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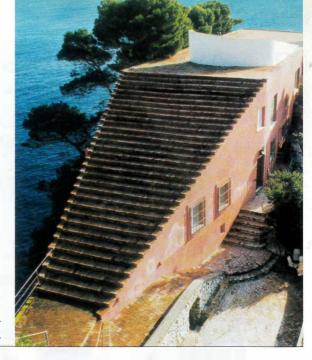
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On the Cover: Vancouver House, by Patkau Architects. Photograph by Paul Warchol. Right: Adalberto Libera's 1940 Casa Malaparte. Photograph by Andrejs Grants.

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* You can find these stories at architectural record.com. including expanded coverage of projects. Explore the latest news about emerging architects at architecturalrecord.com/archrecord2.



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The New Online Journal of Ideas from Architectural Record This month's features:

- Peter Wheelwright, the chair of architecture at Parsons School of Design, on the World Trade Center
- An interview with composer Philip Glass
- A discussion with Anthony Tung, author of Preserving the World's Great Cities
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- · A review of The Goat, or Who is Sylvia? a new play by **Edward Albee**

DAILY NEWS

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Project Portfolio: Unbuilt Houses

5x2=10! Five architects each present two of their best ideas for the housing of the future. This Web only section features 10 forward-thinking projects that are still on the drawing board.



Digital Practice

Connect to high-tech resources through product vendor guides and software reviews with links to manufacturer's websites. This month: National CAD Statement Update.



archrecord 2 for the emerging architect

DESIGN: Berkeley based IS.Ar Iwamoto Scott Architecture. WORK: How do young architects make a name for themselves in a competitive environment? This month: Non-Traditional Careers for Architects. LIVE: Alain Valdes's toolshed. TALK: How do you market yourself? Share your thoughts and opinions in the latest forum.

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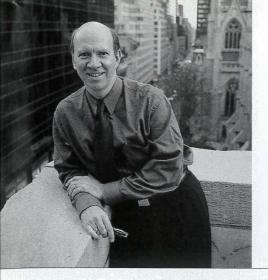
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The Security Paradox

Editorial

By Robert Ivy, FAIA

hink of where you feel most secure. Lying fully prone on a warm beach or snuggled in your own bed? Lost in swirling crowds during a lunchtime break or hiking in the high country? Few would answer, "Behind locked doors and high walls." As psychologist Richard Farson has observed, the term "security" is bound in paradox: Where security systems assert themselves most forcefully—in prisons, for example—fear, discomfort, and even danger often flourish; conversely, the absence of visible protection can promote the feeling of well-being.

In recent months, security by design has leaped from a single item on the architect's programmatic checklist to the headlines. Architects and other design professionals are engaging in a national debate, spawning a mini-industry of consultants, Web sites, and AIA conferences in their wake, to discuss safety and security for the built environment. If you take Farson's point, however, you quickly realize that security engages both fact (statistical reality) and perception, with design at the fulcrum, balancing the two.

When terrorism shattered our world, did facts dictate that all buildings become bunkers? Two building types illustrate the dilemma, with differing solutions. As Jane Loeffler, Ph.D., has written, embassies evolved, by policy, from projections of American culture (remember Edward D. Stone's embassy in India) to thick-walled, heavily protected, interior-oriented structures with little room for architectural involvement. Despite the Nairobi bombings and contemporary realpolitik, critics decry these fortresses, with their unintended negative connotations of America's image abroad.

By contrast, American courthouses, under the direction of the General Services Administration (GSA) and prompted by an ethos passionately articulated by former senator Daniel Patrick Moynihan, had begun to open up. In buildings from Las Vegas to Boston, we began to see symbols of justice that democratically engaged the city, opening a transparent, public face to the community, while sequestering judges chambers, juries, law enforcement, and defendants in more protected, private areas. Courtrooms became the mediating space between the two exposures. Can this openness continue?

In this murky time, risk assessment can help provide direction for decision making by architects. By isolating the types of potential threats and addressing each as a design dilemma, imaginative solutions can produce buildings that enhance our feelings of well-being while simultaneously providing protection. Our plans may change: As in the new GSA courthouses, layered zones may progressively increase in wall thickness, in material strength, and in active protective systems from public to private realms. Buildings at high risk for blast damage can offer greater setbacks, wall hardening, minimized adjacency, and mitigation of projectile damage, none of which need affect the public's appreciation of transparency or accessibility. It should be possible to appear open and be safe.

Make no mistake, the moment is dangerous. The list of potential security challenges can seem daunting-biohazard, theft, crowd control, arson, chemical attack. However, if we are able to determine which threats to address dispassionately, our solutions can become part of our overall design palette, much as we design for fire safety today. New products and systems may be invisible components of total building safety, similar to systems for fire suppression or thermal comfort. Speaking from his experience with airport design, architect Laurence Speck offered, "If it's designed in, it should be as natural as a stove in a kitchen."

ARCHITECTURAL RECORD wants to help. While this April issue includes the latest definition of "home," our most sacrosanct environment, we wanted to address the notion of security in other types of buildings and structures. Together with our sister publication, Engineering News Record, we offer a special publication, Building for a Secure Future, that addresses the security paradox, encouraging us to design buildings that are simultaneously transparent, welcoming, and safe. Do you feel secure where you are today?

Letters

As an architect living in New York City and working throughout the Northeast, and a proponent for ecological methods of design, product selection, and construction, I feel obligated to bring the following issue to my colleagues' attention:

I recently watched an investigative show, *Bill Moyers Reports: Trading Democracy*, that examined NAFTA and, specifically, the gross mistreatment of a Mexican town by a Newport Beach, California, waste-management company called Metal-Clad.

In 1995, Metal-Clad purchased a hazardous-waste-water plant in the Mexican state of San Luis Potosi. Metal-Clad intended to clean up the site and expand the plant to handle hazardous waste from the U.S. During the licensing process, an environmental impact study revealed that the plant was situated directly above a local aquifer. The local government declared the area an ecological preserve. Metal-Clad was then unable to obtain government permits for expansion and subsequently left the property in a polluted state, thus ruining the only source of fresh water in the area. (Metal-Clad later sued the Mexican government under NAFTA's Chapter 11 and won \$16.7 million.)

As members of arguably the world's most honest profession, I believe architects have a moral obligation as progressive thinkers to exercise control, and even to dictate which materials and products we should specify on our jobs and which ones we should prohibit.

Though cost is certainly a factor in selection, there are always alternate manufacturers, and it wouldn't take that much extra research to determine if a company has participated in any unscrupulous behavior.

. A smart consumer is an informed and powerful one. The ripple effect of exposing these types of ill-mannered companies will help to reinforce the positive and noble objectives that many of us in the field of architecture and the building industry aim to achieve.

— Peter Gaito, Jr.

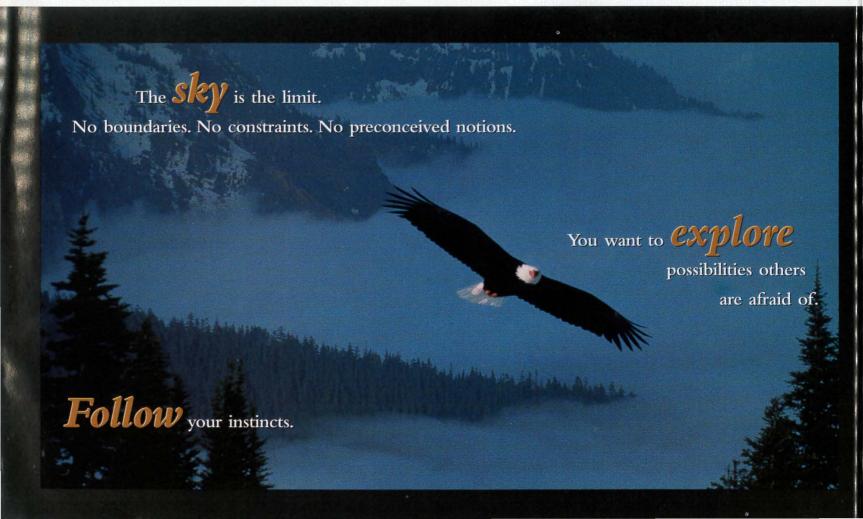
New York, N.Y.

The silencing of the muse

Youngsters in the profession sure can't draw. The computer drawings that are generally produced look terrible and lack line weight, care, and concern. In the past, the young aspiring designer of such drawings would have been relegated to the spec department or to doing details in the back room.

I fear the Muse has lost her influence. She no longer has the human material to inspire and move her creations directly from mind to hand to paper. She no longer has the eye to get the color just right or to contemplate the penumbra of the shadow as it falls against the stone wall. The computer has simply gotten in the way, and a fundamental link has been broken.

When Frank Lloyd Wright used to shake the sketch out of his sleeve in a few hours to solidify and firm up the incubations and fermentations of his mind, the result was a wonder. When Louis Sullivan cre-



ated ornament as a germ seed of an idea, the result was earth moving. Of course, they were architects of the Beaux Arts age, when charrettes seeking inspiration mattered.

There is an inexplicable something about the sketch coming from the hand of the master, with its resulting authority, that cannot be replaced by the account-executive business model so prevalent in the modern corporation. No amount of packaging, rendering, and graphic design replaces the inspiration of the sketch and all that it conveys.

I suspect we have lost something as we embrace our new computer technology. It seems the creative spark is dimming in the profession. It seems cold-minded accounting, efficiency, and packaging presented by account executives focusing on the client relationship is becoming ascendant. While it is encouraging to see the National AIA Convention 2002 offer remedial drawing classes that integrate xerox, camera, and the computer—I fear they don't get it, and the Muse is

becoming silenced.

—Craig Purcell
Island Architecture
Bainbridge Island, Wash.

Rebirth with the arts

I would suggest that within considerations for development of the former site of the World Trade
Center, strong thought be given to the inclusion of arts facilities as part of any rebuilding effort. The positive and meaningful expressions of dance, theater, music, visual arts, and the spoken word are reflective of the most hopeful aspirations of the human spirit and stand in stark contrast to the hateful destruction of life and property caused by the attacks on the twin towers.

The arts could serve an important function in revitalizing New York City's devastated downtown, bringing life and business into the area even after business hours, making the landmark tip of Manhattan so much more than just the canyon of commerce. A facility on the model of the Barbican Center in London,

housing theaters, galleries, shops, and restaurants, would be an appropriate living memorial to all that was lost in the attacks and could provide a centerpiece of creative energy at the very heart of downtown. It would bring with it not only the cultural excitement for which this city is known worldwide but ample employment opportunities, as well. Such a facility could house or be built around a permanent memorial to the victims and stand as powerful testimony to the many free and distinct voices that make up our great city. An interdenominational chapel for reflective prayer could be included, highlighting the importance of tolerance among people of all faiths—thus merging at the site the beneficent energies of religious faith and creative expression in the humanistic spirit of the Italian Renaissance.

The generous power of artistic endeavor has long been a vital strand in the fabric of our urban life, playing both an important economic role and contributing so much to the sense of

what it means to be a New Yorker. The arts very much deserve recognition and inclusion in the effort to heal the psychic as well as the physical wounds of 9/11. There has been discussion of what to do with aging Lincoln Center. This is the time to bring it downtown, and to let every joyous note, song, and step prove our devotion to our common humanity, to mark all that has been lost, and to celebrate all that remains.

—Julian Jackson Metaphor Contemporary Art Via e-mail

Corrections

Photographer Derek Lepper's name was misspelled in the March issue's story on the Coal Harbour Community Center [page 124]. In the December 2001 issue's Design Vanguard section [page 76], the Day Care/Youth Center in West Berlin was designed by Barkow Leibinger Architekten with Douglas Gauthier as a principal collaborator.

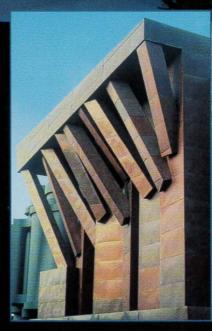
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Record News

Highlights AIA conversation p. 24 Piano plans for Morgan Library p. 26 Strategizing over WTC site p. 30 Rudolph building endangered p. 32

Libeskind riles up Canadians with Royal Ontario Museum win

The Royal Ontario Museum (ROM) in Toronto selected Daniel Libeskind in late February for its \$130 million expansion, and the choice quickly created controversy.

Libeskind's design, with dramatic angular forms, is in sharp contrast to the ROM's existing building and the surrounding context. The ROM's expressed intent-to commission a building that would establish the fifth largest museum in North America, and Canada's largest, as a star attraction in the international architecture scenestruck at the heart of Toronto's ambivalence about its future as a world-class city. Just as its loss of

the 2008 summer Olympics to Beijing was met with as much relief as disappointment, Toronto greeted Libeskind's bold architectural gestures with decidedly mixed feelings. But one newspaper headline blared, "Godzilla Looms Over ROM."

The design, which will be refined with Toronto firm Bregman + Hamann Architects, will include substantial renovation of the museum's existing facility. The 40,000-squarefoot addition will include gallery space, studios, offices, restaurants and retail, a reference library, and two theaters. Libeskind's plan shifts the ROM's main entrance from Queen's Park, Toronto's grand ceremonial

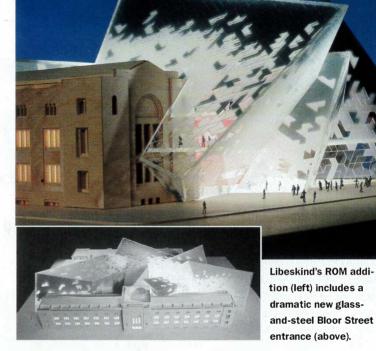
> thoroughfare, to Bloor Street, a bustling commercial avenue.

Libeskind won the competition against two finalists, Architetto Andrea Bruno of Turin, Italy, and Bing Thom

Architects of Vancouver. The ROM initially invited 12 architectural firms to submit formal proposals for the museum's expansion, including Jean Nouvel, Cesar Pelli and Associates with Adamson

Associates Architects, Foster and

Partners, Kohn Pedersen Fox and Associates, Michael Hopkins and Partners, Polshek Partnership, Rafael Viñoly Architects, Skidmore, Owings & Merrill, and Tod William Billie Tsien and Associates. Andrew Blum







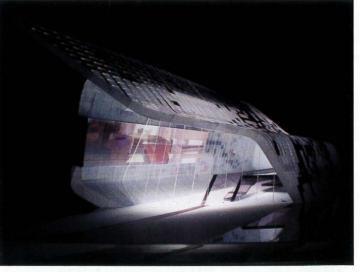
Entries by Bing Thom (left) and Andrea Bruno (right).

Hadid designs temporary Tokyo Guggenheim

The Guggenheim Museum, which is expanding worldwide but is uncertain about its planned lower Manhattan museum by Frank Gehry, has commissioned Zaha Hadid Architects to design a temporary Tokyo museum.

Hadid's design for a 1.250square-foot gallery on Odasiba Island is a large, single space wrapped in a snakeskinlike enclosure clad in ceramic tiles. Photovoltaic cells, light boxes, and a large media screen are embedded in the exterior. The building is planned as a 10-year contemporary art museum. Hadid was one of three architects, including Jean Nouvel and Shigeru Ban, considered by the Guggenheim for the job.

The Guggenheim has announced that it will develop a facility in Rio de Janeiro. But the fate of the lower Manhattan museum. which was going to rise on the East River shore, is unclear. Early last year, the city pledged to fund about 10 percent of the museum cost, but no announcement has been made in the aftermath of September 11. John E. Czarnecki, Assoc. AIA



Hadid's Tokyo Guggenheim is a room wrapped in a snakeskinlike enclosure.

Record News

OFF THE RECORD

Structural engineer Leslie E. Robertson, P.E., will receive the first Henry C. Turner Prize for innovation in construction technology in a ceremony at the National Building Museum on May 6. The prize, which includes \$25,000 cash, is named after the founder of the Turner Construction Company,

Frank Gehry, FAIA, may be close to getting his first major project in his hometown of Toronto. Gehry has been in discussions with the Art Gallery of Ontario regarding a \$170 million expansion for the downtown museum.

Preservationists in Chicago are in an uproar that the city has issued a demolition permit for the building that once housed the Chicago Mercantile Exchange. The 17-story 1927 building is slated to be torn down after tenants vacate this month. In 1996, the building was listed by the Chicago planning department as historically significant, but it was not granted official landmark status

Harry Wolf, FAIA, and his Malibu, California-based firm Wolf Architecture will design a new federal courthouse in Mobile, Alabama. The \$70 million building is part of the GSA's Design Excellence program.

Robert A.M. Stern Architects is designing a 36-story office tower, called Torre Almirante, in Rio de Janeiro for American developer Hines, to be completed in 2004. Stern was also selected as design architect for a new \$100 million federal courthouse in Richmond that is scheduled to open in 2007.

Lord Norman Foster has won an international competition for a waterfront arts and entertainment complex in Hong Kong that will include theaters, concert halls, an art museum, cinemas, shops, and restaurants. The development will be built on 100 acres of reclaimed land.

Chong on the AIA's national conversation

At the American Institute of Architects (AIA) Grassroots Leadership Conference, AIA leaders initiated what they called a "national conversation" about a wide range of issues relevant to architects today. AIA President

Gordon H. Chong, FAIA, President-elect Thom Penney, FAIA, and Norman Koonce, FAIA, EVP/CEO of the AIA, introduced the conversation's broad themes in a video discussion (the video is available

to all AIA components). They then asked component leaders to have a dialogue about the issues at the local level before the AIA Convention in May. Some of the topics are: "How do we accommodate the rapid pace of change?"; "How do we build collaboration across the building industry?"; and "How do we begin to frame our role in creating livable communities?" RECORD news editor John Czarnecki spoke with Chong about his intentions for the national conversation.

ARCHITECTURAL RECORD: How was the vision for the national conversation initiated?

CHONG: The national conversation is the latest in a continuum of efforts to engage AIA members in thinking about the future of the profession. This is not a stand-alone effort: The AIA began analyzing trends affecting the future of the profession in 1994 with an initiative called The Redefinition of the Profession. RECORD: In general terms, what do you hope to accomplish through this conversation and member feedback? CHONG: The primary goal is to encourage members to simply engage in a dialogue about the future. The process of engagement is almost more important than

finding "the single right answer." RECORD: How do you believe this conversation will impact the institute and the profession in the next year? Or in the next 10 years?

CHONG: The short-term issues may receive responses in 2003, while the responses on the more complex issues of the future will direct the additional types of research and information needed by the academy (education) and practice. We have already been increasingly sharing, collaborating, and integrat-

> ing our efforts with the collateral organizations. **RECORD:** The conversation topics are rather wide-ranging and allencompassing, from documents to livable communities to expanded services. Why? Are there

any topics that deserve greater focus? **CHONG:** Diverse practice settings are of increasing complexity, with no limit to the number of issues that we can and need to address. However, it is not anticipated that the national component of the AIA will address all of them. Some are better addressed at the local level, and others in collaboration with collaterals and other industry partners. We hope to undertake "pilot projects" as a methodology of testing change, experiential learning, and risk taking. Perhaps more important than identifying areas deserving greater focus is seeing integration of opportunities.

RECORD: Can you point to an example of how the changing role and responsibility of the architect is impacting how the AIA operates? **CHONG:** The AIA's leadership in developing the content of contract documents is critical to building the confidence and trust of our clients and contractors through clarity of expectations. By increasing client and public confidence as "trusted advisors," the architects who have broad skills as trusted advisors will be called upon for input to enhancing the livability of our cities.

RECORD: One of the topics is "How do we develop a culture of sharing?" Why should a culture of sharing be a topic

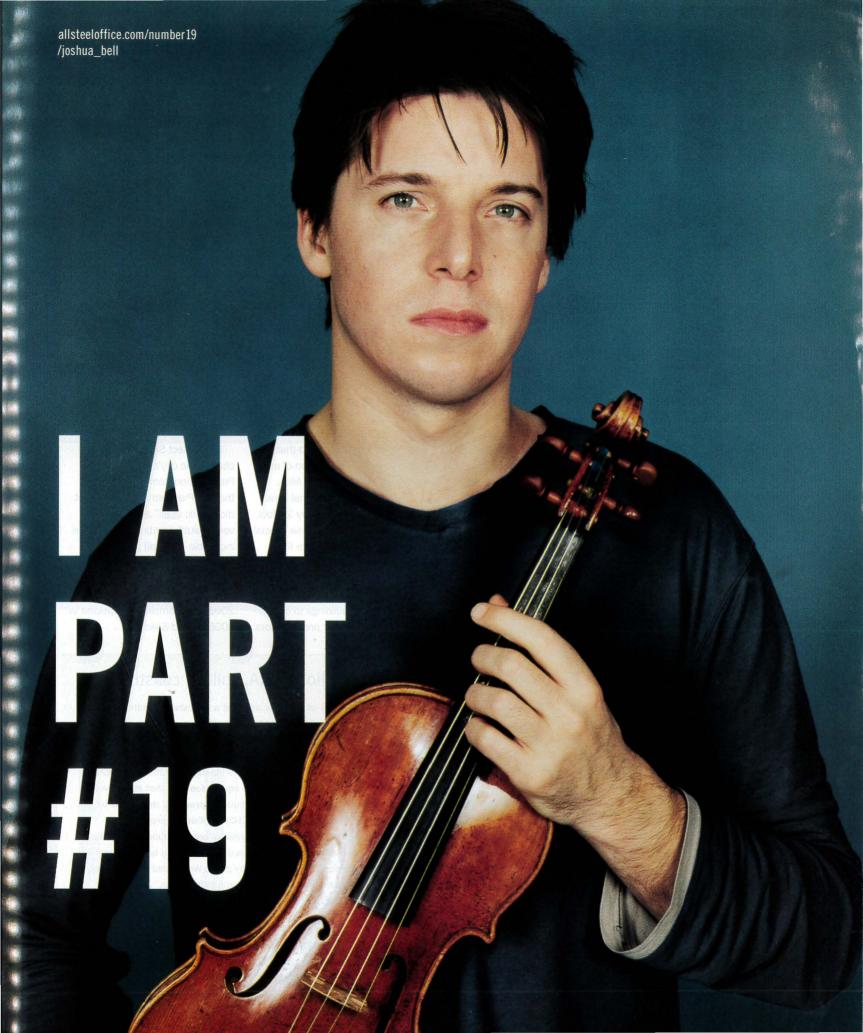
of concern for architects today? CHONG: The need to develop a knowledge-based profession is one of the AIA's three primary AIM implementation strategies. The AIA board is discussing an approach to defining a "knowledge agenda" that includes three concurrent efforts: 1) a member-derived, practicebased sharing of "best practices"; 2) a more rigorous, applied-research program that we have launched on issues that serve a greater societal concern; 3) the aggregation of "practice-based" (as opposed to design-based) information that can

RECORD: Once the information is gathered, how will the AIA proceed

CHONG: We intentionally identified many discussion issues without prioritizing or prejudging whether or not these were the most important issues. The member perspectives will shape the focus for programs in 2003 and beyond.

