from their usual palette of natural finishes, to lacquer its surfaces in multiple, polished coats of gold enamel—maximizing the sense of splendor. Twisting ribbons of gold-painted steel along the long walls, echoing those of the main dining room, seem to vibrate in the light of continuous fluorescent tubes at the floor and ceiling. These steel strips screen out views of air diffusers and acoustic wall material. The table, like the rest of the furnishings, evokes vegetal forms, with two continuous steel plates that fold symmetrically from a central stem to produce twin cantilevered leaves. Tall serving tables line the walls; their small bisecting tops like paired hands proffering a serving platter. The chairs, thin-cushioned and mounted on casters, consist of two symmetrical steel plates, folded like origami around a diagonal cut running across

the seat. The steel plates ingeniously open below the seat to produce a curving back and single side arm, inviting diners to assume a relaxed, almost reclining posture, as if at a Roman feast.

More than 55 feet long, the table adds to the sense of ceremony, as does the background music of Gregorian chants, Baroque viols, or Balinese gamelan. Whether it's a banquet or merely an evening with regular diners, the scenario entails a bit of choreography. Couples must separate like partners in a line dance to find facing seats on either side of the table, while the waiters whisk round and round announcing courses. (When patrons arrive in groups smaller than 44 for a meal, not a banquet event, empty chairs typically act as spacers between different clusters of diners.) Despite the drama of the room and its activities, the overall effect is of amplitude and ease, combining the free horizontal flow of modern space with the thick, heavy forms of the *masía*. Once a dark, enclosed chamber buried in the center of the complex, this hall gives new meaning to the notion of an interior world glowing from within. ■

**Sources**  
**Acoustic ceilings:** Knauf Delta  
**Urinals:** Lagares

For more information on this project, go to Projects at [www.architecturalrecord.com](http://www.architecturalrecord.com).



The wine cellar occupies vaults of the original building. The simple glass door and strip of light set in the floor successfully play old against new—a balance that emerges in the project as a whole.

The clear view in from the street (opposite) reveals undulant sculptural forms framing lateral racks of backlit clothing (this page) and surreally "floating" mannequin torsos hovering over rings of light.





# Asymptote weds high-tech fabrication with flashes of vibrant Brazilian culture to create the **CARLOS MIELE** flagship store

By Sarah Amelar

Without a single Amazon waterfall or any literally wet surfaces, the new flagship store for Brazilian clothing designer Carlos Miele evokes a liquid environment. Though this mostly white boutique by architects Hani Rashid and Lise Anne Couture of Asymptote does not emit the deep blue underwater quality of their New York Stock Exchange project [RECORD, June 1999, page 144], the shop's reflective poured-epoxy floor and glossy, taut ceiling membrane have a rain-slicked look. And the curvy sculptural forms meandering through the space present areas of sea-washed smoothness and cavernous openings with subtle variations in floor color pooled beneath them. But maybe this sense of fluidity suggests not water, but an ether—the medium, perhaps, in which the shop's headless mannequins, clad in fluttery garments (and suspended from nearly invisible filaments), appear to float weightlessly. Or, then again, maybe the sculptural forms extending the length of the shop say more about the curves and movement of the human body itself. Much remains open to interpretation. As Rashid puts it, “We definitely weren't interested in being literal, explicit, or overly allegorical—or assigning a single, fixed meaning.”

For this 3,000-square-foot downtown Manhattan store, Asymptote drew on several different analogies—from water and landscape to urban parks and religious ritual—but by distilling and abstracting those influences, the architects turned them toward multivalent design, without succumbing to the pitfalls of mixed metaphors.

At the very outset, however, Couture and Rashid had serious misgivings about designing a fashion boutique—in their view, a “highly dubious” commercial endeavor “predicated on trend and taste.” But meetings with the Brazilian designer soon convinced them, they say, that here was an opportunity to explore “larger issues of art, architecture, and urbanism.”

The fashion designer and architects found significant common ground—all sharing a fascination with cutting-edge technology and materials. Like Asymptote, Miele, 39, had created multimedia installations and exhibited his own video art in museums, biennials, and other venues. His women's and men's apparel, sold in his own 93 stores in Brazil, juxtapose the high-tech with the artisanal—exploring optic fibers; body-temperature responsive, holographic, and “memory” textiles; and ecologically recycled and milk-based materials, alongside indigenous Brazilian laces, brocades, rosettes, beading, and appliqués, handcrafted by a cooperative of seamstresses and artisans in the *favelas*, or shantytowns. (Miele makes a point of donating funds to schools and



other causes for these impoverished communities.)

The architects were pleased that their client had chosen to site his first store outside of Brazil in New York City's Meatpacking District, a neighborhood rich in its improbable mix of the newly gentrified and the well-established: ultrahip boutiques near the grisly meatpacking activities spilling out onto quasi-derelict cobblestone streets. The sense of overflow or, at least, of continuity between interiors (of meat marts) and street life helped inspire the shop's larger urban gesture. Along similar lines, Miele envisioned his boutique, Rashid recalls, as “a piazza or gathering place, not hidden from the street, where people could hang out.” The architects began to think of the store almost as a vestpocket park, a midblock “urban room.” Integrating benches, or abstracted street furniture, into the large sculptural forms (with their cavernous openings), they shaped its curves to loosely define a series of separate “rooms” or seating areas within the larger space.

But rather than create a facade that literally opens up to the street, they rendered it open with unmillioned sheets of glass, revealing the sculptural forms snaking their way among suspended mannequins, all the way to the back of the store. (It would be disingenuous, however, to claim this as a true piazza beckoning all. Transparent though the facade may be, glass is also undeniably a barrier—and, in this case, an elegant and upscale one.)

The architects' enthusiasm for the urban setting was not equaled by their first impression of the interior site. The raw space struck them as too

**Project:** Carlos Miele Flagship Store, New York City

**Architect:** Asymptote—Hani Rashid, Lise Anne Couture, principals; Noboru Ota, John Cleater, Peter Horner, Cathy Jones, project team; Michael Levy Bajar, Janghwan Cheon, Teresa

Cheung, Mary Ellen Cooper, Shinchiro Himematsu, Michael Huang, Lamia Jallad, Ana Sa, Markus Schnierle, Yasmin Shahamiri, assistants

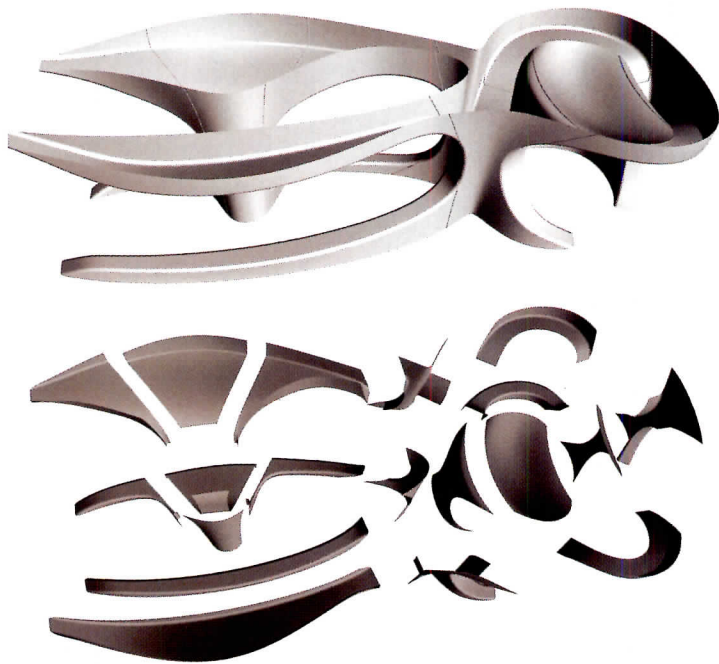
**Engineers:** Kam Chiu, Andre Tomas Chaszar

**Lighting:** Focus Lighting



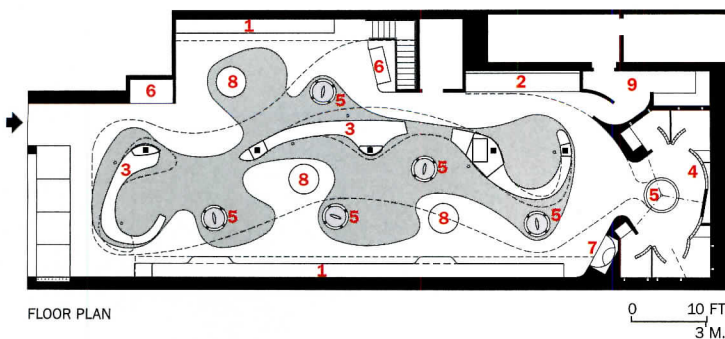
For the back of the store, near the glowing fitting area, Asymptote designed a round, irislike installation that combines video and light-emitting paint with convex and concave mirrors (this page). Daylight from the street-front illuminates forms reminiscent of Neimeyer's concrete work (opposite).





The “altar” (top right) frames views into the shop, while other openings (opposite) reveal vignettes of dramatically lit apparel. Inspired by clothing patterns, Asymptote shaped sensual 3D curves from 2D images, creating the components of the larger sculptural forms (above).

1. Clothes rack
2. Backlit clothing
3. “Altar”
4. Changing area
5. Light ring
6. Art niche
7. Mirror/video piece
8. Display table
9. Cashier



low ceilinged and dominated by a line of view-blocking, repetitive columns. But, says Rashid, “As fate would have it, those two issues drove the design for the better”—and ultimately led to innovations with methods, well suited to the high-tech precision of Miele’s materials and fabrication.

The glossy epoxy floor and reflective ceiling—a stretched polyvinyl chloride (PVC) membrane—give the illusion of high, expansive space. And the large sculptural elements—with complex double curves of modified, medium-density fiberboard (MDF), laser cut from direct-transfer computer files—effectively render the columns invisible. Asymptote’s winding forms frame views from the indoors out and outdoors in, capturing the theatricality of the interiors and the street life.

Aspiring to further levels of meaning, the architects conceived of their coolly high-tech design as a “spatial narrative” centered on “an abstracted reading of what constitutes Brazilian culture, landscape, and architecture” and partially shaped by that culture’s “exuberant vivacity.” Allusions to the architectural Modernism of Oscar Neimeyer and others of his generation may be perceived in Asymptote’s forms. And impressed by Miele’s passion in describing the multireligious, multicultural character of his country, Rashid and Couture molded the sculptural piece nearest the storefront as an “altar.” They imagined it, they say, not as a shrine to fashion, money, or any specific religion, but as a gesture of almost ritualistic procession through the space.

But this confluence of ideas is a tall order for a 3,000-square-foot storefront. In the end, it’s a shop, simply put—and one that seems to work well as a canvas for Miele’s wares. Asymptote’s palette of white with muted grays and greens highlight the clothing’s vivid colors. The sculptural forms evoke the human body moving through space, in part because the architects applied 2D clothing patterns to create sensual 3D curves. The illumination—halos of floor-embedded uprights beneath the floating mannequins, as well as glowing shelves and backlit walls—dramatizes the display of apparel. And the shop even integrates video installations by Asymptote and Miele, separately and in collaboration.

Just as Miele’s designs collage materials and ideas from radically contrasting sources, Asymptote’s interior draws on a multiplicity of influences. Some will not be apparent to the casual visitor, but their abstracted meanings, like the layers of well-made garments, may gradually reveal themselves. ■

#### Sources

**Ceiling:** Barrisol  
**Millwork:** 555 International  
**Furnishings:** Magis

For more information on this project, go to Projects at [www.architecturalrecord.com](http://www.architecturalrecord.com).



Deftly disguising a row of columns, the sculptural curves morph into display tables, seats, or archways and windows opening onto the shop's merchandise and activity.



A 25-foot-high atrium in the rear of the building brings light into a first-floor bedroom and living spaces below (this page) and knits all three levels together (section, opposite).



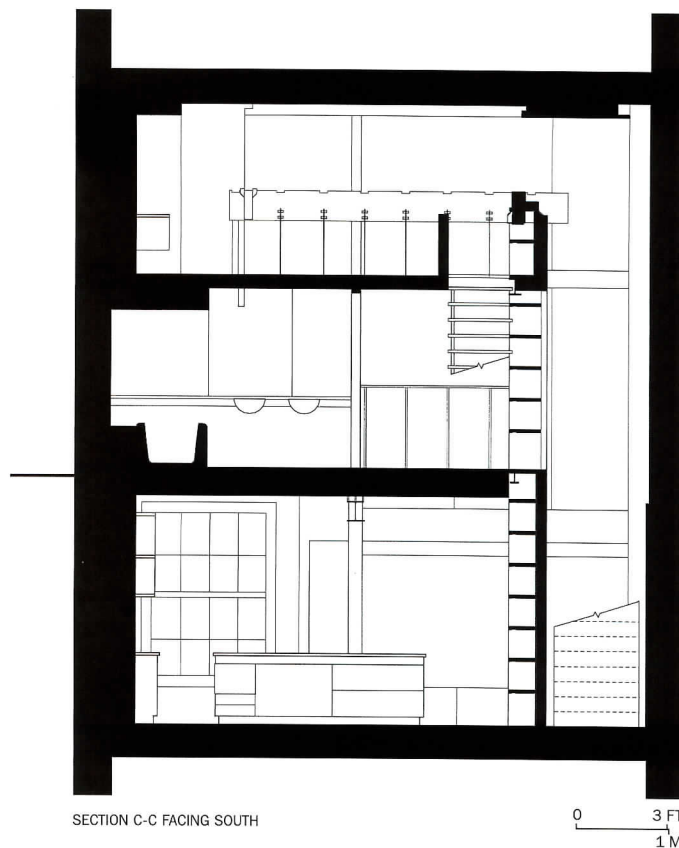
# To create a **LIVE/WORK LOFT** for themselves, **Marpillero Pollak Architects** borrowed light and punched through floors

By **Clifford A. Pearson**

**C**all it addition by subtraction. That was the strategy Marpillero Pollak Architects employed in transforming a long, narrow ground floor and basement into a light-filled apartment and office. “It’s counterintuitive, but we gained a whole story by losing 9 feet,” says Linda Pollak, AIA, explaining why she and her husband, Sandro Marpillero, AIA, reduced the footprint of their live/work space in New York City’s Tribeca district by moving the rear wall forward. “The people at the buildings department said they couldn’t remember anyone ever asking to make a place smaller,” she recalls with a laugh. But the move turned a dark, narrow rear yard into a 16-foot-wide garden large enough to bring daylight to the basement and make it usable as living space. To take full advantage of the scheme, the architects sliced through the first story to create a 25-foot-high atrium in the back of the building with a steel-and-glass wall overlooking the garden. The one-two punch of pulling back and going up turned out to be an effective way of giving a dark, constricted space the attributes of a loft.

Thinking three-dimensionally, Marpillero and Pollak wove together different functions in a complex but logical way. Instead of simply segregating 2,000 square feet of residence and 1,400 square feet of office on different floors, they integrated both on each floor, using a new stair-bookcase element as the hinge. “Books are where our private and professional lives come together,” says Marpillero, “so we used the bookshelves as a site of negotiation between the two worlds.” Rising from the basement through the first floor and up to a mezzanine that the architects inserted, the shelf-and-stair unit roughly divides each floor into a street-facing front (for the firm’s office) and a garden-facing back (for the Marpillero-Pollak home).

Most office functions occur at street level, although a small print area and bathroom occupy the basement level and the two principals have their desks on the mezzanine overlooking their employees’ workstations. The main living spaces occupy the rear of the basement, with the master bedroom on the first floor and Marpillero’s teenage daughter’s bedroom on the mezzanine. Set in a five-story, 1864 Italianate building dressed in cast iron and sandstone on its street facade, the project exhibits the same ability to accommodate change that has made what was once gritty Tribeca such an attractive neighborhood in recent years. By taking the darkest, least desirable space in the building, the architects found they could afford an area they at first considered beyond their budget. Acting as their own general contractor also helped, as did carving out a 400-square-foot space in



the basement with its own entry, which they hope to rent out.

While some architects might have simply contrasted new elements with the old building’s brick envelope, Marpillero and Pollak established a more complex dialectic—integrating and layering old and modern materials. Instead of erasing evidence of what has been moved or cut away, they intentionally left scars: indentations in the bearing walls where old wood joists had rested, for example, and broken bricks where the rear wall had stood. In other places, they left ghosts, such as a bricked-up opening they revealed after moving a wall, or the iron joist holders that remain hanging from the ceiling without anything to support.

Enriching the dialogue between the building’s history as offices and a warehouse for a dry-goods-import business and its modern incar-

**Project:** *Duane Street Live/Work Loft, New York City*

**Architect:** *Marpillero Pollak Architects—Sandro Marpillero, AIA, partner in charge; Linda Pollak, AIA, partner; Paul Teng, project manager; Alison Crawshaw, Jessica Levin, Alex Jiaravanont, Kyungen Kim, team*

**Architect of record:** *John Furth Peachy Architect*

**Engineers:** *D’Antonio Consulting Engineers (mechanical); Richard Balsler Engineers (structural)*

**Builders:** *Angel Vazquez, Eric Asudillo*  
**General contractor:** *Marpillero Pollak Architects*

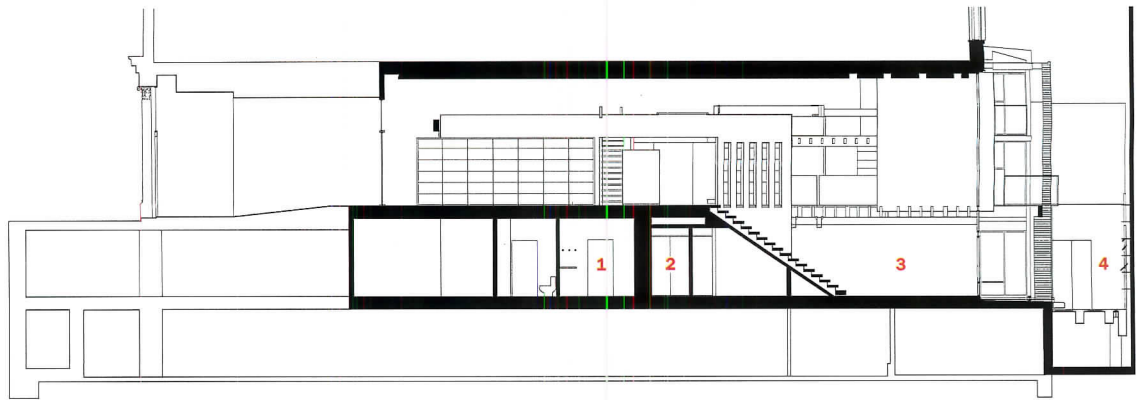


Set in the darkest spot in the plan, the master bathroom was treated as a glass cube that "borrows" views and space from the hallway and atrium. A timber cut during construction is now a step leading to the mezzanine.



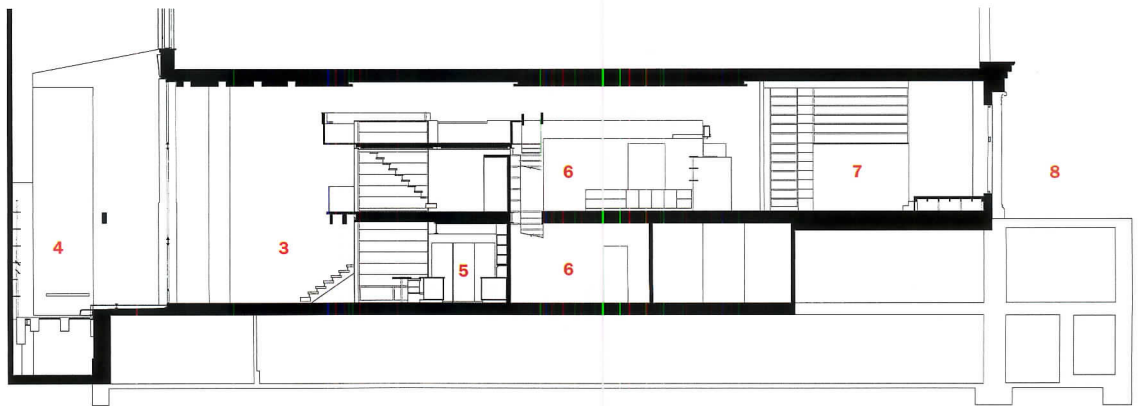


1. Laundry
2. Pantry
3. Living
4. Garden
5. Kitchen
6. Office
7. Conference
8. Duane Street



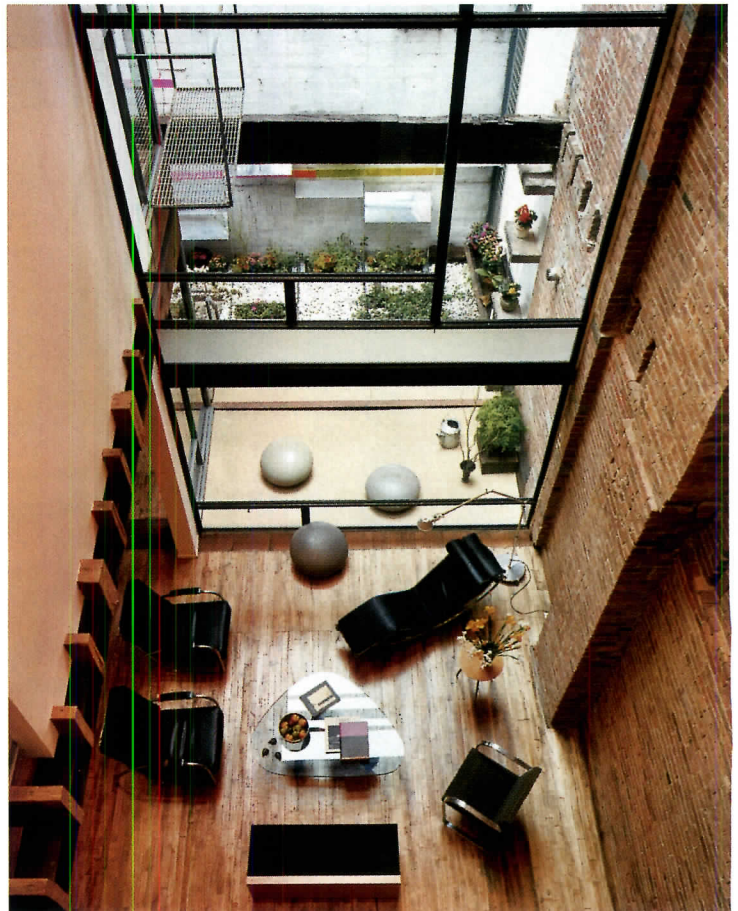
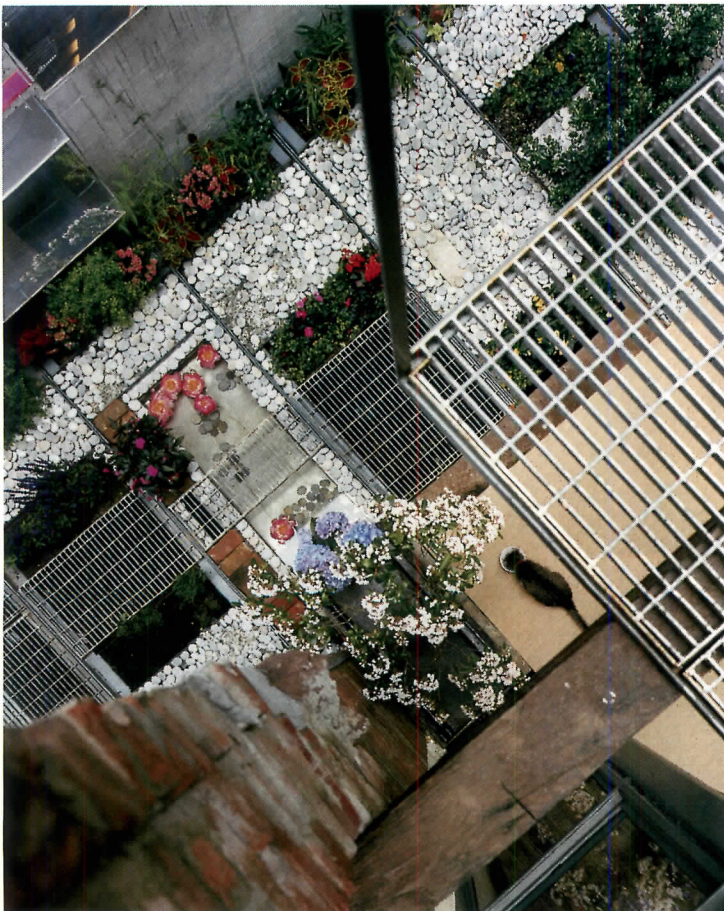
SECTION A-A LOOKING EAST

The garden (below) works as an artificial landscape with stones and plants placed in a metal grid. Angled mirrors set on an adjacent building reflect strips of the sky into the garden and living room (below right).