AIA reports to be on healthy ground

Norman Koonce, FAIA, **EVP/CEO** of the American Institute of Architects (AIA), told the chapter leaders gathered for the AIA Grassroots **Leadership Conference on** March 1 that the institute's financial health was steadily on a positive track. The AIA's actual 2001 net income of \$2.85 million nearly doubled the amount that was budgeted-\$1.446 million. Treasurer Douglas L. Steidl, FAIA, noted that the AIA will now plan to achieve total net assets of \$2.5 million in 2002, one year ahead of schedule. "It's been a tough track for the past two years, and will be in 2002," Steidl said. "We're now optimistic about the future." In addition, the AIA now reports approximately 72,000 members, the most in the organization's history. J.E.C.



Record News

OFF THE RECORD

Rafael Viñoly has been commissioned for the Howard Hughes Medical Institute's biotechnology research center in Loudon County, Virginia. The \$500 million, 750,000-square-foot complex will likely open in 2005.

The Modern Art Museum of Fort Worth building by Tadao Ando will open to the public on December 14.

Skidmore, Owings & Merrill has been hired to design a new U.S. Patent and Trademark Office in Washington, D.C. Scheduled for completion in June 2005, the project consists of five office buildings totaling 2.6 million square feet, two parking garages totaling 1.3 million square feet, and two townhouse and office buildings.

The Royal Australian Institute of Architects (RAIA) has selected Brit Andresen as the recipient of its 2002 Gold Medal. Andresen is the first woman to win the award. No woman has ever won the AIA Gold Medal.

A shortlist has been announced for a new \$85 million central library for Birmingham, England: Edward Culligan Architects, Future Systems, Michael Hopkins and Partners, Richard Rogers Partnership, Wilkinson Eyre Architects, Moshe Safdie and Associates, and Snøhetta. A winner will be named in April, and the library is expected to open in 2007.

Denver-based Fentress Bradburn Architects has won a competition to design the \$80 million National Museum of the Marine Corps in Quantico, Virginia.

Southern California architects

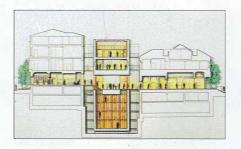
Lawrence Scarpa, AIA, and Angela

Brook, AIA, of Pugh + Scarpa have
cofounded a new nonprofit, affordablehousing development organization,
Livable Places. They've received nearly
\$1 million in grants from Fannie Mae,
banks, and foundations.

Piano's Morgan addition approved

New York City's Landmarks
Preservation Commission approved
a \$75 million expansion to the
Morgan Library by Renzo Piano
Building Workshop with the New
York firm Beyer Blinder Belle. The
Morgan expansion will add more
than 69,000 square feet to the
museum and research center. Its
campus, located on Madison
Avenue between 36th and 37th
Streets, now comprises the original
1906 library designed by Charles
McKim for John Pierpont Morgan, its
annex, and the Morgan House.

A majority of the expansion will occur out of sight: An auditorium and storage space will be located in a four-story vault carved into the bedrock beneath the site. Above grade, three glass-and-steel pavil-





The Renzo Piano addition will be inserted between existing Morgan Library buildings (above) with four undergound floors for storage (below).

ions will be interspersed among the existing buildings. A new entrance pavilion, with reading room and gallery, will move the Morgan Library's public face from 36th Street to Madison Avenue. It will open to an inner courtyard that necessitates the demolition of an atrium by Voorsanger and Mills.

Between the original library and annex, a 20-by-20-foot steel cube will house special exhibitions. Another four-story structure will replace a small office building.

The excavation allows the new buildings to correspond to their predecessors' scale. Morgan director Charles
Pierce says, "We wanted the architectural solution to be modern in
approach, but to fit in and integrate
itself as best as possible with the
three existing buildings."

Architect Sherida Paulsen, chair of the city's Landmarks Preservation Commission, adds that the Piano structures "are not monolithic at all" and "provide a very beautiful setting for the three incredible [original] jewels."

Pending approval from the city's Board of Standards and Appeals, construction will begin in 2003, with completion expected in 2005. *David Sokol*

Green building plan to affect \$1.2 billion in L.A. college construction

The Los Angeles Community College District (LACCD) board of trustees adopted a sustainable building plan in early March to incorporate energy-saving and environmentally friendly features into its new structures. A year ago, Los Angeles voters approved the \$1.2 billion Proposition A bond measure that will fund new construction and renovation at each of the nine campuses of LACCD, the largest community college district in the country, with more than 120,000 students enrolled annually. Some 50 to 60 new LACCD buildings are planned over the next decade.

Under the sustainable building plan, new structures with more than 7,500 square feet and that are more than 50 percent funded by Proposition A would be required to incorporate green building practices advocated by the U.S. Green Building Council's Leadership in Energy & Environmental Design (LEED) certification program.

LACCD's board of trustees worked with the local community and environmental organizations like the Sierra Club and Global Green as they developed their plan. "Given the size and complexity of [LACCD's] building program, we felt we needed to adopt a well-defined process for meeting our sustainability goals. We wanted to be both environmentally protective and fiscally responsible," LACCD chancellor Mark Drummond told RECORD.

Implementing LEED-certified standards for its new buildings will add an estimated \$3 to \$5 million in construction costs for each of the nine campuses. Some of these costs will be offset by rebates, incentives, and long-term savings due to conservation of energy and water. Construction management firm DMJMH+N is overseeing LACCD's construction program. The colleges are now engaged in planning and design work. Leo A. Daly, Gensler, and Sasaki Associates are among eight firms developing master plans for the district. Deborah Snoonian, P.E.



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Record News

SPECIAL REPORT

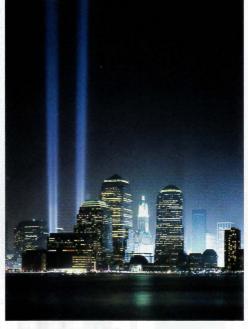
New York remembers with two temporary memorials

As discussions are taking place regarding an appropriate permanent memorial to the World Trade Center disaster, two temporary memorials to the event were unveiled on March 11.

The 1971 Fritz Koenig sculpture *The Sphere*, which originally stood in the World Trade Center plaza, was recycled as a memorial sculpture and unveiled in Battery Bark. The 15-foot-tall, 45,000-pound steel and bronze sculpture sustained a gash in its center on September 11 but remained structurally intact [March 2002, page 28]. Koenig had created the sculpture as a monument to peace through world trade.

At dusk on March 11, the Tribute in Light memorial, composed essentially of two parallel beams, was projected into the sky (to continue for the next 32 nights) from a site a few blocks north of Ground Zero. To be implemented, the beams required a total of 88 fixtures, 44 for each. Lit from dusk until 11 P.M., the tribute was conceived by a creative team including John Bennett, Gustavo Bonevardi, Richard Nash Gould, Julian Laverdiere, Paul Marantz, and Paul Myoda. The Municipal Art Society of New York helped to organize the memorial, with artistic support from Creative Time.

Financial support for the Tribute in Light was provided by General Electric, Deutsche Bank, and AOL/Time Warner, and Con Edison was a contributing sponsor.



The blue beams of Tribute in Light shine just north of Ground Zero (bright glow in right of photo).

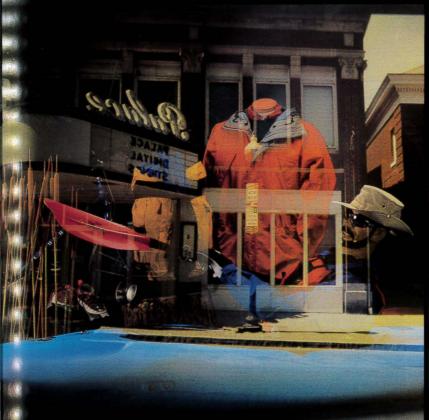
At its Grassroots Leadership Conference, the American Institute of Architects (AIA) honored the New York chapter's response to the terrorist attack. AIA New York, under the leadership of president-elect George Miller, FAIA, past president Margaret Helfand, FAIA, president Leevi Kiil, AIA, and executive director Rick Bell, FAIA, has been instrumental in organizing the region's design

community to respond to the September 11 disaster. The chapter has also cosponsored the World Trade Memorial Fund with the New York Building Congress. AIA president Gordon H. Chong, FAIA, presented the chapter leadership a citation that read, in part, "Out of the ashes of a great tragedy, they have given voice to the hopes and concerns of all of us and brought together the energy and vision of the design professions and community leaders to honor the memory of those struck down, by fostering bold and still unfolding acts of creativity." J.E.C.



The Sphere was dedicated March 11 as a memorial in Battery Park.

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Record News

SPECIAL REPORT

Planning moves quickly on 7 WTC and other components

Sources close to the planning for 7 World Trade Center and the remainder of the World Trade Center site told RECORD at press time in late March that plans were moving forward with 7 WTC, and construction may begin in June. General planning for the remainder of the WTC site may be made public by April.

As RECORD has previously reported

[February 2002, page 28], developer Larry Silverstein has selected Skidmore, Owings & Merrill (SOM), with David Childs, FAIA, as design principal, to design a new 7 WTC, which would be built in the same location as the previous 7 WTC and include a new Con Edison substation. Sources reveal that plans for 7 WTC call for a 1.6 million-square-foot building about 700 feet tall. The previous 7 WTC, which was destroyed on September 11, had 1.9 million square feet and was 615 feet tall. The smaller

square footage is a result of allowing Greenwich Street to continue south of Barclay to Vesey Street. (The previous 7 WTC blocked Greenwich Street from the rest of the WTC site.) The size also reflects the maximum number of elevators, which is about 30, that can be placed in the building's floor plate while allowing room for Con Edison substation machinery. The 7 WTC lobby will sit at ground level facing the new block of Greenwich Street on the east side of the building.

Sources report that John C. Whitehead, chair of the Lower Manhattan Development Corporation (LMDC), is eager to begin construction of 7 WTC in order to activate the Con Edison substation. Once the structure for the building is in place, the Con Edison machines, weighing about 250,000 pounds each, can be installed on the ground floor of the north and south sides of 7 WTC. The Con Edison substation's power output will be necessary for the demands of summer heat and to service the upcoming construction in the area.

SOM is advising developer Larry Silverstein for the entire WTC site, but architects have not been named for the rest of the development. Alexander Garvin, appointed in February as the vice president of planning, design, and development for the LMDC, has since worked closely with Silverstein and SOM. Garvin is a member of the city planning commission, an adjunct professor of



Looking north at Ground Zero, toward the site of 7 WTC, on March 7.

urban planning and management at Yale University, and the planning director for NYC2012, the nonprofit group coordinated to bring the Olympics to New York in 2012. Two of Garvin's former Yale students work for him with LMDC: Andrew Winters, a 1994 graduate of the Yale School of Architecture, is director of design and development; Christopher Glaisek, a 1996 graduate, is director of planning.

Marilyn Jordan Taylor, FAIA, chair of SOM, and urban designer Ken Greenberg of Toronto are leading a team that will develop a comprehensive plan by summer for the East River waterfront of lower Manhattan. The study, although outside the WTC site, will suggest connections to the new development at that location. *J.E.C.*

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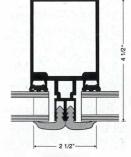
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Record News

County executive wants to replace his Paul Rudolph building

The county executive of Orange County, New York, has raised the ire of architects and preservationists by proposing to tear down Paul Rudolph's Orange County Government Center in Goshen, New York, a sleepy town of 5,676 about 25 miles north of the New Jersey border.

The Brutalist building, completed in 1971, is considered, an important example of Rudolph's (1918–97) civic design. Noted for its intermingled and daringly varied spaces, the Orange County building was constructed with exposed reinforced concrete and brick.

In his March 7 State of the County address, newly elected Orange County executive Edward Diana announced that he wants to

replace the Rudolph building with a new 50,000-to 60,000-square-foot building. A final decision on the building's future will be made in a few months, he says. "If you asked the people in this village, they would say you couldn't tear it down fast enough," Diana told RECORD.

Diana contends Rudolph's design not only is contextually inappropriate (the town is dominated by brick buildings and small farmhouses) but also aesthetically unpleasing, too difficult to maintain, and lacking space efficiency. He claims the cost to

heat, air-condition, and renovate it would be \$12 to \$15 million over the next two to three years.

Many architects and preservationists, however, contend that the building must be saved. "Gothic Cathedrals are a bit drafty. It doesn't mean we tear them down," says Robert A.M. Stern, FAIA,



The Orange County Government Center by Paul Rudolph.

dean of the Yale School of Architecture, which is in one of Rudolph's seminal buildings. "Something by one of the 20th century's more important architects should be kept in principle."

"Paul Rudolph has always been an architect who generated a great deal of passion from both sides: Either you love him or you hate him," says Scott Heyl, president of the Preservation League of New York. The league will consider the building's case, although most landmarked buildings are at least 50 years old. Sam Lubell

Army Corps chief resigns after five months

After openly disagreeing with the Bush administration's proposed budget cuts for his department, Michael Parker, the civilian head of the Army Corps of Engineers, was forced to resign on March 6, only five months after being appointed. Parker's resignation brings to a head a perennial debate about the future of the Corps, which is often criticized for wasting money and harming the environment

Parker asked for a 40 percent increase in the Corps funding, but President Bush's budget proposed a 10 percent decrease. A former House member from Mississippi, Parker was a vocal proponent of such traditional Corps activities as flood control, port dredging, and beach replenishment. He was also opposed to wetlands rules. Scott Faber of Environmental Defense told *The Washington Post* that the resignation "is one of the best things that's happened for the environment since God separated the heavens from the earth."

The Army Corps of Engineers is administered by the Pentagon but employs more than 30,000 civilians. The Corps has a long history of disagreements with presidents, but



Michael Parker

it has enjoyed very strong support from Congress because its construction projects spread billions of dollars among local economies. The Corps also has an impact on private construction projects, most importantly through rules regarding whether wetlands can be drained or filled to make them suitable for construction.

The day before Parker resigned, senators Robert C. Smith (R-N.H.), John McCain (R-Ariz.), and Russell Feingold (D-Wis.) introduced a bill to reform the Corps. A March 18 New York Times editorial called for wide reforms for the Corps in general. Kevin Lerner

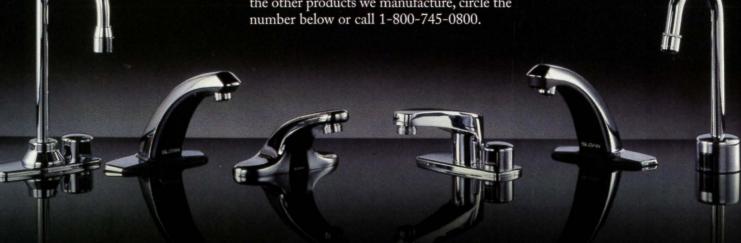
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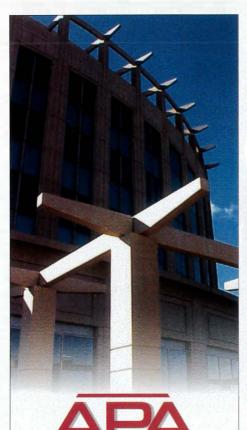
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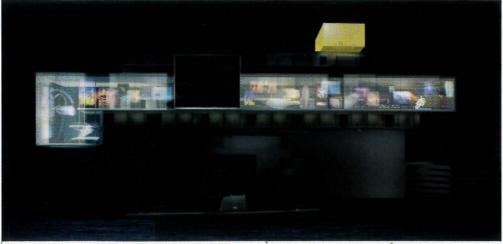
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Record News



Nouvel selected for Carnegie Science Center in Pittsburgh

After a lengthy and sometimes contentious competition, the Carnegie Science Center in Pittsburgh announced in mid-March that Jean Nouvel was selected to design its \$90 million addition. The 160,000-square-foot expansion to a 12-year-old building by Tasso Katselas Associates will cantilever 80 feet over the Ohio River near the confluence with the Allegheny and Monongahela rivers. The Nouvel building will be part of a development that will include a 3.5-acre water park on the science center's 13-acre site.

The Carnegie Science Center invited five architects to compete for the commission in fall 2000: Nouvel, Ben van Berkel and Caroline Bos of UN Studio, Daniel Libeskind, Peter Eisenman, and Bernard Tschumi, After the architects submitted their design proposals [January 2001. page 32], Nouvel, UN Studio, and Libeskind were given additional time and funding for revisions. Because they did not receive notification of either the ad hoc second round nor of their elimination. Tschumi and Eisenman withdrew in protest [March 2001, page 30]. The remaining three architects underwent a lengthy review process.

Once selected. Nouvel and the science center were in extended contract negotiations.

Construction will likely begin in 2003 on the Nouvel building, which is a composition of rectilinear trays in steel and glass stacked on top of the existing building. The cantilevered volume will allow dramatic river views, and transparent and translucent walls may have images of technology projected onto them. The riverside cantilevered volume is similar to Nouvel's 2000 design for a hotel in Brooklyn, which would have cantilevered over the East River near the Brooklyn Bridge. The hotel will not be built, but, "In Pittsburgh," Nouvel says, "I can prove it is a good idea."

Carnegie Science Center director Seddon Bennington calls the Nouvel addition "an innovative and far-sighted investment." He cautions. though, that the design will evolve. The facility is expected to open in 2008.

This will be Nouvel's second major U.S. commission. His design was unveiled in February for the Guthrie Theater in Minneapolis [March 2002, page 24], which will also feature cantilevered volumes. Charles Rosenblum and J.E.C.

Nouvel's design (shown at night above) includes a dra-









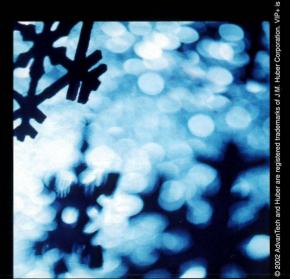
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Record News

Ranalli inspired by Wright for center

The New York City Housing Authority has built or plans to build 80 new community centers. One of the most distinctive, and the only one that may be mistaken for a Frank Lloyd Wright design, will be the \$2.9 million Saratoga Community Center in Bedford-Stuyvesant, Brooklyn, by New York architect George Ranalli.

The new building, to be completed in June 2003, adds 3,500 square feet to the 16-story Saratoga Village residential tower. Ranalli's design recalls Wright in its broad, horizontal masonry volumes, massing, geometric detailing, and flow of spaces. Currently the dean of the City College of the City University of New York School of Architecture and Environmental Studies, Ranalli did his master's thesis at Harvard on Wright.

"The design of the building is a reevaluation of the idea of public construction seen as durable, strong, and permanent," Ranalli notes in his design statement about the community center. He expressed that permanence in materials such as brick on the exterior and mahogany doors and windows.

The steel roof structure (above)



is exposed to the interior and is supported by paired steel columns. Inside, the community center will include a main multipurpose room, game room, reading room, offices, and kitchen. Ranalli is also renovating the existing 1,500-square-foot community center space in the residential tower to connect to the new building.

A large outdoor terrace will include an 18-by-19-foot concrete slab for viewing movies outdoors in warm weather. The terrace will be a social space for a variety of outdoor programmed activities sponsored by city agencies.

The community center building boom has included some notable completed projects, including the \$5.9 million Melrose Community Center in the Bronx [March 2001, page 130] by Agrest & Gandelsonas and Wank Adams Slavin Associates. *J.E.C.*



The Saratoga Community Center by George Ranalli was inspired by Frank Lloyd Wright in its horizontal masonry volumes, massing, and geometric detailing.

right in its horizontal masonly volumes, massing, and geometric



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PHOTOGRAPHY: COURTESY CESAR PELLI (TOP); ◎ AKER/ZVONKOVIC PHOTOGRAPHY, KMCA MODEL BUILDERS/PACF (BOTTOM)

With a tight budget, construction begins on Pelli's Miami performing arts center Cesar Pelli, FAIA, describes his design

for the Performing Arts Center of Greater Miami as an ambitious project that could vault Miami to the top of the national arts scene. In terms of scale, it is already being compared to Lincoln Center in New York.

Record News

Construction began last fall on the \$334 million, 450,000-squarefoot performing arts center by Cesar Pelli & Associates, Located on Biscavne Boulevard between Northeast 13th and 14th streets, the center will open in fall 2004 with two separate theater buildings: a 2,480-seat ballet and opera theater and a 2.200-seat orchestra hall. The complex will be clad in white granite and glazing, reflective during the daylight hours.

Between the two buildings there will be an oval-shape, 57,000square-foot outdoor Plaza for the Arts. Sheltering colonnades and cascading garden terraces will surround the plaza, whose floor pattern is based on West and North African and Caribbean designs.

"I wanted the complex to look fresh, strong, exciting, welcoming,

and very well suited to the climate and the light of Miami," says Pelli. "The forms that we have conceived for the exterior are forms that are going to be very beautiful against the dark blue skies of Miami."

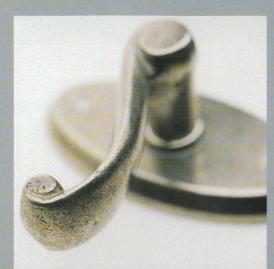
The Miami-Dade County Commission set a hard-line budget for the two-hall structure, and the county had negotiated with the contractors for months to lower their bid before allowing construction to begin. Contractors were forced to trim \$24 million from their original bid to get to a \$255 million construction budget. Pelli said the design lost some "niceties" through the process. It could have been worse. The Miami Herald reported that contractors suggested last summer an exterior of precast concrete panels rather than stone in order to build on a tight budget. Luckily, that compromise was not necessary.

Pelli remains optimistic about the arts center impact: "Downtown Miami has the potential of becoming a great cultural, commercial center." Jennifer LeClaire and J.E.C.

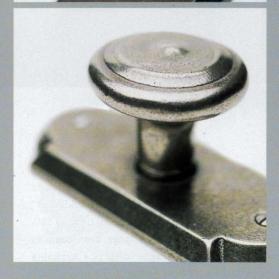


The Performing Arts **Center of Greater Miami** (foreground in right photo) will include the Sanford and Dolores **Ziff Ballet Opera House** (above and furthest right in right photo).









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Installation on forlorn Intel structure prompts viewers to "take time"

When the economy began to slow down more than a year ago, so did the fortunes of Intel, the world's largest chip maker. In March 2001, Intel unexpectedly shut down construction on its \$124 million, 10-story downtown Austin, Texas, research and design center, designed by Graeber Simmons & Cowan, when the building's concrete structure was only six stories tall.



The microprocessor giant suspended the project and fenced off the structure, hoping construction might resume when the downturn reverses.

Until recently, the abandoned structure has been an eyesore in Austin. Intel has been working with a group of four University of Texas students to camouflage the unfinished building with an art installation, titled Take Time, comprising more than 100, 4-footsquare, mesh-fabric panels affixed to the upper floors of the structure. The panels, being added over the course of three months, will ultimately depict Austin cityscapes and landscapes accompanied by messages such as "take time to breathe" and "let time fall into



The fabric panels, with images and text printed on them through a digital process, are affixed to a cable system (below) on the concrete Intel structure in downtown Austin.

place." Going up in stages since February, the installation will all be in place by the end of April, and it will stay up indefinitely.

The installation is intended to prompt the thousands of Austin commuters who pass the structure daily to ponder developments taking place around them. "We wanted to look at it as a positive opportunity for Austin to reflect on itself as a city and on the nature of change," says Daniel Olsen, a University of Texas associate professor supervising the design team composed of four stu-

dents in the second year of the communication-design program: Carolyn Moore, Katie Phillips, Ian Searcy, and Ryan Thompson. Intel has budgeted \$30,000 for materials and scholarships as compensation.

"This is a temporary fix," Intel spokesman Fred Shannon says. "We had committed to the city of Austin to do something about the building in its current state." While Shannon stresses Intel's desire to complete construction, the company has also received offers from prospective buyers. Stephen Sharpe



News Briefs

Graves gets playful in
Minneapolis Michael Graves,
FAIA, unveiled his design in March
for the expansion and renovation of

for the expansion and renovation of the Children's Theater Company (CTC) in Minneapolis. The whimsical \$24 million building will be an



Graves's lively CTC addition geometry.

expansion to a 1972 white brick building by Kenzo Tange and will include a 288-seat theater and classroom and rehearsal space. The CTC, awaiting \$12 million in bonding funds requested from the state, hopes to start construction in order to open the facility in 2004.

Judge strikes down High Line destruction plan A New York state judge struck down a plan to tear down the High Line [February 2001, page 34] on Manhattan's West Side. Justice Diane S. Lebedeff of the State Supreme Court of Manhattan ruled on March 12 that the plan approved in the final days of the Giuliani administration violated city law by circumventing public review. Activists have organized to save the High Line elevated rail line and convert it into an esplanade. Nearby property owners who hope to demolish the High Line will appeal the decision.

New museum for African-American history in Baltimore RTKL, in a joint venture with The Freelon Group, has designed a new Maryland Museum of African American History and Culture, to be located at the corner of Pratt and President streets in Baltimore. Funded by the state of Maryland, the \$19 million, 80,000-



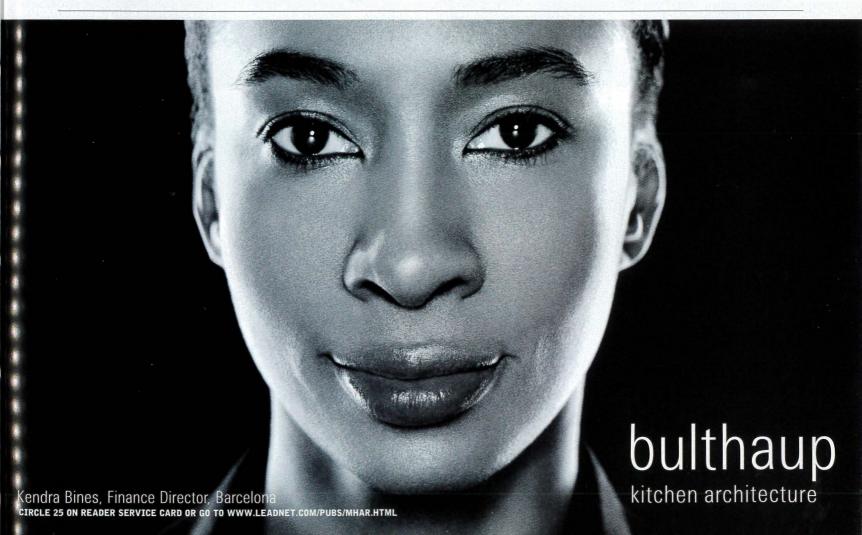
African-American history museum in Baltimore.

square-foot building will have five floors for exhibition areas, interactive learning areas, and a 200-seat auditorium. A red "intervention wall," intended as a metaphor for the multitude of life issues that African-Americans have confronted in Maryland, faces a central atrium. The museum, which will be the second largest African-American museum in the country, will open in late 2003 or early 2004.

Major addition for Chicago's Union Station The Chicago Landmarks Commission has approved plans by Amtrak and the Chicago-based developer Prime Group Realty Trust to build a mixed-

use redevelopment of Union Station. The commission also granted Union Station official landmark designation. The addition, designed by Chicago architect Lucien Lagrange, would more than double space in Union Station and add a 26-story tower. Daniel

Burnham, the original architect of Union Station, had planned for a tower to be built after the station was originally completed in 1925. The new building, which could be completed by 2004, would contain 150 condominium units and 480,000 square feet of office space, while the existing building would be renovated to include a Hilton-operated hotel and conference center.







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Dates & Events

New & Upcoming Exhibitions

Gaudí Experiences: Space, Geometry, Structure, and Construction Barcelona, Spain

March 20-September 27, 2002

Throughout his lifetime, Gaudí's feats of structural ingenuity and seemingly impossible design never ceased to amaze the public. In a tribute to his work, this exhibition unveils the mystery behind Gaudí's construction by exploring the exceptional methods of calculation used by the architect. At the Museu d'Historia de la Ciutat. Visit www.gaudi2002.bcn.es for more information.

Ten Shades Of Green Houston

March 22-April 21, 2002

Ten Shades of Green seeks to illuminate the different environmental issues involved in architecture and design. The 10 shades refers to 10 projects that have been selected as remarkable examples of sustainability. Among them are Foster & Partners' Commerzbank and Renzo Piano's Beyeler Foundation Museum. Sponsored by the Architectural League. At the University of Houston. Contact 212/753-1722.

The Geometry of Seeing: Perspective and the Dawn of Virtual Space Los Angeles

April 16-July 7, 2002

Through illustrated treatises, drawings, and prints, this exhibition traces the complex yet fascinating history of perspective drawing over a period of four centuries. On display is an extraordinary range of theories and rendering techniques, including the work of Leon Battista Alberti, Albrecht Dürer, and Sebastiano Serlio. At the Getty Center. Contact 310/440-7360.

Moebius Band Sculpture San Francisco

April 7-May 5, 2002

This band sculpture, by German artist Valeska Peschke, invites visitors to walk on an "impossible" surface. It is a 20-foot-long interactive experience with a seemingly two-sided, ribbonlike form that is actually one surface. This event is included with the price of admission to the museum. At the Exploratorium. Contact 415/561-0357.

Houses X Artists=Design Without Rules West Hollywood, Calif.

May 10-June 25, 2002

Commencing this six-month exhibition is the first phase of *Houses by Artists*. The Mak Center in collaboration with architecture firm OpenOffice has invited 10 contemporary artists to stretch their imaginations and each design a house free of the typical restraints imposed on architects by professional practice. Their proposals will be presented in model and digital form as they evolve in three phases over the next six months. At the Mak Center. Contact 323/651-1510.

Ongoing Exhibitions

Renewing, Rebuilding, Remembering New York City

Through April 12, 2002

A photographic exhibition investigating cities that have been rebuilt in the wake of man-made and natural disasters. Photographs, renderings, and models will illustrate a diverse response to traumatic events and their dynamic impact on urban life. Among the cities on display are Berlin, Lebanon, Oklahoma City, and Manchester, England. At the Van Alen Institute. Contact 212/924-7000.

Museums for a New Millennium Fort Worth

Through April 14, 2002

Finally making its United States debut, this international traveling exhibition presents the designs of 25 world-renowned museum buildings through architectural drawings, photographs, and original models. Featured projects include works by Norman Foster, Zaha Hadid, Daniel Libeskind, and Santiago Calatrava. At the Modern Art Museum of Fort Worth. Contact 817/335-9215.

Isamu Noguchi: Sculptural Design Weil am Rhein, Germany

Through April 21, 2002

Bridging the gap between fine and applied arts, this exhibition features the astounding artistic versatility of sculptor Isamu Noguchi, whose work extends into the fields of architecture and design. On view are more than 80 projects—sculptural works, furniture, stage sets, and public design. At the Vitra Design Museum. Contact 49 7621 702 3351.



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Dates & Events

Cesar Pelli: Connections Washington, D.C.

Through April 28, 2002
One of the most comprehensive retrospectives on the life and work of distinguished architect and AIA Gold Medalist Cesar Pelli. Through photographs, photo murals, more than 100 drawings, and 30 originals models, the show will explore over a half century of his career, culminating with his most recent work. At the National Building Museum. Call 202/272-2448 for more information.

Architecture Flirts with Art: UN Studio/Matrix 146

Through April 28, 2002
One of the first museum exhibitions devoted to the innovative architectural designs of the Amsterdam-based UN Studio. The show's blend of digital and physical representation will feature some of the firm's most notable work, including the Erasmus Bridge and Mobius House, in a fashion that mirrors the firm's imaginative approach to digital technology and architectural design. At the Wadsworth Atheneum Museum of Art. Call 860/278-2670 for more information.

Mathematica San Francisco

Through May 5, 2002
This Eames-designed exhibition from 1961 showcases mathematics as both a science and a tool for

art. Forty years later, it remains the only Eames exhibition still in existence. Other Eames designs on display include toys, home electronics, and lesser-known furniture. At the Exploratorium. Contact 415/563-7337 or visit www.exploratorium.edu.

WTC: Monument New York City

Through May 5, 2002
As a tribute to the Twin Towers, this exhibition provides an in-depth exploration of the buildings' conception, design, and construction, beginning in the 1960s. It includes a 7-foot-tall architectural model of the towers by WTC architect Minoru Yamasaki, and a film commissioned by the Port Authority. At The Skyscraper Museum. Call 212/968-1916 for more information.

The Way of the Tea New York City

Through May 9, 2002
In this exhibition, architects, designers, and artists explore the enduring influence of the tea ceremony upon contemporary art, architecture, and industrial design throughout Asia. Featured designers include architect Masayuki Kurokawa, graphic designer Kan Akita, and interior designer Takashi Sugimoto. At the Japan Society. For more information, call 212/832-1155.

Mood River Columbus, Ohio

Through May 26, 2002
Explore the forms, materials, and textures of contemporary design through a close look at the objects and icons that define our everyday reality. This exhibition features more than a thousand products and designs from the worlds of fashion, sports, and technology, representing such designers as Philippe Starck, Frank Gehry, and Issey Miyake. The show is accompanied by a series of lectures, discussions, and walking tours. At the Wexner Center. Contact 614/292-3535.

Mies in America Chicago

Through May 26, 2002
An exhibition of work from the late career of the German architect
Ludwig Mies van der Rohe, after he arrived in America in 1938. The
Seagram Building in New York and the Farnsworth House in Illinois are among the show's highlights. At the Chicago Museum of Contemporary Art. Contact 312/280-2660.

US Design, 1975–2000 Denver

Through May 26, 2002
Through a choice selection of drawings and designs, this exhibition celebrates the work of American designers in the last quarter of the 20th century. Included in the show—extending to architecture, industrial design, and beyond—are such designers as Robert Venturi, Maya Lin, and Steven Holl. At the

Denver Art Museum. Call 720/865-5000 for more information.

Utopia & Reality: ModernIty in Sweden 1900–1960 New York City

Through June 16, 2002
This timely exhibition surveys
Swedish art and culture from the
first half of the century, when youth,
progress, and innovation became
vehicles for understanding the
advent of Modernism and the rapidly changing world that followed. A
full range of artistic expression will
be covered, from architectural
drawings and models to painting,
sculpture, graphic design, and photography. At the Bard Graduate
Center. Contact 212/501-3000.

The Alliance of Art and Industry: Toledo Designs for a Modern America Toledo

Through June 16, 2002
In the 1930s, Toledo was a hotbed for cutting-edge industrial design.
Now, almost a century later, it is celebrating its past with this exhibition at the Toledo Museum of Art.
Among the 180 products included are cars, scooters, appliances, furniture, gadgets, and even a life-size model of the wildly modern "Kitchen of Tomorrow," presented in 1942. For more information, call 800/644-6862.

Alsop at the Soane London

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Dates & Events

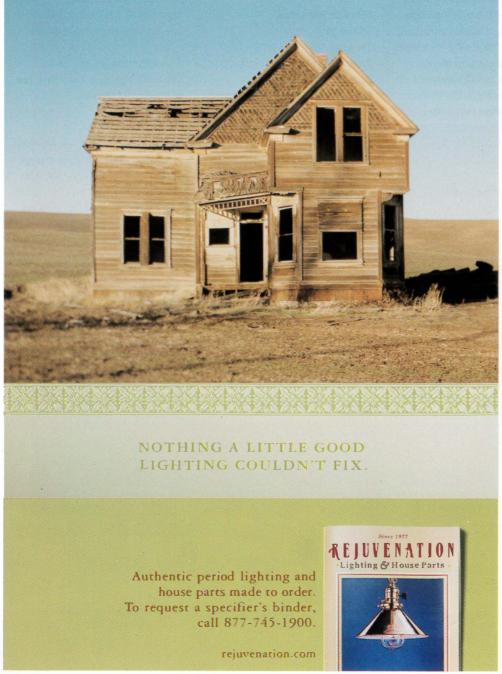
practice, this exhibition is the third in a series linking the work of celebrated contemporary world architects with the tenets and themes that are reflected in the unique collection of architectural ephemera, sculpture, and painting in the Sir John Soane's Museum. The show includes models, film projections, and a selection from concept sketchbooks. At the Sir John Soane's Museum. For further information about the exhibition, contact William Palin at will.palin.soane3@ukgateway.net.

Lectures, Symposia & Conferences

The Eames Design Legacy: Eames Demetrios San Francisco

April 24, 2002

Eames Demetrios, currently principal of Eames Office, will speak on various topics related to design, sustainability, and the connection between the physical world and cyberspace. The talk will take place at the Exploratorium. Contact 415/561-0363.



Kennedy & Violich: Material Misuse New York City

April 25, 2002

The two architects will present recent projects and discuss the work of MAT^X—an exploratory new materials research unit at Kennedy & Violich Architecture that investigates preformative materials. Hosted by the Architectural League of New York. At The Scholastic Auditorium. Contact 212/753-1722.

International Quingue Symposium Newport, R.I.

June 27-30, 2002

This four-day symposium brings together architects, artisans, and scholars to examine key issues in historic preservation practices. It will feature the work of local preservationists and institutions. At the Salve Regina University. Call 401/341-2156 for more information.

Universal versus Individual: The Architecture of the 1960s Jyväskylä, Finland

August 30-September 1, 2002

This conference will explore the architecture of the 1960s inside and out by illuminating universal currents as well as individual and regional trends. Keynote speakers include Beatriz Colomina, Claes Caldenby, and Dennis Doorman. Sponsored and organized by the Alvar Aalto Academy. Visit www.alvaraalto.fi/conferences/universal for more information.

Conventions

Society of Environmental Graphic Design 2002 Annual Conference & Expo Denver

May 31-June 1, 2002

Join fellow architects and designers in this year's SEDG conference, entitled "Trailblazing: Crossing Frontiers." Lectures, workshops, and discussions led by the industry's leaders will cover a broad range of topics including marketing, communication arts, exhibition design, and virtual reality. Also, view special exhibits and demonstrations at the accompanying trade show. At the SEGD conference center. Visit www.segd.org/events.html for more information.

XXI World Congress of Architecture Berlin

July 22-26, 2002

The Union Internationale des Architectes invites architects and students from around the world to discuss responsibilities and strategies for environmental and sustainable design within an urban context. At The International Congress



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Dates & Events

Centre Berlin. Contact 49 30 90 12 13 14.

Competitions

Bus Shelter Competition Bloomington, Ind.

Deadline: April 19, 2002

The Bloomington Community Arts Commission, in conjunction with Bloomington Transit, invites proposals for three new public bus shelters to be installed along a major thoroughfare that will be improved as part of a citywide transportation project in 2002. For information, contact BloomingtonArt@aol.com or call 812/336-0564.

2002 Business Week/ Architectural Record Awards

Deadline: April 19, 2002

This annual award program recognizes distinguished collaboration between client/architect teams who use design to achieve progressive goals. Entrants may submit projects completed anywhere in the world since January 1, 1999. Sponsored by the American Institute of Architects. Contact 888/242-4240.

Defining an Architecture for the 21st Century

Deadline: April 27, 2002

The Union Internationale des Architectes launches its first annual international urban-design ideas competition. Students and practitioners are invited to revitalize Berlin's inner city through proposals that set a standard and direction for future development. Winning projects will be exhibited at the 21st World Congress of Architecture 2002, on the theme of "Resource Architecture," in Berlin. Visit www.uia.com for more information.

Pilkington Glasshouse Competition

Deadline: May 31, 2002

Entrants are asked to design a house for the 21st century, exploring the architectural potential of glass. The winning schemes will demonstrate a creative approach to the use of glass as part of an overall design. It is left to the entrant to determine the exact requirements of the space in terms of the number and age of persons to be accommodated, number and size of rooms, accessibility, and related matters. Visit www.pilkington.com/glasshouse for more information.

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Institute for Architecture and the Humanities Competition

Deadline: June 17, 2002

This is not a design competition. Rather, it is a competition for making judgments about design. Students are invited to revisit already completed work and write their own assessment of the strengths and weaknesses of the project. Open to students in undergraduate and graduate programs. First prize is \$1,000. Call 312/733-7230 for more information

The Great Egyptian Museum Competition

Deadline: August 10, 2002

An open invitation to architects from around the world to participate in the creative design of this new museum. Located near the Giza pyramids, the museum will house some of Egypt's most ancient monuments and treasures. For more information, visit www.gem.gov.eg.

Events & Programs

Summer Program in Classicism New York City

June 15-July 29, 2002

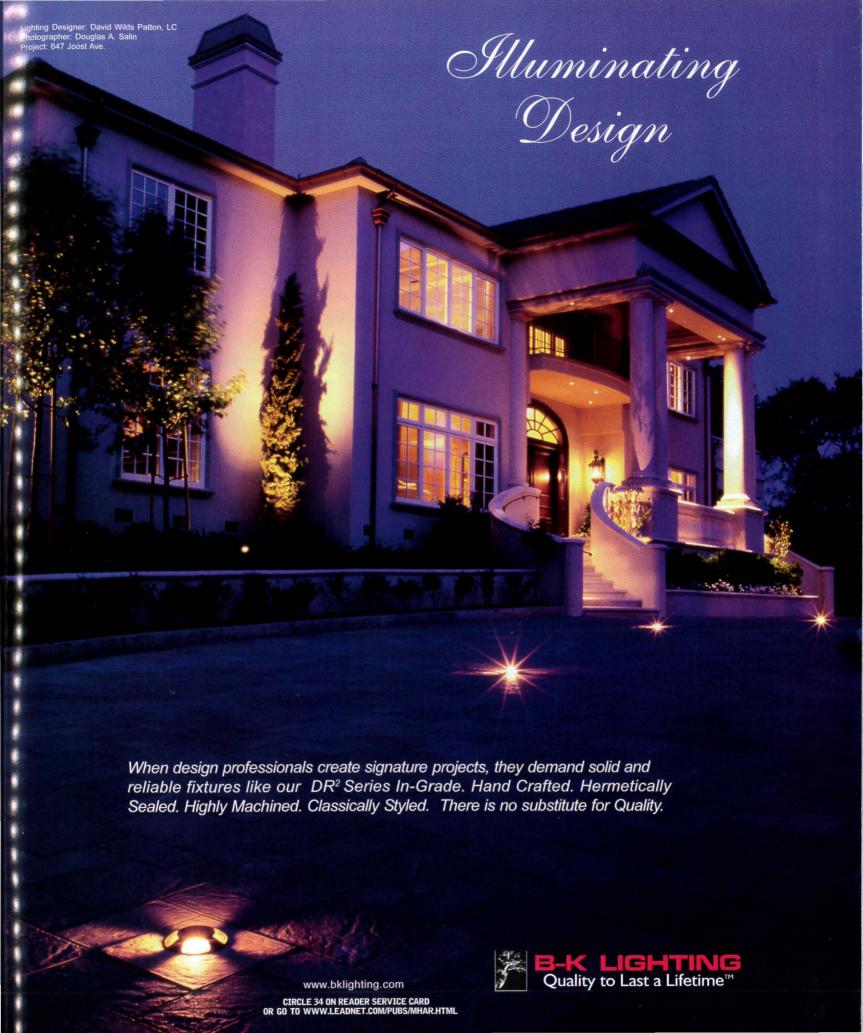
Spend six weeks in New York City discovering the elegance of Classical architecture and principles of traditional urbanism. Students will have the opportunity to study with leading practitioners and work directly with a design studio community on real New York City projects. Deadline for application is April 15. Contact The Institute of Classical Architecture at 917/237-1208 for more information.

Eco-ARCHitecture San José, Costa Rica

July 9-30, 2002

The faculty of Architecture and Urbanism of Universidad del Diseño invites students and practitioners to participate in a three-week studio exploring the biophysical and sociocultural conditions of design in a tropical climate. Application deadline is April 30, 2002. For more information, visit www.unidis.ac.ar.

E-mail events and competitions to ingrid_whitehead@mcgraw-hill.com. Please send notices of events and competitions two months prior to the event or deadline.





Vancouver is transformed into a city of glass

Correspondent's File

By Sheri Olson, AIA

A bumper crop of shimmering glass residential towers—an astounding 150 built in the past decade—is transforming Vancouver's skyline. At a time when North American cities struggle to entice people back downtown, Vancouver's success draws delegations of city officials, developers, and urban designers from the U.S. to study aggressive planning policies that emphasize guidelines and incentives over hard regulations. Two huge developments, Pacific Place and Coal Harbour, are models for a unique manifestation of new urbanism: denser, taller, and without the historical pastiche.

"It's happening faster than anyone predicted," says codirector of city planning Larry Beasley. Since the 1980s, the central area's population grew by 35,000 to its current 75,000 and is expected to reach 100,000 by 2015.

Twenty years ago, growth was stalled by a lack of zoned residential properties in the constrained central city: Vancouver is on a 3-mile-long peninsula with 1,000-acre Stanley Park at its tip. The turning point came with the 1986 World Exposition, when the provincial government purchased rail yards on the north shore of False Creek for the fairgrounds. Not only did Expo open up prime waterfront when its 177-acre site was rezoned from industrial to housing, it was also the impetus for renewed civic pride. "The world discovered Vancouver at Expo, and it made us look around and realize how spectacular our natural

Sheri Olson, AIA, is RECORD's Seattlebased contributing editor.

setting is," says architect Gregory Henriquez. Expo also marked the beginning of an unprecedented flow of wealth and immigrants into the city due to jitters about Hong Kong's transfer to China. Vancouver's rebirth is not just a product of rezoning and the market, but the result of a comprehensive strategy honed by extensive post-Expo public meetings and summarized in the 1991 Central Area Plan. The plan is highly discretionary; developers must earn the right to develop by providing public amenities. "The major difference between Canada and the U.S. is that we consider it a privilege, not a right, to develop," says Beasley.