SECTION B-B LOOKING WEST

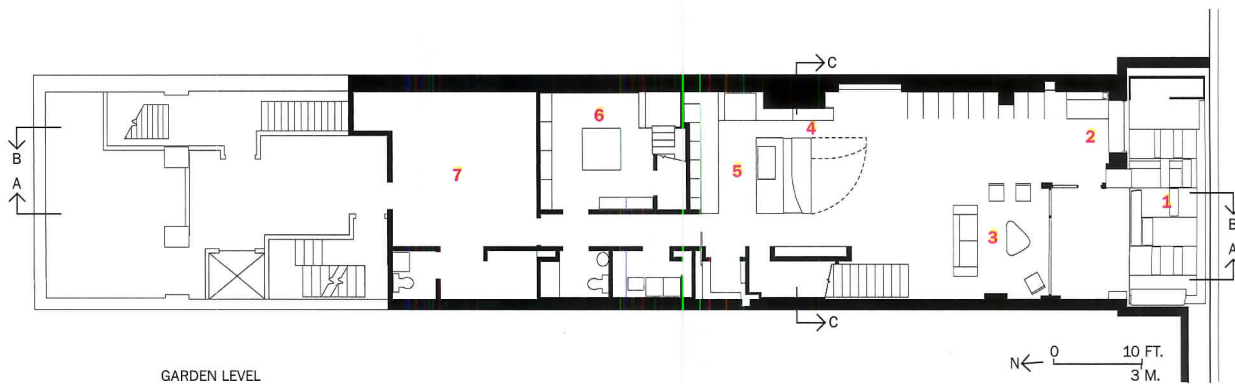
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The architects recycled wood joists cut during construction into stairs leading to the garden level and railings for the mezzanine. They left some joist hangers on the kitchen ceiling.



1. Garden
2. Guest
3. Living
4. Bar
5. Kitchen
6. Office
7. Shop
8. Master bedroom
9. Entry hall (residence)
10. Conference
11. Entry hall (office)



The firm's office (above) occupies a long space on the street side of the first floor, while the residence faces the rear garden

(left). A floor-to-ceiling height of 15 feet on the street level allowed the architects to insert a mezzanine (top of photo, opposite).



nation as a live/work loft, the architects recycled almost everything they tore out. Those wood joists have become treads in the new staircase, old timbers show up as railings or steps, wrought-iron window shutters now serve as pantry doors, and even a broken roof gutter has a new life as an outdoor sink in the garden. Working with a tight construction budget—\$280,000—and being scavengers at heart, Marpillero and Pollak rescued additional items from other places: plastic 1960s stools found on the sidewalk, a Carrara marble countertop from a restaurant going out of business, and stainless-steel refrigerator doors from the same restaurant, which the architects used ironically as cabinet doors. “We didn’t want everything we touched to look pristine and different,” explains Marpillero. “So we took old elements and displaced them along with the new.”

“A lot of our work deals with small spaces and opening them up,” says Pollak. “We often use what the Japanese call ‘borrowed space,’” creating views or openings from one room to another or from indoors to out. The firm has completed a variety of residential work, as well as two small outdoor classrooms in parks for low-income neighborhoods of New York City. The Robin Hood Foundation recently hired Marpillero Pollak to

design one of the small libraries it has been creating in local public schools.

Although both are registered architects, the partners come from contrasting personal and professional backgrounds—Marpillero is an Italian trained in urban design, and Pollak, an American with training in landscape architecture. Marpillero, who practiced in Italy before coming to the U.S. on a Fulbright scholarship in the early 1980s, says, “Linda and I have different perspectives and have worked at different scales.” The two don’t always agree and sometimes find themselves offering alternative takes on the same point. But, says Marpillero, “Buildings serve as our common ground.” ■

**Sources**

**Maple-veneer cabinetwork:**

*Albert Paez*

**Skylight:** *Velux*

**Glazing:** *Parthenon Glass*

**Steel structure:** *Damo Construction*

**Steel window and doors:**

*Metalforms*

**Tack board:** *Homasote*

**Toilets:** *Duravit; Toto*

**Sinks:** *Franke; Duravit; American Standard*

For more information on this project, go to Projects at

[www.architecturalrecord.com](http://www.architecturalrecord.com).

The conference room, director's office, and bathroom area each occupies its own free-standing volume. Layered acrylic panels of different hues clad these boxes, yielding a spectrum of vivid color, heightened by skylights and other backlighting (this page and opposite).



# Pugh + Scarpa animates a video-editing house, **COOP EDITORIAL**—turning its rooms into freestanding objects

By David Hay

**W**hen architect Lawrence Scarpa, AIA, first visited the Santa Monica, California, site of COOP Editorial, he was in for a surprise. The single-story, 4,700-square-foot commercial structure that his client had asked him to convert into a video-editing facility turned out to be a Frank Gehry building, vintage 1963. Unfortunately, time had not served the simple Modernist box well. The structure's most recent occupant, a kidney-dialysis outfit, had given the interior the standard features of medical design, including low, cottage-cheese ceilings and harsh fluorescent lighting. And an unfortunate 1990s makeover, partially covering the original plaster-stucco exterior, had left copper cladding angled across the floor-to-ceiling windows of Gehry's original front facade.

Nonetheless, early hints of the famous architect's future sensibility remained. Travertine-clad columns between the windows, for instance, suggested Gehry's willingness to explore refined materials, even in so basic a commercial structure—although, of course, he was not yet experimenting with titanium.

Scarpa, a principal in the Santa Monica firm of Pugh + Scarpa, quickly saw beyond the recent "embellishments" and found himself entranced by the clean, well-proportioned shell of the original building. Though he lacked precise information on the Gehry interiors, Scarpa recalls, "I saw possibilities for opening up this dense, almost hermetic office space." By cutting a row of floor-to-ceiling windows across the rear elevation, he could open up lines of sight "from the outside to the inside and to the outside again." But this idea would not be easy to realize, given the programmatic needs of COOP Editorial, a TV-commercial postproduction house. Three separate, soundproof video-editing bays would be required, in addition to a conference room, an executive producer's office, and lounge areas.

Pugh + Scarpa—a firm that had built its reputation on novel

*David Hay is a journalist who frequently covers art and architecture. He is also a playwright.*



PROJECTS

design solutions for such Hollywood clients as Danny De Vito's Jersey Films—soon devised a way to put the editing bays out of sight and away from the proposed open, light-filled interior. Though the architects were unable to dispense with the metal obstructions along the front facade, they would gain illumination through the new rear windows. But they still needed a way to create the required enclosed offices without disturbing the flow of light through the space.

**Project:** COOP Editorial, Santa Monica, Calif.

**Architect:** Pugh + Scarpa—Lawrence Scarpa, AIA, principal in charge; Peter Borrego, Angela Brooks, AIA, Silke Clemens, Vanessa

Hardy, Ching Luk, Fredrik Niilesen, Tim Petersen, Gwynne Pugh, AIA, Bill Sarnecky, Katrin Terstegen, design team

**Engineer:** Gordon Polon (structural)

**General contractor:** Hinerfeld Ward



Matte materials play against reflective surfaces; vibrant hues against neutral tones; and hard-edged forms against organic curves.

The wood wall, rippled like the ocean, separates the public space from the darker video-editing bays (above and opposite, top).

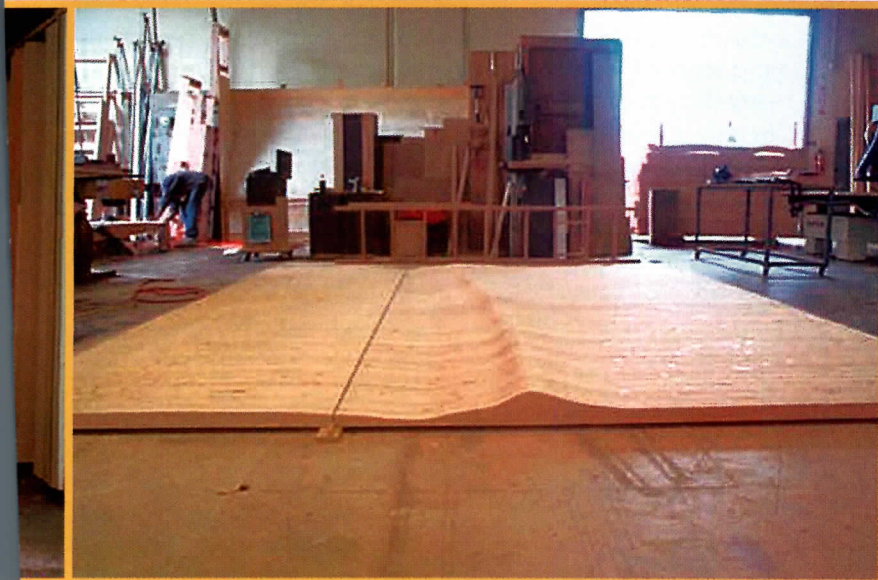


FLOOR PLAN

- |               |               |                  |
|---------------|---------------|------------------|
| 1. Lobby      | 5. Office     | 9. Video editing |
| 2. Reception  | 6. Vault      | 10. Graphics     |
| 3. Kitchen    | 7. Server     | 11. Patio        |
| 4. Conference | 8. Rear lobby |                  |







The 100-foot-long wall was created by information sent directly from the architect to a computer numerically controlled (CNC) router, which sculpted 74 glue-laminated beams of varying thicknesses. Entry doors cut into the wall continue wood grain almost seamlessly.



The reception desk (below) is concrete, as are the floors, which combine two different lithochrome stains.

Carefully sealed lead sheets partially sheath the freestanding volumes (above and below).



That's when Scarpa revisited his long-held interest in the work of the late Minimalist sculptor Donald Judd. Years earlier, Judd had positioned objects, such as cubes, across gallery spaces in ways that not only celebrated the forms and materials, but also commented felicitously on the surroundings. It struck Scarpa how the volumes "tended to look less like objects in space" and more like interventions "calling attention to the space itself."

Judd's forms inspired him to design three discrete, freestanding, nearly cubic rooms for the main space of COoP Editorial. These forms house a conference room, the executive producer's office, and bathrooms, respectively. Perched on a ½-inch-thick neoprene pad and separated from the ceiling by a wide reveal, each one appears to float, hovering slightly above the floor. Scarpa used a dark-colored neoprene, he explains, to "cast shadows that enhance each room's floating quality." Carefully sealed lead sheeting, applied like wallpaper, contributes to the boxes' necessary acoustic isolation—as do abutting walls of inch-thick laminated acrylic. The architect accentuated the programmatic individuality of each "cube" with distinct materials and color. Vivid blue rubber-sheeting lines the conference room, while the bathrooms have all-white interiors with deep, multihued, acrylic-paneled recesses on the exterior.

The deft positioning of these colorful volumes allows light to flow easily across the newly open interior. A spectacular, undulating, 100-foot-long, wood-paneled wall runs nearly the entire length of the building, enhancing the trajectory of light from sunrise to sunset. This wall also separates the main space from the large, darkened editing bays.

With its wavy form evoking the ocean surface, the sculptural wall—a series of glue-laminated panels carved into curves by a computer numerically controlled (CNC) machine—suggests the architect's commitment to exploring applications of materials old and new. (Pugh + Scarpa employs an architect solely to experiment with innovative materials and structural forms and to bring the results to planning meetings.) The wood surface remains somewhat unfinished, its slightly rough veneer a reminder of its natural origins. Such treatment provides a refreshing contrast to the purely technical world behind the wall, where every decision passes through a computer-driven editing machine.

Material experimentation continues with luminous, acrylic-paneled recesses, about 18-inches deep, on the sides of the three volumes. An inch thick, the panels themselves are eight-layer-deep composites of acrylic strips, each of a different hue—and in combination yielding a spectrum of other rich colors. Skylights above the panels allow abundant rays to shine through, pumping up the color to maximum effect.

Expressive color also enlivens the concrete floor, where the architects mixed two different lithochrome stains to achieve a multi-toned, modeled finish. Since the completion of COoP Editorial, it's hard to imagine the interior of this Gehry building ever having a murky past. The place now has the effect of light boxes within a light box.

The design serves both editors and clients well. Video editing demands highly concentrated work in dimly lit interiors. Here, the staff (sometimes with clients viewing rough or final cuts) emerges from editing into luminous, colorful, and materially rich public areas—entering the animated spaces between objects. For the editors' overworked brains, this reimagining of Gehry's Modernist box can only come as a tonic. ■

#### Sources

**Glass:** PPG

**Skylights:** Bristolite

**Doors:** US Aluminum (storefront);  
Timely (hollow-core metal);

Spectrum Oaks (wood, custom);

Julio Chavez (glass, custom sliders)

**Hardware:** Schlage (locksets); Stanley (hinges)

**Concrete stain:** LM Scofield

For more information on this project, go to Projects at

[www.architecturalrecord.com](http://www.architecturalrecord.com).



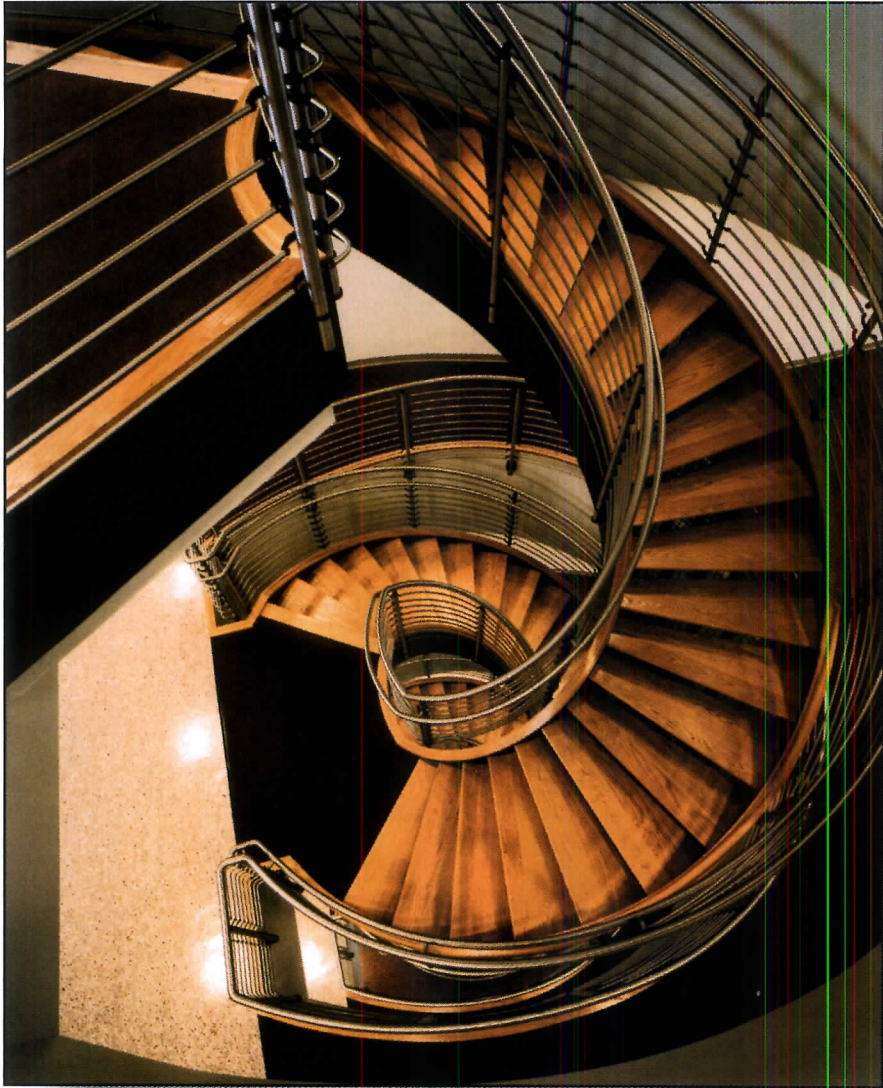
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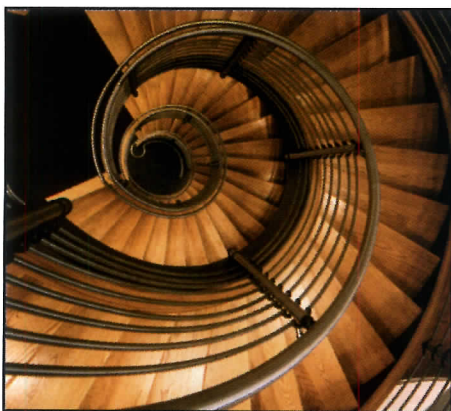
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**Project: WITHELD PER OWNER'S REQUEST**

**Architects:** O'Brien/Atkins Associates, PC [www.obrienatkins.com](http://www.obrienatkins.com)

**General Contractor:** Suitt Construction Company  
*photos by Rick Alexander and Associates© Photographer*

"The spiral stair and atrium for this project laboratory/administration building were identified early on as key public features in the facility. The Modesto System delivered the clean lines, technical requirements and the design image this project demanded. The craftsmanship complements the finish of the building and even the owner commented it was "the best stainless steel welding in the whole building."

*O'Brien/Atkins Associates, PA.*

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# Radiating Creature Comforts in Buildings

**NEW SOFTWARE AND ALTERNATIVE SYSTEMS OF THERMAL CONDITIONING CAN ENSURE THAT HEATING, VENTILATION, AND AIR-CONDITIONING WORK TOGETHER EFFICIENTLY, INVISIBLY, AND QUIETLY**

By **Barbara Knecht**

**A**n Australian television crew was recently filming an interview with the executive director of a New York-based not-for-profit housing developer in its flagship building in Times Square. Partway through the interview, which took place in a top-floor conference room, the cameraman yanked off his headphones to ask about the loud noise that suddenly started. It wasn't sirens on the street outside. "It's the AC unit coming on," explained the director. "It's on the roof just above us."

Heating, ventilating, and air-conditioning (HVAC), as every architect and MEP engineer knows, are designed to work together to provide a comfortable environment, unobtrusively and cost-effectively. Of course, no one notices when the collaboration is successful, but no one can help but notice when it isn't, especially if the thermal properties are inadequate or the system is noisy. Then cost-effective quickly turns into costly.

"If you have to retrofit after construction is completed, you are doing it in an occupied building on premium time. And if it's a problem to the occupants, you can't fix it fast enough. It is much more cost-effective to do it right from the start," explains Paul Sampson, principal of Spaulding & Slye Colliers, a real estate services company in Boston and Washington, D.C. "We have made it a practice to incorporate acousticians as part of the design team in all our projects."

Mechanical engineers and acousticians agree that, in most applications, it isn't difficult to provide sufficient sound attenuation for building occupants. Still, one of the most common problems remains

*Barbara Knecht is a writer in New York and Boston.*

## 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 172 and follow the instructions.

## LEARNING OBJECTIVES

After reading this article, you should be able to:

1. Describe the best time to deal with sound attenuation in air-handling systems.
2. Discuss appropriate uses for radiant heating and cooling systems.
3. Explain the benefits of underfloor air distribution.

For this story and more continuing education, as well as links to sources, white papers, and products, go to [www.architecturalrecord.com](http://www.architecturalrecord.com).



Three inverted domes mark Northeastern University's Spiritual Life Center.

rooftop equipment placed over a sensitive space, which causes problems for the occupants and, quite often, for those in neighboring buildings. "The list of potential offenders is long," says Anthony Pangaro, principal at Millennium Partners-Boston, which recently developed the Ritz Millennium Towers on the Boston Common. "Gurgling water in the distribution system, elevator noise, rooftop mechanicals, bypass piping, and heat pumps of all kinds are all on the list, but it's relatively easy to deal with noise inside our own buildings. It's much harder to deal with the noise from a rooftop unit, especially with the increased use of operable windows. We try to make sure that the most cost-effective solution for us doesn't cause a problem for someone else."

"The most cost-effective noise control that you can buy is in the design phase," says Carl Rosenberg, president of Acentech, a national acoustical consulting firm. "Noise control treatments are generally very inexpensive." Acentech engineer Doug Sturz concurs: "We have learned that fixing a problem can cost five to ten times as much as attenuation during initial construction. We have also learned how to analyze solutions from the cost-benefit-risk standpoint. Not all solutions can be implemented within a project budget, and by prioritizing and analyzing the benefits of a solution against the first costs and the risk of a significant problem requiring mitigation, an owner can make an informed choice."

According to Sturz and Rosenberg, problems often arise when a system that was acceptable in one application is carelessly specified again in the next. Replication seems cost-effective, but circumstances are rarely identical. In office-building construction—the most ubiquitous building type—volume purchasing can buy better sound attenuation. According to Tim Foulkes of Cavanaugh Tocci Associates, acoustical consultants in Sudbury, Massachusetts, “Rather than specifying a standard system, which is then shopped around for the lowest bid, some projects are committing to a product up front and then working with its manufacturer on a custom design to get exactly what is needed to integrate sound attenuation into the air-handling system.”

### The sound of silence

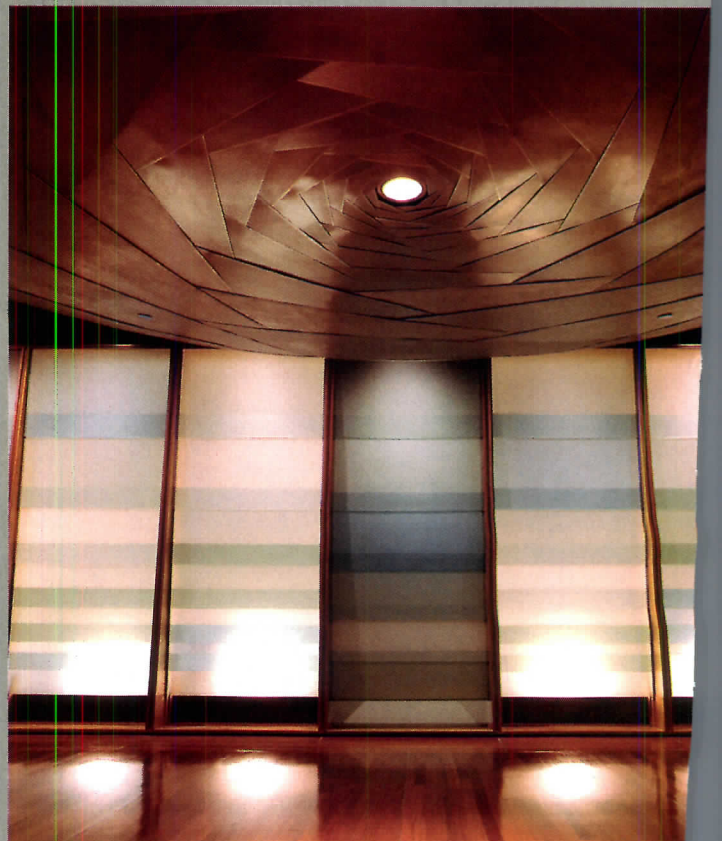
Acoustical engineers are more interested in the elegant solution to a difficult problem than they are in endless discussions about what wasn’t done correctly. Northeastern University’s Spiritual Life Center, shoehorned into the second floor of the Ell Center in Boston’s Fenway, is one of those well-resolved predicaments. Office dA, the Boston-based architecture firm, their mechanical consultants, Cosentini and Associates, and Acentech were given an awkward space only 20 by 75 feet and 11 feet 6 inches in height to create a serene and comfortable environment for rituals and individual contemplation. After construction, the finished area had shrunk to 20 by 60 feet with a low, 8-foot ceiling, which is composed of three inverted domes covered with off-the-shelf, perforated aluminum panels.

At any given time, the center may be occupied by two people or 200, so the acoustics and the mean temperature will vary greatly. “This is the kind of space where the HVAC system needed to be as silent as possible, and the constrained space made it especially important to come up with a solution that incorporated the mechanical systems with the noise control and the architecture,” explains Acentech’s Sturz. “A high-velocity duct with high-velocity diffusers creates quite a noise; a more sensitive solution for noise control would be to distribute the diffusers throughout, but in this case, that would have been highly intrusive to the architecture. What you need to reduce noise and provide sufficient air are large ducts pushing air at a low velocity.” The solution was to use the space above the domes as pressurized plenums to distribute the air into the space. There is a main duct that runs down the center over the domes and branch ducts that let the air out into the plenums. Large perforations in the ceiling panels permit the passage of air into the space, and smaller perforations provide sound absorption. Some of the glass panels that line the side walls are raised so the air can return at the base of the wall. As Office dA principal Nader Tehrani says, “Acoustics and environmental control overlap in one seamless system.”

### Running hot and cold

Serenity and comfort are a high priority for the national engineering firm Flack + Kurtz, says senior vice president Dan Nall, even as he readily acknowledges the difficulty of satisfying every single person’s perception of thermal comfort. He is a proponent of environmental conditioning systems that more directly create individual comfort than ones that simply change the temperature of the air. These include a number of methods of delivering heating and cooling and mitigating climatic impacts that have been much more common in Europe than in the U.S.