Rising on the old Expo grounds is Pacific Place, Vancouver's largest urban project and a poster child for its planning policies. Under construction since 1995, the \$2 billion development will eventually house 18,000 people in 47 towers and town houses grouped in distinct neighborhoods. In exchange, the developer, Concorde Pacific Group, will donate 113 acres for public parks, marinas, and an elementary school. Concorde Pacific also was required to complete a portion of the 9-mile-long seawall promenade that wraps the city. Visiting U.S. developers balk at the amenities requirement until they hear that the city's demands are balanced by an analysis of a project's program. "We know the public value but don't intrude on basic profit and risk," says Beasley.

Offshore immigration kickstarted the demand for high-density housing, but it is not enough to sustain it. Decisions made in the 1960s to build public transit, not freeways, stymies the flow of private cars from the suburbs, making congestion a motivating factor for living downtown. The city took more specific measures to attract families by requiring that 25 percent of all units be designed



Pacific Place's Roundhouse Co-op, by Neale Staniszkis Doll Adams Architects.

with children in mind. Guidelines call for larger units, often in ground-floor town houses, with outdoor play areas visually accessible from indoors. One indication that the strategy is working is that Pacific Place's new waterfront elementary school is under construction three years ahead of schedule.

City policies insist on a mix of income levels to battle the twin evils of gentrification and ghettoization. "The large condo market and a lack of rental housing makes it difficult for the working poor," says Ehman. New developments must set aside 20 percent of units for nonmarket public housing, with 5 percent of that for the "hard-to-house." Pacific Place's largest social housing project, the

Roundhouse Co-op (named after the 1889 engine turntable that remains from the old rail yards) integrates market and nonmarket units in a brick-and-glass design by Neale Staniszkis Doll Adams Architects to blend with the surrounding development.

The city realized that public consensus was key in achieving a housing vision of this scale and devel-



Residences on Georgia, by James Cheng.

oped a cooperative planning process to build it. Issues and concerns are raised early in ongoing consultations between neighborhoods and the developer. Politicians make policy while developers are approved by appointed officials and ratified by a peer panel, depoliticizing the process and allowing an emphasis on urban

Correspondent's File

design. "The design process is so strict and the city's expectations are so high that developers realize they have to hire architects capable of working with the city to obtain approval," says Ehman.

Local conditions are fertile ground for a building type now associated with Vancouver: a slender tower on a medium-rise base of town houses with a private interior garden. These distinct glass towers—dubbed "see-throughs" by locals—are the result of the premium placed on views of the water and mountains. "Views are like hard cash," says Beasley. City policies limit floor plates, keeping buildings slim to protect view corridors. Canadian building codes, unlike those of the U.S., permit scissor stairs that allow a small central core. Less conservative seismic codes decrease exterior shear walls and free up the facade for more glass. Canadian manufacturers work-

ing with Vancouver architects developed an economical preglazed window-wall system that gives the city its trademark transparency.

"As a young city, Vancouver has always welcomed modern architecture," says architect James Cheng, the designer of 17 high-rises, with another three under construction. His sleek glass Residences on Georgia won a 1998 Governor General's Award for its exemplary response to the city's urban design guidelines, but he regards Vancouver's changes with a critical eye. "It's an instant city; we're compressing 50 years of building into 10. The question is how do we put variety and diversity into something when we don't have time on our side?" says Cheng.

Vancouver's other major housing development under construction is on old rail yards along Coal Harbour on the north edge of downtown. Unlike Pacific Place, which was developed by one company, this site has different developers and urban design strategies. Marathon Developments, a branch of the Canadian Pacific Railroad, is building 2,200 condos in 18 towers. The city faced pressure to dedicate the site, with its expansive view of Burrard Inlet and Grouse Mountain, as a major public space. The challenge for Civitas, urban designers for the 41-acre site, was to place towers on the south edge of the long, narrow site without casting shadows on the linear park on the north. The focal point of the park is the Coal Harbour Community Center by Henriquez Architects. It manages a public presence under its lid of grass designed so that it obstructs neither park nor views.

Where the Marathon Development is hard up against the downtown core and continues the urban street wall, Bayshore, as the gateway to Stanley Park, takes a towers-in-the-park approach to the 23-acre site. "The difference between

the two projects—the new urbanist versus Corbusian—shows the flexibility of city policies: It's not bythe-books new urbanism," says Ehman, whose firm is designing one of the project's 10 towers. With a master plan by Milkovich/Erickson for the Tokyo-based Aoki Corporation, the \$300 million Bayshore development will house 1,800 people in 980 condos that terrace back from the water.

The last waterfront site, 50 acres along Southeast False Creek, is potential housing for athletes for the 2010 Olympics before it is developed as a residential community, with limited commercial and light industrial space, for 8,100 people. "The city's objective is to make it a model sustainable urban community," says urban designer Joseph Hruda of Civitas. With another three new neighborhoods being planned for an additional 16,000 people downtown, a Sunday afternoon of dim sum followed by a walk on the seawall and a sales presentation at a condominium development may become a Vancouver tradition.





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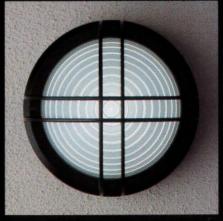
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FOR THE EMERGING ARCHITECT

Sometimes, small projects can get their designers big notice. Lisa Iwamoto and Craig Scott obviously have big designs in their back pocket, ready to pull out for the right client. But in the meantime, they're happy to build a single room. archrecord2 also presents a project from a Florida intern who built a nifty toolshed in his backyard, attracting the interest of his boss, who was at the intern's house for a party. Which just shows that size doesn't always matter.

DESIGN

IS.Ar Iwamoto Scott Architecture

For Craig Scott and Lisa Iwamoto, professional collaboration came second, but their careers still come first. A couple for almost 15 years, the pair have only been working together for five or six years, traveling independently back and forth



across the continent for primarily professional reasons. They met in Berkeley, and both worked with RoTo Architects there. Then

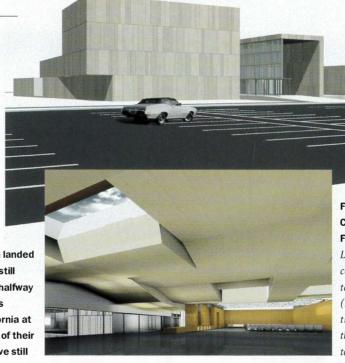
they each ended up at the Harvard Graduate School of Design, but in different years. After graduation, both landed in Ann Arbor, Michigan, where they taught—and Scott still teaches—at the University of Michigan. Now, they are halfway through one last move, back to California (Iwamoto has already gone and is teaching at the University of California at Berkeley), which they both consider home. In fact, one of their current projects is their own house. Somehow, they have still

found time in all of this moving to design buildings as well as innovative and original furniture.

IS.Ar Iwamoto Scott Architecture's commissions come from all over—friends of friends, competitions. One even came from a someone who posted a note on a bulletin board.

"Unfortunately, a lot of people come to the school, thinking they can get architecture for cheap or free," Scott said. "But some of them pan out. We have a church client right now, a pretty sizable addition, who approached the school."

Iwamoto and Scott not only designed and built one of their early projects, a faculty resource room at the University of Michigan, but they raised the money for the project themselves. The low budget required the pair to use particleboard and medium-density board for the walls, but they spent more money on the surfaces that people would actually touch, which is a testament to the thought that this young firm puts into the details of their projects.



Flemington Jewish Community Center Competition, Flemington, N.J., 2001

L/IS Levit Iwamoto Scott. With a colleague, Robert Levit, the architects addressed the dual nature (secular and religious) of a traditional synagogue by separating the functions but drawing them together with repeated patterns.

Faculty Resource Room, Ann Arbor, Mich., 1999

IS.Ar Iwamoto Scott Architecture. The architects, who were both teaching at the University of Michigan, converted a little-used, windowless concrete-block room into an inviting and crowded faculty room, with space for computers and slide making. They raised the money themselves.



DEPARTMENT

architecturalrecord.com/archrecord2

(continued from previous page) Typical of their more recent work is the Fog House, a private residence designed to make the most of a Marin County, California, hilltop location. Unlike the existing house on the lot, which is half-buried into the hill, this project is perched on a ridge to take better advantage of 270-degree views sweeping out toward San Francisco Bay and the surrounding hills. Iwamoto and Scott want to use the project to combine earth-shaping landscape architecture with a glass box. The house even provides a path for the fog that sweeps in from the bay to float under and through the building itself. In an early concept meeting, the client asked for a design that was "like living on a single floor of a high-rise."

"That obviously piqued our interest," Scott said.

The project has been on hold for a time, while the client has concentrated on other projects, but Scott and Iwamoto hope to use their impending move to California to rekindle his interest in the house.

"Part of the idea of moving out to California is to be able to pursue practice even more actively," Iwamoto said. "Because at Michigan, we were both teaching every day. It's quite difficult for both of us to be full-time teachers and to have a practice." One suspects, given their output in the past, that they would have found a way to sustain that practice anyway. Kevin Lerner Go to architecturalrecord.com/archrecord2 for more projects from IS.Ar Iwamoto Scott Architecture, and to learn how to submit your own work.



IS.Ar Iwamoto Scott Architecture. Perched on a hilltop outside San Francisco, the planned house would incorporate not only its surrounding landscape, but the weather, too.

LIVE

On the Side

Alain Valdes's toolshed

Necessity, as they say, is the mother of invention. So it wasn't stifled creativity or a love of working with his hands that spurred Alain Valdes. an intern architect at Gould Evans Affiliates in Tampa, to create this



structure in his backyard. It was a much simpler motive. "I live in a bungalow, which has basically no storage space," Valdes says, "so I didn't have a place to put my tools or my lawn mower."

Valdes, 30, completed the academic work for his M.Arch. at the University of Florida in 2000. He worked for a year at another Tampa firm, Alfonso Architects, before joining Gould Evans.

Despite this training, Valdes, like many architects, really only had design experience. That paid off, though, since he went through about 20 different designs, filling an entire notebook, before he decided on the final look of the shed. Even so, his practical experience was limited. "I'd never built anything in my life,"

Valdes says, "so it was a pretty good learning experience."

Not only for him, but for his father, too, who, without any building experience, was Valdes's only help in constructing the shed. Still, the assistance was welcome—as Valdes says, "the weight of materials is something of a shocker."

The shed is about 4 feet by 16 feet, since it was originally designed to be sheathed in standard-size plywood sheets. This length also shields Valdes's backyard from an adjacent alley. The final facade is made of rough-sawn cypress. Valdes has since completed a deck and has plans for a new kitchen. "But that's a way off," he says. Kevin Lerner For more "On the Side" stories, visit LIVE at

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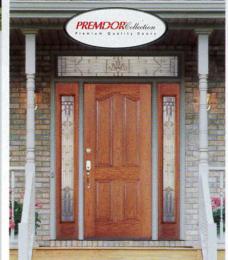


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It takes more than square feet to make a successful public park or civic place

Critique

By Robert Campbell, FAIA

Does anyone out there know what "public open space" is? I hear the term all the time, but I have absolutely no idea what it means. Technically, I suppose an asphalt street is a public open space. So is an Olmsted park. Can we really think about the quality of life by using such an abstract term?

People talk about public open space as if it were a statistic, rather than a human experience. In my hometown of Cambridge, Massachusetts, I've heard it said at public meetings many dozens of times that Cambridge falls short of a national standard for open space per capita. Nobody has ever identified where this national standard comes from, or who decided on it, or whether it is supposed to apply equally to dense cities like Cambridge and spaced-out suburbs. Nobody has defined what is meant by open space. Usually, it's just assumed to be grass and trees. Recently, a senior city planner said to me that you could never have too much open space in Boston. I pointed out that if that were true, we would welcome the complete disappearance of the city and its replacement by farmland.

Good open space is of several kinds, which often overlap in one place. There's parade space for formal display or celebration, like Lincoln Center. There's green space for relief from the city, like Central Park. And there's community space for a mix of commercial and cultural

Contributing editor Robert Campbell, FAIA, is the architecture critic of The Boston Globe.

activities-for the business of living—like the Piazza Navona or the Campo dei Fiori in Rome. (There's also ad-hoc space that simply gets appropriated for public use when it's needed, like Times Square after a triumph by the hated Yankees.)

We don't do any of these very well, as a rule. Maybe it's because we think about open space in such a statistical, numerological way. A recent visit to Europe was a bracing shock. Compared to us, the Europeans—in this case, the Dutch and French—are more inventive. more thoughtful, and much more generous in creating open space.

Getting wet

Case in point: Rotterdam. The Shouwburgplein ("theatersquare") is a plaza in the middle of downtown. There's a lot to see, but probably the first thing you notice is a row of light fixtures. They look like bright red Luxo lamps, except that they're maybe 30 feet tall. Like real Luxos, these lamps move. They're controlled by computer. Kids sit at consoles at the edge of the park and make the lamps move—pointing one down, perhaps, to cast light on a strolling couple. Not far from the lamps, there is a fountain—although you can't see that it's a fountain. It looks like simple paving until jets of water shoot up in unpredictable patterns. Kids race through on their bikes, the goal being not to get wet-or maybe it is to get wet. Grown-ups play chicken with the water, putting out a toe and pulling it back. If you walk through the plaza, you may notice that a hidden camera is projecting your moving image on the white facade of a building that occupies a corner of the plaza. The building, appropriately enough, is a multiscreen cinema. You've just become part of the show.

Even the plaza floor is full of interest. It's an abstract collage: green rubber, black rubber, wood, gray-green slate. In some places the paving is an open metal grille

successful. It's everything that feeds it. There's that cinema in the middle. Across a street stands the city's major concert hall. On another side is a performance building for dance, opera, and theater, with a restaurant overlooking the plaza. In all directions, there is housing. People live next to the Shouwburgplein. (Nobody lives next to City Hall Plaza. Or Rockefeller Center, for that



In Paris, an old viaduct now houses shops at street level (above) and a linear park above (right).

through which you can look down and see moving water. There aren't a lot of trees because there is a parking garage hidden under the plaza. But the trees are planted where they count, making a thick green edge behind the red Luxos.

I can't help comparing all this ingenuity to the trackless brick tundra that is City Hall Plaza, Boston's nearest approach to a paved civic space. But it isn't only good design that makes the Shouwburgplein

matter.) Nobody thought of the Shouwburgplein as a mere statistic, as providing some required percentage of "open space." Instead, the designers—West 8 (Adrian Geuze)—invented something that works in every way.

Case two: Paris. The Viaduc des Arts is a formerly abandoned, decaying 19th-century railroad viaduct that has been converted by

Critique

architect Patrick Berger into a 21stcentury combination of shops and parkland. The shops are tucked into the brick-faced arches that supported the old viaduct. Many of the shops display the work of craftspeople in metal, glass, or wood because the neighborhood traditionally was home to artisans. The shopfronts, in glass and steel, are tensely detailed bowstring arches, very much in the language of today. There's parking tucked almost invisibly underground.

A linear park with life

The shops beneath the viaduct, though, are less than half the story. The rest lies upstairs, on top of the arches. This is the Promenade Plantée. Three miles of the old trackbed have been converted into a linear park, with a level of invention (and maintenance) that would be incredible here. In places, the park spreads out into playing fields

and strolling parkland, or into paved courtyards, or, in one case, into a cavelike hideaway. In other places, it narrows to a tight file atop the arches, edged by shrubs and trees of many varieties. In still another place, it shears its way through a building, splitting it in half. The designers have had fun with the drama of this linear park that insinuates itself through Paris like thread through a needle. (Philippe Mathieu and Jacques Vergely did the landscape.) Just as important, they've salted the length of the Promenade Plantée with new housing on both sides. (The same is true of other new parks in Paris, such as the Parc de Bercy and the Parc Citroën, both also on recovered industrial sites). People need parks, of course. Parks also need people. In Paris, both halves of the equation are alive.

Incidentally, New York now has a similar opportunity. The so-called

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High Line viaduct, in Manhattan's west teens and 20s. is an analogous rail relic, and its fans have contacted the Viaduc des Arts designers. A New York version would be very different but equally exciting.

What are the lessons here? Start with the client: In both cases, it was the city itself, with sufficient clout and money to do a good job. Americans are more inclined to spend their money on their private home entertainment centers than on the public spaces we all share. And in Paris as in Rotterdam, there's the lesson of comprehensive planning. Parkland and the activities that fuel it-shopping, culture, commerce, housing, parking—are thought of as inextricably intertwined. Each piece lives off the others. In Paris, another lesson is that if you want to make a city interesting, save what you can. A good city is a mix of memory and invention. The new and the old comment on each other. The character of the old Paris neighborhood, despite changes, is recalled by the artisan

shops. And an old piece of infrastructure, instead of being demolished, is transformed by new uses. The city becomes a temporal collage, the collage of new wine in an old bottle. Both new and old are made more intense by the contact.

There are good recent parks in this country, too. But too often we ignore the lessons of Europe. Parks must be part of a larger design strategy, and they must be inventive—as inventive as Olmsted was in his day-unpredictable, even risktaking. Sometimes I think we tend to focus too much on our Olmsted heritage. Olmsted's wonderful parks brought a piece of the countryside into cities in which the inhabitants were largely trapped. But within a few years, trolley lines and then automobiles offered most city residents access to the real countryside. (The original train at Viaduc des Arts was just such an excursion line, taking weekenders to the Bois de Vincennes.) In the city parks of this century, there's room for fresh, surprising ideas. ■



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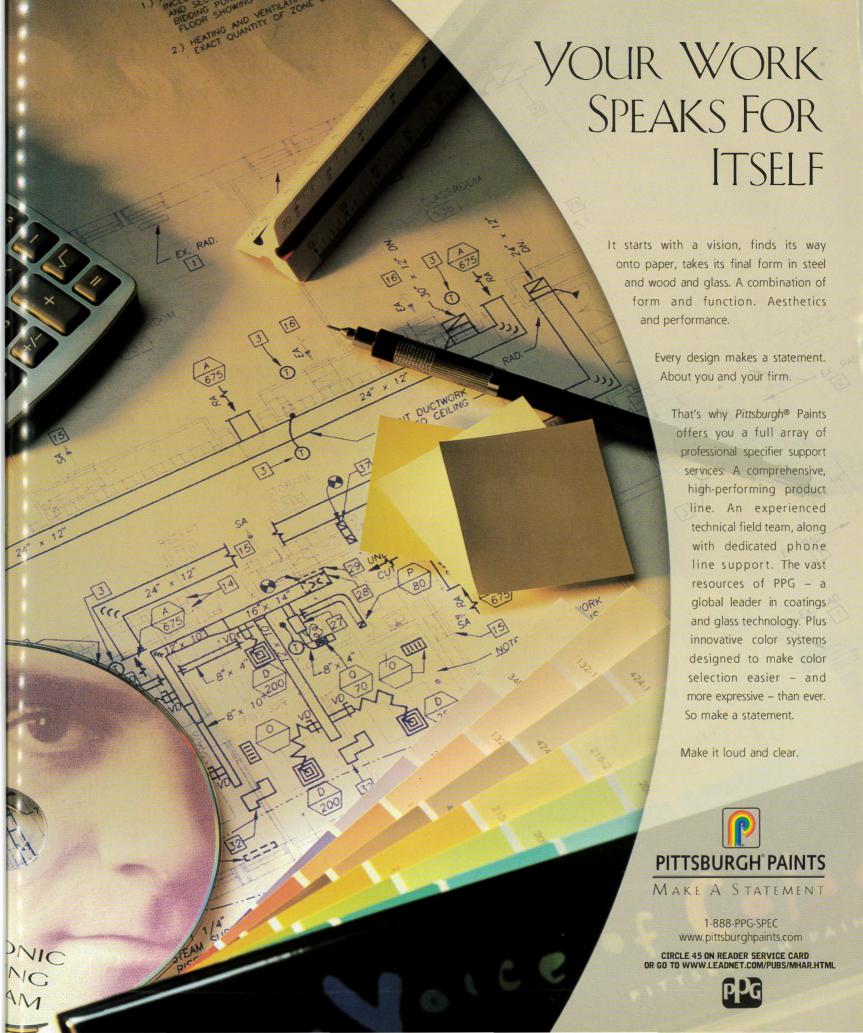
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New Canaan: Modernist outpost under siege

Commentary

By John Morris Dixon, FAIA

People who are paying \$1 million or more for residential properties want more than 1,800-square-foot houses with 5-by-8-foot bathrooms. That's the crux of the threat faced by the remarkable aggregation of midcentury Modern houses in New Canaan, Connecticut.

Built when "functionalism" was still a mantra, these houses were intentionally spartan. Usually only one-story high, with interiors pared to essentials, they focused attentionthrough wall-to-wall glazing, patios, and terraces—on their typically wooded surroundings.

The strong market for "starter mansions" in this affluent community has conspired with the town's zoning regulations to put would-be restorers of these houses at a severe disadvantage. Allowable house sizes here are based on ground coverage—including covered outdoor areas measured to the "drip line" of overhangs. The majority of these Modern houses can be replaced as of right by taller structures that can have two to three times their interior floor areas. Conversely, if an owner wants to preserve one of the New Canaan Moderns and increase its living area by adding a complementary wing, ground coverage limits will in many cases be exceeded. Zoning based on the total usable floor area, as in several nearby towns, would make preservation of many more houses legally and economically justifiable.

John Morris Dixon, FAIA, is the former editor in chief of Progressive Architecture.

A nearly picture-perfect New England town, with white churches around its central green, New Canaan became a locus of Modern design almost by accident. Eliot Noyes, fresh out of Harvard's Graduate School of Design and working as director of the Industrial Design Department at the Museum of Modern Art, bought a site here for his own first house, completed in considered too challenging

1947. His rocky, wooded land, for conventional houses, was relatively inexpensive. He was soon followed by fellow **GSD** graduates Philip Johnson-who completed his famous Glass House in 1949—John Johansen, and Landis Gores, and their teacher at Harvard, Marcel Breuer. Dubbed the "Harvard Five," they lived and practiced for varying periods in New Canaan. (Noyes maintained a flourishing practice there till his death in 1977, and Johnson is still living there at 96.)

The five were responsible for 30 houses in the town, and architects who passed through their offices completed some 70 more before local demand for them petered out in the late 1960s. In the heyday of the movement, recalls John Black Lee, designer of eight local examples, both architects and owners hoped to transform people's lives, not just their tastes. "We were all involved in something experimental for the good of the world."

The houses generally hewed to the International Style, interpreted

mainly in wood and fieldstone, with extensive glass. Roofs were variously flat or gently pitched. Many were assertively asymmetrical, often responding to slopes, with living areas in partially exposed lower floors. But some displayed the symmetry adopted by many in the 1950s, following the lead of Mies and Johnson.

The exceptional number of Modern houses in New Canaan,

Modern design. And, as in the 1940s, some consider these houses eyesores, disrupting the prevalent traditional New England imagery. At least a dozen of the town's

Modern houses have been demolished in recent years, including two by Johansen and two by Noyes. Meanwhile, two landmarks by Johnson (the Wiley and Boissonnas houses of 1956) have been carefully





Houses such as Eliot Noyes's, built in 1947 (left), and the 1956 house by John Black Lee, recently remodeled by Toshiko Mori (right), were built on rocky, wooded land that was considered too challenging for conventional houses.

which had only about 8,000 people in 1950 (about 17,000 now), was widely recognized in the press. But the reputation of New Canaan as a hotbed of Modernism is a sobering indication of the minimal impact the movement had on house design; the Modern efforts never accounted for even five percent of the town's houses.

Starting in 1949, there were numerous Modern-house benefit tours that drew visitors from a wide area, but these ended in the mid-1960s, when owners became leery of crowds and publicity. Today, most New Canaan residents are unaware that the town was ever known for its

restored by enthusiastic owners. A 1956 house by John Black Lee has recently been subtly remodeled by architect Toshiko Mori, who has installed insulating glass (which almost all these houses need), increased the height of its raised central roof area, replaced rotting wood porch columns with stainless steel, and stained weathered walls dark. Lee admires these improvements.

Other architects have proposed ways to expand: Peter Gluck has designed an underground extension, exposed on the downslope side, which would leave another Lee house virtually untouched; Kaehler

Commentary

& Moore have designed a harmonious second floor for a Noyes house that will appear to float above an 18-inch clerestory.

In 2000, the New York/
Tri-State Chapter of DOCOMOMO
(Documentation and Conservation of Buildings, Site, and Neighborhoods of the Modern Movement) organized a tour of several New Canaan houses. In collaboration with the New Canaan Historical Society (which sponsored a 2001 tour), DOCOMOMO has since launched a survey of the houses, with dozens of volunteers adding to the historical record on the subject.

Janet Lindstrom, director of the Historical Society and occupant of a 1962 Modern house designed by her husband, architect Gary Lindstrom, cites the potential of historic easements that can be established through The Society for the Preservation of New England Antiquities, the Connecticut Trust for Historic Preservation, or—just recently—the National Trust. For a fee, these organizations research the property and draw up legal agreements, which they then monitor. Because of the initial documentation and the monitoring, these easements are more effective preservation guarantees than deed restrictions, which can sometimes be ignored.

Local real estate agent Alice
Jennings, who lives in a 1958
Modern by John Black Lee, explains
the current economic bind. She may
find potential buyers able to pay
\$500,000 to \$800,000 for houses
that probably need renovation, but
too often the land alone is worth
over \$1,000,000 to buyers intending
to demolish and build anew. What's
more, speculative developers are
attuned to the local market, ready to
pounce the instant a property comes
up for sale. Some owners have held

out for buyers who mean to preserve their houses, but Jennings estimates that only a handful of the town's owners are willing to accept (or impose on their heirs) the financial penalty that comes with deed restrictions or historic easements. The ideal preservation-minded buyers, she says, are people without children, most likely from Manhattan, who can afford to put more than \$1 million into buying and rehabbing a relatively small architectural jewel.

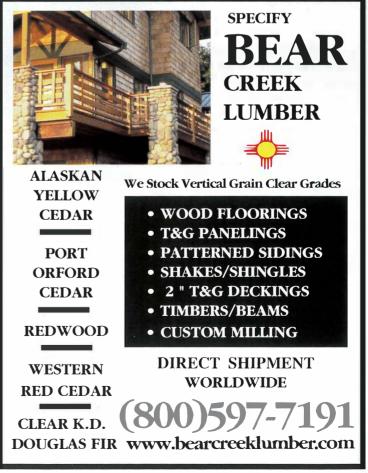
The town's first selectman (chief elected official), Richard Bond, expresses resistance to any landmark regulations or demolition delay rules that would interfere with the free market for house sellers and buyers. Instead, he offers assurance that he and the town's zoning officials will look favorably—and move quickly—on case-by-case zoning appeals, when the objective is the preservation and sympathetic expansion of Modern houses (notably 35 of them on an informally compiled list in his office). This does not, however, put would-be preservers on an equal

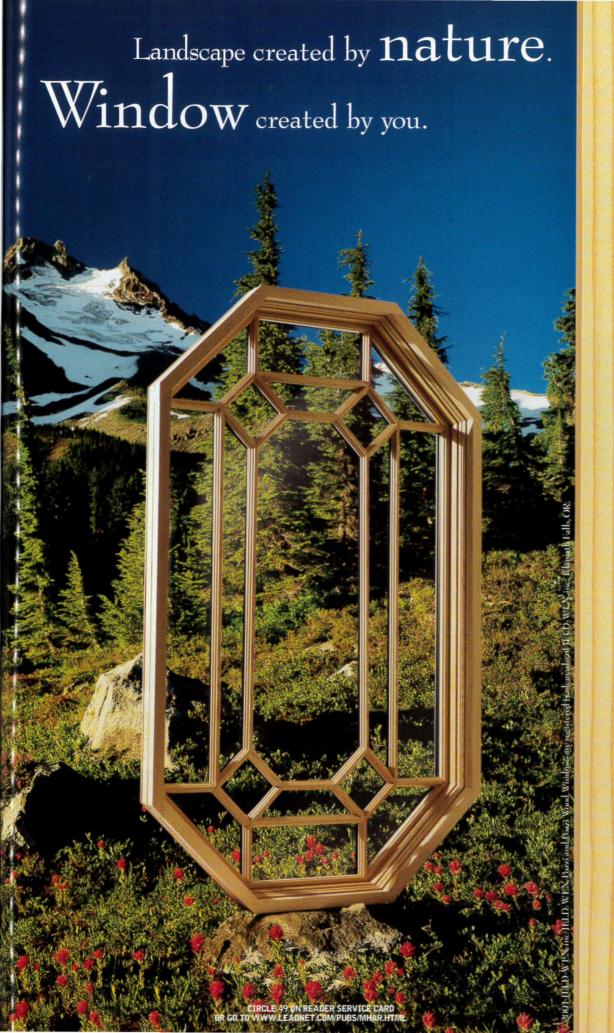
footing with others ready to build anew under established zoning rules. And a sympathetic attitude among town officials, who may be gone tomorrow, is no match for regulations on the books.

The town's zoning regulations are now under review, but it is impossible to predict changes, if any. Given the small proportion of Modernism fans in the town, it is vital for them to make common cause with owners of the town's many fine houses of earlier periods, from Pre-Revolutionary to 20th-Century Tudor, which are also threatened in today's market.

A principal hope of those trying to save New Canaan's Modern legacy is the rising enthusiasm for 1950s design, as indicated by the proliferation of shops, Web sites, and magazines specializing in the period. Increasing interest in houses of this period may reverse the perception that Modern design means poor resale value, but that might not succeed in saving modest houses on \$1-million-plus plots of land.









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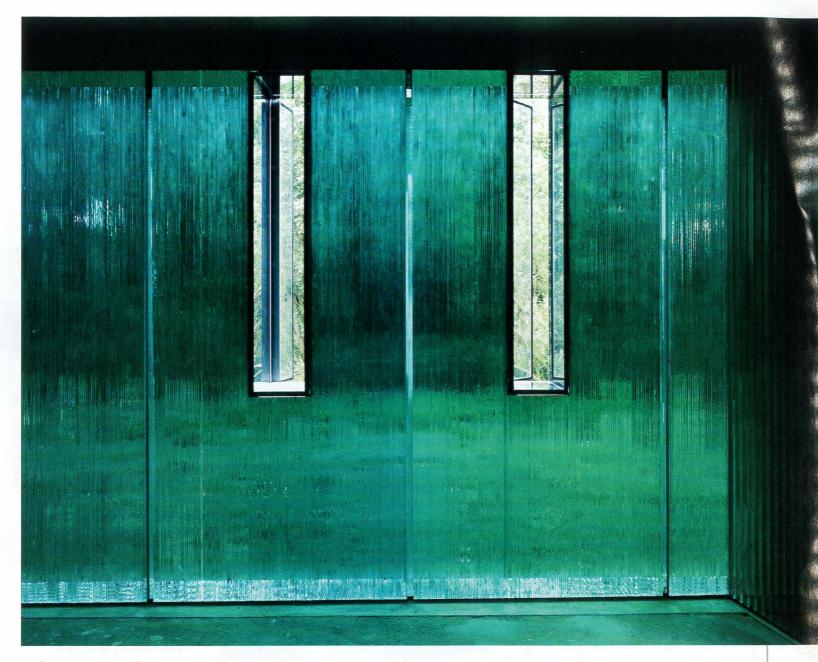
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Snapshot



By Ingrid Whitehead

Much has been said about people who live in glass houses—less about the people who design them. The two young Dutch architects who designed the Laminata House in Leerdam, the Netherlands, bring to mind words like radical, as well as heroic, and maybe even crazy. Paul van der Erve and Gerard Kruunenberg have spent the past five years creating a wonder: A house with walls made entirely of glass.

The exorbitant and astonishing vision for the house began as an entry in a competition held by the Leerdam housing corporation CWL (Centraal Woningbeheer Lingesteden). Leerdam is known as the glass capital of Holland, and CWL wanted to mark their 40th anniversary with something unusual—a built house that would be both experimental and functional. An independent jury chose five designers from a pool of 160 entrants, and paid them to conceive a glass house whose plan would be embraced and then supported by the city council and local glass manufacturers. Van der Erve's plan won. But the city and the local glass industry said, "Not interested." CWL was committed, however, and the

Living the laminated life, in a prototype house of glass



Snapshot

young, zealous architects figured they had nothing to lose. When multinational glass manufacturer Saint-Gobain agreed to collaborate on the project by developing and manufacturing the glass for a fixed fee, it was a go.

The concept was complex and unconventional. The architects envisioned a massive rectangular block composed of 450 cubic meters of glass formed by gluing together 13,000 glass plates. They then imagined cutting this laminated block cross grain to form two side wings of unequal depth. Carved out of these parts is a series of interior spaces that serve as the main rooms located along a central corridor.

The project was to be a groundbreaking study of the use of one material—glass. In practice, it was a grueling five-year process, resulting in a masterpiece that will not soon be recreated. Four years of extensive research commissioned by the architects and conducted by the Netherlands

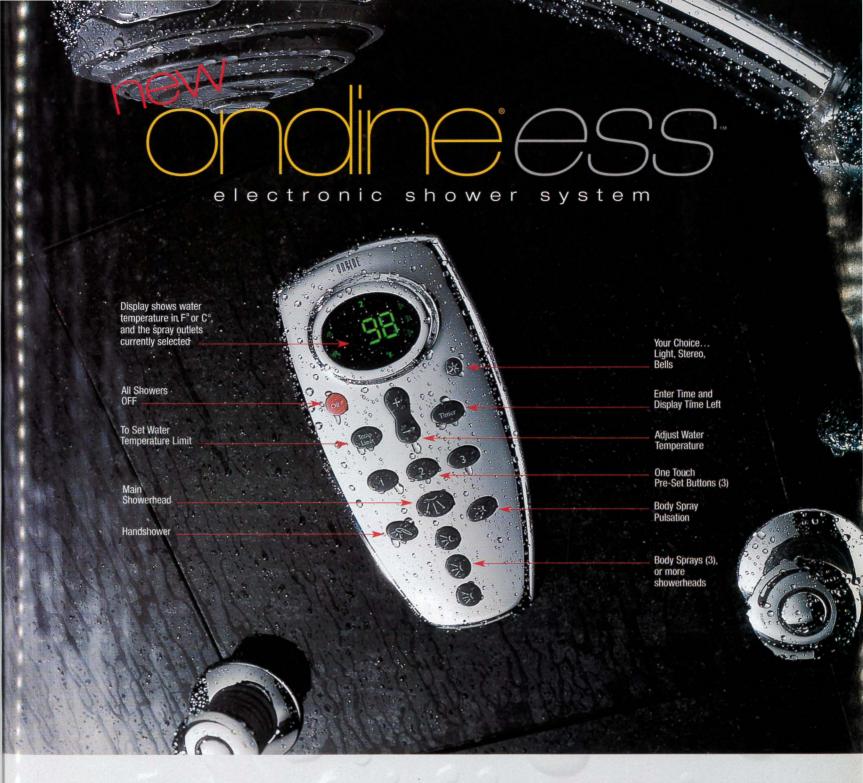
Organization for Applied Scientific Research (TNO) had to be undertaken to investigate how glass could be used as a primary building material. Questions about heating, ventilation, electricity, acoustics, and lighting had to be answered.

Once a doable, albeit arduous, design scheme was in place, the fabricating began on an unlikely site in a neighborhood on the outskirts of Leerdam, amid modest suburban homes. A temporary shed ("like a laboratory," says Van der Erve) was erected to maintain a controlled environment in which to build. All 13,000 panes of glass were cleaned





when you live in rooms with walls of glass (below), especially along the house's startling, 20-meter corridor (above). The house is a monument to its primary element, and a study in contrasts. Here, a material that's delicate and fragile in a single transparent pane becomes as strong as concrete when a thousand layers of it are placed back-to-back.



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Snapshot

on the site, by hand, the sharp edges removed, and a special glue created by U.S. company G&E was rolled on before the panes were adhered to each other, one by one. The wall unit was then carefully set into a lip in the poured-concrete floor's edges. Because glass is naturally brittle, the inflexibility was countered by a UV-resistant silicon glue that provides some "give" to the walls as well as an almost 100 percent absorption rate and an almost 0 percent transmission rate. That said, the house had no need for air-conditioning. The glass walls' natural cooling properties, combined with heating in the concrete floor, creates perfectly monitored interior climates all year long. The problem of where to put cables was solved with a wireless electrical system that uses radio waves to operate lighting and some appliances, while stainless-steel boxes in some corners of the floors provide outlets for devices that can't be operated by remote control.

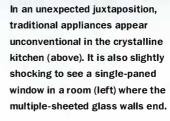
waves to operate lighting and some appliances, while stainless-steel boxes in some corners of the floors provide outlets for devices that can't be operated by remote control.

Because the views to the outside are extremely fragmented, what might have been a fishbowl is more like walking under a frozen waterfall. Inside, distorted visual sensations are especially intense when walking down the 20-meter corridor that runs the length of the house—murky visions of light and shadow punctured by the intense, brilliant sunlight that comes through the few vertical, slit windows scattered throughout the space. The need for a place in the house for future homeowners to escape inquisitive neighbors' eyes—silhouettes and shapes are visible from outside—led to the inclusion of a conventional



led to the inclusion of a conventional basement in the core of the building. Its construction required a courtyard to be built above it, providing the center of the house with light and air.

Who would live in this quasi-aquarium? A couple—a painter and her retired husband—bought the house after construction for about \$850,000. The painter uses the basement as her studio, and once a month she holds a "visiting day," when people are invited to view her paintings and the interior of the house. And they come in droves to experience something previously found only in dreams—a walk along a corridor of frozen rain.





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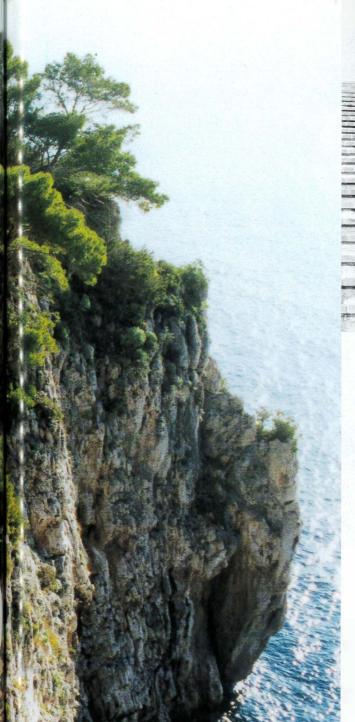
on the island of Capri (above), appeared prominently in Jean-Luc Godard's 1963 film Contempt, starring **Brigitte Bardot** and Michel Piccoli (opposite, top). The house's dramatically stepped roof terrace provided a highly cinematic venue.

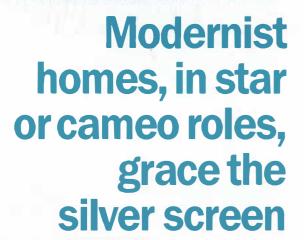
NEUTRA'S 1953 F.W. SCHAARMAN HOUSE,

in Los Angeles, was the setting for Anniversary Party of 2001, directed by Alan Cumming and Jennifer Jason Leigh.

BELZBERG/WITTMAN'S 1996 HOUSE in Malibu (opposite, bottom) set the ominous scene for **Daniel Sackheim's** 2001 Glass House.









Movie Houses

By Thomas Hine

n the movies, people who live in glass houses usually have something to hide. That was certainly true in last year's Glass House, a slightly trashy teen-oriented thriller, in which the title role was played by a luxurious, nervously Modernist 1996 residence, designed by Belzberg/Wittman Collaborative, that juts out from the Malibu coast. In the film, the house's sleazy, drug-addled owners resort to embezzlement and murder to pay for this extreme domestic indulgence.

And in last year's Anniversary Party, Richard Neutra's 1953 F.W. Schaarman House provides a pristine, crystalline setting, where a seemingly ideal couple goes awry in the company of glamorous, screwed-up friends and neighbors. This film follows the rule

that any house that appears perfect in the early scenes will be a mess by the end.

The house in Glass House is often shown in the film obliquely from below, menacing like a haunted place, whereas the one in Anniversary Party appears mostly in close-ups, creating a feeling of intimacy and, in effect, bringing the viewer into the party. Different as these films are, you could say that in both the true stars are the houses, each embodying a distinctive sense of precarious-

Thomas Hine was The Philadelphia Inquirer's architecture critic for 22 years. His book Want That! How We All Became Shoppers comes out this fall.







ness. The houses seem clear, but they conceal secrets. Glass can shatter. So can lives.

Films rarely concentrate this obsessively on a house, where it becomes possible to draw a plan and, in the case of *Glass House*, a section. But modern houses have long played an important role in the movies. They most often appear not in starring roles but in cameos, showing up briefly, but memorably, to alter the mood or help define a character. In films where architecture does dominate, such as Terry Gilliam's 1985 *Brazil* (which wittily presents work by Ricardo Bofill) and Ridley Scott's 1982 *Blade Runner*, it often describes a nightmare vision. Design buffs find such films cool, but nobody would want to live in the worlds they predict.

Glimpses of notable Modernist houses flash by in everything from art films to kung fu slugfests. One must be alert, because they appear without warning, often with improbable furnishings. And unlike, for example, the people who deliver sandwiches to the set, the houses are hardly ever identified in the credits.

While it's fun to spot famous houses on-screen, in most movies they exist merely to explain or challenge the central characters. Modern settings, in both film and real life, are exceptional. You notice them. And if you notice the building or its interior in a film, it usually means the protagonist faces a threatening, or at least unfa-

miliar, situation.

Moviemakers tend to use Modern houses to communicate feelings other than those intended by the architects. While the ideology behind these buildings celebrated freedom and flexibility, light, and air, Modern houses in the movies are often identified with sinister characters and arbitrary power. (Many of James Bond's enemies share a taste for high-tech Modern.) They are often uncomfortable places whose Minimalist decor is associated with controlling personalities.

The same house can turn up in many guises. Frank Lloyd Wright's 1924 concrete-block Ennis House served as the exterior of Vincent Price's 1958 thriller *The House on Haunted Hill* and later epitomized Hollywood's potent culture of fantasy in John Schlesinger's 1975 *The Day of the Locust*, based on Nathanael West's novel. In *Blade Runner*, its Mayan motifs were expanded into a dark, futuristic-primitive cityscape. It even appeared in Ridley Scott's 1989 *Black Rain*, a movie that supposedly takes place in Japan.

LA Confidential, Curtis Hanson's 1998 film set in the early 1950s, makes striking use of Richard Neutra's 1929 Lovell (Health) House. That great

white hillside edifice was originally built to demonstrate ideas about healthy living through openness, ventilation, and indoor-outdoor design. In the film, the house takes on a nearly opposite meaning. As the home of a real estate developer who runs a prostitution ring and blackmails his customers, it seems the very source of evil. The house's abstract quality helps

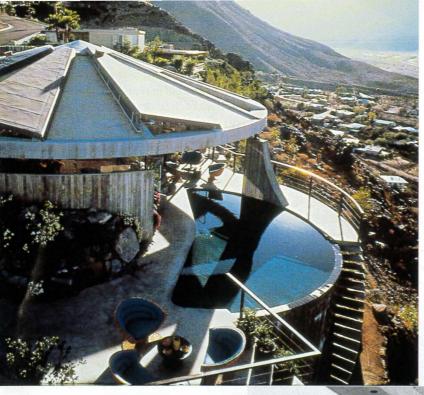
MODERNIST HOUSES FLASH BY IN EVERYTHING FROM ART FILMS TO KUNG FU SLUGFESTS.

establish the character as remote—not someone with whom the viewer can easily identify. Only with the last scene in the house does one sense that it might actually be a wonderful place, but by that time the viewer might be distracted by the owner, sitting dead in a chair in the living room, his wrists bleeding onto the off-white carpet.

It turns out that the developer-pimp is only working for a more important villain, a friendly fellow who resides in a warm, cozy bungalow. Still, the association of powerful villainy with High Modern houses is a strong enough tradition that Hanson could use it to manipulate the audience's expectations.

As early as the 1920s, film sets in Europe and America sometimes reflected archi-





settings—ranging from the opulent, streamlined interiors of the Astaire-Rodgers musicals to the terrifying avant-garde lair of the mad architect played by Boris Karloff in The Black Cat (1934)—existed only in the movies. (Karloff portrayed the architect as sinister but extremely stylish, an austere dandy with some of the elegantly authoritarian mien of, say, Paul Rudolph or Philip Johnson.) Once filming on location became routine, Hollywood filmmakers discovered that the 30-mile radius of the intersection of Beverly and La

tectural ideas that had scarcely been realized in the real world. Until the late 1950s, most films were shot on soundstages, and some modern domestic

Cienega Boulevards—the so-called "zone" where lower union rates apply offered the world's greatest concentration of Modernist houses.

And to a lesser extent, famous houses outside of Hollywood have also had their movie-star moments. Even Le Corbusier's 1930 Villa Savoie played a bit part as the scene of a seduction in French Postcards, a 1979 film about American teens in Paris. In Jean-Luc Godard's 1963 Contempt, Jack Palance, cast as a boorish American film director, declares, "Gods—I like them very much. I know exactly how they feel." His house, played by Adalberto Libera's amazing 1940 Casa Malaparte, atop a crag in Capri, provides a suitably superhuman setting for a memorable monster.