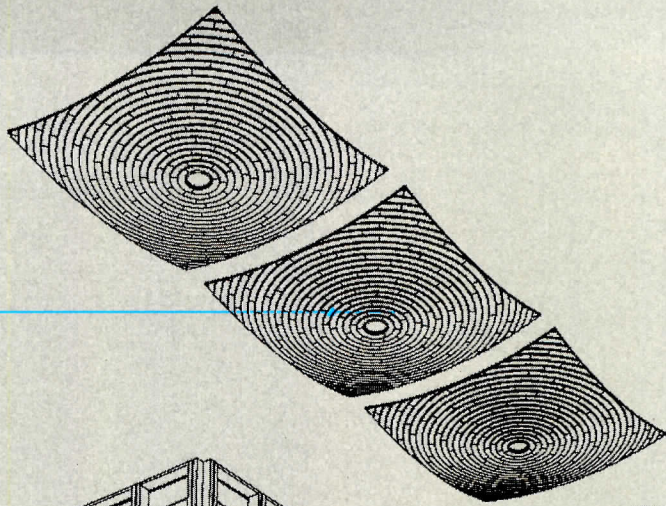
Conventional air systems rely on creating an even air temperature from which some radiant comfort will result, while radiant systems concentrate on changing the temperature of surfaces in a space. According to the American Society of Heating, Refrigeration and Air Conditioning Engineers (ASHRAE), the mean radiant temperature, which is a measure of surface temperatures in a space, has more impact



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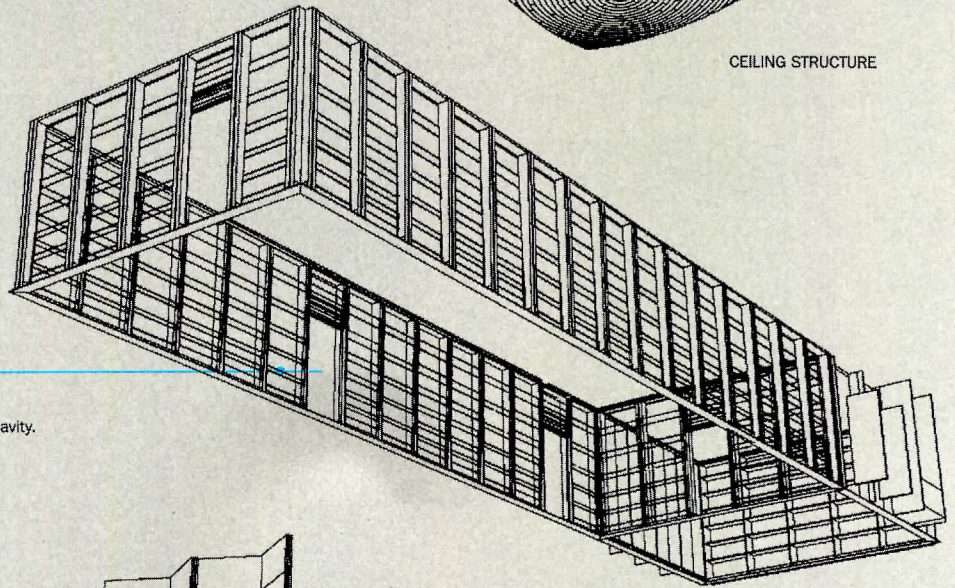


The Spaulding Center for the Blind at Northeastern University was designed by the Boston architecture firm BBGM-BBGM. The program demanded that the space have a quiet HVAC system, one that would still maintain comfortable temperatures. One question was whether occupancy was two people or 200.



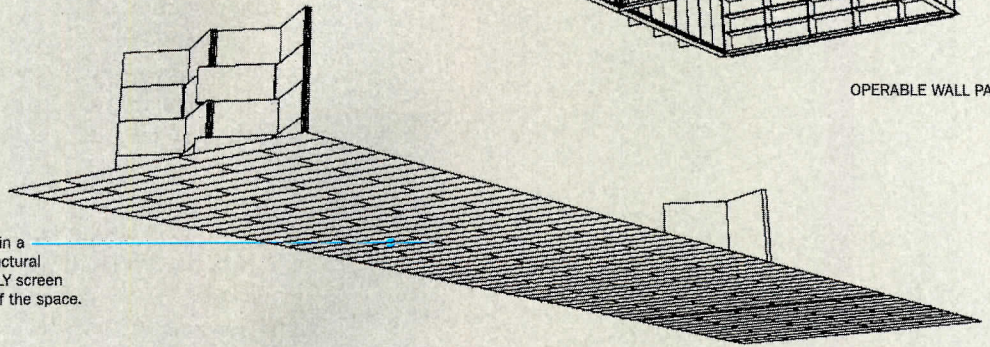
Three inverted domes are made of perforated aluminum. Large perforations allow air into the space; smaller ones absorb sound.

CEILING STRUCTURE



Some glass panels at the base of the walls open to allow air to return into the cavity.

OPERABLE WALL PANELS

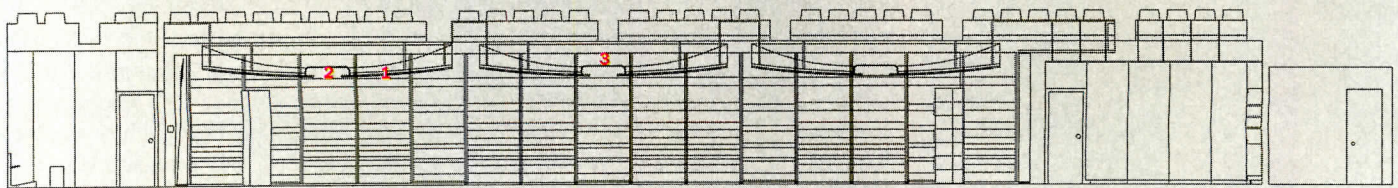


The floor is cherry in a zinc grid. A nonstructural freestanding FIN PLY screen marks both ends of the space.

FLOOR ASSEMBLY

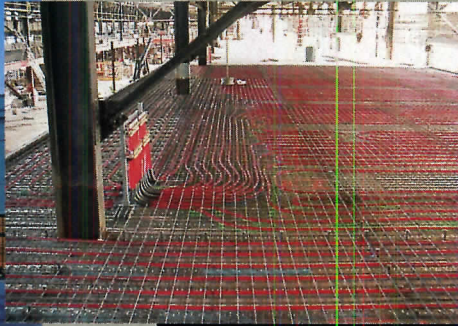
EXPLODED PERSPECTIVE

1. Dome
2. Ductwork
3. Glass panels

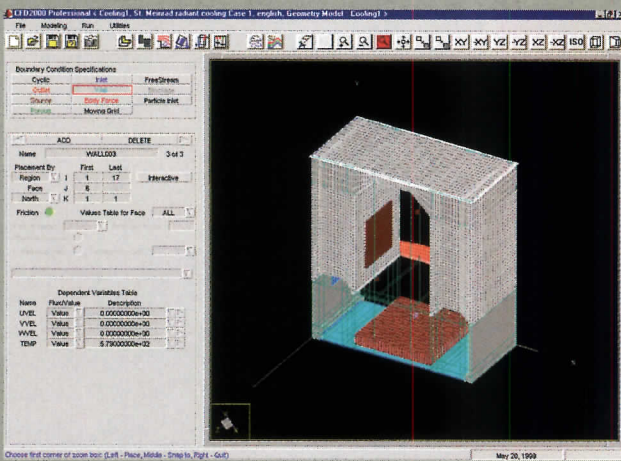
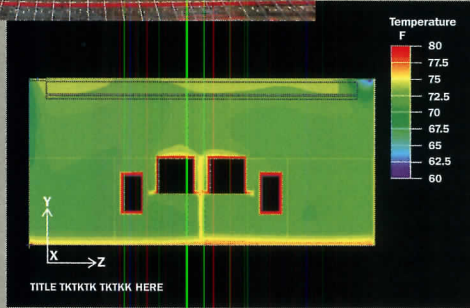


SECTION

0 10 FT.  
3 M.



SMWM Architects' renovation of Pier One (far left) on San Francisco's waterfront includes a radiant heating and cooling system. Pipes are laid before the concrete floor is poured (left). The vertical element is the manifold, which connects each radiant zone with zone-control values.



on human comfort than the air temperature. ASHRAE has also indicated that people are comfortable at lower temperatures with radiant systems.

Although radiant floor heating is not common in the U.S., radiant cooling is quite rare. Both these systems have been used much more extensively in Europe for some very good climatic reasons, explains Nall. "Western Europe has a much less humid summer climate than most of the U.S. east of the Rocky Mountains. London, like San Francisco, is damp, but the temperatures are cool. The difference lies in the dew-point temperature, which combines with air temperature and measures humidity. The percentage of the year when the dew-point temperature is in the uncomfortable range is as follows: zero in London, 2 percent in San Francisco, rising to 7.5 percent in Chicago, and 41 percent in Houston. The high humidity causes condensation, or "puddling," on a cool floor. Air systems, which are able to adjust the humidity and velocity, have some inherent benefit over radiant systems in humid environments.

Pier One, with the Ferry Building, is located at the symbolic center of San Francisco's redeveloping waterfront. This grand space was recently renovated as a retail center by SMWM Architects of San Francisco and outfitted with a radiant-heated and -cooled floor. Besides its advantage of being located in a good climate, a space as large and high as this is an ideal candidate for a radiant system. Reaching a comfortable air temperature throughout such a space, blowing air from above and mixing it around to achieve a single, even air temperature that may or may not be comfortable to the occupants is a tough business. A radiant system heats and cools the surface and mass adjacent to the occupants, allowing air at the higher levels to heat up and be exhausted out.

By incorporating the thermal mass of the building into the conditioning system, the amount of heated or cooled water running through the mass is adjusted to maintain steady temperatures. Imagine a granite floor that receives a dose of solar heat during the day. With an air system, the sun heats the floor; the floor radiates that heat and warms up the air; the air system throws more cold air into the space, swirls it around, and tries to cool the occupants who are experiencing the radiated heat coming off the floor. With a radiant system, sensors detect the solar heat and adjust the amount and temperature of the water in the pipes running through the floor so that it prevents the mass from heating up in the first place.



St. Meinrad Cathedral in Indianapolis, by Woollen Molzan Architects, features radiant heating and cooling in its granite floors. In this project and Pier One (top), Flack + Kurtz used computational fluid dynamics (CFD) analyses to design the systems for maximum energy efficiency and comfort.



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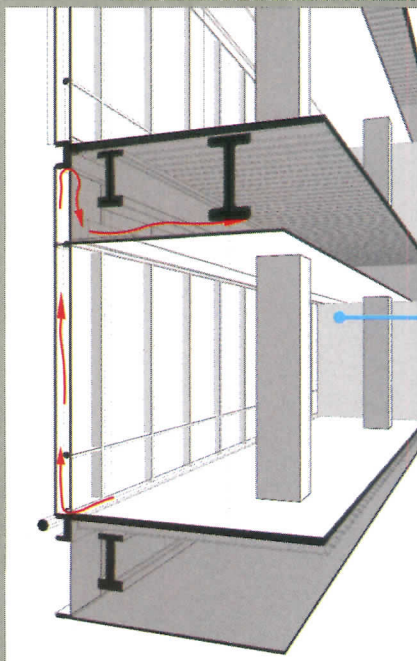
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#### Curtain-wall detail

Warm air is pushed through a slot in the active curtain wall and returned to the ceiling plenum for cooling.

Manulife Financial, designed by Skidmore, Owings & Merrill, has an 8-inch insulating curtain wall, manufactured by the Italian company Permasteelisa.



In San Francisco, with its relatively low levels of humidity, the system is simple. An installation in Indianapolis illustrates how other controls are introduced to avoid the “puddling” effect. St. Meinrad is a 12,000-square-foot cathedral that was renovated in 1999 by Woollen Molzan Architects of Indianapolis. It features radiant heating and cooling in a granite mosaic floor. Since radiant systems supply only heating and cooling, there is also a mechanical ventilation system, which supplies air changes and makes adjustments in the humidity. The air is not delivered overhead but through displacement diffusers behind perforated plates located in the face of benches that line the exterior wall of the aisles on either side of the church nave.

“Because air is delivered at a very low velocity, about 40 feet per minute, and at a very low humidity, about 52 degrees dew point, you cannot feel it flowing out of these diffusers, even when you are sitting on the bench with bare legs,” explains Nall. “There is enough diffuser area, however, to provide ventilation air for 600 people and to dehumidify the space.” More diffusers supply dehumidified air at the door opening, to prevent incoming humid air from causing condensation on the cool floor.

Radiant heating and cooling will not work in carpeted spaces, nor does it give the occupants any chance to make individual adjustments

### Simulation software makes the difference

The international engineering firm Buro Happold has taken the power of computer analysis to great heights. Computational Simulation and Analysis (CoSA) is their multidisciplinary group of analysis specialists, which provides services for 50 to 60 percent of Happold’s projects. The expertise of the group extends from aeronautics to architecture to academia.

CoSA has gathered building-simulation software to model environmental and human impacts on both the exterior and the interior surfaces and spaces of a building under one roof. For example, they can model airflow in and around a building to determine the best locations for openings, or they can model the patterns of air within a space to design the most effective heating and ventilating system. Fires can be modeled to design evacuation systems; daylighting can be simulated to reduce the need for artificial lighting; and the movement of humans can be modeled to design for safety and comfort.

Computational Fluid Dynamics (CFD), used by Flack + Kurtz in the analysis and design of the underfloor air-delivery system for the Alcoa building in Pittsburgh, is widely used by CoSA, as well. Air distribution within a space is modeled using CFD to reveal drafts and stagnancy, hot and cold areas, so systems can be designed much more precisely and efficiently.

All of the software used by Buro Happold—CFX or Flovent for CFD analysis, Thermal Analysis Software (TAS) for thermal modeling and system simulation, or Building Exodus for evacuation studies—is commercially available. In some cases, capacity is increased by modification of the software. “BH has taken Building Exodus software, which was originally designed for emergency evacuation only, and found ways to apply it to foot traffic in airports, train stations, and sports venues,” according to Stribling. “In cases where we are helping determine a building’s orientation, we use CFD to model building shading and sunlight. By integrating simulation analysis, the result is more likely to be an optimum design to reduce energy consumption, take advantage of passive environmental controls, and provide the highest level of human comfort. B.K.

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to account for differing preferences. In Europe, these problems have been mitigated by raised-floor air distribution, which, like radiant systems, delivers heating and cooling right to individuals instead of over their heads. In Pittsburgh, the Alcoa headquarters uses such a system. Diffusers are installed in relocatable floor tiles. They deliver air in a swirling pattern that mixes quickly with the surrounding air rather than blowing directly on the occupant. The hot air created by office equipment, the sunlit desk, and the occupant rises into the unoccupied strata to the return-air duct. The occupant has individual temperature controls to precisely modulate the local environment.

### Cool tools for insuring comfort

Sophisticated computational modeling tools (see sidebar, page 170) can now describe the heterogeneous temperature distribution in a space to design these systems for maximum energy efficiency and maximum human comfort. Flack + Kurtz's Nall explains what can be studied with a computational fluid dynamics [CFD] analysis, comparing the airflows for underfloor air distribution with conventional overhead-mixing air distribution. "Overhead distribution shows relatively uniform temperature across the height of the space. Underfloor air distribution shows the temperature variation from low to high in the space, commonly known as stratification. It shows how the heat rises off the computers and off the people, in thermal plumes. In this way, part of the heat is carried out of the occupied zone before it has an opportunity to affect comfort."

Conventional air-handling systems in offices with glass curtain walls are forced to deal with competing thermal needs simultaneously in the winter months. Near the curtain wall is that zone of radiating cold air, and in the center of the building is a zone radiating hot air from occu-

pants and equipment. Losing that cold zone is good for comfort and good for energy consumption. Another concept, well-tested in Europe, is under construction in South Boston for the giant Canadian financial-services company Manulife Financial. Manufactured by the Italian company Permasteelisa, the double-skin glass curtain wall has an 8-inch insulating cavity. The exterior wall is just one of a number of measures Manulife and its architect, the Chicago office of Skidmore, Owings & Merrill (SOM), are taking to achieve a LEED rating from the U.S. Green Building Council. Designed specifically for energy conservation, the wall provides a marked increase in comfort for occupants near the exterior wall as well as increased acoustic insulation, a particularly desirable quality for its location near Logan Airport.

"The temperature at the inside surface of the Active Wall is almost room temperature," explains Bernie Gandras, a SOM partner. "There is a continuous 3-inch-tall slot at the floor line, and another 3-inch slot in the ceiling cavity. Low-velocity (4CFM PSF) air is naturally pushed through the wall and returned to the ceiling plenum for cooling." Four-inch vertical blinds in the cavity provide solar protection and can be manipulated individually by the occupants.

These kinds of systems do add first-time costs to construction, primarily in overall increases in building volume for the raised floor, or materials and installation. High energy prices in Europe and different building practices (raised floors are generally more common) have made these systems common in spite of their higher first-time costs. U.S. demands seem to be shifting rapidly toward better energy management, supported by greatly increased human comfort and reduced risk to owners and developers by using systems and methods that have been well-tested in Europe. ■



## AIA/ARCHITECTURAL RECORD CONTINUING EDUCATION

### INSTRUCTIONS

- ◆ Read the article "Radiating Creature Comforts in Buildings" using the learning objectives provided.
- ◆ Complete the questions below, then fill in your answers (page 217).
- ◆ Fill out and submit the AIA/CES education reporting form (page 217) or download the form at [www.architecturalrecord.com](http://www.architecturalrecord.com) to receive one AIA learning unit.

### QUESTIONS

1. Noise control is dealt with most cost-effectively in which stage?
  - a. construction
  - b. post-occupancy
  - c. design
  - d. move-in
2. Sound attenuation can cost up to 10 times more at which stage?
  - a. construction
  - b. schematic
  - c. design
  - d. post-occupancy
3. What is often the cause of problems with noisy air-handling systems?
  - a. replication of previous specifications
  - b. failure to design for sound attenuation
  - c. uncooperative mechanical engineers
  - d. office building design
4. Which is the best way to reduce noise and provide sufficient air?
  - a. high-velocity diffusers with small ducts
  - b. large ducts with low-velocity diffusers
  - c. high-velocity ducts with high-velocity diffusers
  - d. small ducts with low-velocity diffusers
5. Which is a measure of surface temperatures in a space?
  - a. mean radiant temperature
  - b. air temperature
  - c. relative humidity
  - d. heat index
6. Which has more impact on human comfort?
  - a. air temperature
  - b. mean radiant temperature
  - c. air velocity
  - d. air density
7. Why is radiant floor heating not common in the U.S.?
  - a. many U.S. winters are too cold
  - b. many U.S. summers are too warm
  - c. much of the U.S. has high humidity
  - d. much of the U.S. is too dry
8. Drawbacks of radiant heating and cooling are all except which?
  - a. it does not work well in carpeted spaces
  - b. it does not give occupants the chance to make adjustments
  - c. it does not work well in humid climates
  - d. it does not work well in dry climates
9. Temperature variation from low to high in a space is seen with which delivery method?
  - a. overhead distribution
  - b. underfloor distribution
  - c. exterior wall distribution
  - d. central distribution
10. Relatively uniform temperature across the height of the space is seen with which delivery method?
  - a. overhead distribution
  - b. underfloor distribution
  - c. exterior wall distribution
  - d. central distribution

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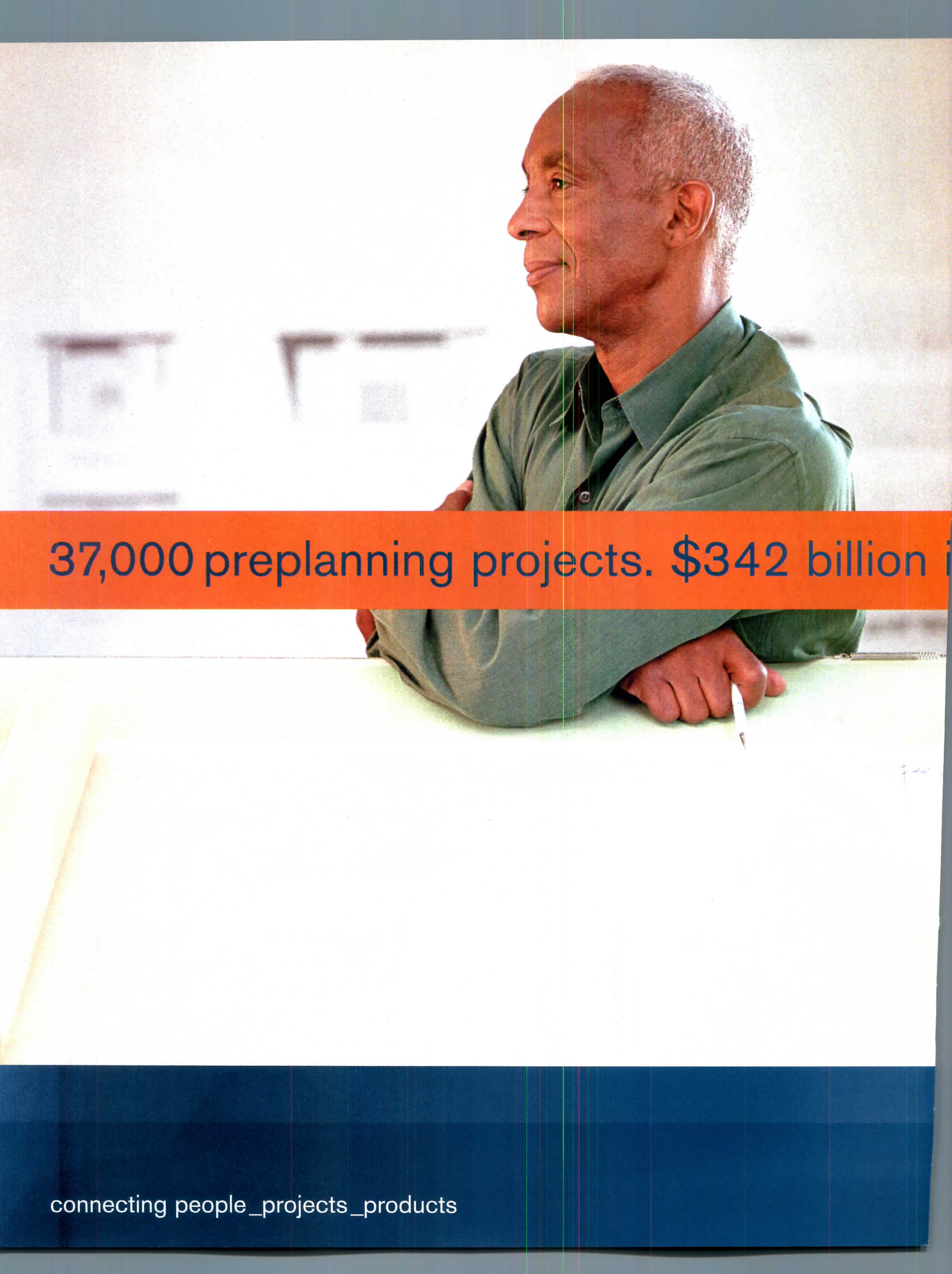
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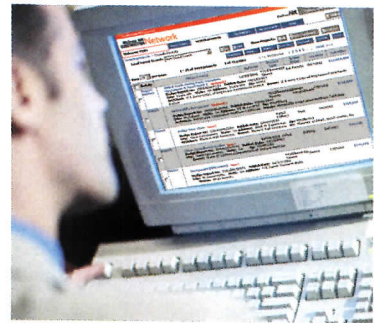
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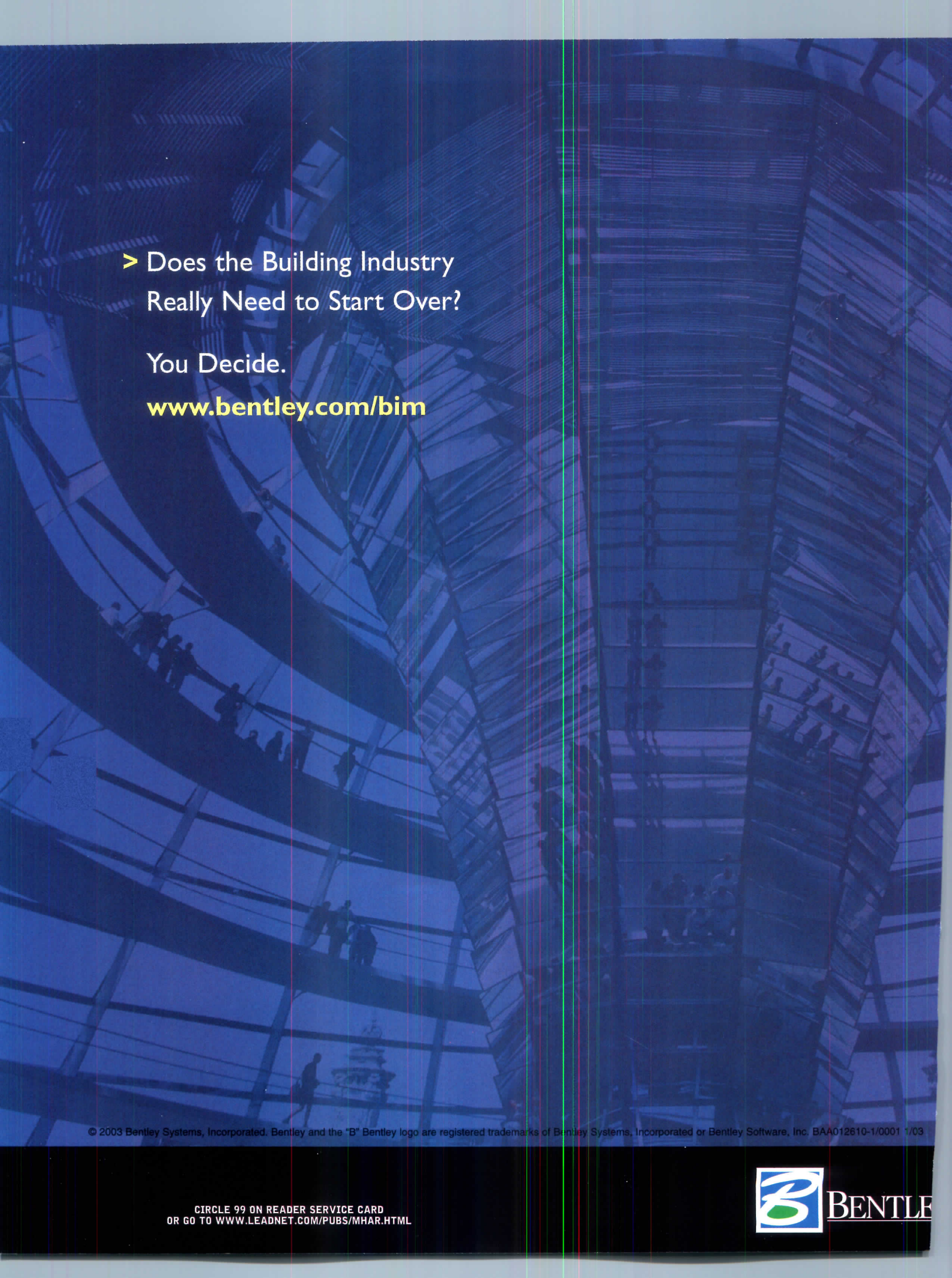
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# Digital Practice

**IN THIS SECTION:** Will software interoperability see the light of day? [page 177] • Architects modernize hospitals with high-tech

equipment [page 179] • Digital Architect: A New Jersey firm harnesses technology for green-building design [page 187] • Bentley Systems and Autodesk issue updates, plus new hardware and design tools [page 189]. *Deborah Snoonian, P.E.*

## BYTES

The AIA's [Technology in Architectural Practice](#) committee's fall conference, "Connecting the Dots," is taking place [October 16–18](#) in San Francisco. [www.aia.org/tap/conference/2003/default.asp](#).