Brian de Palma's 1984 Body Double gives architecture buffs the

opportunity to get inside of John Lautner's famed 1960 Chemosphere (Malin) House. A favored film and television location, it's an unlikely hybrid of flying saucer and watchtower that seems to embody California freedom. And for the film's protagonist—a clinically claustrophobic actor having difficulty with his role as a vampire—the house's openness and views seem an antidote to his demons. Yet the film, with its many shots of interiors glimpsed through windows and of fish in aquariums, ultimately presents the Chemosphere and other glassy houses as places of confinement, not liberation.

The architectural star of Glass House, with its marble floors, complex, multilevel spaces, and high-tech

kitchen—where its residents heat their take-out dinners—seems a perfect embodiment of 1990s excess, some of which, we now know, was made possible by juggling the books. Thus, from the start, the audience is suspicious of its shifty owners, who happen to be named Glass.

The style of the house is significant, and its impact clearly geared toward a target audience. The children, who are Glass House's protagonists, are orphaned within the first few minutes of the film and forced to leave the home in which they grew up. It, too, appears quite expensive. But, with a mantel, moldings, white picket fence, and other traditional trappings, it is "homey"—a place that much of the general audience might aspire to own. By contrast, the hard-edged Glass house might engage architects' eyes, but in the context of its story and its teenage target audience, the change of scene is like a plunge into an icy swimming pool, making it the dream house of just a tiny minority. Likewise, some members of the audience might find the calamari and risotto that Mrs. Glass serves the children at their first meal appealing, but it was clearly intended to evoke a collective "yuck!" from the teens in the theater. The camera loves clutter, and ultraclean, modern interiors come across as life-denying. In Joseph Ruben's 1991 Sleeping with the Enemy, Julia Roberts begins to discover that she has married a villain by observing that he cares more about the neatness of his modern house than he does about her.

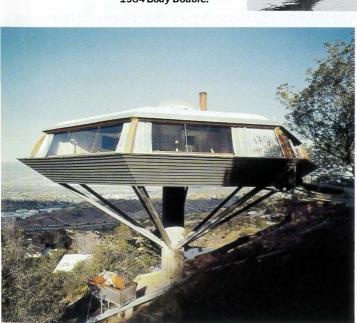
ELROD HOUSE, in Palm Springs, California, was

JOHN LAUTNER'S 1968

featured in the 1971 James Bond film Diamonds are Forever (above and right).

JOHN LAUTNER'S 1960 CHEMOSPHERE

(Malin) House, in Los Angeles, provided a sinister setting for Brian de Palma's 1984 Body Double.



DIVIDING SPACE WITH LIGHT AND GLASS

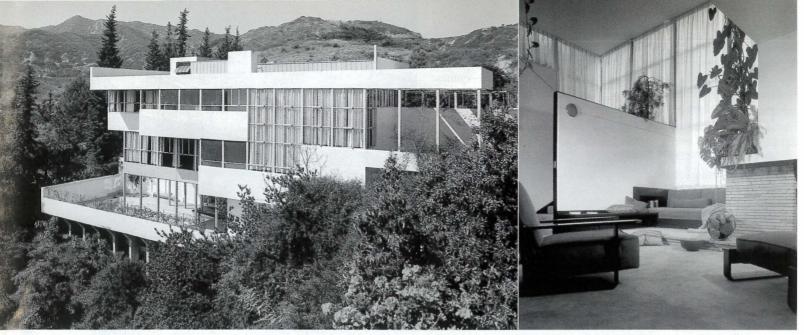


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NEUTRA'S 1929 LOVELL (HEALTH) HOUSE

(above, left and right) is the home of a villainous developer-pimp in Curtis Hanson's 1998 LA Confidential.

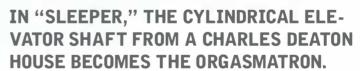
PIERRE KOENIG'S 1960 CASE STUDY HOUSE

#22, as portrayed in the classic Julius Shulman photo (below), appeared in Neil LaBute's *Nurse Betty*. This theme carries through even into comic films. In Jacques Tati's 1958 *Mon Oncle*, the director creates a cartoon of a Modern house, complete with two round windows that evoke Le Corbusier's eyeglasses. Its residents are hilariously incompetent in their use of the house's perverse technological "conveniences," but, more seriously, the house forces them into lives that are pretentious and antisocial.

In *Sleeper* (1973), Woody Allen used two real houses in Colorado, Charles A. Haertling's 1969 Brenton House and Charles Deaton's 1960s unfinished house for him-

self, to conjure up an alienating, dictatorial, though very funny, future, in which the health benefits of deep-fat frying are, at last, understood, and people take their pleasures in the orgasmatron, a device inspired by Deaton's cylindrical space-age elevator shaft. As a man displaced from 1973 to 2173, Allen portrays one of the most familiar movie archetypes: the fish out of water. The alien environments in which such figures find themselves often include Modern houses.

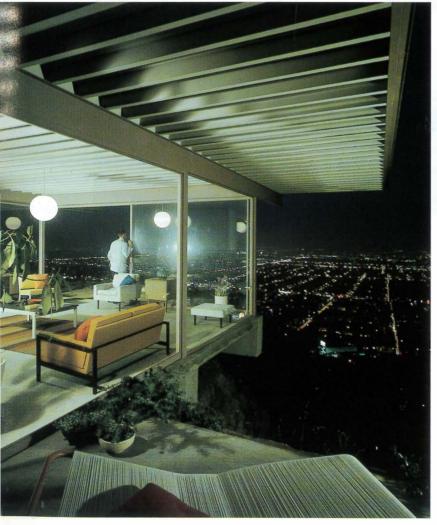
In Neil LaBute's 2000 *Nurse Betty*, Renee Zellweger plays a fish who doesn't know she's out of water: a midwestern housewife, traumatized by witnessing her husband's murder, who believes she is a



character from her favorite TV soap opera. She leaves her overfilled tract house and goes to Los Angeles, where she meets the handsome lead actor from the soap.

He takes her to his home, which turns out to be Pierre Koenig's 1960 Case Study House #22 (Stahl House). In this place, best known through the classic Julius Shulman photograph in which it appears to float above nighttime Los Angeles, we see the character in a new light. The Shulman image is briefly recreated in the film. No longer the country-mouse housewife, she becomes as fully glamorous as the house itself. Both the character and the audience are pleased to discover that she fits into this alien setting. This dream house seems to validate the character's dream world. The famous Modern house is not evil but exhilarating. It's a thrill to be there, and through its open spaces, one can see fabulous possibilities.

A moment like this suggests the promise and the power of architecture. And we like to think that Modern houses can in real life evoke pleasure and excitement. But such moments happen rarely—at least on the silver screen.





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1. Patkau

2. Jim Jennings

3. Cutler Anderson

5,6. Shim-Sutcliffe

7. Daly, Genik

8. Moussafir

4. Adriá + Broid + Rojkind

Record Houses

2002

house can hide secrets about itself. The face it shows to strangers may mask unsuspected personality traits, concealing its true size and character, its inner nature, perhaps even an entire realm behind it. For a single-family house—a private home—to function successfully within a more public domain, balance, or productive tension, is necessary between its outward and more inward demeanor, between its relatively accessible and inaccessible zones. We were struck by the expression and resolution of this condition in the projects selected for this year's Record Houses.

Public-private contrasts were most immediately apparent in the buildings in, or near, urban areas. Jim Jennings's Howard Street House, for example, which fronts a slightly gritty San Francisco street, ingeniously introduces a camera obscura effect—produced by a facade of perforated Corten steel backed by translucent glass—to bring aspects of the street life literally and figuratively inside. Between party walls, the facade's huge translucent window conveys openness, yet preserves pri-

vacy, giving no hint of a hidden courtyard.

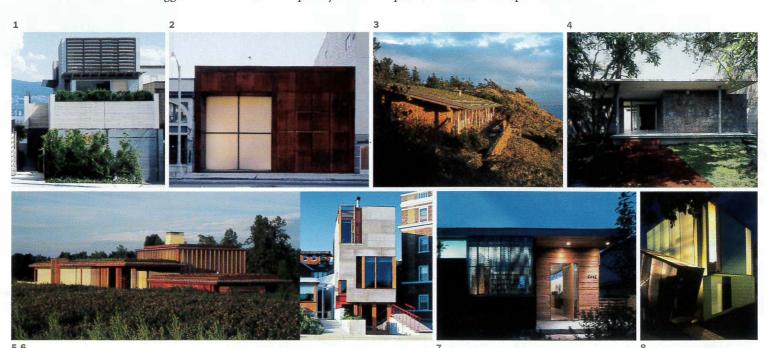
Patkau Architects' Vancouver House is also sited with close lateral adjacencies, but without party walls. To channel lines of sight toward spectacular views, the Patkaus set the interior between long concrete walls. The exterior barely suggests the sectional complexity within. At the front door, a glass-bottomed pool is partially visible, hovering overhead. This is just the beginning.

In Stratford, Canada, Shim-Sutcliffe's Tower House, a tiny cement-board-clad structure amid far more towering urban neighbors, conceals a light-filled, three-story, fir-lined atrium at its core. The atrium balconies, reminiscent of an operating theater, overlook a cooking-school kitchen. Only the facade's wooden mullions offer a clue to the interior, and the entry ramp belies the home's more public component.

Gradually uncloaking its own inner realm, Adriá + Broid + Rojkind's F-2 House, near Mexico City, engages a language of walls and a sequence of thresholds. With a very different architectural vocabulary, Daly, Genik's Beverley House in Santa Monica, California, appears from the street, among modest structures, much smaller and more enclosed than it really is. Similarly, Jacques Moussafir's Stein-Fleischmann House, near Paris, takes on an expansive lightness and luminosity on its interior that is hard to imagine from the discreetly cubic exterior.

In the wide open countryside, public and private issues are less obvious. But the two rural houses we've included, Cutler Anderson's Reeve Residence and Shim-Sutcliffe's Island House, were both designed to disclose themselves slowly. Both are "camouflage houses," with planted roofs that seem, at first glance, to blend with their settings.

All our featured projects finally reveal that even in this year of tragedy, houses—with their complex personalities—continue to be places of comfort and optimism.





Patkau Architects cast dappled light

into its VANCOUVER HOUSE through the glowing prism of a glass-bottomed pool

By Sheri Olson, AIA

PHOTOGRAPHY: © TOMOHIRO SAKASHITA/GA PHOTOGRAPHERS (OPPOSITE); PAUL WARCHOL (ALL OTHERS)

reaming out loud. That's all it really was. But, in response, Patkau Architects moved heaven, earth, and 50 tons of water to fit a lap pool onto an impossibly narrow site in Vancouver. "We found out later that it was an incidental request-if we had protested vehemently, the client would have dropped it," says John Patkau. Instead, water became the catalytic element in a precisely calibrated design. To fit the pool onto the 33-foot-wide site, partners John and Patricia

Patkau had it hoisted 10 feet in the air, above the entry walkway. Glass panels in its bottom act as lenses, refracting light inside the house in flickering, aqueous patterns.

The 60-foot-long outdoor pool runs along the west side of the rectilinear house, with spectacular views north across English Bay to the city's glass towers and the verdant Coast Mountains beyond. As light filters through the pool's water and glass panels, a swimmer can see who is directly below at the front door, and vice versa. "The view through 4 feet of water is surprisingly transparent," says John Patkau. "It appears only 6 inches deep."

Transparency and light play against opacity and solidity throughout the 3,071-square-foot house. Suspending a pool above grade required a reinforced-concrete structure for lateral stability in the event of an earthquake. The architects devised an exposed concrete frame that braces the house's walls on the interior and extends outdoors, forming a cantilever to cradle the pool. Two parallel planes of board-formed coincrete, a mere 16 feet apart, define the building envelope, providing privacy from encroaching neighbors, only inches away on either side. Here in Kitsilano, a rapidly changing Vancouver suburb, waterfront real estate is at a premium, leading to exceptionally tight sites where high-end residences rub shoulders with older ramshackle cottages.

Given Vancouver's damp, gray climate, the Patkaus were concerned about concrete's potential for gloominess, and so they developed a special mix that is denser and whiter than usual. The resulting highquality concrete stays bright even on the dreariest days and provides a

Sheri Olson, AIA, RECORD's Seattle-based contributing editor, is author of Miller/Hull (2001) and architecture columnist for the Seattle Post-Intelligencer.

neutral backdrop on the interior for the lush play of light. With the material's serenity, John Patkau explains, "We tried to respond to the visual overkill of daily life."

Although this house for a single, Hong Kong-based businessman may appear simple in plan, a CAT scan would reveal a dramatically different section every few feet. The actual distribution of program is straightforward: living and dining spaces on the ground floor, a bedroom and study on

the second level, and a music room below grade. But the site's lateral constraints inspired the Patkaus to manipulate the volume vertically, giving the space expansive and varied qualities within its 1,540-squarefoot, long, narrow footprint. As John Patkau puts it, "The result is both minimal and baroque." Baroque—in the sense of experiential richness and complexity—is an understatement for the interpenetrating spaces, layered planes, and dappling light that change throughout the day and the seasons.

A long section through the house would reveal a cascade of cantilevered concrete steps down to the main living space and its panoramic view. The constancy of the exterior side walls—working almost like blinders to channel lines of sight—provides a foil for the house's everchanging section. The living room's prowlike glass walls heighten this effect and project out toward the water, tending to merge the interior space with the English Bay before it. Oversize glass doors slide open to a deck 40 feet above the rocky shoreline.

A few steps up from the living room, to the south, a transverse cut would lay bare other major sectional variations. Here, the landlocked dining area expands skyward as its ceiling angles up 20 feet to a giant clerestory window. Its wooden louvers temper western rays, while directly below the clerestory, a light shelf over pool-level windows bounces flecked

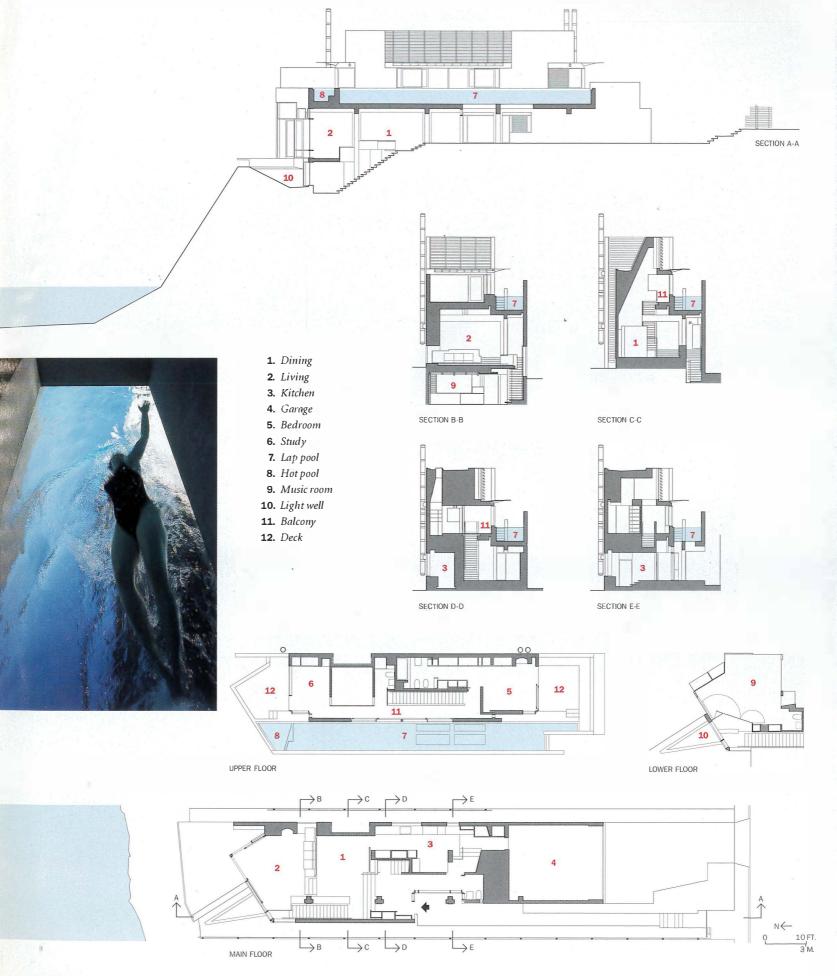
Corporation

Project: Vancouver House, Vancouver, British Columbia Architect: Patkau Architects-Michael Cunningham, John Patkau, Patricia Patkau, Peter Suter, Brian Wakelin, Joanne Gates, Craig Simms,

Kathleen Robertson, Dohhee Zhoung Engineer: Fast & Epp Partners Consultants: SLS Lighting; The John White Woodshop Company General contractor: Glover















Sectional complexity (above left and right) plays against the forceful constant of north-south views toward the bay—vistas that penetrate the layering and interlocking of planes on the balcony level (above right) but open up fully in the living room (opposite, top). In the double-height bedroom (opposite, bottom), a louvered clerestory can admit light even when the lower windows are covered for privacy. In pure elevation (left), the building's sculptural qualities give way to compositional calm.





reflections off the water and throughout the interior. A glass railing allows the dining space to interlock with the balcony on the upper floor, while a wafer-thin concrete slab spans precipitously overhead.

The house takes the pool's water line as its horizontal datum, with the entry-level floor below following the site's sloping topography, while high above it, giant louvered clerestory windows face west. (Louvered clerestories also rise to the north and south within the bedroom and study, respectively.) The distance between the high western windows and the facing wall changes along the length of the house—from 10 feet at its widest, drawing daylight into an inner dressing area, to 1 foot wide at its narrowest, creating an illuminated ceiling slot at the balcony's south end. Tying together the sectional play are long, penetrating views, modulated on the balcony level by layered planes and interlocking volumes that ultimately reveal slivers of sky.

Like CAT scans, sectional slices can describe the relative placement of structure, solids, and voids but are not capable of capturing the spirit. Here, the shimmering light that animates the concrete walls breathes life into the house, giving it the vitality of a living thing.

Sources

Shingles: Soprema (modified bitumen)

Lighting: Zumtobel

Plumbing: Kohler (toilets); American

Standard (sinks); Vola (faucets) Refrigerator: Sub-Zero

www For more information on the people and products involved in this project, go to Projects at architecturalrecord.com.



PHOTOGRAPHY: © SHARON RISEDORPH

Jim Jennings uses multiple optical effects to animate his **HOWARD STREET HOUSE** in a gritty San Francisco neighborhood

By Clifford A. Pearson

he ancient Greeks learned that a small aperture can turn a simple box into a camera obscura, a room-size device for casting images from the outside onto an interior surface. In the process, the image gets altered—reversed and flipped upside down. For a residential commission in San Francisco's South of Market neighborhood, Jim Jennings turned the house itself into a camera obscura—literally and figuratively.

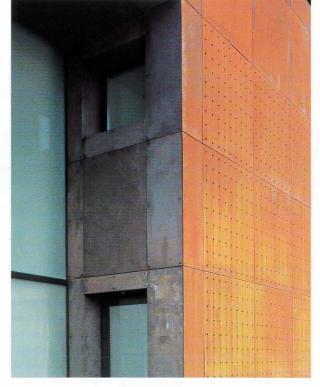
Set in a transitional part of town where car body shops bump up against trendy loft buildings, the 4,500-square-foot house for two single men rests on the foundation of a small industrial building, retaining some of the old structure's concrete perimeter walls. The streetscape here is ragged and gritty in an attractively hip way. Untillast year's tech bust, dot-com whiz kids paid top dollar to live in this area.

Jennings, whose office is nearby, knows the neighborhood well and set out to design a building that captures the spirit of the place yet transforms it. Like a camera obscura, the house projects the life of the street inside, in the process inverting the rough into the elegant, the public into the private.

A longtime fan of Corten steel, Jennings shielded most of the house's front elevation with 1/6-inch-thick panels of the rusting metal punctured with a tightly spaced grid of small holes. Placing a glass plane 14 inches behind the perforated metal, he created a multiple camera obscura effect with hundreds of images cast on the glazed front wall of the rooms inside. Because the apertures are larger than pinholes and the focal plane the glass—is so close behind them, the projected images appear out of focus. Whenever a car pulls up or a pedestrian walks by, the grid of fuzzy projections dances along the glass surface, conveying an animated quality.

From the street, none of this optical manipulation is apparent. Instead, the perforated steel has the feeling of industrial pinstripes—a sophisticated material with a subtle pattern. A two-story-high, four-square grid of translucent glass, recessed within the rusting facade like a gigantic window, adds to the house's aura of mystery. Visitors can look, but they can't see in. As Jennings explains, "I like the building's inscrutable character."

Designed for two young, heterosexual, single men who were



partners in a successful tech company they have since sold, the house reflects their flexible, affluent lifestyle. A large block with spaces for living, working, and sleeping occupies the front of the site, while a smaller pavilion, with garage and guest room above, stands on the other side of a generous courtyard. The heart of the main structure is a 20-foot-high living/dining/entertaining space that runs along one half of the building and rises to a gently curving barrel vault. Tucked into the other half of the block are a kitchen, pantry, and study on the ground floor and two master bedroom suites upstairs. Sliding

pocket doors, made of translucent glass framed in mahogany and blued steel, can divide the front of the main building into rooms for meetings or offices, should the two owners start up a new company. The same type of doors separate the kitchen and a den/office from the main living space. By hiding partitions in wall pockets, Jennings emphasized the cleanlines and impressive proportions of the long, high living space.

While the ground floor offers big, light-filled spaces, the second floor presents a more intimate environment. Starting with the mahogany stairs that ascend to the bedrooms between tightly spaced pouredconcrete walls, Jennings introduced a sense of compression to give the second floor its own character. Indeed, neither bedroom has windows to the outdoors, only bands of translucent glass overlooking the main living

Project: Howard Street House. San Francisco

Architect: Jim Jennings

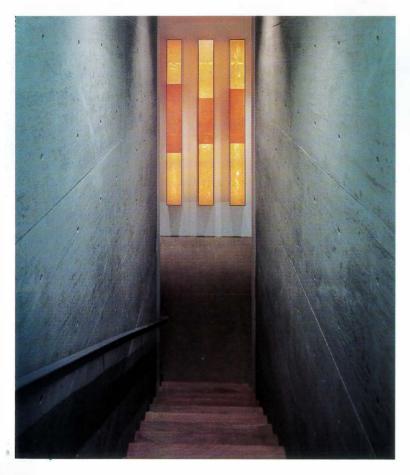
Architecture—Jim Jennings, principal in charge; Paul Burgin, Ross Hummel, Michael Lin, Troy Schaum, Melina

Engineer: Santos & Urrutia

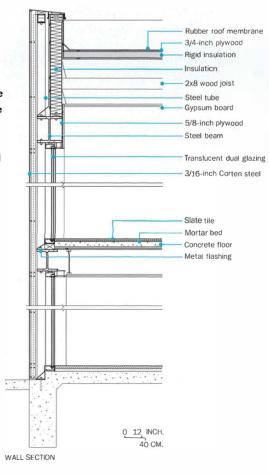
(structural)

Consultants: Dan Dodt (lighting); M. Todd Davis (project consultation); John Wigmore (light sculptures); Ferrari Moe (waterproofing) General contractor: Ryan Associates





Plug holes in the concrete walls lining the stairs (left) recall perforations in the main facade (section right). Jennings contrasts the expansive living space (above) with more compressed areas such as the stairs and kitchen (foreground in photo above).







- 1. Office/den
- 2. Living/dining
- 3. Kitchen
- 4. Courtyard
- 5. Garage
- 6. Bedroom
- 7. Guest

Jennings treats daylight as a precious commodity in order to focus its impact. A bedroom, (opposite, left) has no windows, just bands of glass overlooking the living space (opposite, right) and skylights. In a bathroom (below), sunlight enters from above. **Holes in the Corten** facade project images onto a glass wall in the shower (below left).









space and a couple of skylights deeply recessed in the ceiling. The master bathroom on the Howard Street side of the house, though, offers the mesmerizing presence of the camera obscura glass, part of which becomes a wall in the shower. Because the ceilings are much lower on the second floor than in the living room, the gentle curve of the barrel vault leaves a greater impression here. Nothing on the outside of the house hints at curving ceilings, making them, says Jennings, "a soft surprise."

Also hidden from the street, a large courtyard brings light and air to the back of the long living space. Paved with milky travertine and

RETAINING THE EXISTING CONCRETE WALLS, JENNINGS GIVES A SHAPE TO THE GHOST OF A LOST BUILDING.

edged with pebbles and bamboo, the courtyard extends outdoors the sleek aesthetic of the interiors. In nice weather, this house becomes the perfect party venue, perhaps the reason the clients decided to pool resources and live under one roof.

Although separated from the clutter of the street, the courtyard is not an island removed from the city. Because the property's lot lines zig and zag, neighboring buildings press in on the courtyard, making it part of the urban collage. To the west, there's an apartment building's vinyl siding; to the east, the brick walls of a small commercial building. Providing a datum for the ensemble, Jennings wrapped the walls of the courtyard with planks of Alaskan yellow cedar, attached from behind to hide the screws. Where the adjacent commercial building backs up to the court-

yard, the architect ran cedar planks up part of its facade, visually stitching together the house and its neighbor.

Working essentially within the footprint of the commercial building that once stood on the site, the architect inserted a wood-frame structure between concrete lot walls. Radiant heating in the new, lightly sandblasted concrete floors of the two-story-high living space keeps temperatures comfortable around people without having to heat the upper portion. Jennings also retained an old concrete wall on the courtyard side of the main house (adding only a parapet), giving partial shape to the ghost of the lost building.

In a city such as San Francisco, little lasts forever. Earthquakes, immigration, changing tastes, and new patterns of economic development alter the streets and neighborhoods. By recalling what had once been there and projecting on the inside fleeting images of the world beyond its walls, the Howard Street House engages this process of change and gives it domestic form.

Sources

Corten steel: 3D Studios Alaskan yellow cedar: Rushton Hawley

Aluminum windows and woodframe pocket doors: Kenner USA Custom cabinetwork: Plant Architectural Woodwork Concrete floors and walls:

Concrete floors and walls
Whiteside Concrete

Sofa, dining table, and benches:

Custom, by Laurie Blessen/Elbe + Co.
Furnishings: Limn/San Francisco
Light sculpture: John
Wigmore/Wigmore Lighting Design

For more information on the people and products involved in this project, go to Projects at architecturalrecord.com.

Attuned to Lopez Island's rugged beauty, Jim Cutler sets his sod-roofed REEVE RESIDENCE seamlessly into a wild coastal cliff









Like a natural landform, the house alters its mood—and the hues of its roofscapewith changing seasons, light, and weather (above and previous page). Mimicking the surrounding trees, the entry facade begins to blend with the forest (left). The stone retainingwall fits into the landscape like a Native American ruin (opposite, top and bottom).

n calm days, you can hear orca whales blow just offshore or the sharp, thin calls of bald eagles circling overhead. The pristine 120-acre site on the south end of Lopez Island, in the Pacific Northwest, follows a mile of convoluted coast, running from vertical cliffs above the Strait of Juan de Fuca to grassy terraces with protected bays. Pastoral Lopez, home to sheep, cows, and llamas, as well as a small population of year-round residents, is the most level of the three largest San Juan Islands, but its southern end tilts dramatically upward to form one of the most rugged shorelines in the archipelago. For 10 years, Seattle residents Sally and Tom Reeve hopped the state ferry to their secluded vacation property, living with their four young children in a trailer off the grid. "It took us a long time to get up the nerve to build something," says Tom Reeve. "We were afraid of negatively impacting the land."

Finally ready, they contacted architect Jim Cutler, FAIA, whose reputation for houses that blend into natural settings had attracted them. His approach is not to be confused with an emphasis on sustainability, since, paradoxically, Cutler is less interested in sustainability per se than in attaining a successful visual fit with the landscape. He believes that if you connect people to the beauty of the environment, they will turn toward the deeper issues of preserving it. The Reeve house is the finest example yet of Cutler's talent for siting, an instinct that in this case ran contrary to his clients' initial vision. The Reeves showed the architect a high spot with a stunning view, but, Cutler says, "It was too exposed and would have desecrated the cliff." Instead, he nestled the house discreetly amid mossy outcroppings, between a forest to the north and the coast to the south.

A single, sod-covered shed roof, supported by wood columns on a bluestone plinth, forms a pavilion that shelters the building's three independent volumes: a 925-square-foot bunkhouse for children and guests, a 1,185-square-foot communal living area, and a 445-square-foot master suite. The design responds to the dual nature of this site—not only its windswept cliff, but also its more sheltering woodland side.

As viewed from the beach, 100 feet below, the house's stone retaining wall blends with the cliff like a Native American ruin. Its joints are so deep that the mortar is imperceptible. Cutler scrapped early plans to quarry the site's stone when he discovered its whiteness. So he switched to a Montana moss stone, which echoes the cliff's lichen-encrusted boulders. The Reeves can attest to the effort required to achieve a seamless—and apparently effortless—fit with the terrain. "We trekked out with Jim to survey the site in wind and blow," laughs Sally Reeve. "It was like Cutler boot camp." The architect, who develops intimate relationships with his sites, met his match in the Reeves. In extensive hikes with their own pack-bearing llamas, they have come to know almost every bend and ripple on the property.

Here, the 70-mile-per-hour winds, whipping across the open water, can shear off the tops of cliffside trees. To render the roof as streamlined and inconspicuous as possible, Cutler gave it a low pitch, matching the angle of the truncated trees. Harmonizing with its setting, the roof was planted with a native seed mix. While sod offers obvious energy efficiency, modulating interior temperatures, the state's strict energy code assigns it no official U-value, thus requiring a layer of insulation under the turf.

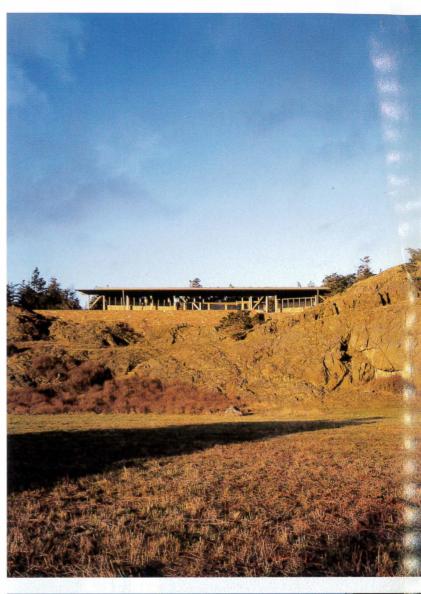
Project: Reeve Residence, Lopez
Island, Washington
Architect: Cutler Anderson
Architects—Jim Cutler, FAIA, partner
in charge; Janet Longenecker, project

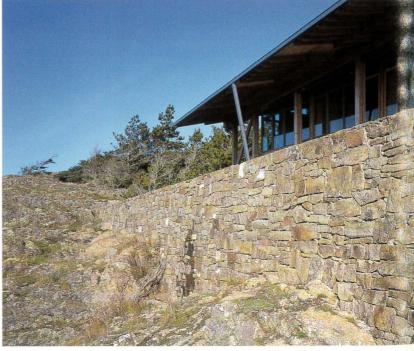
architect; Julie Cripe

Engineer: Coffman Engineers Consultants: Ecotope (energy); Weatherholt (roofing)

Interior designer: Susan Okamoto General contractor: Russet

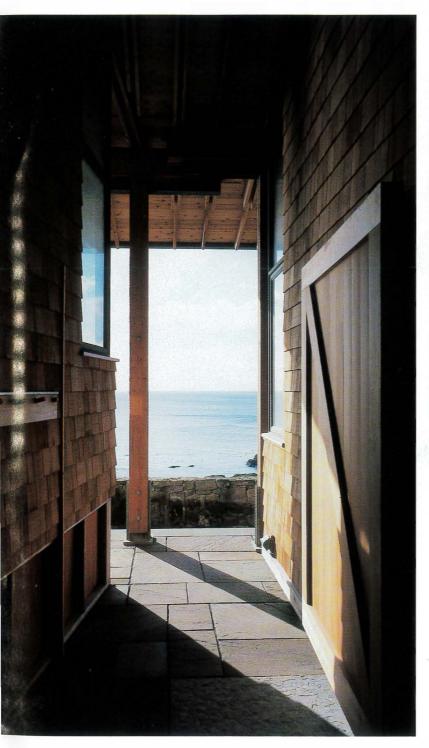
Construction



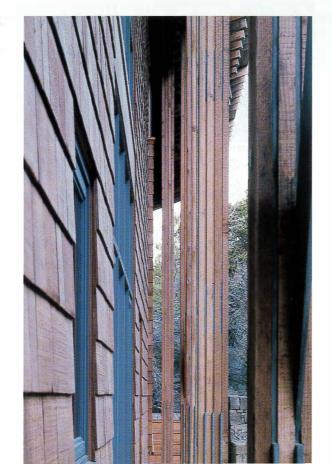


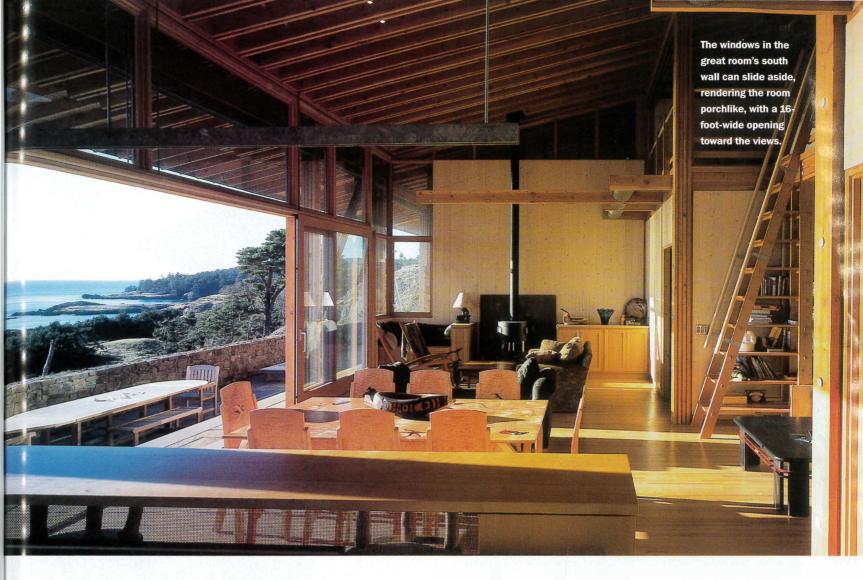
Spaces between the volumes frame coastal views (below). Throughout the house, columns and structural beams combine wood

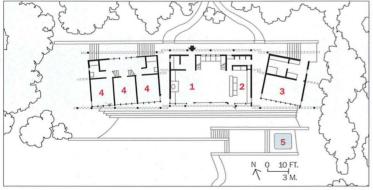
studs with steel plates (below right). Even in the kitchen (right), the windows help to merge the indoors and out.











- 1. Living
- 3. Master bedroom

2. Kitchen 4. Bunkhouse bedroom

Rainwater, siphoned off the roof, collects in an 8,000-gallon underground cistern for the house's fire-sprinklers—a necessity in such a remote location.

5. Hot tub

On approach from the forest, you get glimpses of the watery horizon between the house's volumes. The entry facade's classically proportioned, but roughly hewn, wood colonnade mimics the surrounding trees, merging house and forest. With the scrupulous detail and craftsman's finesse that typifies Cutler's work, columns and structural beams throughout the house are multilayered sandwiches of wood studs and galvanized steel plates. A web of steel plate and wood cross bracing further articulates the entry facade.

To achieve openness and flexibility under 250 tons of sod, Cutler placed the structure outside the exterior walls, allowing him to skew the bunkhouse and master suite toward specific views. To accommodate the clients' many friends, the bunkhouse—as compactly efficient as a boat—sleeps twelve. The house's central volume contains the "great room," with tall windows that delicately lift the roof above its white pine walls. On the south wall, huge glass doors roll aside, creating a 16-foot-wide opening with views toward a stone terrace and the coastline beyond.

To travel between the separate volumes, the family must go outdoors, but the heated stone plinth warms bare feet even in chilly weather, and the overarching roof provides an umbrella over in-between zones. This rustic character suits the Reeves' lifestyle. "We told Jim we didn't want a suburban house with a picture-perfect Architectural Digest living room," says Tom Reeve. "We wanted a cabin we'd really use."

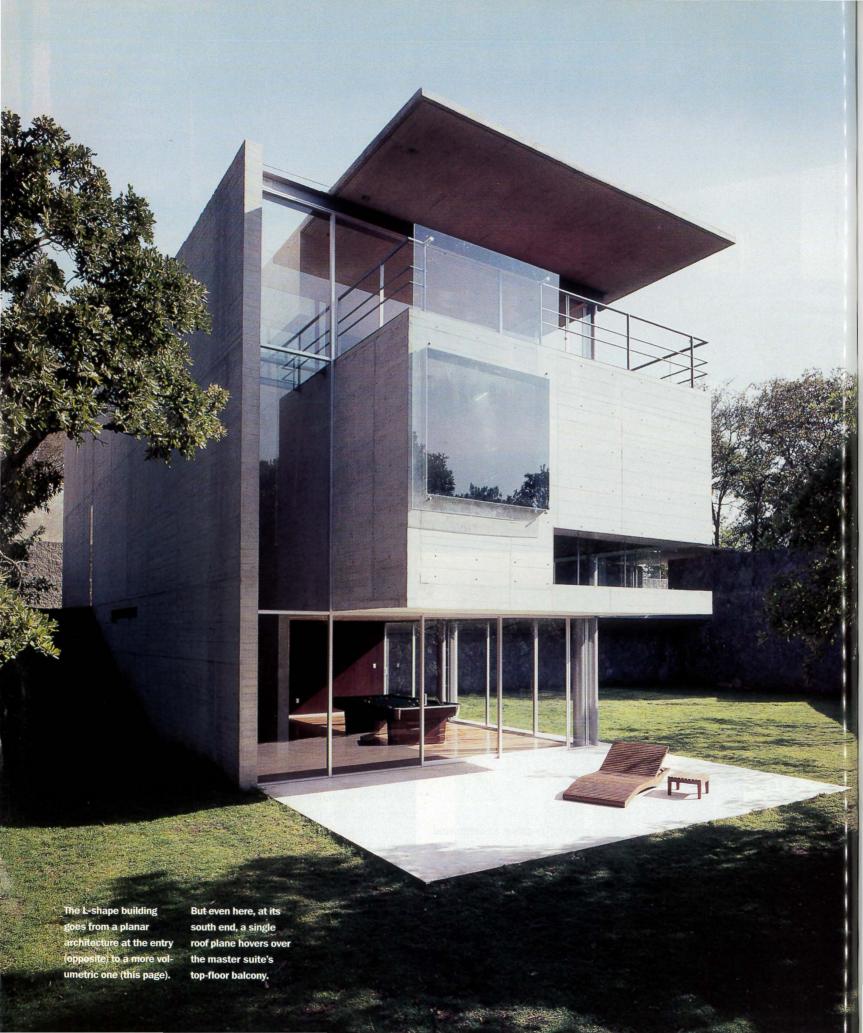
In his careful siting of the Reeve retreat, Cutler resolves the conflict inherent in his clients' desire to build on a private piece of the Pacific Northwest without ruining the wilderness that attracted them to it in the first place. ■

Sources

Roof: Taylor Metals (standing seam); Derbigum (built-up roo fing)

Paint: Benjamin Moore Tile: Dal-Tile

www For more information on the people and products involved in this project, go to Projects at architecturalrecord.com.



Adriá + Broid + Rojkind shapes

an evocative language of walls in the F-2 HOUSE near Mexico City

By Sarah Amelar

climbing wall was one of the first things our client, Alfredo, asked us for-even before he mentioned anything about the bedroom," recalls architect Isaac Broid of his F-2 House near Mexico City. "But then Alfredo met Paulina," adds Broid, "and things got serious quickly." By the time the house was done, the couple—a young pair in the computer industry—was about to marry, and the

programmatic priorities had shifted. That request for a climbing wall went the way of Alfredo's bachelorhood, but massive walls remained the project's essence. As built, thick planes—basaltic volcanic rock or poured-concrete walls or a wenge-wood bookcase—lead the way, penetrating from outside in or between levels, sometimes creating baffles or a deep, narrow chasm.

The walls play transformative, transitional, or even controlling roles. The first walls you see on approach to F-2 House embrace its zone of privacy and calm amid nouveau riche, often garish,

neighbors in a gated community. From the street, views toward the house's entry level are shielded by solid planes of pale-gray painted steel; rough, charcoal-hued basaltic rock; and light-reflective board-formed concrete. These perimeter walls, edging most of the quarter-acre site, are just low enough to reveal the tops of mature trees and, behind them, a glimpse of F-2's upper level. From inside the gate, the walls block out jarring views of nearby faux haciendas and neo-Tudor mansionettes that lack the vivid language of authentic Mexican architecture but are clad, nonetheless, in glowing shades of peach or electric blue.

F-2's quiet, Minimalist entry gate and surrounding walls establish the mood and architectural language of the house itself. Unlike the neighboring pastiches, it draws on the elegantly restrained palette of color and texture inherent in its materials. With purely Modernist forms, it borrows from such masters as Mies van der Rohe, but remains distinctly Mexican in the thickness of its walls, abstractly recalling the heft of traditional adobe.

From the entry gate, a teak-planked path through a shady forecourt leads west, straight to F-2's front deck, a cantilevered travertine plane reminiscent of Mies's Farnsworth House. Here, a staggered pair of basaltic walls, perpendicular to the path, forms a second view-obscuring threshold,

intentionally denying the visitor immediate discovery of the building. But past this threshold, the place begins to reveal itself. One of the basaltic walls takes a 90-degree turn, wrapping the house's interior and heading deep inside. Behind the other wall, the building unmasks its full size and L shape, stepping down a slope to add a partial bottom floor, a third level, at its base.

Most of the house is cast in bright concrete, contrasting with the

entry's dark, porous walls. Clearly Miesinfluenced in their articulation, the rough basaltic planes never touch the flat concrete roof above them; they are separated by a glass clerestory strip, or sometimes, on the interior, by an open gap. Similarly, the walls stand apart from the slender steel columns that support the flat roof, allowing it to float visually above the clerestory.

As the house bends into an "L," its exterior changes from a planar architecture to a more volumetric one, whose massing harks back to Le Corbusier's boxlike urban houses on pilotis. But for all its

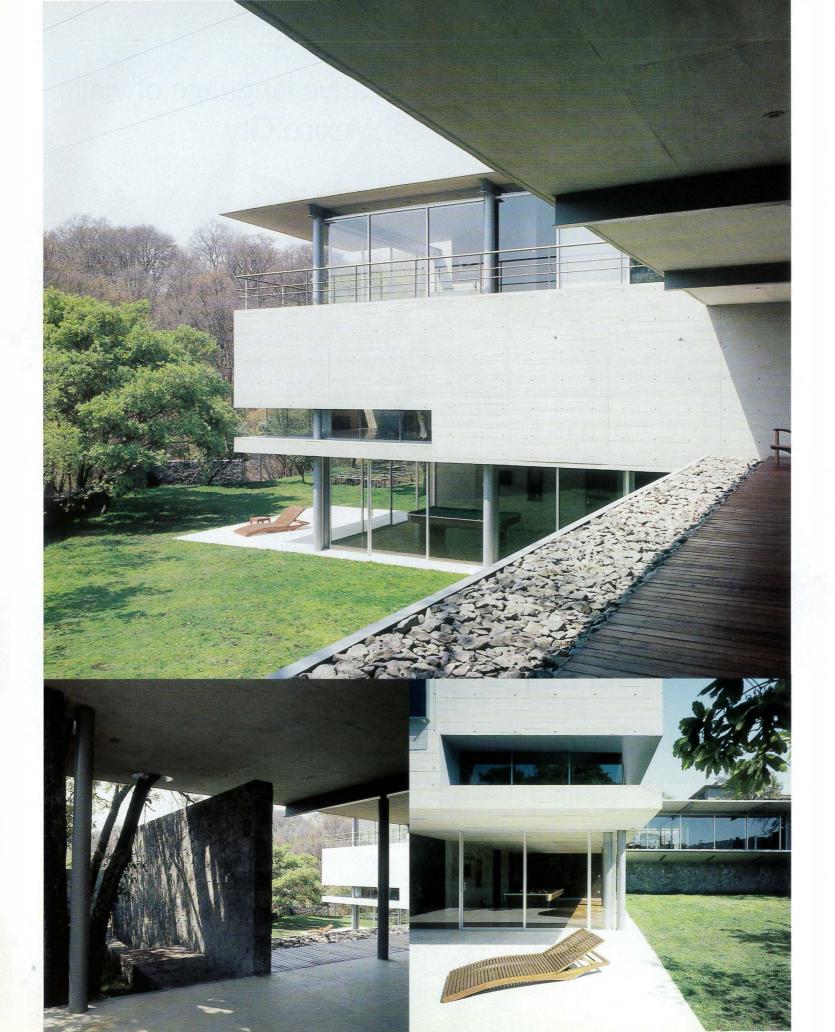
Modernist references, F-2 introduces a range of textures singularly suited to intense Mexican sunlight, inviting its rays to catch the horizontal grain of concrete formwork, to cast dark shadows on volcanic rock, and to highlight the sharp-edged, overscaled gravel that borders long stretches of the house. (Intimately linked to the wall-making process, this gravel happens to be the shards left over when stone was chiseled and shaped for the basaltic planes.)