The Digital Design Research Laboratory at the [University of Pennsylvania](#) is hosting a conference titled "Performative Architecture" on [October 10–11](#). [www.gsfa.upenn.edu/ddrl/symposium/mission.htm](#).

MIT's [Emerging Technologies Conference](#) will take place on [September 24–25](#) in Cambridge, Mass. [www.etc2003.com](#).

Architecture firm [Gensler](#) has established a strategic relationship with [Autodesk](#) to help the software maker develop design and productivity solutions for the AEC industry.

According to the [2003 ENR Technology Study](#), an annual survey, Autodesk's [Buzzsaw](#) is the leading collaboration software used among design, engineering, and construction firms, followed by offerings from [Meridian Project Systems](#), [Constructware](#), and [Citadon](#).

An article in the July 21, 2003, issue of [BusinessWeek](#) reported that [13 percent](#) of the U.S. population now uses [high-speed Internet access at home](#), and [11 million](#) households are [connected to the Internet wirelessly](#).

The [New York Times](#) reported recently that [HP](#) is planning to [develop a 3D printing device](#) for rapid prototyping that will sell for \$1,000.

## Software interoperability makes strides, but hurdles still remain

Last May, outside Washington, D.C., the International Alliance for Interoperability (IAI), an organization of member companies involved in design and construction, hosted its first-ever "Industry Day" to educate practitioners about its vision for a common data-exchange standard. At the same time, it announced a major

does so in a slightly different digital format—and because of these differences, 3D models cannot always be used intact as projects move forward. The IAI's goal in creating the IFCs is to slash the time and effort required to construct buildings by allowing project data to be shared seamlessly as a project moves from

evolves. Some software executives are skeptical that creating a single data-exchange standard is really the solution to faster, cheaper construction. "What question are we trying to answer with software interoperability?" one asked. "The heart of the IAI is in the right place, but they are demanding a sophisticated technological response for which there are a very limited number of customers," because few companies truly need to use design information in the way envisioned by the group.

Even if software companies agree to build IFC compliance into their offerings, practitioners must be willing to use the standard in their project work. To date, anecdotal evidence suggests that most in the AEC world don't know IFCs exist. (In an informal poll conducted when researching this article, 10 architecture firms were phoned at random, and only one was aware of the IFCs). It's likely that architects and engineers will resist learning a way of doing business that's based on a technology not yet widely accepted—finding early adopters has always been a challenge in the design and construction industry.

Still, the IAI remains undaunted in its vision. "The promise of interoperability is value," noted Industry Day's keynote speaker, Patrick MacLeamy, the C.E.O. of HOK. IFC2X2 represents significant progress, says the group, incorporating more types of design information than in previous versions. And IAI will continue to host demonstrations that show different types of software passing project information back and forth with ease, in hopes of converting doubters.

*Deborah Snoonian, P.E.*



**Patrick MacLeamy, C.E.O. of HOK and chair of IAI's International Council, gave the keynote speech at the Industry Day, which attracted nearly 200 people.**

update of the standard developed by the membership: the Industry Foundation Classes, or IFCs. The newest version is called IFC2x2. [Note: RECORD publisher McGraw-Hill is an active member of the IAI].

Since the dawn of CAD, the AEC community has sought the uber-intelligent building model—a single database that contains geometric information about a building's physical form, data on its components and their behavior, as well as cost, erection schedules, and other nondesign information. Makers of 3D design software offer many of these capabilities, but each

concept to completion. Software makers can allow their files to be saved in IFC format to be used for other purposes—a 3D building model, for instance, could be imported into estimating software to determine its construction cost.

### Overcoming obstacles

So far, response from the industry has been mixed. A handful of leading software companies, such as Graphisoft and Bentley Systems, have committed to making their tools IFC-compliant; others are taking a wait-and-see approach, knowing how quickly technology



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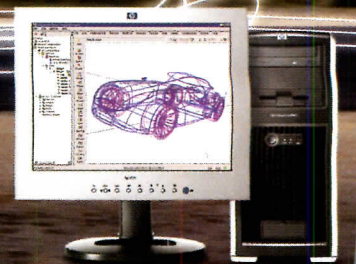
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# At long last, hospitals are going high-tech

INNOVATIONS ARE CHANGING HOW HEALTH CARE IS DELIVERED—AND HOW HOSPITALS ARE DESIGNED

By Alan Joch

The health care industry has always had a love/hate relationship with technology. Hospitals have been quick to embrace sophisticated diagnostic equipment such as MRIs, CAT scanners, and digital X-rays, yet stagnant capital budgets have made them laggards in installing technology and communications gear that are ubiquitous in other types of facilities. A telling example of the effects of this foot-dragging occurred last March, when the Food and Drug Administration ordered the health care industry to install bar-code systems within three years—a mature technology that has been commonplace in retail environments for years. The FDA estimates that bar codes could eliminate almost half a million medication errors in hospitals over the next 20 years.

Fortunately, examples of this go-slow approach may be getting rare. Renovations and construction of new hospitals are layering new computers and communications gear on top of existing IT infrastructures. “The overarching issue in health care today is change, and technology is playing a big part in that,” says John Pangrazio, FAIA, a partner at the Seattle architectural firm NBBJ and the leader of the company’s health care practice.

The following case studies illustrate ways that architects are integrating new technologies into three markedly different health care projects. In each case, technology was a core design element that shaped each project’s goals and program.

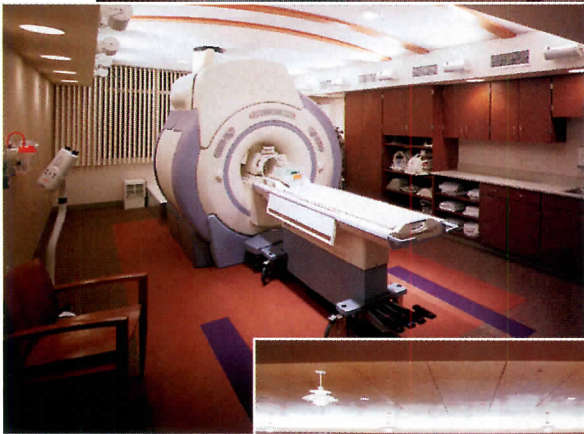
## Mayo Clinic, Rochester, Minnesota

At 1.6 million square feet, the Gonda Building is the largest construction project in the long history of the Mayo Clinic. But size isn’t its biggest claim to fame: At its core, the building represents a new initiative to integrate various medical practices to improve collaboration among caregivers and provide more convenience for patients, who won’t have to be shuttled throughout the hospital for tests and treatments. This approach of taking testing equipment to patients, rather than the reverse, is gaining a foothold in other health care facilities, as well. “Construction costs for

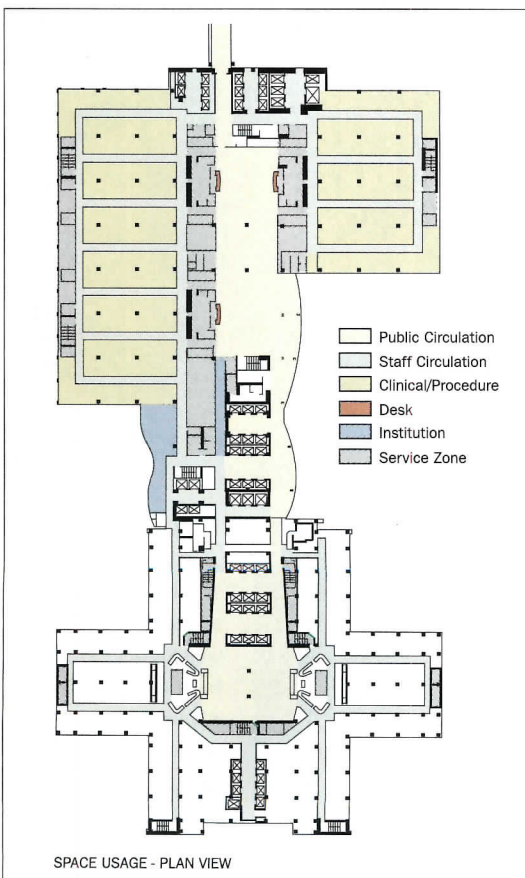
*Alan Joch is a technology and business writer based in New England and a frequent contributor to RECORD. Contact him at [ajoch@monad.net](mailto:ajoch@monad.net).*



Sweeping changes in medical technologies are the driving force behind projects at two well-known medical facilities, the Memorial Sloan-Kettering Cancer Center in New York City (above) and the Mayo Clinic in Rochester, Minnesota (left).



In the Gonda Building, architects planned flexible spaces to accommodate future high-tech medical equipment.



large facilities pale when compared to the operational efficiencies of not having to move patients throughout the hospital for certain tests," says NBBJ's Pangrazio.

The Gonda Building includes specialty clusters for the diagnosis and treatment of various types of cancers, as well as cardiovascular, vascular, urological, and other diseases. "The fit-out is still going on today, so there are five or six floors that are still unoccupied," says Paul Zugates, director of health care for architecture firm Ellerbe Becket in Minneapolis. "If we have the flexibility we think we have, they can occupy parts of this building and move into the remaining space as they need it."

In addition to collaborative clusters, the clinic also wanted the building to be flexible and adaptable for expansions over the next 50 years or more. To accomplish this, Ellerbe Becket provided excess capacity for HVAC, plumbing, electricity, fiber-optic communications, floor loads, and vibration control, not knowing where new equipment might be located in the building in the coming decades. "All the things that are hidden within buildings—the things behind the walls—are the expensive items within a health care facility," Zugates says.

One example of how new technologies make overengineering necessary is the trend toward using digital diagnostic images. By law, existing hospitals must store X-ray film for more than a dozen years, but as filmless digital X-ray machines become commonplace, storage needs will gradually decline. The Mayo Clinic decided to upgrade the areas that would be emptied of X-ray archives to meet power, loading, and vibration tolerances required by MRI and CAT scan machines—or other, unknown medical technologies—which would allow the facility to use high-tech medical equipment anywhere in the future.

Flexibility also affected the design of the interior spaces, says Mark Shoemaker, AIA, associate principle for Cesar Pelli & Associates of New Haven, who participated in the project. "MRI [machines] are getting smaller. We design smaller inserts within the facade to allow units we placed in the building today to be traded [for smaller ones] later. The curtain wall was designed to allow panels to be removed easily," he says.

Designers also had to accommodate the growing need for rooms dedicated to computers and communications equipment. The Gonda Building has rooms of approximately 200 square feet on every floor to house data and telephone network equipment. The rooms are stacked above each other on each floor to provide for direct communications connection throughout the facility.

As the Gonda Building approaches full occupancy, the Mayo Clinic hopes it will have a facility that will serve patients through the next

## HOSPITALS ARE FINDING IT CHEAPER TO BRING TESTING EQUIPMENT DIRECTLY TO PATIENTS' BEDSIDES.

century. "Not too many institutions look for that kind of sustainability," Zugates says. "But the philosophy was that if we build in flexibility today, it will be less expensive to make the changes we know we'll have to make over the life of the building."

### Memorial Sloan-Kettering Cancer Center, New York City

Architecture and technology blend so closely within two redesigned operating rooms (ORs) at this hospital that it's difficult to tell where one ends and the other begins. Last fall, the cancer center completed renovations that turned the ORs into high-tech, minimally invasive surgery (MIS) centers, complete with touch-screen computers and sophisticated audio/video gear to guide physicians during delicate operations.

Surgeons who perform MIS procedures rely on endoscopic

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Minimally invasive surgery centers (top and above) at Memorial Sloan-Kettering are equipped with computers and A/V equipment that allow physicians located elsewhere to watch and advise on procedures.

cameras, computers, and digital-imaging equipment to treat patients' abdomens and lungs so as to cause as little trauma to the patients as possible. "[With this technique], information that's collected and prepared at many other places in the hospital prior to surgery is available to surgeons on a real-time basis," says Jeffrey Berman, AIA, principal of Jeffrey Berman Architects in New York and an architect for the project. "If they want to see [data from] a CAT scan that was done on a patient two years ago, technicians can bring it right to the surgical field. The surgeon has touchpad [screens] that let him manipulate the images and match them to the area where the surgery is being performed."

Within the MIS center, an A/V studio, known as the head-end room, acts as a central data hub, recording each step of the operation for educational purposes. Live images of surgeries being performed can be sent immediately to specialists who may be consulting on the procedure from another part of the hospital or an entirely separate facility.

Shen Milsom & Wilke, a New York technology consulting firm, designed the head-end room. "Today, we put [data, voice, and video] information on the same [telecommunications] network," says Steven Emspak, a partner in the firm. By sending out this data on the same computer network, the hospital avoided installing multiple lines of similar cables—an efficiency that helped the architects design a less-cluttered OR. The hardware that controls the flow of information required a dedicated space that went beyond the crude networking closets traditionally found in hospitals and office buildings. Instead, the head-end room was born—an environmentally controlled space of more than 1,000 square feet. It is large enough to house all the computer and A/V gear as well as the technicians who direct the cameras while procedures take place.

The new ORs are less cluttered than their low-tech predecessors. "We accomplished this by thinking through how things work and putting the equipment in the right places," says Berman. By running cable through the walls rather than over floors, for instance, the room became less treacherous for health care workers to navigate. Lights, camera controllers, and operating equipment were installed permanently onto walls rather than placed on space-hogging mobile carts. "Once you identify the core functionality that the room needs, you can integrate the necessary equipment in much less intrusive ways," Berman explains.

Berman also considered the ongoing pace of technological change in his design. "We're building these rooms to be useful for the next

## NEW OPERATING ROOMS HAVE A/V GEAR FOR BROADCASTING SURGICAL PROCEDURES TO PHYSICIANS WORLDWIDE.

five to 10 years, so we considered what we had to do to make them more adaptable," he said. Through a close alliance between the hospital and Olympus America of Melville, New York, which supplied much of the medical imaging equipment, Berman gained access to prototypes and drawing-board ideas that allowed him to anticipate the evolution of this equipment. One nod to the future was building conduits and easy-access points for installing broadband cables. "The renovation was disruptive," Berman concedes, "but future upgrades will be plug-and-play." This is welcome news to Sloan-Kettering, which, like most hospitals, is faced with keeping its facilities up-to-date with budgets that cannot keep pace with innovations in the technological arena.

### Washington Hospital Center, Washington, D.C.

Just blocks from the U.S. Capitol, the Washington Hospital Center (WHC), a 907-bed not-for-profit teaching hospital, feels a special responsibility to prepare for wide-scale emergencies in the post-9/11 world. The hospital recently completed the first phase of a \$2.2 million, federally funded project that resulted in a prototype of a new emergency room called ER One, which is intended to handle the immediate medical challenges of a bioterrorist attack, a SARS-like epidemic, or a natural disaster.

The ER One project will ultimately create a new emergency facility at WHC and provide an annotated architectural plan that hospitals throughout the nation can use for their own disaster-readiness planning. The design prototype was finished earlier this year, and the center is now refining it.

ER One is intended to serve 10 to 20 patients per hour, the average number of visitors the emergency department receives currently. However, if a wide-scale medical emergency occurs in the Washington area, the facility will be designed to handle as many as 300 patients per hour for the first two hours, and five times normal patient volume for the first four days. To accomplish this, the prototype had to break some rules,



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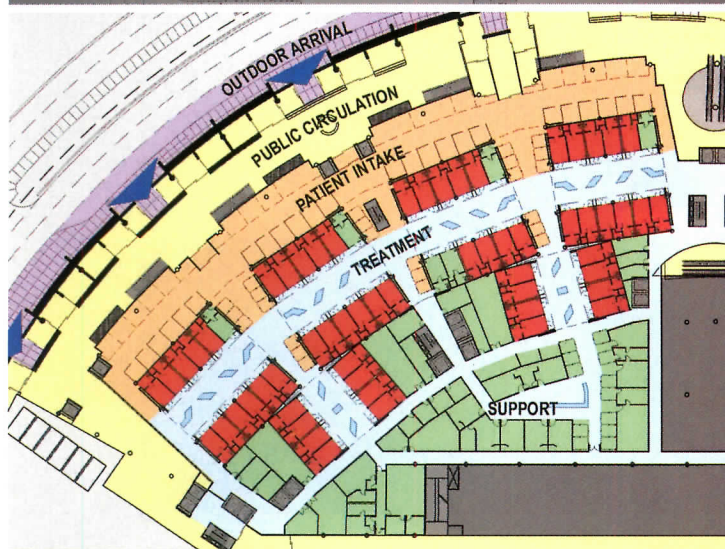
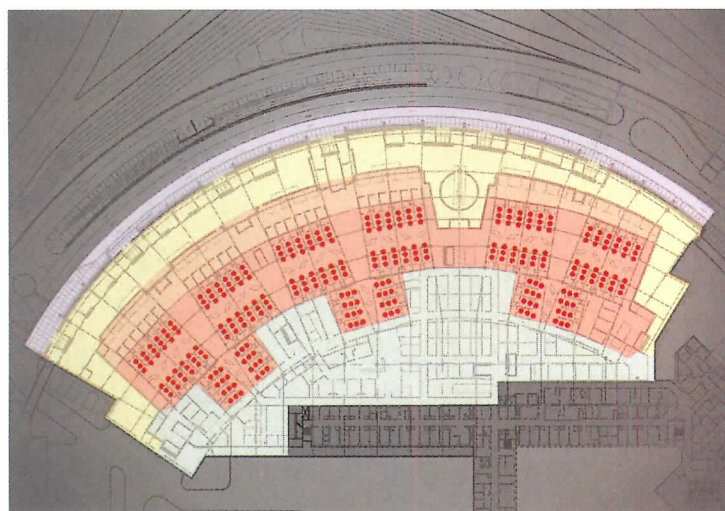
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Located near the U.S. Capitol, the Washington Hospital Center (above) has designed a prototype trauma center called ER One (below)

to accommodate large-scale emergencies. The red areas shown below are rooms where patients could be isolated for treatment in

situations requiring quarantine. Health care workers would carry handheld organizers to receive patient information quickly.



says Dr. Michael Pietrzak, director of the ER One Institute. "We are talking about having people design things that are not necessarily supported by the [building] codes," he says. "Their first reaction is, 'We don't do things that way.' But that doesn't mean that codes shouldn't be changed. In our initial work sessions, we spent time breaking some paradigms. At the same time, we had to have some credibility behind what we wanted to do, so we used simulation modeling and vulnerability analyses to create a logical, justifiable scientific basis for what we were doing."

WHC doesn't want to build treatment rooms that languish unused, nor does it want to make large influxes of patients wait for treatment in corridors or cafeterias. Instead, the prototype calls for what's termed a "graceful degradation" of services, says Dr. Craig Feied, director of WHC's Institute for Medical Informatics. This means that, in a wide-scale emergency, patient housing wouldn't be as private, nor would patients receive the same level of care as in nonemergency situations—but neither would they suffer in a far corner of the facility because health care workers wouldn't be nearby. "We designed treatment rooms that are bigger than normal," Feied says, "big enough for us to roll an X-ray machine into the room. In the event of overcrowding, we could turn a bed 90 degrees so that the room could accommodate two beds."

Underpinning these scalability needs is a wireless communications infrastructure that delivers patient records, radiology images, CAT scans, and other essential information to each bedside, with doctors

## HANDHELD ORGANIZERS COULD HELP PHYSICIANS LOCATE AND TREAT CRITICAL PATIENTS IN BUSY EMERGENCY ROOMS.

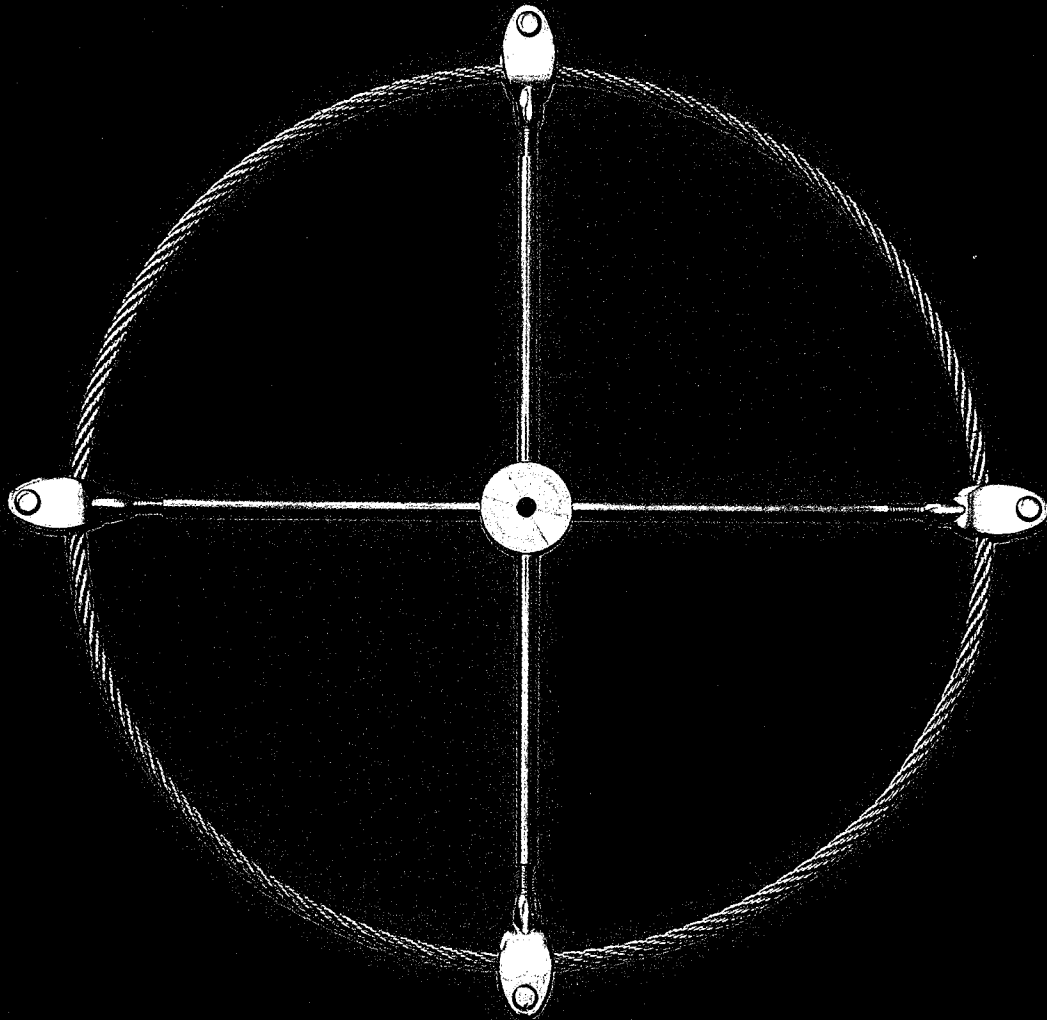
receiving the data via handheld organizers. "If we can get [patient] information right into a doctor's hand, he or she can make a decision based on that knowledge," says Feied.

Larger, more flexible treatment rooms address scalability but also create new challenges. Cumulatively, the bigger rooms add up to a larger area that health care workers must traverse as they assess and treat patients. Feied believes motorized Segway transporters—which have been mostly gee-whiz techno-toys to date—may provide a solution. "We're convinced that they can transform hospital design," he says. "We could build an ER that's three football fields long, yet still practical" if the plan called for "Segway corridors," like HOV lanes on highways, that allowed caregivers to travel through the hospital at high speed, he says.

ER One also proposes to implement a special ventilation system to prevent the spread of SARS or infectious diseases. "The typical emergency department has one or two isolation rooms," says Dr. Mark Smith, chair of emergency medicine at WHC. "But in ER One, every room is designed to be an isolation room." The ventilation system would be compartmentalized on a room-by-room basis, so that failures are kept local.

Hospital staff and designers are also considering installing video cameras in ER One, in which real-time images of patients would be beamed across the wireless network to handheld organizers carried by health care workers, allowing them to see patients in need of medical attention even if they are not in the immediate vicinity.

Ultimately, ER One is still just a concept—what's built may not resemble what's in the plans right now. But Jon Pickard, AIA, a principal of Pickard Chilton of New Haven and an architect who helped design the ER One prototype, enjoyed the process of "pushing the envelope." The architecture firm HKS in Dallas and Ralph Hawkins, chief executive officer, were the lead designers on the project. "We saw this as a mission to make a safer world," Pickard says. "We broke down all the normal formulaic approaches to designing for health care." ■



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# Digital Architect

## A visit with WESKetch Architecture

By Deborah Snoonian, P.E.

WESKetch Architecture, based in Millington, New Jersey, is a firm of 20 people that provides architecture, landscape architecture, engineering, and interior design services. It specializes in residential design, focusing on new construction and renovations that combine traditional styles of architecture updated with modern technological advances. The firm's principals were the first architects in the state of New Jersey to be LEED-accredited through the U.S. Green Building Council. RECORD spoke to principal and firm owner William E.S. Kaufman, AIA, who founded the firm seven years ago.

**ARCHITECTURAL RECORD:** How do you present projects to your clients in digital form?

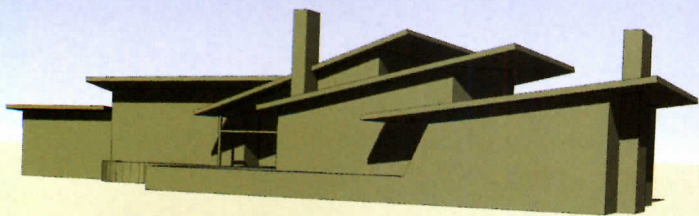
**WILLIAM KAUFMAN:** We began by utilizing existing photographs, cutting and pasting various elements [of them] until the desired design effect was achieved. This process expedited the concept development and presentation phases of our projects and opened our minds to more refined techniques. The combination of hand drawings and photographs using photo-editing software results

in a photorealistic image of a project for the client to visualize.

Now we build a lot of massing models using 3D software. By combining mass modeling done with 3D design software and hand rendering of those images, we can have the best of both worlds—we are able to keep the images soft and allow our clients to complete them in their minds, while also maintaining accuracy in the schematic design process.

**AR:** Are there any design tools you're

After creating a simple 3D massing model (below), designers at WESKetch Architecture hand render the details of the design and its local context (bottom) for residential clients who prefer softer images.



New Jersey-based WESKetch Architecture has a number of LEED-accredited architects on staff to complete green-building projects.

particularly fond of?

**WK:** We just started using SketchUp and we find the program to be surprisingly intuitive. You can “push” and “pull” at models as you would a clay model, yet maintain absolute accuracy.

**AR:** What do your residential clients think of the tools you use?

**WK:** Not a lot of our clients have the time or the knowledge to interact with complicated 3D models. We can send them images, but we don't expect them to mark up or understand models or have online meetings with us or things like that. Plus, we feel that we would lose the hands-on approach if we were to rely on e-mail for communication.

**AR:** How does technology help you design sustainable buildings?

**WK:** We use a number of different online tools and software resources for this purpose. The GreenSpec.com product directory helps us identify products that have been examined for their environmental impact. Environmental Building News's online archives are also helpful in researching specific issues, such as how to reuse certain building materials.

For sun studies and energy modeling, we use a package called SOLAR-5 to examine heat gain in buildings. That software works within Accurender to produce a thermal diagram that shows us where the hotspots in a building are located. And we use the Department of Energy's Energy-10 software for sophisticated modeling.

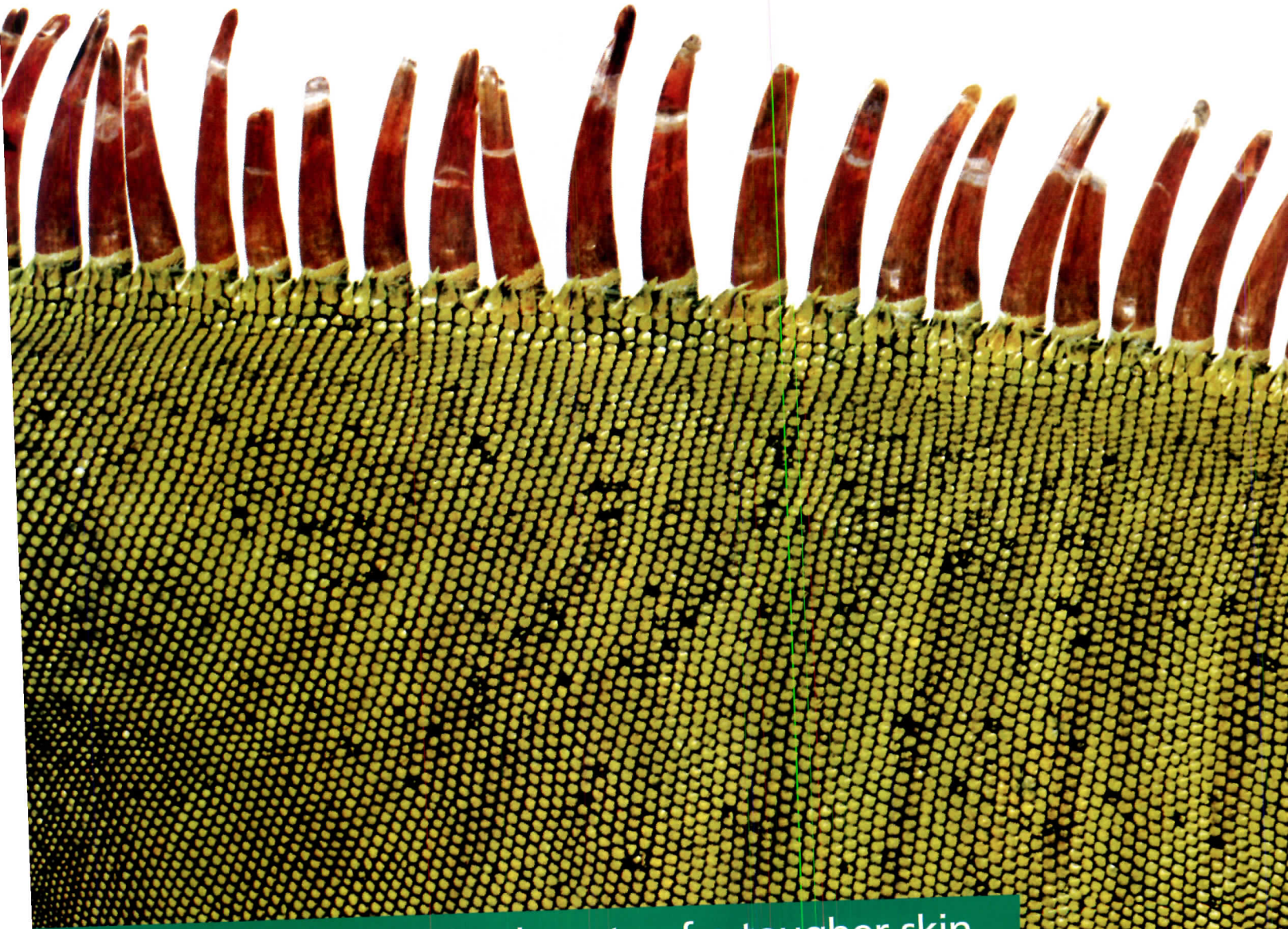
A program called REScheck helps us meet New Jersey's energy codes. You plug in a building's design criteria, and it tells you if there are areas of noncompliance. For buildings where we want to collect storm-water runoff from roofs on-site, a simple program by the makers of storage tanks called SIM-TANK lets you enter the roof area and the project's location, then calculates how large a tank you'll need.

We also use the Green Building Advisor, an interactive database of case studies that gives us feedback on what types of green-building strategies to use based on a project's size, location, and use.

**AR:** For a firm of your size, what's the biggest challenge you face in using technology?

**JK:** We have to realize that not all technologies are appropriate for all projects. It's important for small practices to remain competitive when budgeting their work, yet simultaneously to possess the ability to present their work competently to clients. I believe we're pretty bold in the use of technology. It's important for us to have as many tools at our disposal as possible so that we can remain competitive, so we are constantly investing in new tools to try them out. ■

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# Digital Products

## CAD upgrades, new hardware, and more

By Deborah Snoonian, P.E.

### MicroStation V8

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This updated CAD package forms the basis for a significant upgrade of all of Bentley's design software, which was demonstrated last spring on an extended road show, culminating in the annual user's conference last May. MicroStation and its related products, such as the 3D modeling software TriForma, are intended to work together for creating, editing, and publishing of design and engineering information. A main selling point is full interoperability with DWG files, a feature that may help the company win over some of Autodesk's customers. Architects considering an upgrade or platform change should consider this alternative to the AEC market leader.

### DesignJet 100 and 120 Printer Series

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HP has aimed this new line of color printers at companies that occasionally need to print large-format documents but can't justify the cost of purchasing a machine. Starting at under \$1,000, the DesignJet 100 model is a color multifunction printer targeted to the AEC market. It can print 4-color documents ranging from letter-size to D-size (24 inches by 36 inches), at a speed of up to 11 pages per minute for letter-size paper in draft mode. Modular ink supply cartridges can be replaced individually, simplifying maintenance and upkeep. Starting under \$1,300, the DesignJet 120 (pictured at right)

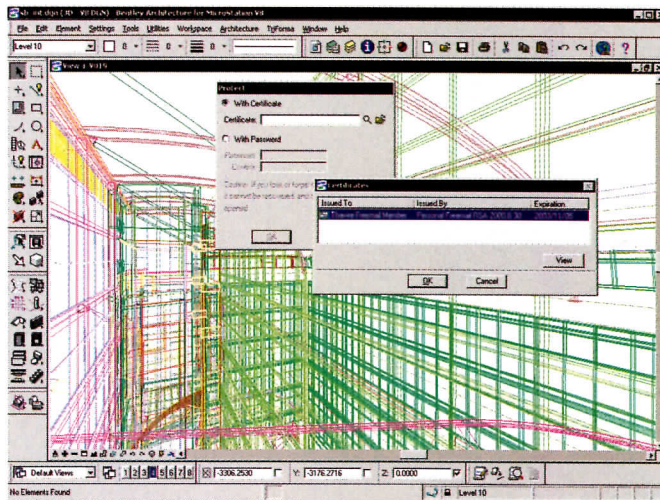
has six-color capability and can be equipped with an optional roll feeder. Though it is targeted to the graphic-design market, architects who need to print highly accurate color renderings and presentation photographs will find it useful. Both devices work with HP's Printing for AEC service.

### Architectural Studio 3

Autodesk  
[www.autodesk.com](http://www.autodesk.com)  
(for Windows only)

Autodesk has released updates of much of its product suite this year, including this popular conceptual-design package, which debuted in 2001. The uncluttered interface is designed to replicate a desktop one might find in any architectural office, from pens and markers to translucent trace paper that can be laid over existing photos or drawings for idea development.

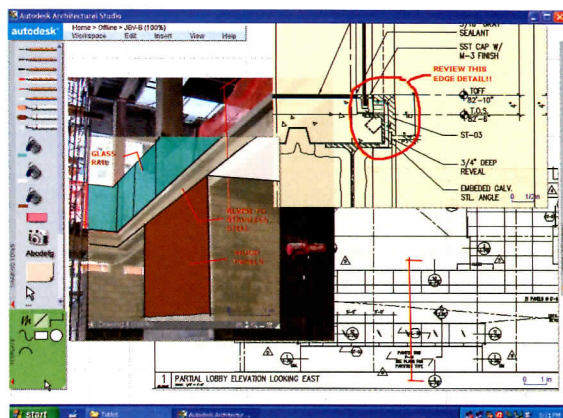
The work space has a graph-paper pattern, with icons for drawing, and editing tools lined up along its sides. Working in 2D, a user can either sketch freehand or work with shape and line tools for more accurate drawing. New to this version are tools for creating 3D solids, walls, extruded shapes, and cutouts; the resulting design, however, lacks the data needed for true building information modeling. All of the drawing objects are vector-based, so they can be selected and modified throughout the work cycle. Users praise a snapshot tool that lets them select portions of other files, such as CAD drawings or photos, for mark up or further work in Studio. Built-in collaboration abilities let designers work on the same project together in real time.




Bentley's latest version of MicroStation can handle DWG files.



HP's DesignJet 120 is best for occasional large-format color prints.



Architectural Studio 3 now has tools for creating 3D objects.



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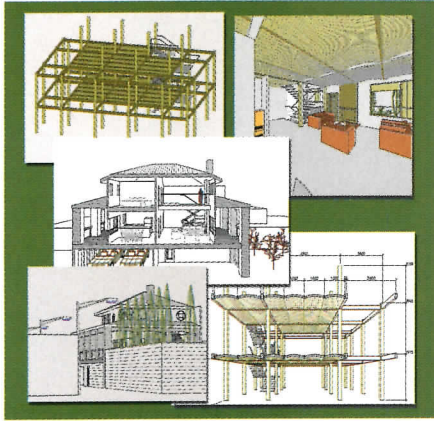


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## Digital Products



BOA's 3D CAD is targeted to the AEC market.

### BOA

BOA Research Corporation  
[www.boaresearch.com](http://www.boaresearch.com)  
(for Windows and Macintosh)

Originally developed on the Macintosh platform, this 3D CAD package is now compatible with Windows-based computers, in a likely attempt to snare a portion of the AEC market dominated by software made by Autodesk and Bentley Systems.

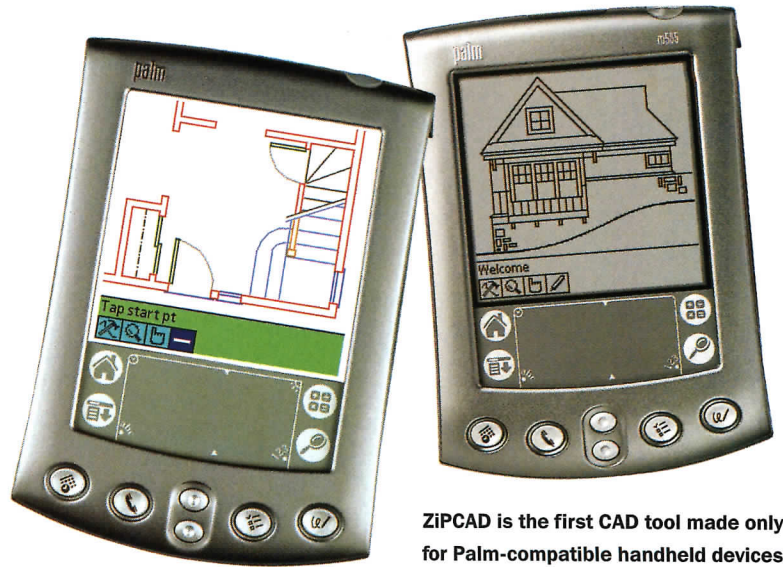
Like most object-based CAD, BOA lets designers model their buildings directly in 3D, from which they can extract 2D plans, elevations, and sections as needed. A designer can define two object types within BOA: blocks and frames. Blocks are user-defined volumetric building components, such as walls, columns, and beams; frames are inserted into blocks to represent openings in the blocks, such as doors and windows. This is a departure from other 3D CAD programs that have an array of predefined objects corresponding directly to building components.

BOA's blocks are generic until a designer assigns them data and properties to make them behave like the components they represent, and they remain editable throughout the design process. BOA's workplane, which corresponds to the reference plane found in other 3D software, can be manipulated easily so that the user

can view a model from any angle or zoom position, and allows easy switching between 3D views and plans or sectional cuts.

### ZIPCAD

123-D Software  
[www.zipcad.com](http://www.zipcad.com)  
(for Palm and Palm-compatible handheld organizers)



ZipCAD is the first CAD tool made only for Palm-compatible handheld devices.

Users of Palm handheld organizers, take note: This design software won't replace your desktop CAD system, but it's a handy tool for marking up existing drawings and creating on-the-fly as-builts. The company was founded by a computer guru-turned-architect who saw a niche market for designers in need of a simple, mobile CAD

program. ZipCAD allows import and export of DXF files from and to compatible desktop programs. Users will recognize common CAD functions like layers and line types, as well as drawing and editing tools like offsets, trims, and grouping functions. It's a useful tool for those who don't mind working on a small screen.



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## SEPTEMBER

### **Infrastructure Security for the Built Environment**

*September 16–18, 2003; Washington, DC*

Providers: The Infrastructure Security Partnership, Associated General Contractors, Committee on Architecture for Justice, and the American Council of Engineering Companies

Questions to [caj@aia.org](mailto:caj@aia.org)

### **Density: Myth and Reality**

*September 11–14, 2003; Boston*

Providers: Boston Society of Architects, Regional and Urban Design Committee, Housing Committee, and Center for Livable Communities

Questions to [tdavis@aia.org](mailto:tdavis@aia.org)

### **Restoration and Renovation Conference and Exhibition**

*September 18–21, 2003; Chicago*

Provider: Restore Media, LLC

Selected education sessions provided by the Historic Resources Committee

Questions to [hrc@aia.org](mailto:hrc@aia.org)

## OCTOBER

### **Strategically Leveraging Your Prime Asset: Your Future Depends On It!**

*October 8–10, 2003; Savannah*

Provider: Practice Management PIA

Sponsor: Graphisoft

Questions to [practicemanagement@aia.org](mailto:practicemanagement@aia.org)

### **Urban and Innovative Schools: The Cultural and Social Role of Educational Architecture**

*October 9–11, 2003; Minneapolis*

Provider: Committee on Architecture for Education

Questions to [cae@aia.org](mailto:cae@aia.org)

### **Cleveland: The Treasures Within**

*October 16–18, 2003; Cleveland*

Provider: Interfaith Forum on Religion, Art, and Architecture

Questions to [ifraa@aia.org](mailto:ifraa@aia.org)

### **Connecting the Dots: Understanding the Emerging Digital Building Process**

*October 16–19, 2003; San Francisco*

Provider: Technology in Architectural Practice PIA  
Sponsors: Autodesk Revit, Bentley Systems, Inc., and Graphisoft

Questions to [tap@aia.org](mailto:tap@aia.org)

### **IFMA World Workplace 2003**

*October 19–21, 2003; Dallas*

Provider: International Facilities Management Association

Education session (design/collaboration track) provided by Facility Management PIA

Questions to [facilitymanagement@aia.org](mailto:facilitymanagement@aia.org)

## NOVEMBER

### **Mold in the Built Environment: Perspectives for Architects**

*November 8, 2003; San Antonio*

Providers: Building Performance PIA, Building Science, Committee on the Environment, and Housing PIA

Questions to [plukas@aia.org](mailto:plukas@aia.org)

### **Historic American Buildings Survey 70th Anniversary Symposium: Architectural Documentation**

*November 14–16, 2003; Washington, D.C.*

Provider: Historic American Buildings Survey, National Park Service; Library of Congress; Historic Resources Committee

Questions to [hrc@aia.org](mailto:hrc@aia.org)

### **2020 Vision: a diversity conference for design professionals**

*November 19–20, 2003; Boston*

Providers: AIA Diversity Committee and Boston Society of Architects

Details at [www.architects.org/diversity](http://www.architects.org/diversity)

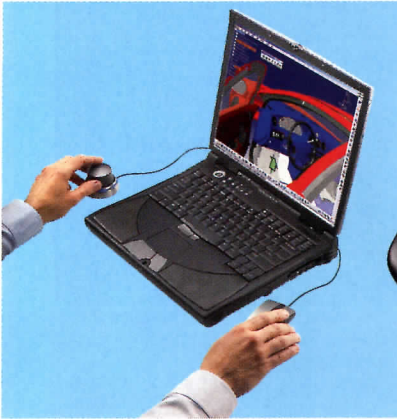
### **Women, Children, and Healthcare: Designing Facilities for Distinctive Needs**

*November 19–22, 2003; Denver*

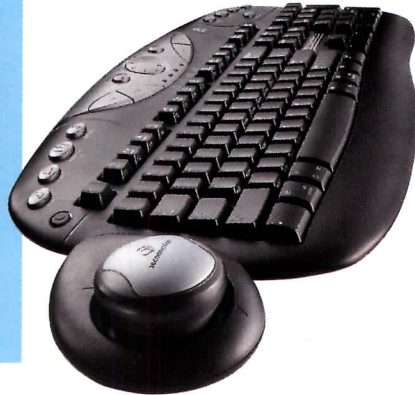
Provider: Academy of Architecture for Health

Questions to [jbarry@aia.org](mailto:jbarry@aia.org)

## Digital Products



3D Connexion's input devices win points for user comfort.



### SpaceNavigator and SpaceTraveler

3D Connexion  
[www.3dconnexion.com](http://www.3dconnexion.com)  
(for Windows only)

3D Connexion aims to make designers more comfortable at their desks by giving them ergonomically correct input devices. The company's research indicates that repetitive tasks are minimized by as much as half and productivity increases up to 30 percent when using two hands rather than one for design tasks.

The SpaceNavigator keyboard, released last spring, has a trackball-like device built into its left side. Users can scroll through Web pages and zoom in on document details with the left hand, freeing the right hand for using the mouse to select and modify text or elements of a CAD model.

For designers on the go, the SpaceTraveler works with portable computers. It comes bundled with a Logitech-brand travel-size mouse as well as the left-handed navigator for panning, zooming, and rotating.

Both tools allow users to program the navigator's buttons for different software applications.

### SketchBook Pro

Alias (formerly Alias Wavefront)  
[www.alias.com](http://www.alias.com)  
(for Windows tablet PCs only)

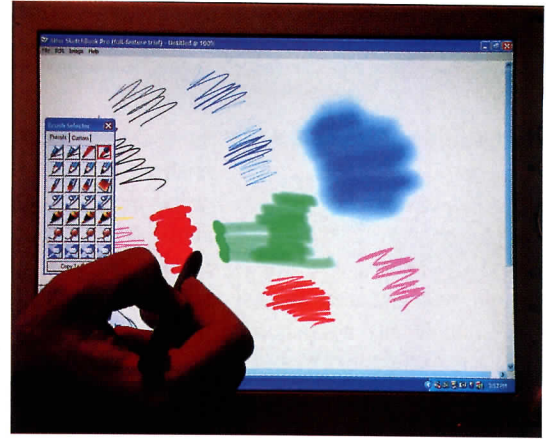
The birth of the tablet PC last fall is

spawning a crop of pen-based design tools, including this new offering from the makers of Maya. SketchBook Pro turns a tablet PC into a sketchpad with a customizable collection of pens, markers, and brushes at the ready for digital artists. The drawing tools are pressure-sensitive: the harder you press on the screen with the pen, the

darker the resulting stroke. Even a felt-tipped pen held to the screen for several second "bleeds" into the screen, just like a real pen would do on paper. Users can create different pen and brush sizes and shapes and save them in a personal library for future use.

Instead of traditional drop-down menus, the primary interface

is a simple artist's palette located in the lower left corner of the screen, but movable to any area. A user chooses tools by tapping on them with the tablet PC's pen. The software allows designers to create layers in their sketches and undo up to 20 previous penstrokes. Its ease of use will make this tool a favorite among sketch-happy designers.



SketchBook Pro's pressure-sensitive pens "draw" darker the harder they are pressed on the screen.



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# Digital Products

## QuadriSpace Presenter 2.3

QuadriSpace  
www.quadrispace.com  
(for Windows only)

As more and more architects design directly in 3D, they have a variety of options for presenting these models to their clients. This software, which debuted last year, lets designers create interactive, multimedia presentations that incorporate visuals, text, and sound—all without having to learn complicated animation software. Various types of visuals, such as 3D models, 2D images and drawings, and text boxes and labels can be imported into a presentation and ordered in a logical sequence for the viewer. Programmable buttons within a presentation let the viewer navigate through the various images (e.g., walk-throughs, zooming, and so forth). A viewer allows those who don't own the software to see presentations on their own computers. Though the file types handled by the software are limited to DWG, DXF, and 3DS, this is nonetheless a handy tool for showing off designs in a polished, professional manner.

## BEES 3.0

National Institute of Standards and Technology (NIST)  
www.bfri.nist.gov/oea/software/bees.html  
(for Windows only)

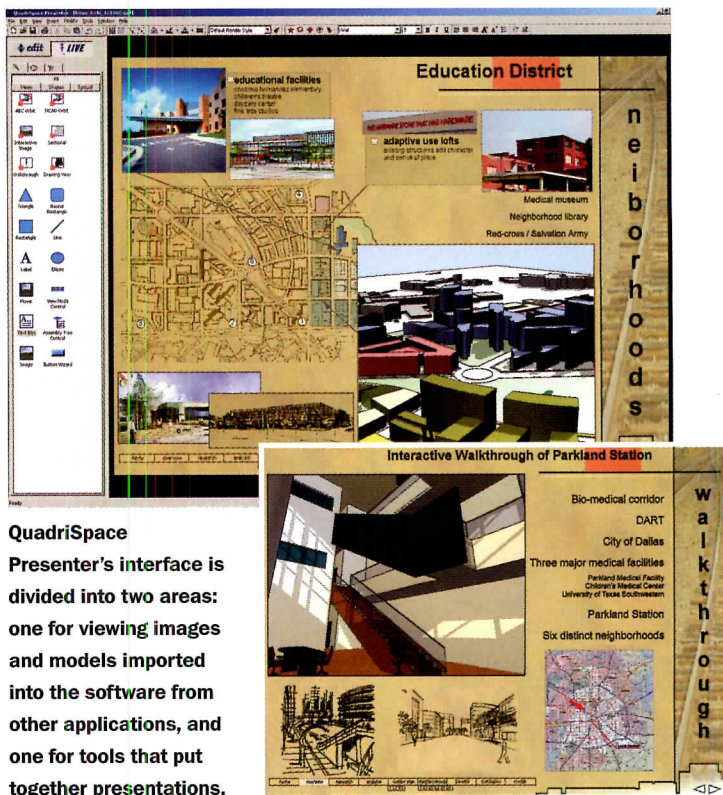
Amid a growing number of tools that guide architects who design green buildings, BEES is one of the oldest on the block. Its name is an acronym for Building for Environmental and Economic Sustainability. The decision-support software prompts a user to enter information about a project, including location, size, and selected materials. It then assesses the environmental performance of a given design based on the life-cycle approach outlined in ISO 14000 standards, as well as economic performance based on ASTM standards

for life-cycle cost analysis. Both analyses are combined to create an overall performance measure. The latest version includes historical performance data for nearly 200 building products. The software, which is available free of charge, was developed by NIST with support from the U.S. Environmental Protection Agency.

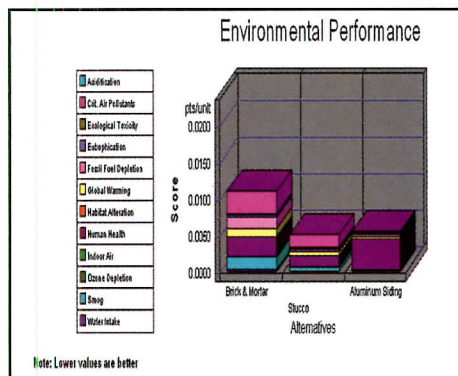
## Solibri Model Checker (SMC)

Solibri  
www.solibri.com  
(for Windows only)

This tool automatically checks digital building models against criteria such as component dimensions, interrelationships, and building codes to determine potential problems with a design before they are discovered in the field during construction. The software works with models developed in software compliant with the Industry Foundation Classes (IFCs) created by the International Alliance for Interoperability (IAI), such as Graphisoft's ArchiCAD and Microsoft Visio. The interface is split into two halves: one for viewing information about the model, the constraints against which it is being checked, and a list of the potential problems found during the analysis; and a second viewing area for seeing the IFC-format building model at various angles. The constraints against which models are checked are included in the software but can be customized for a specific project. Constraints can also be grouped together into sets that are useful for interference checking, space checking, and other common tasks. When problems are detected, they must be corrected in the original application used to create the model and then rechecked in Solibri at a later time. As IFCs become more common, this tool will be handy for ensuring that building design data are accurate as projects enter the construction phase. ■

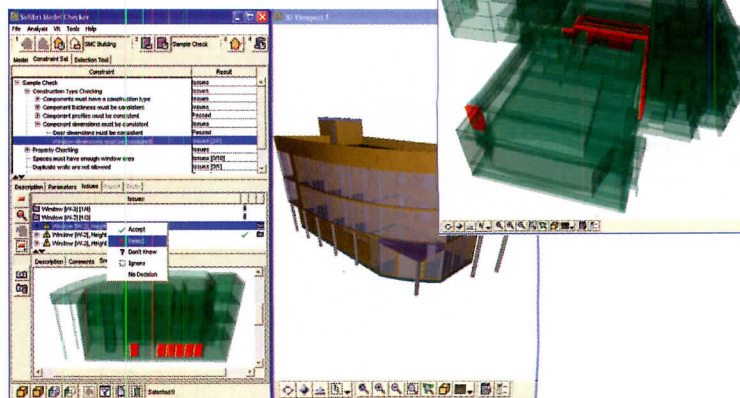


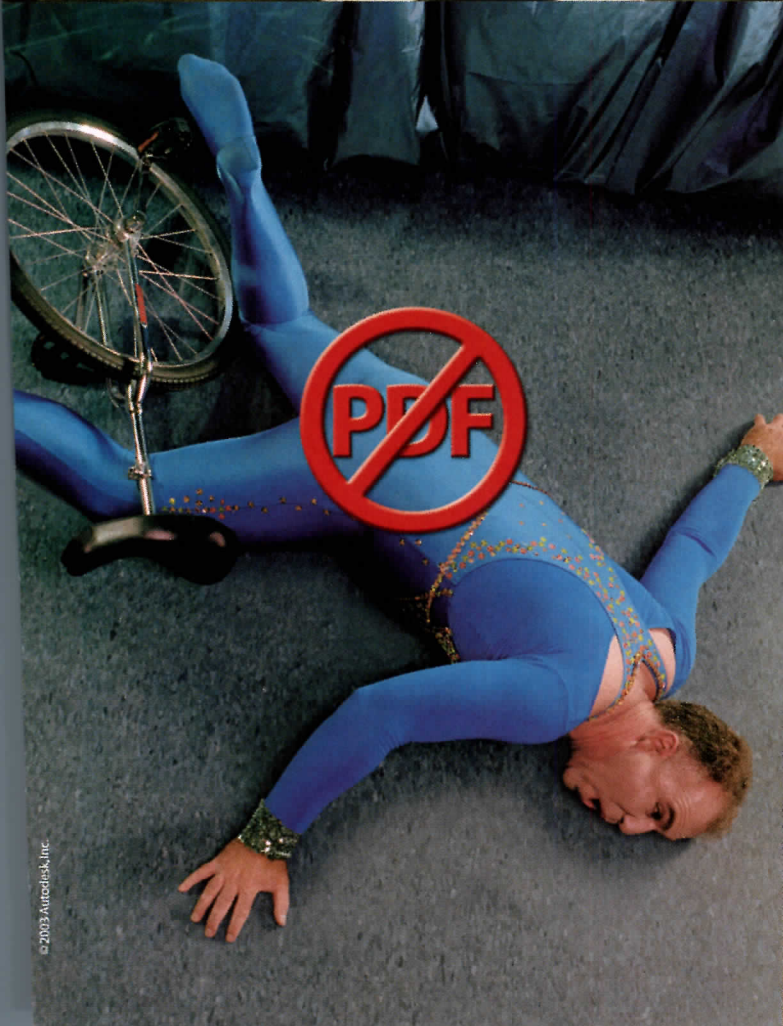
QuadriSpace Presenter's interface is divided into two areas: one for viewing images and models imported into the software from other applications, and one for tools that put together presentations.



BEES 3.0 helps architects design green buildings.

Areas where conflicts or potential problems are detected within the Solibri model checker are highlighted for easy viewing.





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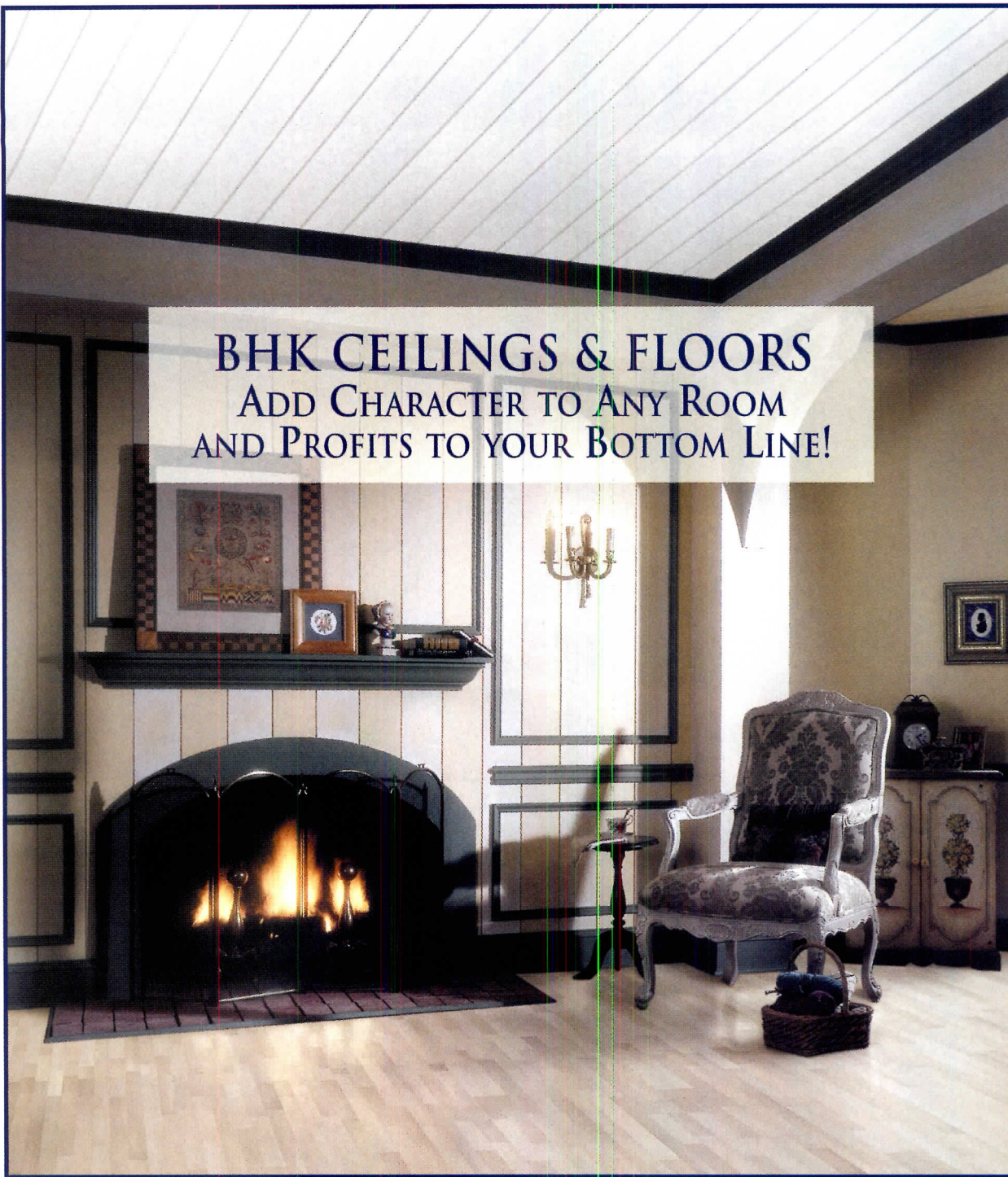
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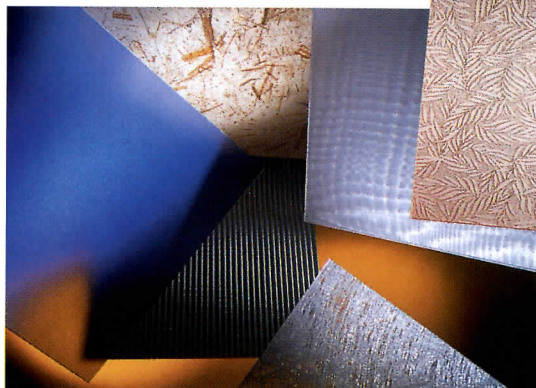
**IT'S A SNAP!**



# New Products

Several of the **wall and ceiling** products featured this month reinterpret the role these elements play in interior spaces. Some take a radical new approach in response to current design tastes, like a canopy system created to work in a "ceilingless" project; while others, such as a **breathable film for wall cavities**, address one of the current plagues of the design industry, mold and mildew. *Rita F. Catinella*

## Canopies for ceilingless spaces among new products to look up to



**Tin Look tile in silver (far left); Infusions finish options (center); Ferns and Coral tiles (right).**

Infusions, Armstrong's new collection of canopy ceilings, was designed in response to the growing number of environments built without traditional ceilings. Infusions uses standard components to create floating ceiling canopies in a variety of visuals, ranging from fabric-infused polycarbonate to metals.

Available on the market in

October 2003, the canopies come in 2' x 5' and 2' x 6' sizes and can be used individually or in combination to create different configurations, including hills and valleys, in applications ranging from high-profile corporate to upscale retail.

While Infusions was big news at Armstrong's booth at this year's NeoCon trade show, it wasn't the

company's only introduction. It also launched Traces, a collection of two nature-inspired commercial ceilings. The 2' x 2' mineral-fiber panels (named Ferns and Coral) feature sculpted organic patterns, a Noise Reduction coefficient (NRC) of .65, and a Ceiling Attenuation Class (CAC) of 37.

On the company's residential

side, Armstrong has added three new Tin Look ceiling styles: Fans, Squares, and Triangles. The 12" x 12" lightweight, vinyl-coated tiles can be painted to duplicate nearly any metallic finish the customer desires, including copper, silver, pewter, bronze, or gold.

877/ARMSTRONG. Armstrong World Industries, Lancaster. **CIRCLE 200**



## Acoustical ceiling tile creates the look of drywall

Techstyle Acoustical ceilings from Hunter Douglas are made from a patent-pending, lightweight fiberglass composite. The tiles' load-bearing characteristics allow them to span up to 16 square feet without sagging and to absorb the force of normal impact and bounce back. The large-format panels and narrow 1/4" reveal create the monolithic appearance of drywall when

installed in a 24" T-grid, while their honeycomb structure absorbs both high and low frequencies. The Class A fire-rated panels are manufactured from more than 10 percent recycled content and completely recyclable materials and feature a light reflectance of LR-1, an overall Sound

Absorption Average (SAA) of .89, and an NRC of .85. The product's inorganic structure is inhospitable to mold or mildew and does not emit VOCs. The ceiling can be used in any interior application, including museums, airports, train stations, libraries, retail, and open-plan offices. 866/556-1235. Hunter Douglas, Broomfield, Colo.

**CIRCLE 201**

## Hand-screened wallpapers from Brooklyn

At this year's International Contemporary Furniture Fair in New York City (for more products from the fair, see page 206), the Brooklyn-based interior and product design firm twenty2 launched its first collection of hand-screened wallpapers. Created by Krya and Robertson

Hartnett, the firm's founding principals, the contemporary patterns are named Maxwell Group, Acco Group, Columbia Heights, and Casa Mila. Each design is hand-screened on vinyl-coated paper or a grass cloth of woven jute and carries an ASTM-E84 Class A fire rating. The Maxwell Group

consists of both Maxwell and the coordinating Half Max (shown here in Terrain), each of which sports energetic dots in a freehand scribble. The firm is currently developing a line of hand-printed fabrics to coordinate with the new wallpapers. 888/222-3036. twenty2, Brooklyn, N.Y.

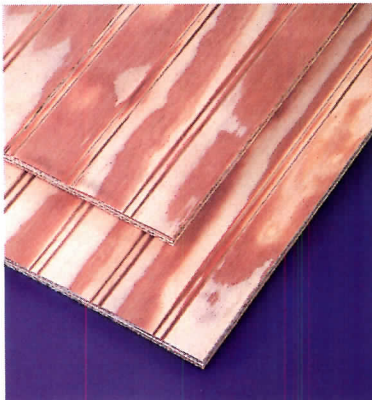
**CIRCLE 202**



## New Products

### ► Versatile plywood line

The G-P Plytanium plywood product line is made from real Southern pine plywood and is ideal for residential or light commercial construction. With the beaded look of classic tongue-and-groove planking, the Plytanium Ply-Bead panels (shown) provide ceiling, wall, and wainscoting solutions. The complete product line includes Sturd-I-Floor, Sheathing, Siding, and Sanded Project panels. 800/BUILD-GP, Georgia-Pacific, Atlanta. **CIRCLE 203**



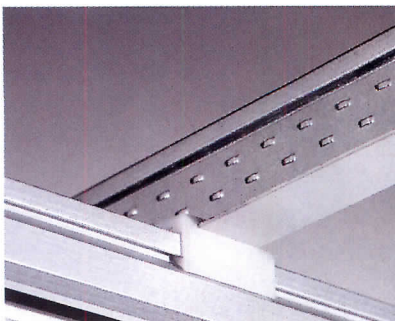
### ▼ Reform your office design

The Reform wall system from Inspace is 98 percent reusable and is manufactured in an award-winning, eco-friendly plant that is built on a reclaimed brownfield in New York State. The movable wall system features new fabrics, vinyls, glazing, and paint-color options, and a flush glaze front option to create a storefront look while retaining its unitized modular construction. 905/836-7676. Inspace, Ontario, Canada. **CIRCLE 205**



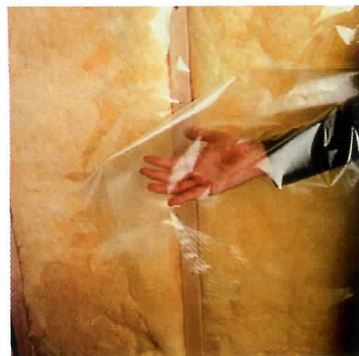
### ► As strong as blocking

Gridclips, from Clickeze Privacy Systems, a division of InPro Corporation, attach tracks to suspended ceilings without hardware or backing. Gridclips contain the same strength as the traditional blocking method of installing and reinforcing track while still supporting more than 45 pounds of weight. They offer a quick, four-step installation and will not damage ceiling grids during any necessary removal or repositioning. 888/715-8390, ext. 262. InPro Corporation, Muskego, Wis. **CIRCLE 207**



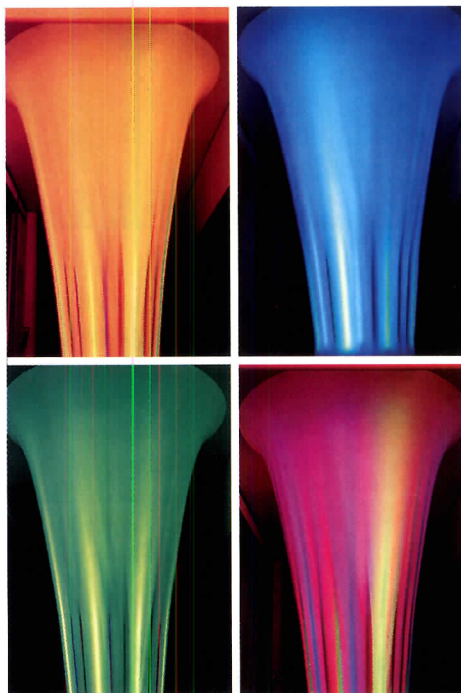
### ► Breathing walls

CertainTeed claims to have introduced the first vapor retarder in the U.S. that breathes and allows excess moisture to escape from wall cavities. Called MemBrain, this new, patented smart vapor retarder is a polyamide film that changes permeability from less than 1 perm at low humidity (such as during winter) to greater than 20 perms at high relative humidity. According to CertainTeed, the more typical vapor retarder, polyethylene, does not allow drying when the seasons change. 800/723-4866. CertainTeed, Valley Forge, Pa. **CIRCLE 204**



### ◀ Color-changing stretch ceilings

A player in the stretched-ceiling market for almost a decade, Prestige Design now introduces luminous 3D ceilings in a variety of shapes suitable for clubs, restaurants, hotel lounges, and other public spaces. The internal lighting operates through a programmed, three-color system using neons or diodes, which produce varied chromatic depths depending on the color of the PVC sheet. The product will be on display at BATIMAT this November in Paris. 312/327-5260. French Technology Press Office, Chicago. **CIRCLE 206**



### ► From floor to ceiling

BHK Moderna Logo laminate ceiling planks are now available in the U.S. in colors including Maple Royal, Natural Maple, Beech Siena, Pearl White, and Montblanc Pine. Like BHK's flooring product line, the new ceiling panels install with a four-sided tongue-and-groove joinery system. The panels feature mold-, mildew-, sag-, humidity-, and scratch-resistance, as well as a limited lifetime warranty. BHK's complete product line of flooring includes laminate, engineered wood, and cork. 800/663-4176. BHK of America, Central Valley, N.Y. **CIRCLE 208**





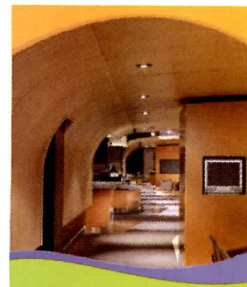


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# 2020 Vision

## A Diversity Conference for Design Professionals

National and international researchers and practitioners gather to share the latest research, discuss practice-based solutions and create a stronger future for increasing diverse participation in shaping the built environment.

November 19–20, 2003  
World Trade Center Boston  
[www.buildboston.com/diversity](http://www.buildboston.com/diversity)

Workshops on:

- “universal” hiring practices
- pathways to leadership
- integrating practice and education
- public agency practices
- why women leave architecture
- students’ aspirations
- firm identity
- global practices
- consumer myths
- diversity in Lower Manhattan

...and a good deal more designed to help individuals and firms understand the history of diversity in design and embrace new education, hiring and practice models.

Sponsored by:

AIA Diversity Committee  
Boston Society of Architects/AIA

Held in conjunction with Build Boston  
November 18-20, 2003

World Trade Center Boston  
800-544-1898

## Product Briefs

### ► Dual-fuel range

Aga Ranges, introduced 80 years ago in the U.K., has launched its newest addition to the line, the dual-fuel Aga Six-Four Series that fuses six gas burners and four electric ovens. A wok burner features an independent outer and inner ring that can be used to adjust the flame more accurately. The series also includes a conventional roasting oven, a simmering oven for slow cooking, a pure convection baking oven, and a broiling oven. Like all Aga ranges, the Six-Four Series is made in the Coalbrookdale Foundry in Shropshire, England, where it is crafted from cast iron and enameled by hand with three coats of vitreous enamel available in 14 colors. 800/633-9200. Aga Ranges, Cherry Hill, N.J. **CIRCLE 209**



### ▲ Good sound-masking makes good neighbors

In response to the effect that distracting noise has on productivity in the open-plan office environment, Herman Miller has embedded Quiet Technology sound-masking into the "petals" that attach to the top of Miller's Resolve office system. A four-level remote volume control assures that the system masks the correct level of unwanted sound and never creates a distraction itself—an issue with some ceiling-based sound-masking systems. 888/443-4357. Herman Miller, Zeeland, Mich. **CIRCLE 211**

### ► Home team advantage

High Desert Forge is an architectural- and ornamental-metals fabrication shop based in Albuquerque that specializes in gates, railings, and furniture. Working in collaboration with the City of Albuquerque, HOK Sports Venue Architects, Bradbury Stamm Construction, and the Isotopes Baseball Team Owners, the firm recently completed 14 gate panels made from aluminum, stainless steel, and copper for

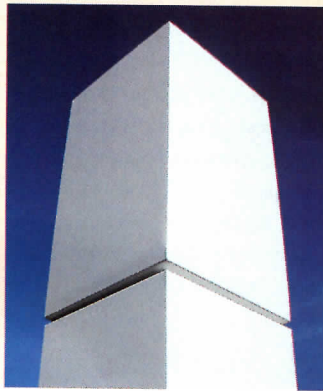
the Albuquerque Isotopes baseball stadium. 505/344-1325. High Desert Forge, Albuquerque. **CIRCLE 212**



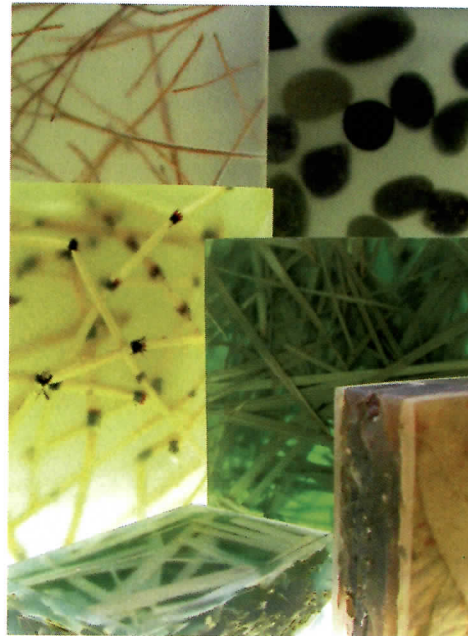
## Product of the Month

### FormaBond

Centria has introduced FormaBond, the industry's first single-source metal-composite wall panel. Centria's system encompasses manufacturing and fabrication, design and engineering assistance, a nationwide sales force, and a network of installers. FormaBond panels are molded, complete with integral patent-pending panel joinery and stiffeners, and are delivered ready to install—eliminating additional costs for shipping and manufacturing. The system is available in any panel width up to 60" and custom lengths up to 180" (sheet thickness is 8 mm). The aluminum for FormaBond is produced from 80 percent recycled material, and the scrap produced in fabrication is less than 10 percent. Centria is a member of the U.S. Green Building Council and an EPA Energy Star partner, and LEED credits can be obtained for projects within 450 miles of the company's facility in Frankfort, Kentucky. The panels integrate with Centria's Dimension Series architectural wall system, Formavue windows, and C/S louvers and sunshades. 800/759-7474. Centria, Moon Township, Pa.



**CIRCLE 210**



### ▲ Elemental resin line

Fossil Faux Studios has unveiled the latest custom resin designs from their Elemental series. Various techniques, compositions,

and concentrations of materials, including leaves, grasses, and rocks, are manipulated within the diaphanous resin by San Francisco-based artist/designer Marcia Stuermer. The resin can be used for countertops and bar tops, tables, screens, partition walls, flooring, wall cladding, stair rails and treads, and lighting panels. The material is an FDA-approved food-preparation surface that is scratch-, stain-, and impact-resistant and withstands surface temperatures up to 212 degrees. Fossil Faux

handles all CNC milling to create a spectrum of thicknesses, shapes, sizes, and edge detailing. 415/826-1911. Fossil Faux Studios, San Francisco. **CIRCLE 213**

## Product Briefs



### ▲ Gathering at the water trough

Featuring a rectangular shape offered in four sizes, the Undertone Trough sink (shown in foreground) can be installed virtually anywhere in the kitchen to work as a secondary sink area. Wire drying racks and storage baskets are included for added convenience. The Undertone's four length options are 22" x 8", 33" x 8", 43" x 8", and 60" x 8", all with a basin depth of 6". Also new from Kohler is the 33" x 18" Swerve sink (shown in background) that features a sleek arc that bridges horizontally from one basin edge to another. 800/4-KOHLER. Kohler Company, Kohler, Wis. **CIRCLE 214**



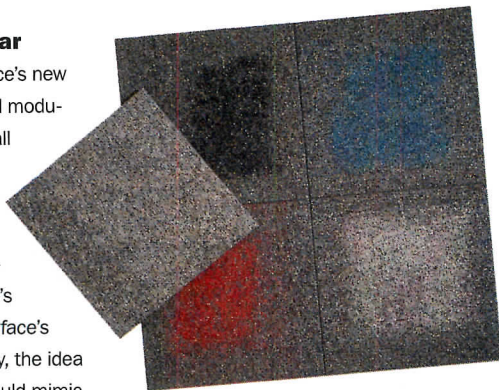
### ◀ Stainless-steel scrim

Laser Scrim is a 100 percent polyester sheer from Donghia that reduces light transmittance by 46.5 percent and cuts down heat transfer. Complementing the shimmering stainless-steel-coated back is a colored matte finish on the face of the textile available in a lustrous palette. 800/DONGHIA. Donghia Furniture/Textiles, New York City.

**CIRCLE 217**

### ▶ Mimicking modular

The 23 products in Interface's new collection of nondirectional modular floor coverings, i2, install with less waste, allow for multiple dye lots to be used in any installation, and offer the largest product rollout in the company's history. Influenced by Interface's exploration into biomimicry, the idea that products can and should mimic nature in terms of aesthetics and functionality, the line includes the amorphous splatters of color of Biomorph and the organic veining of Symbiosis. 312/822-9640. Interface Flooring Systems, Chicago. **CIRCLE 218**



### ▲ Brooklyn design pride

Brooklyn Designs, a new show produced by the Brooklyn Chamber of Commerce that featured 30 local designers of con-

temporary furniture, lighting, rugs, and decorative accessories, drew close to 4,000 visitors during its inaugural three-day run in June at St. Ann's Warehouse in DUMBO, Brooklyn. Hailed as "one of the most successful Chamber events ever," according to Kenneth Adams, president of the Brooklyn Chamber of Commerce, the show attracted visitors who perused prod-

ucts such as the Slide table from DYAD Studio, featuring a stainless-steel frame and slideable Lucite tops, and the Planter and trellis system from Robert Martin Designs made of mahogany, bamboo, and red cedar. 718/797-2030. DYAD Studio, Brooklyn, N.Y. **CIRCLE 215** 718/797-1183. Robert Martin Designs, Brooklyn, N.Y. **CIRCLE 216**



### ► Flushing champion

American Standard's new generation of toilet technology will be launched on a new two-piece toilet named Champion. Labeled "America's Best Flushing System," the technology features a patent-pending Flush Tower that releases 1.6 gallons of water in just .75 seconds. Since the flush valve is 50 percent larger than the industry standard of 2 inches, this allows more water to enter the bowl faster for a more powerful flush. The Flush Tower also features a sealing silicone rubber seal that functions in place of a flapper. By eliminating the flapper, Champion meets the strictest nonadjustability codes required by a growing number of municipalities. 800/524-9797.

American Standard, Piscataway, N.J. **CIRCLE 219**



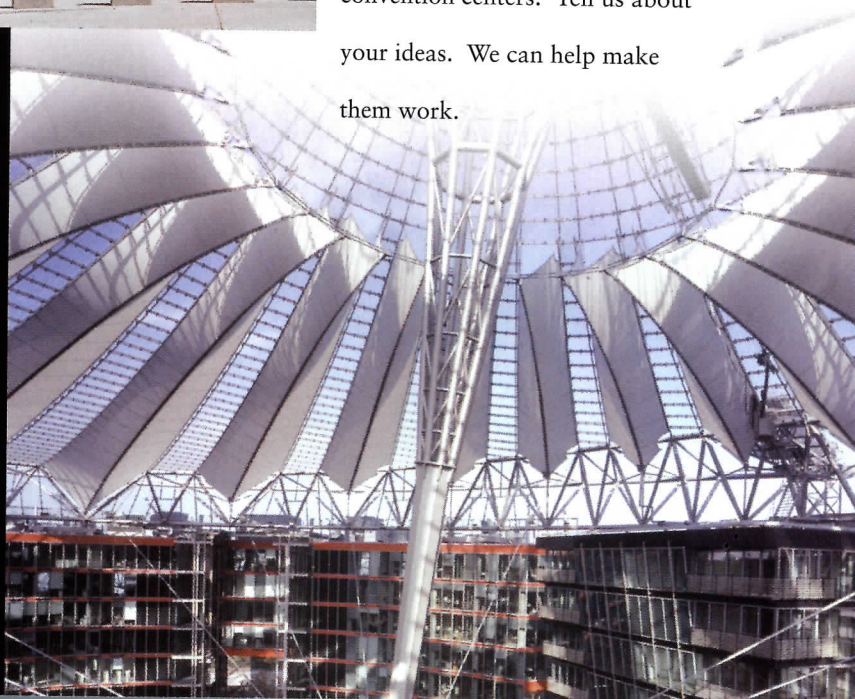


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## Product Briefs

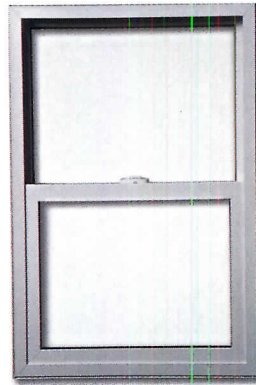


### ▲ Office survival

Likened to a Swiss Army knife, the new Avid conference table from Nucraft conceals a great deal of technology within a well-designed package. An easily accessible racking system, consisting of multiple vertical and horizontal compartments, runs under the center of the table, storing video, sound, teleconferencing, and other equipment. Avid has a few surprises, too, including retractable lights that slip beneath the tabletop when not in use. 877/NUCRAFT. Nucraft Furniture Company, Comstock Park, Mich. **CIRCLE 220**

### ► Take the guessing out of color matching

By clicking on any color sample, the Color Cue TX handheld spectro-colorimeter identifies the closest number and name from the cotton or paper version of the Pantone Textile Color System. Once a color is identified, all other data is made available through a scrolling feature. The last 10 colors measured are recorded for later reference. 201/935-5500. Pantone, Carlstadt, N.J. **CIRCLE 221**



### ◀ Automatic residential window lock

Jeld-Wen introduces WEN-Lock, an upgraded lock constructed with an ergonomic design that allows the window to lock with almost no effort. The lock features an oversize button for those with limited mobility and a slim design with an overall height of less than 1/2", making it less visible from the outside of the home. The lock incorporates an automatic locking action with manual override and features an inconspicuous indicator notch. 800/877-9482. Jeld-Wen, Klamath Falls, Ore. **CIRCLE 222**



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▲ **Something's warm in Denmark**

Founded in Denmark in 1853, Morsø produces wood- and coal-burning cast-iron stoves with firebrick interiors. Developed specifically for the North American market, the new 3610 model (top right) is the largest of the Morsø line of stoves. Its double doors with the extra glass panels give a good view of the fire, and the primary combustion air washes across the glass to create a barrier to carbon buildup. The 3400 series (shown here with soapstone sides) is equipped with an advanced combustion system that ensures that all gasses released from the fuel are burned. 877/337-8414. Hearthlink International, Randolph, Vt. **CIRCLE 223**

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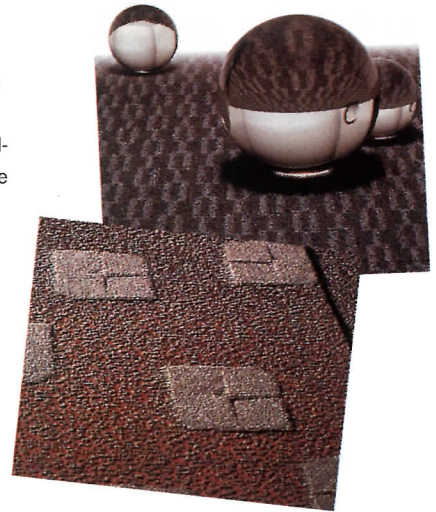


◀ **Guiding light**

For the Town Hall Gallery, a hotel in Innsbruck, Austria, French architect Dominique Perrault created a "moving" facade that appears to constantly change due to an interplay between the transparent window surfaces and individually adjustable, semitransparent sunscreens made of shimmering stainless-steel wire mesh from GKD. 49/02421-8030. GKD, Düren, Germany. **CIRCLE 224**

▶ **The next generation**

The rbn carpet collection, Lees Carpets' latest endeavor, involved a collaboration with students of North Carolina State University's College of Design, who developed initial designs for the collection. The new line is a collection of three multi-loop textures available in a palette of 10 neutral colors that display a changing metallic effect as a result of Lees Elumicolor carpet yarn and Simplex tufting technology. 800/523-5647. Lees, Greensboro, N.C. **CIRCLE 225**



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## Product Briefs

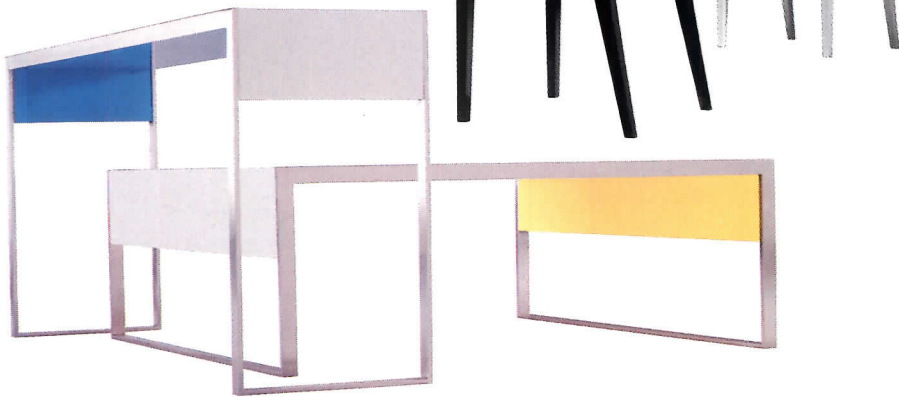
The premier event in North America for contemporary design, the 15th annual **International Contemporary Furniture Fair** hosted more than 17,000 attendees searching for the best product designs in New York City's Javits Center. *R.F.C.*

### ▼ Image-making furnishings

While it's possible for exhibitors to get overlooked at larger shows such as Milan's Salone del Mobile, ICFF offers a more intimate venue in which to make an impression, and several design firms chose to introduce their new lines at the show. Bernhardt Design launched the Fabien Baron Collection of seating and tables, adding Baron to a roster of designers including Ross Lovegrove and Christian Biecher.

Baron, who has been an image maker for Giorgio Armani, Burberry, and Issey Miyake, chose to work with a bright color palette and materials such as maple and anigre woods, brushed nickel, and glass. 212/997-6600.

Bernhardt Design, New York City. **CIRCLE 226**



### ▲ Stretching for better design

The Stretch stool, introduced by Brooklyn-based 3 Square Design in a variety of colors, is constructed of a molded plywood shell with a stretched-fabric sling seat mounted on a swiveling base. The firm has designed a full line of furniture, including credenzas, drawers, benches, wardrobes, panel screens, storage units, and end tables, and has recently completed a custom installation for the China Grill restaurant in Mexico City. 888/333-8440. 3 Square Design, Brooklyn, N.Y.

**CIRCLE 227**

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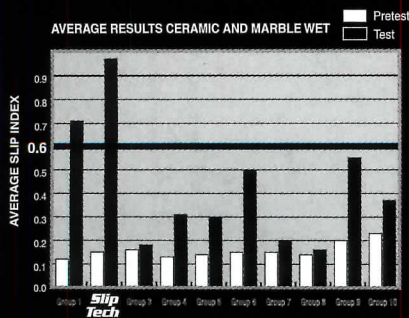


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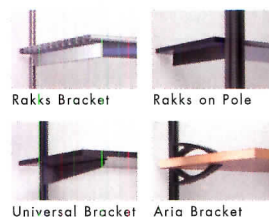
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Rakks wall-mounted shelving at Sweet & Associates Modern Furnishings, Cleveland, OH  
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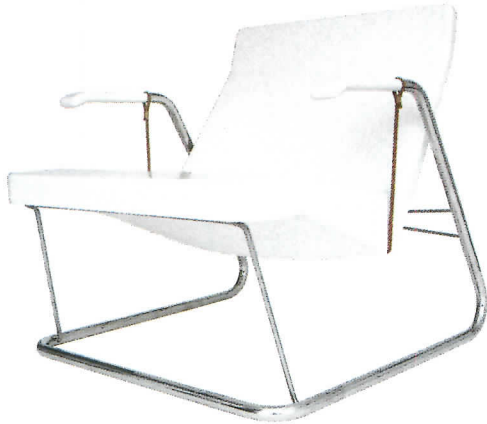


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## Product Briefs ICFF

### ▼ Tapping new markets

Following Lolah's strong debut last year, its 2003 introductions included the Glide chair and Tower water dispenser. Glide features a nautical cord made of stronger-than-steel aramid fibers that support the seat of the glider. The chair is constructed of a stainless-steel tubular base, fiberglass seat pan, and hand-carved wood armrests. Tapping an undeveloped design market, the Tower water dispenser conceals a 5 gallon water bottle under a spun aluminum cover. The handblown-crystal reservoir is removable and easy to clean. 905/855-3559. Lolah, Mississauga, Canada. **CIRCLE 228**



### ► Back to school

Inspired by the functionality of old school chairs, Offi's Perch lounge (shown) features a cushioned, contoured plywood shell atop a chrome rod frame with an elevated wire shelf for books, magazines, or a laptop. The Waterfall table, another piece from Offi, is a hybrid bench/work surface made of molded plywood and chrome-plated steel tube. A removable soft pad provides the seat cushion. 800/958-OFFI. Offi, Emeryville, Calif. **CIRCLE 229**



### ▲ One powerful desk

The Power Desk from Skypad is multifunctional in a new way—the desk integrates a personal computer directly into the desk design. All Power Desks are Hewlett Packard/Compaq hardware-enabled and are completely integrated with a flat-screen monitor, DVD drive, and state-of-the-art audio system. The Power Desk can also feature a built-in VideoCam in the monitor to allow for videoconferencing. 416/762-8129. Skypad, Toronto. **CIRCLE 230**

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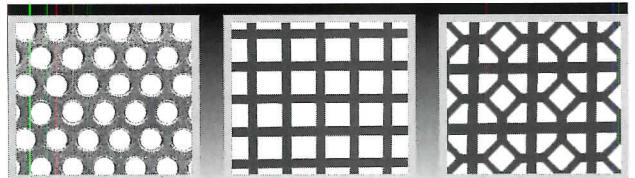
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## Product Briefs

The Montreal International Interior Design Show (SIDIM) celebrated its 15th anniversary this May, and the creative spirit of its Quebec designers sparkled. SIDIM has become quite a showcase for emerging talent. *Ingrid Whitehead*



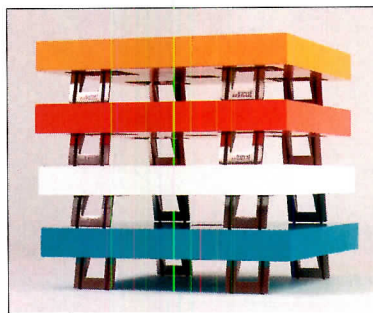
### ◀ Go with the Flo

Industrial designer Patrick Messier collaborated with ceramists Louise Bousquet and Guy Meynard to create this pedestal sink and faucet called Flo. The pure shape of the porcelain sink utilized challenging manufacturing techniques, while the simple form of the faucet was achieved by the design partners despite technical and aesthetic constraints. The water spout allows for output adjustment with a slight pull and temperature regulation by rotation. The balanced proportions are realized through a mathematical formula known as the "golden ratio." 514/495-4484. Messier Designers, Montreal.

CIRCLE 231

### ▶ Know when to hold them

The three founders of Fridgeland give furniture, object, and accessory designers the opportunity to develop their projects from prototype to display. Fridgeland's first collection, the I'm a Gambler series, was revealed at this year's show. Designed by Régine Lafata and René-Luc Desjardins, I'm a Gambler features a series of furniture pieces in laminated plywood. 514/838-7059. Fridgeland, Montreal. CIRCLE 232



### ◀ Stack 'em up

Three-MTL's tables, called sur[FACES], encourage users to construct their own table configurations. The medium-density fiberboard modules are available in three standard sizes and can be stacked or used individually. All modules come in a variety of colors and are equipped with hinged legs. 514/482-6113. Three-MTL, Montreal. CIRCLE 233

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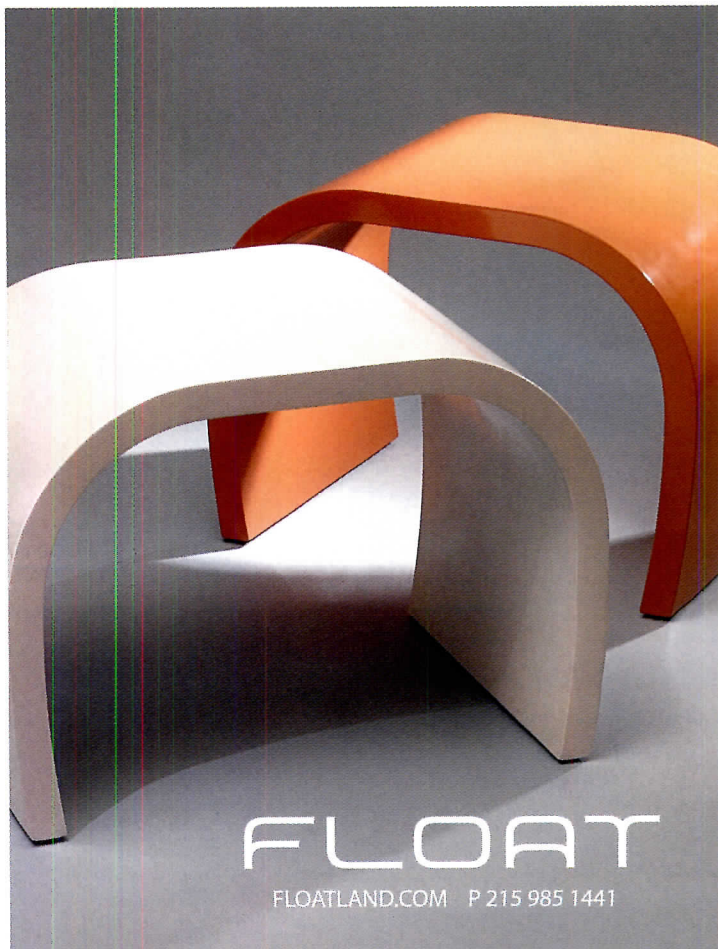
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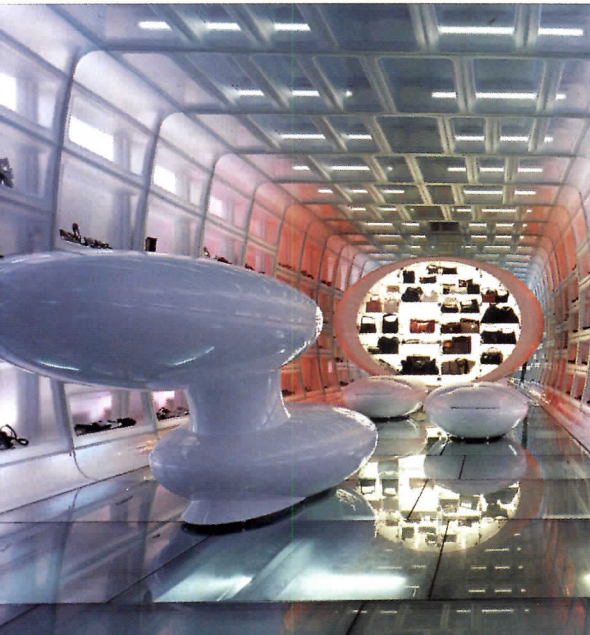


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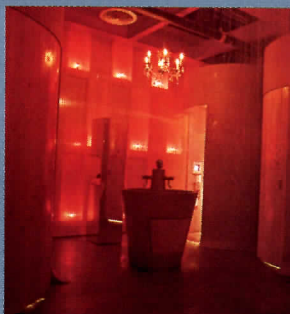
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**Design:** Check out our profile of Thread Collective, a firm of three young architects who work in Williamsburg, Brooklyn and their eclectic mix of interiors and installations.

### Live: Roasting Architecture.

John Czarnecki interviews Oren Safdie, the son of architect Moshe Safdie. Oren, who also studied architecture, has written a new play called "Private Jokes, Public Spaces," in which he takes on architecture and academia.

Photograph © Noah Sheldon



## Lighting

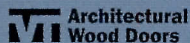
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## Product Briefs SIDIM

### ▼ Put it on your TAB

The TAB collection, by XTIAN, features three different tables: Loïd, made of mahogany; Lo (shown), made of maple and morado; and Asco, made of walnut. Every table comes with two sets of legs and offers three adjustable height options (made possible with the use of a simple Allen key): a "sushi" height, where the table is set directly on the sheaths; a "coffee" height (by inserting the short legs in the sheaths); and a kitchen-table height. Lo features a removable centerpiece—a bowl that can be reversed to regain a flat-surfaced tabletop. 450/226-0044. XTIAN, Morin Heights, Canada. **CIRCLE 234**



### ▲ Porcelain wall

Pascale Girardin specializes in high-end architectural ceramic artworks. Her latest creation, *Bardeau*, presented at this year's show, is a handmade glazed porcelain wall inspired by foliage. Each tile is constructed to wrap and hang on rods. The wall is custom-made to size and can be used with a waterfall. 450/227-7585. Pascale Girardin, Montreal. **CIRCLE 235**

### ▼ Lux interior

Sima lux produces original, hand-crafted incandescent lamps. The 2003 collection includes the Toum, Tam, and Savane (shown) series. Various types of white or natural cotton canvas make up the translucent cylinders of the lamps, while the lamp bases are made of walnut, teak, maple, or wenge wood. The lamps may be commissioned as one-of-a-kind pieces or produced as a limited series. 514/522-6438. Sima lux, Montreal. **CIRCLE 236**



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## WHERE WE STAND

### First Half Results For 2003

To members of the AIA,

The AIA continues to be on a sound financial path with continued strong performance during the second quarter of 2003.

#### Total Net Income 5% Ahead of Plan

Actual revenue is over budget by \$612,000 (+2.1%) at mid-year due to increased continuing education program revenues, higher than forecast convention revenues, and stronger-than-anticipated sales of Contract Documents in electronic format. Year-to-date expenses are slightly over budget due to higher than budgeted investment in AIA Contract Documents software improvements. The result is that total net income through the second quarter is \$10.3 million, 5% ahead of the budgeted goal.

#### Continued Diligence

We project completion of our fourth year in a row of fiscal stability and asset growth this year as a result of an ongoing commitment by the AIA Board, Executive Committee, Finance Committee, and management to exercise discipline in our financial affairs. The fruits of our labors are beginning to appear in new services and benefits to AIA members. We are committed to continuing both of these trends.

I welcome your comments.

Sincerely,

Norman L. Koonce, FAIA  
 Executive Vice President/Chief Executive Officer

AIA Financial Results June 2003 (\$000's)

	YTD June Budget	YTD June Actual	Annual Budget
Revenue	\$28,592	\$29,204	\$39,298
Operating Expense	(18,819)	(18,917)	(38,235)
<b>Operating Net Income</b>	<b>9,773</b>	<b>10,287</b>	<b>1,063</b>
Non-Operating Income	80	82	160
Unrestricted Net Income	<b>9,853</b>	<b>10,369</b>	<b>1,223</b>
Restricted Expense	(20)	(37)	(240)
<b>Total Net Income</b>	<b>\$9,833</b>	<b>\$10,332</b>	<b>\$983</b>



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## Product Literature

### Glazing educational facilities

Technical Glass Products has released a new handbook that addresses issues at stake in specifying fire-rated glass for school construction. Written in a question-and-answer format, the 12-page handbook discusses recent code changes, impact protection, and how to select appropriate products for educational facilities. It also provides a chart that offers side-by-side comparison of fire-rated glazing options. 888/397-FIRE. Technical Glass Products, Kirkland, Wash. **CIRCLE 237**

### New workstation offering

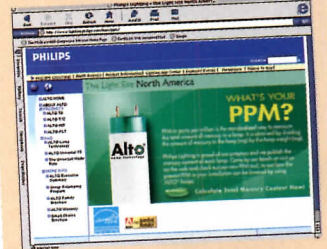
Ahrend USA has introduced a new 24-page brochure detailing Ahrend 500, a collection of modular, linkable workstation tables from Europe. 212/732-4691. Ahrend USA, New York City. **CIRCLE 238**

### Lighting controls binder

Lutron Electronics has introduced the *Lighting Controls for Commercial Applications* reference binder, a comprehensive new resource filled with detailed information on the company's line of commercial lighting-control products and services. The binder includes *Commercial Lighting Control Solution* and *Commercial Product Update*

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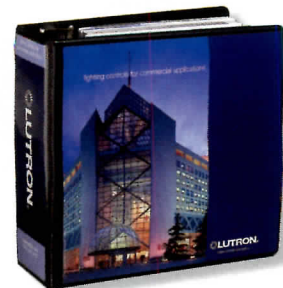
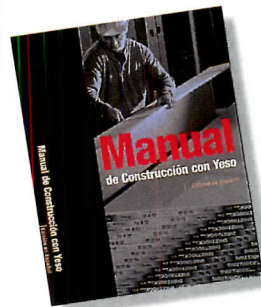
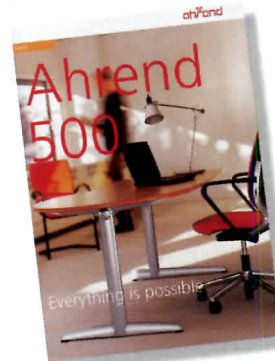
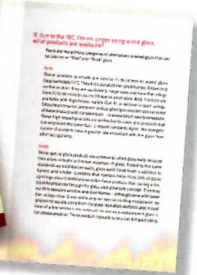
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brochures, a *Commercial Wallbox* catalog, *Commercial Systems Technical Guide*, and *Grafik Eye Designer 5* Software. 800/523-9466. Lutron Electronics, Coopersburg, Pa. **CIRCLE 239**

### Bilingual gypsum handbook

In response to the rapidly increasing number of Spanish-speaking persons in the construction trades, USG has printed its *Gypsum Construction Handbook* in Spanish for the first time. 708/486-1344. USG, Chicago. **CIRCLE 240**



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## Product Literature

### Guide to LEED flooring

The *ECOsurfaces' Green Guide to LEED* explains how ECOsurfaces can contribute to obtaining LEED credits. The guide includes definitions, graphics, and sample calculations showing how the products can be a factor in two out of six LEED rating categories: "Indoor Environmental Quality" and "Materials and Resources." 877/326-7873. ECOsurfaces, Lancaster, Pa. **CIRCLE 241**

### Surveillance catalog

Extreme CCTV has introduced the company's comprehensive 2003/2004 full-line catalog. The 16-page, full-color catalog features detailed information on new surveillance products and their applications. 888/409-2288. Extreme CCTV International, Burnaby, Canada. **CIRCLE 242**

### Window paint system

Weather Shield has partnered with Sherwin Williams to introduce the Accentials paint system, featuring seven standard colors and 48 new designer colors for its wood exterior and extruded-aluminum exterior windows and doors. The new custom color program delivers a finished product to match a supplied

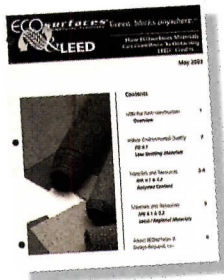
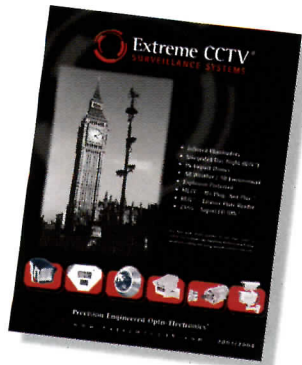
color swatch. A painted interior option allows factory-finished window and door interiors in either the 55-color palette or custom colors. 800/477-6808. Weather Shield, Medford, Wis. **CIRCLE 243**

### Vivak Sheet product guide

Sheffield Plastics has released a comprehensive guide to fabricating, forming, and finishing their Vivak Sheet product. The guide includes color application photos, as well as charts, diagrams, and drawings. 800/254-1707. Sheffield Plastics, Sheffield, Mass. **CIRCLE 244**

### Glazing reference manual

The Laminating Division of the Glass Association of North America has recently released the newest addition of the *Laminated Glazing Reference Manual*. This guide presents design criteria, technical and performance data, and installation guidelines for laminated glass products. The 2003 edition includes the latest information on laminating interlayers, as well as in-depth discussions of the applications of laminated architectural glass, including safety, solar control, security, and skylights. 785/271-0166. The Glass Association of North America, Topeka. **CIRCLE 245**



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## SET PIECES (continued from page 118)

cerns than dance: Instead of motion, the sets must deal with music and the libretto's narrative, more like a play. Daniel Libeskind, an accomplished pianist, chose to focus on the structure of Wagner's music for the opera *Tristan und Isolde*, for which Libeskind designed not only the sets and lighting but also the costumes in a 2001 production. Working within the Saarländisches Staatstheater in Saarbrücken, Germany—a theater commissioned by the Nazis and given as a gift to the town by Hitler himself—proved a loaded context for Libeskind. He focused instead on abstraction, with a series of towers composed of irregular layers with often serrated edges.

Last year, Libeskind was approached by the Deutsche Oper in Berlin to design sets for one of its productions. Libeskind accepted the commission without knowing what opera would be staged; it turned out to be Olivier Messiaens's *Saint Francis of Assisi*, a work with deeply religious content. The architect created a set that he describes as "a place for meditation, inquiry, analogy, and paradox," based on his earlier design for the Exile Garden at the Jewish Museum Berlin. Like that project, his sets for *Saint Francis of Assisi* comprise a perspectively exaggerated grid of 48 chamfered boxes (a 7-by-7 grid with one box removed).

*Desire*, an opera with movable sets designed by Hadid, premiered last January in Graz, Austria, to inaugurate that city's yearlong run as Europe's cultural capital. The contemporary opera by Swiss-born composer Beat Furrer, performed in the renovated industrial shell of the Helmut-List-Hall, is a modern take on the myth of Orpheus and Eurydice. Hadid's design—not unlike her fluid buildings—was a kinetically charged landscape, in this case moving parts of fiberglass mounted in aluminum frames. The zigzagging set pieces dashed across the stage,

carried by singers or moved by hydraulics, with performers moving above and below the stark landscape. An abstracted River Styx split the stage during the course of the opera.

Frank Gehry's sets for the Czech opera *Osud*, by Leos Janacek, had the added distinction of debuting in July in Gehry's new performing arts center at Bard College in upstate New York. Gehry worked with director JoAnne Akalaitis, conductor Leon Botstein, lighting designer Jennifer Tipton, and colleague Craig Webb, who says a big draw for the architect team was being a "client user" of the building it designed.

Webb describes the set for *Osud*—which takes place in three acts set at a spa, a house, and a music conservatory, respectively—as an abstract landscape. He and Gehry tipped up the stage floor, covered it with brushed aluminum panels to catch reflections of the stage lights, and installed two large sculptural objects that frame the onstage action and create negative spaces within which the performers move. One towering piece is translucent fiberglass—like spreading wings or an unfurling bolt of fabric—that Tipton illuminated in various colors to distinguish different scenes. The second set piece is a twisting column of opaque fiberglass painted a dark reddish-brown color. Three painted backdrops, one for each act, dramatically change the feeling of the stage, despite the fact that Gehry's sculptural pieces remain fixed.

Will architect-designed sets become a passing fad or prove to be a lasting trend? "Frank has lots of other offers to design sets," says Webb of Gehry. "I'm pushing him to accept them." Even for architects with less star power, theatrical commissions could be a win-win situation: more work for designers and a fresh approach for producers and directors. Even in the ephemeral world of theatrical spectacle, there can be a permanent role for architects on the stage. ■

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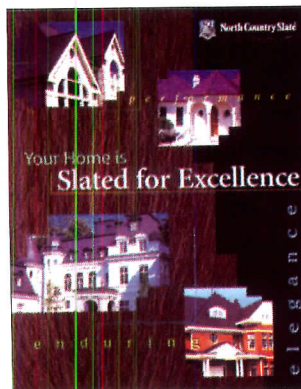


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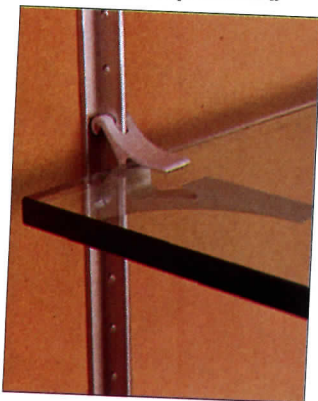


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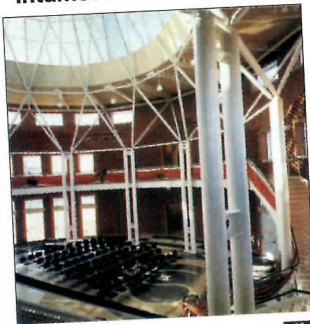


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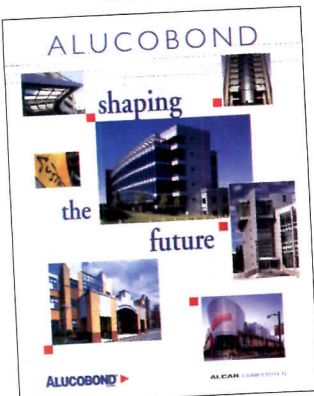
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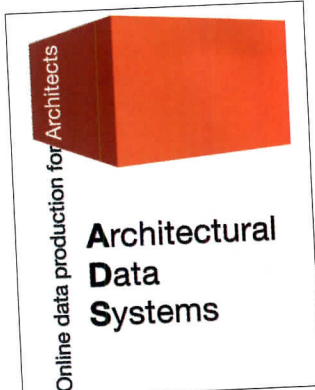


Totally new Alucobond® Material brochure in dramatic new format illustrates the use of Alucobond Material in a variety of innovative applications and colors. Alucobond Material is the original ACM (aluminum composite material) and has been used on more than 50,000 buildings worldwide. Alucobond Material is always the affordable solution. For more information, call 800-382-6445 or visit www.alucobond.com.

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**Ancor Granite Tile**

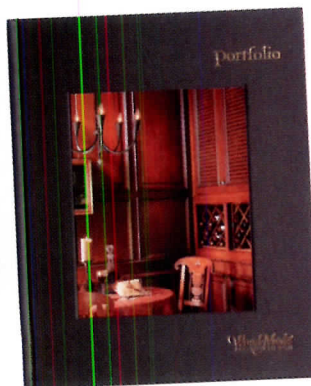


Ancor produces over fifty No. American and Imported granites in a full range of colors and finishes for residential, commercial and institutional use. Standard format is 12 x 12 x 3/8"; other sizes up to 18 x 18 x 1/2" available. Honed finish tile is particularly suitable for high traffic commercial areas, 435 Port Royal West, Montreal, Quebec, H3L2C3, Canada. Phone: 514-385-9366, Fax: 514-382-3533.

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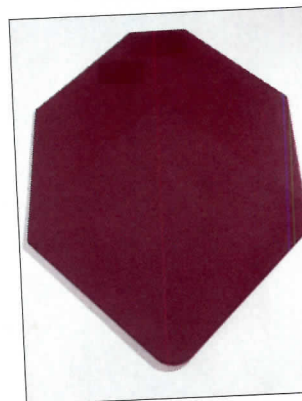


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**Invisible Swing Gate  
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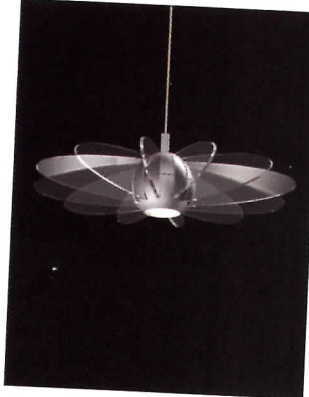


FAAC is the world's largest specialized manufacturer of hydraulic operators for swing, slide and barrier gate systems. The Model 760 hydraulic swing gate operator is designed specifically for in-ground installation for residential applications. Its power, reliability and invisibility make the 760 ideal for large ornate gates. For more information on the 760 and other FAAC products, visit [www.faacusa.com](http://www.faacusa.com).

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**Opus by Prima Lighting  
Sunnays**

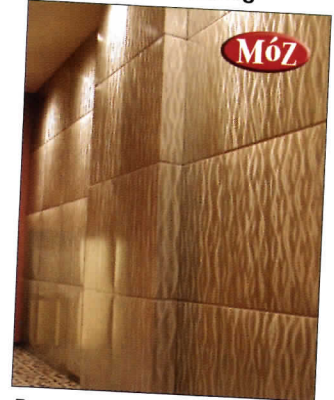


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**AIA/ARCHITECTURAL RECORD CONTINUING EDUCATION Series**



**Weather Shield Windows & Doors**

### Impact-Resistant Systems: Security in a Tiffany Setting

A New Generation of Windows and Doors is Taking the Coast by Storm.

It has been a decade. Still, we are talking about Hurricane Andrew. Andrew, regarded last month by federal researchers from a Class 4 to a Class 5 storm, was the costliest natural disaster in U.S. history. In the past century, only four other hurricanes of similar magnitude have struck the eastern, only four other hurricanes of similar magnitude have struck the Florida U.S. mainland. Can't be 1989, the unnamed storm that hit the Florida Keys in 1935.

Andrew peaked winds of 160 mph and came within 70 miles of a direct strike on downtown Miami. It was directly responsible for \$25.5 billion in damage. More than 135,000 single family homes were destroyed or damaged. 100,000 people were left homeless.

Subsequent analysis vindicated the observation that up to a quarter of the losses attributed to Andrew were attributable to construction that failed to meet codes, poor enforcement of codes, and deficiencies in the code themselves.

In the 10 years since Andrew, building codes in Florida, Texas, the Carolinas and other coastal states have undergone significant overhauls, many of them focused on vulnerable window openings.

Windows and doors were universally found to be the weakest building link, and their failure has been shown to lead to a domino effect that ends in catastrophic losses during major storms.

The highest priority amendment for all retrofits and new construction, according to code officials from Florida to New York, are impact-resistant windows and doors.

This continuing education section is intended to familiarize readers with the new code demands and details of a new generation of impact-resistant products with which to meet the new codes.

Florida Led the Charge

Florida recently implemented the nation's first statewide building code. The most dramatic change: the new Florida Uniform Building Code requires approved impact-resistant glazing in windows and doors (in other provisions domestic impact-resistant glazing in windows and doors).

Last fall a few months later the International Code Council (ICC), the International Conference of Building Officials (ICBO), and the Southern Building Code Congress International (SBCCI), developers of the three model codes used throughout the U.S., issued similar mandatory windows and doors would be required to be installed using impact-resistant glazing or storm systems to lower the hurricane threat.

Even more states also have adopted the stricter codes, and they are expected to be implemented statewide by the end of the year.

The affected codes are intended to improve construction techniques in order to prevent losses during natural disasters.

Advertising supplement provided by Weather Shield Windows & Doors

**Use the learning objectives below to focus your study as you read Impact-Resistant Systems: Security in a Tiffany Setting. To earn one AIA/CES Learning Unit including one hour of health safety welfare credit, answer the questions on page 278. Then follow the reporting instructions on page 278 or use the Continuing Education self report form located at [archrecord.construction.com](http://archrecord.construction.com).**

**Learning Objectives**

- Understand the codes that apply to hurricane and other severe weather regions
- Identify the features and benefits of a window system compared to shutters
- Know how to correctly select and specify impact-resistant window & door systems

**Instructions**

Refer to the learning objectives above. Complete the questions below. Go to the self report form on page 278. Follow the reporting instructions, answer the test questions and submit the form. Or use the Continuing Education self report form on [Architectural Record's website](http://archrecord.construction.com)—[archrecord.construction.com](http://archrecord.construction.com)—to receive one AIA/CES Learning Unit including one hour of health safety welfare credit.

**Questions**

- Analysis of Hurricane Andrew yield that up to how much of the losses were attributable to inadequate construction codes.
  - A: a. 10%
  - b. 15%
  - c. 10%
  - d. 70%
- In studies, what was shown to be the weakest building link in a hurricane?
  - A: a. Windows and doors
  - b. Roof structure
  - c. Interior walls
- Even an opening of only \_\_\_\_\_ percent on the windward side of a structure will allow full pressurization of the interior, exerting uplift pressure on the roof and lateral pressure against interior walls.
  - A: a. 5%
  - b. 10%
  - c. 15%
- The new impact resistant laminates contain a 694" layer of \_\_\_\_\_.
  - A: a. Polycarbonate
  - b. Polyurethane
  - c. Polyvinyl butyral
  - d. Polycarbonate
- The substrate must be included in the testing of a product to be certified as an impact-resistant window door system.
  - A: a. True
  - b. False
- Code approved window systems can be about \_\_\_\_\_% less expensive than windows with accordion shutters.
  - A: a. 12
  - b. 17
  - c. 27
  - d. 32
- Category 4 hurricanes can cause "extreme" damage with winds at:
  - A: a. 111 - 130 mph

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**Answer** test questions on the separate Reporting Form for each article or section.

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\*Program requirements and a complete list of courses can be found on [archrecord.construction.com](http://archrecord.construction.com).

**Learning Objectives**

At the end of this article you will be able to:

- Understand the codes that apply to hurricane and other severe weather regions
- Identify the features and benefits of a window system compared to shutters
- Know how to correctly select and specify impact-resistant window & door systems

**Instructions**

Refer to the learning objectives above. Complete the questions below. Go to the self report form on page 278. Follow the reporting instructions, answer the test questions and submit the form. Or use the Continuing Education self report form on [Architectural Record's website](http://archrecord.construction.com)—[archrecord.construction.com](http://archrecord.construction.com)—to receive one AIA/CES Learning Unit including one hour of health safety welfare credit.

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**AIA/ARCHITECTURAL RECORD CONTINUING EDUCATION**

Program Title: "Impact-Resistant Systems: Security in a Tiffany Setting" (03/05, page 278)

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Directions: Select one answer for each question in the exam and sign your name. A minimum score of 70% is applied to earn credit.

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2.	a	b	c	d	8.	a	b	c	d
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4.	a	b	c	d	10.	a	b	c	d

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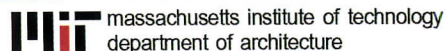
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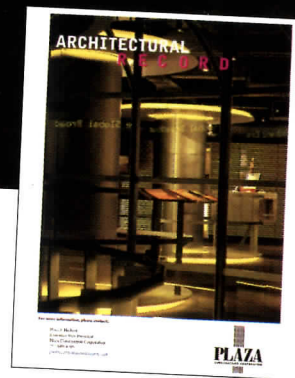
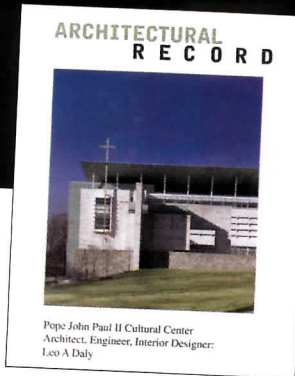
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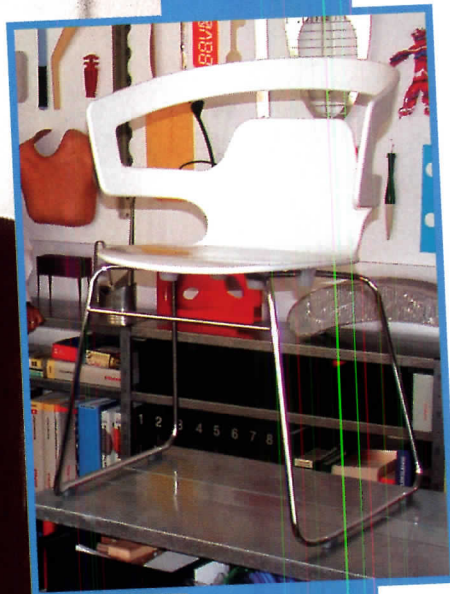
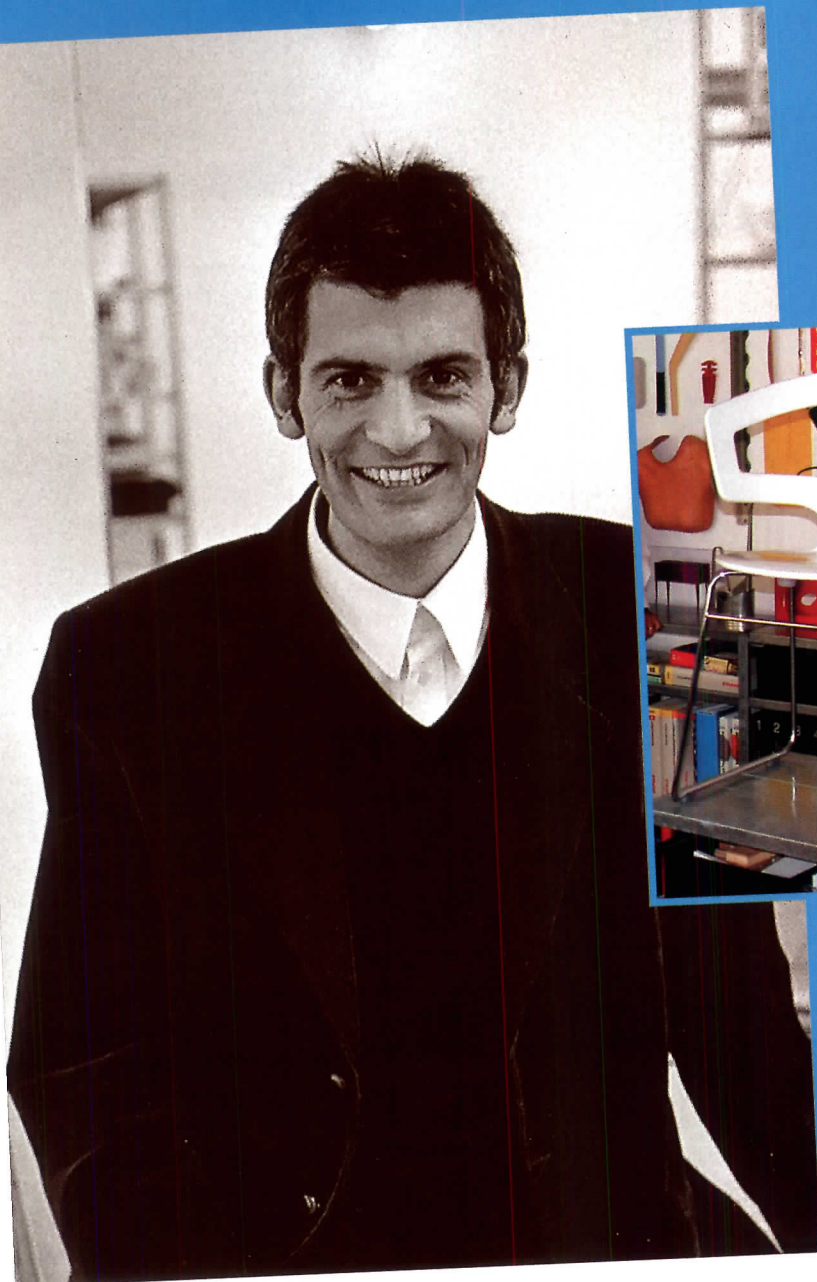
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## Alfredo Häberli: Merging Swiss precision with a Latin design flair

Interviewed by Josephine Minutillo

Whether intentionally or not, a designer's work often becomes associated with a certain style. Not so with Argentine-Swiss designer Alfredo Häberli. While some of his products could be described as functional but a bit off-beat, like his objects for Driade House, others are beautiful, though not necessarily in the classical sense, like his Essence glasses for iittala. Many might be called Minimal, but with a flair—a clever detail or touch of color—that add a particular appeal, such as in his Legnoletto bed or Sec shelving system for Italian furniture makers Alias. Among Häberli's many introductions at the Milan Furniture Fair this past April were new seating for Alias, Zanotta, and Moroso, and a child's toy for Offecct.

**Q:** How would you describe your oeuvre in your own words? I seek simplicity with an added value—a certain flair, a twist, a new function. I cross boundaries, moving between the worlds of discovery and recollection, boldness and naïveté, a need to innovate but still have respect for traditions.

Does having grown up in two very different cultures have any influence on your approach to design? Yes. I speak five languages but none of them perfectly. Maybe this is why I try to be as precise as possible with my design message. My openness to people, projects, and themes is very Argentinean. Having the courage for complexity and the capability to analyze with clear conceptual thinking comes from my Swiss schooling.

You had several introductions in Milan this year for some very prominent companies. Do you feel that you've "come into your own" now after having worked in partnership for many years? Being an industrial designer always involves working in partnership with a client, an engineer, model-maker, and such. I do not feel a big difference, apart from the fact that the process itself is more straightforward now. My first solo presentation in Milan was in 1995 with Driade. Since then I have had a lot of new items. Maybe it was necessary to gain the experience of 10 years in my design studio, reach the age of 40, and be married and the father of two children, in order to obtain the required calmness you need for really good products.

Is the role of design to create objects to improve daily life, or is "design for the sake of design" reason enough?

I always try to find a "real" reason for it, a reason that is more than a simple contribution to consumption.

At what point, if any, does design go beyond the task of designing objects to improve or enhance daily life to become invention? Can you give some examples? Design often arrives at the level of invention. Using new materials like in the Laleggera chair from Alias; finding a new typol-

ogy like the YaYaHo halogen lamp system from Ingo Maurer; being the first producer of a new instrument like the Walkman from Sony. But I also look at the work of Ettore Sottsass or Buckminster Fuller as invention, because they discovered themes that no one else had before.

As the years pass, does designing become easier or more difficult? Both. On the one hand, you gain more and more experience. On the other hand, so much has been done already. I try to always make small steps in design history. This makes it difficult ... but then, writing history is not necessarily the easiest goal to achieve.

**Photograph of Häberli by Gerry Nitsch; the Segesta chair by Alias, shown in Häberli's Zürich studio**