Within F-2's 5,400 square feet are relatively few rooms: The entry level features generously scaled living and dining areas, a den, and an open kitchen; the uppermost floor has three bedrooms; and the lowest level, a library and game room. Just as the perimeter walls selectively mask inward and outward views, vertical planes within the building direct lines of sight. The living room's large corner-wrapping window rises from the floor, only reaching waist level, to block out views of the neighbors. In the den, similarly



Project: F-2 House, Mexico City Architect: Adriá + Broid + Roikind-Miquel Adriá, Isaac Broid, Michel Rojkind, principals; Benjamin Campos, Andres Altesor, Agustin Pereyra, Miguel del Rio, Hernan Cuadra, Paulina Goycoolea, project team Engineers: Salvador Mandujano

(structural); Antonio Valeriano (MEP) General contractor: Proyecto Alpha

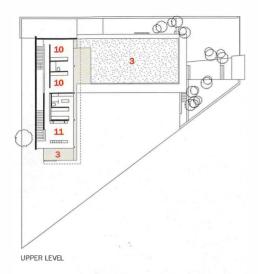


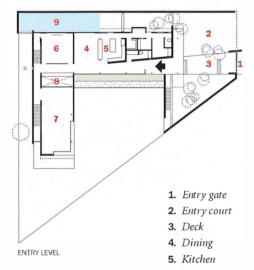
A basaltic wall at the house's entry (opposite, bottom left) masks views of F-2's L shape. Just behind this wall (opposite, top), across a teak deck bordered by basaltic gravel, F-2's three-story wing appears. It houses, from top to bottom, the master suite, living room, and game room. Such oblique views are also visible from within the house, through its zones of floor-to-ceiling glazing (opposite,



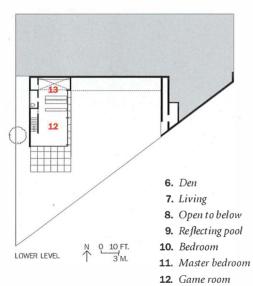
bottom right). Cuts in the long walls flanking the stair offer glimpses into the master bedroom (top and bottom right). A glass-and-steel bridge spans over the stair (above).











13. Library/study





Apertures throughout the house control lines of sight—as in the master bedroom (opposite, top) and the living room (this page). In the living room, a bookcase of African wenge wood (below) passes from the entry level through a cut in the floor to the library/study below. The open kitchen and dining area (opposite, bottom) overlooks a reflecting pool beside a basaltic wall.



low fenestration captures just a reflecting pool, filled with basaltic shards, and the flickering rays bouncing off it.

Throughout F-2, enclosure and openness play against one another, altering the quality of light, balancing and enlivening the experience of its interiors. In the site's least exposed zones—high up in the master bedroom, for example, or in the entry area, looking out toward the bend in the "L"—heavy walls give way to expanses of glass, drawing the outdoors in.

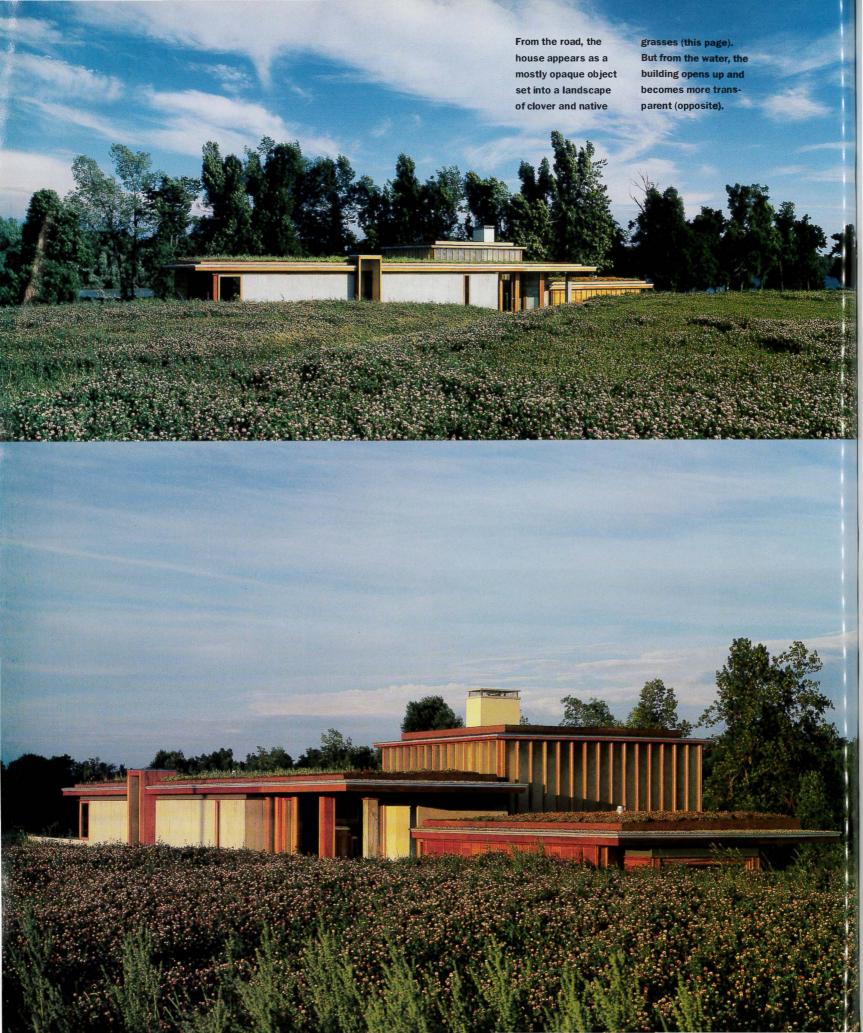
Some of the most remarkable passages, however, involve F-2's long, interior vistas. The house's west end forms a deep crevasse: two parallel concrete walls, nearly 70 feet long and 30 feet high, between which a straight run of Mayan walnut steps ascends. Spanning three stories, the stair offers oblique, layered, and changing views of sleeping and living rooms—all glimpsed through cuts in the concrete walls. High up at the south end of the chasm, a dramatically precipitous glass bridge crosses over the stairway. Transverse steel beams, under clear panes of mullionless glass, brace the tops of the tall parallel walls. As you look up, the glazing seems to disappear, and you feel as if you're in the open air, beneath the sky, held powerfully between two concrete monoliths. In this very spot, the climbing wall would have stood. And here, F-2's language of walls, its entire interior landscape—or "geology"—suddenly snaps into focus. Though the climbing feature went by the wayside, the owners still make an ascent, every day, to the summit.■

Sources

Concrete: Cemex Lighting: Targetti

Stone floors: *Ponzanelli (travertine)*

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Shim-Sutcliffe blends natural with artificial landscapes around its rural ISLAND HOUSE and urban TOWER HOUSE

ISLAND HOUSE

By Clifford A. Pearson

he architects didn't anticipate their clients swapping homes for a weekend. But the work of the husband-and-wife team Brigitte Shim and Howard Sutcliffe has a way of reaching out and making surprising connections—between indoors and out, between buildings and their settings, and even among strangers.

Although the Island House and Tower House moved forward at

roughly the same time, they didn't seem much alike at first. After all, a wood-and-glass vacation home on an island in the St. Lawrence River has little in common with a concrete-board "tower" squeezed onto a tight urban lot in Stratford, Ontario. Closer inspection, however, reveals a common architectural DNA, expressed differently in response to environmental circumstances and client needs.

Perhaps the most important trait of both houses is an ability to link construction with context, to

connect architecture with its historical, cultural, and physical surroundings. You sense this quality most immediately in the Island House, a 2,000-squarefoot residence that stretches out along the land like a Frank Lloyd Wright design moved north of the border. Set in one of the Thousand Islands on a rolling meadow of clover off a country road, the building seems to have an easygoing relationship with its habitat. "Spread out, kick back, open up," it seems to say. "Have another glass of wine and enjoy the view of the water."

Slowly, though, the house reveals a more complex order. That gentle field of natural grasses, clover, and wildflowers turns out to be the work of meticulous planning, and that lazy path to the front door the result of extensive earth moving to create rolling berms on either side. When Shim and Sutcliffe did the landscape design, they positioned the house so that the summertime clover blocks views of the road and turns the front yard into a continuation of the farmland across the way. They planted two of the house's roofs with wildflowers and created a "dry garden" of crushed limestone and rock excavated from the site during construction.

But what, at first, seems to be a house blending seamlessly with its setting turns out to be an object consciously inserted into the land. A 200-foot-long, poured-concrete retaining wall runs along the front or north side of the house and extends beyond it to define an outdoor room where clover gives way to paving. Behind the house, facing a bay of the St. Lawrence River, a reflecting pool separates building from land.

"We wanted to address the existing landscape but also create a





The only access to Howe Island is by boat.

new landscape within it," explains Shim. So, in addition to planting native grasses and restoring a wetlands, the architects set small rectangular "islands" of rushes within the reflecting pool and created paved and decked outdoor spaces. The artificial landscape informs the natural one, initiating a

dialogue about architecture and its relationship to this place's history as farmland, fishing venue, and now vacation area.

The clients, who live in urban Pennsylvania but have long kept a boat on the St. Lawrence, asked Shim and Sutcliffe for a "clean, open, modern house." Simple materials such as wide planks of Douglas fir with vertical battens, mahogany, concrete, and slate establish a relaxed aesthetic, appropriate for a vacation home. In plan, the house is straightforward: Two horizontal wings (one containing bedrooms and a study, the other the kitchen and dining room) flank a cubic living space rising from the center of the composition. At its base, looking south to the water, the living room is wrapped in clear glass but above is translucent fiberglass. "We thought of the living room as a Noguchi lantern," says Sutcliffe.

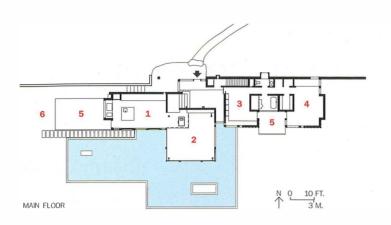
While most of the house is a wood-frame structure, the livingroom volume is framed in steel. Cruciform and cylindrical steel columns, set back from the building's skin, allow two glass corners here to slide open, creating a spatial flow between outdoors and in.

Project: Island House, Thousand Islands, Ontario, Canada Architect: Shim-Sutcliffe Architects— Brigitte Shim, Howard Sutcliffe, principals; Donald Chong, Jason Emery Groen, John O'Connor, Min

Wang, Theo Kelaiditis, project team Engineers: Blackwell Engineering (structural); Toews System Design (mechanical)

General contractors: Peabody and Sheedy Construction

ISLAND HOUSE



- 1. Kitchen
- 2. Living
- 3. Study
- 4. Master bedroom
- 5. Deck
- 6. Dry garden





The architects designed a variety of outdoor spaces, purposely mixing and sometimes blurring the distinctions between naturalistic landscapes, such as a restored wetland, and artificial landscapes, such as a reflecting pool with rectangular "islands" of bulrushes (this page). Planted with wildflowers, the house's two lower roofs become "abstract meadows," says Shim.





A fireplace anchors the interior, but the living room's translucent shell gives the space the sense offloating in the landscape (right). Water in the pool acts as a visual and metaphorical link to the river. The entry hall (above left and right) frames partial views of the yard and the river beyond but obscures other views that become visible from the living room.







As the Internet has shown, communities can develop among people who never meet face-to-face. A similar, though less technologically assisted, bond developed between the Pennsylvania couple and the client in Stratford as their houses moved from idea to reality. They all followed the progress of the two residences and found themselves drawn into the congenial little universe of Shim-Sutcliffe clients.

In Stratford, Shim and Sutcliffe faced a completely different set of challenges. The client, who owns a restaurant and cooking school operating out of an old boathouse downtown near the Avon River, wanted to build a house next door on a three-car parking lot. With an eight-story precast apartment building on one side and a five-story neo-Georgian apartment block pressing in on the other, the new house and its attached restaurant/cooking school had to negotiate tricky changes in scale, materials, and function. No rolling meadows of purple clover here: just an urban jumble.

Using a multipart strategy, the architects slipped a four-level, 40-foot-wide house onto the site and connected it to the restaurant with a gently sloping corridor, lined on one long side by a canted, freestanding, poured-concrete wall. Although the corridor provides access only to the restaurant, the concrete wall—a nonstructural element—is an important visual link to the house, which is clad in concrete board. Translucent greenhouse glazing above the corridor as well as outdoor materials preserve the memory of the outdoor path that once ran alongside the restaurant. The result is like a zipper, fastening restaurant to house, indoors to out.

Although the house is much smaller than the apartment buildings nearby, its concrete cladding and sculptural form give it enough visual heft to stand up to its neighbors. Shim and Sutcliffe also added a bay to the front of the restaurant, providing an extra 250 square feet of dining area and more directly addressing the street. Although modest and simple, the new front serves as a key piece in the urban ensemble, helping everything snap into place. For the area behind the house, the architects redesigned a tiny existing courtyard and added an L-shape water garden that gives the new building some space to breathe. With its country cousin, the Tower House shares a vocabulary of wet and dry landscaping to establish a complex relationship to its context—engaging in places, aloof in others.

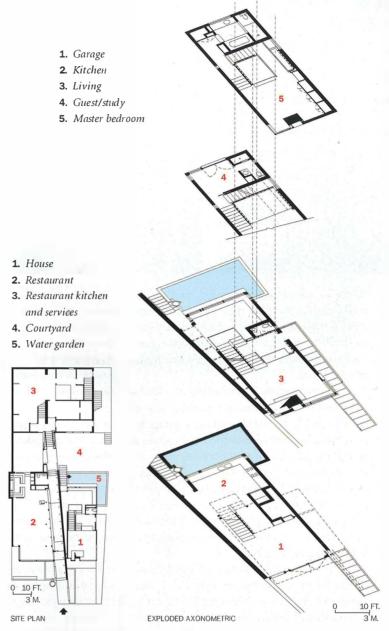
For the inside, the architects created a fluid series of spaces, just as they did in the Island House. But instead of running horizontally, the interiors of the Stratford house unfold vertically, pinwheeling around a three-story-high atrium topped by a clear acrylic skylight.

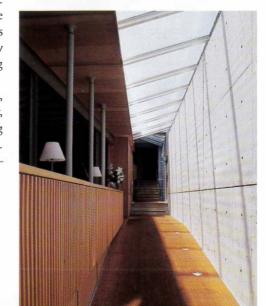
Project: Tower House, Stratford, Ontario, Canada

Architect: Shim-Sutcliffe Architects— Brigitte Shim, Howard Sutcliffe, principals; Donald Chong; Jason Emery Groen, John O'Connor, assistants; Min Wang, Theo Kelaiditis, drawings; James Song, model

Engineers: Blackwell Engineering (structural); Toews System Design (mechanical)

General contractor Dan Paul Design





An enclosed ramp (left) leads to the restaurant's dining rooms. An outdoor ramp on the other side of the property (not shown) provides access to the house. The sculptural quality of the "tower" and a new front for the restaurant help the pair stand up to their bigger neighbors (opposite and top left).





"Since it was designed for one person, it's really one space that just spirals up and around," says Shim. Indeed, the house has only two interior doors: a sliding door to the guest room/study that's usually open and one to the powder room.

A two-story kitchen (above left and right) allows students to watch from a balcony. Most rooms feed directly off the central atrium (right).

Structurally and spatially, the house works as two stacks of rooms on either side of

the atrium. The front half contains a garage below grade, and a 12-foothigh living room and master bedroom, while the back portion encloses a two-story-high demonstration kitchen for the cooking school, a guest room/study, and a master bathroom. The separation of front from back allowed the architects to stagger floors, so you climb only part of a level at a time and experience the house as a continuous series of spaces. While most of the house is framed in wood, a steel moment frame hidden in a side wall and a mastlike steel column partially exposed on the front facade hold everything together.

Like college alumni who meet only after they graduate, the clients for these two houses now feel a common bond forged by the process of creating architecture. While exploring the complex web of relationships between the built and natural environments, the new and the existing, the clients and their architects deepened their understanding of how seemingly unrelated things connect. Shim-Sutcliffe's work has always presented design as a continuum in which one discovery leads to another. So it isn't surprising that these independent commissions turned out to be flip sides of the same architectural coin or that the clients would want to try living (for a weekend or so) at the other one's place. ■

Sources

Translucent fiberglass: Graham Products (Island House) Green roof system: Soprema

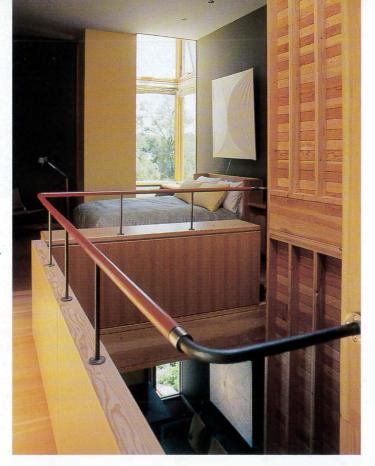
Douglas fir windows: Sashmen Cement-board panels: Macmillan Bloedel (Tower House)

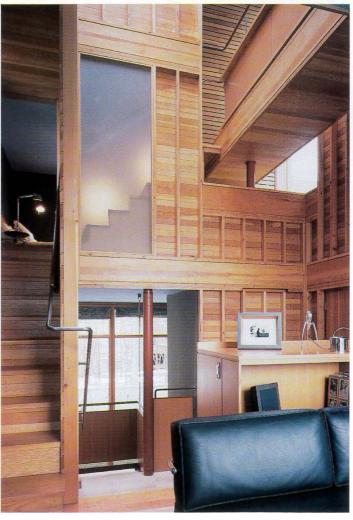
Modified bitumen roofing: Soprema Greenhouse glazing: Jonckman

Douglas fir windows: Loewen Windows

Low-voltage lighting: Eurolito French limestone tiles: Enmar

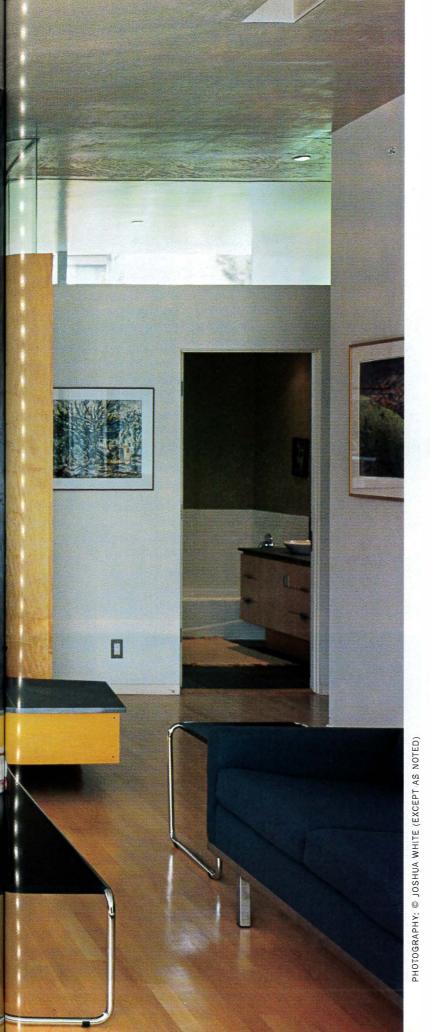
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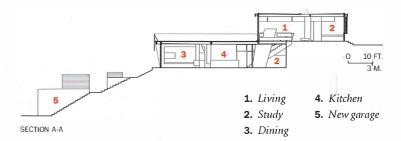






Daly, Genik Architects

deftly reincarnates a **SANTA MONICA** bungalow



By Thomas Hines

he Ocean Park district of Santa Monica, California, is a small but historically rich neighborhood—one resonant with images from the long, still-vital tradition of Southern California Modernism. Within a few blocks of each other are Irving Gill's pioneering 1919 Horatio West Court and the home of the late critic Esther McCoy, the midcentury doyenne of Los Angeles architectural culture. (Here, she engaged Rudolph Schindler for modest remodeling.) Nearby is the studio where Richard Diebenkorn produced his luminous Ocean Park paintings—a series of abstractions evoking the local coastal landscape.

In this stimulating but demanding context, Kevin Daly, AIA, of Daly, Genik Architects, transformed and enlarged an existing early-20thcentury bungalow, creating a house that respects its Modernist context and geographical setting—without any sense of mimetic replication. Genealogically, Daly, Genik's Beverley House recalls the Case Study Program, which sponsored nearby houses by Richard Neutra, Eero Saarinen, J.R. Davidson, and Charles and Ray Eames. While architectural cognoscenti can delight in the house's multiple references to this tradition—open planning, flat roofs, ribbon windows, fluid integration of inside and out—this building speaks directly in its own clear voice to the owners' programmatic needs and the architects' contemporary vision.

Fronting a hilltop street, amid closely spaced homes, Beverley House looks west, over a neighborhood park to the Pacific Ocean beyond. The building is larger than its trimly modest street elevation would suggest. Its entry level includes a generous living room, large deck, small study, and suite of family baths and bedrooms, designed for a philosophy professor, her entertainment-lawyer husband, and their 11-year-old son. A compact entry hall merges with a stairway leading down a flight to a large kitchen and dining area, a guest room, and a study. Much of the house offers westward views toward the ocean and seacoast. In the volatile Los Angeles building market, such views are protected from blockage by the valued city park below.

Thomas Hines, a professor of history and architecture at UCLA, is the author of Irving Gill and the Architecture of Reform (2000).

Project: Beverley House, Santa Monica, Calif.

Architect: Daly, Genik Architects-Kevin Daly, AIA, principal in charge; Christopher Genik, AIA, consulting

principal; Scott Allen, Jacki Hah, Elinor Nissley, Sarah Pelone, George Tolosa, design team

Engineers: William Koh & Associates General contractor: Bonura Building





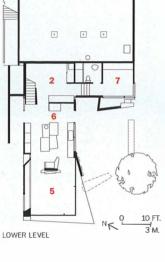


Cedar cladding with a pivoting door (above) replaces the streetfront garage (left) of the original house (bottom left).A veil-like sunscreen of perforated steel (above) moves on a track. The same sheer but paradoxically rigid material wraps the new deck above the dining area (right). The stair and supporting fin wall (opposite three) were cast monolithically in concrete.



- 1. Living
- 2. Study
- 3. Master bedroom
- 4. Bedroom
- 5. Dining
- 6. Kitchen
- 7. Guest
- 8. Deck







The place now reads as a totally new building, but it is technically and legally a remodel, since its upper level occupies the footprint of the preexisting bun-

galow-which, in yet another remarkable connection to the region's cultural history, once belonged to the flamboyant evangelist Aimee Semple McPherson. Although that 1,150-square-foot building was not landmarked, the architects had incentive to keep at least 50 percent of its exterior framing. Whereas a teardown would have decreased the buildable envelope, reuse of that framing entitled the architects to the original zoning allowance. Daly, Genik thus retained the footprint and most of the perimeter wall studs for their upper floor, but demolished the old pitched roof. At 4-foot intervals, they inserted steel columns, taller than the existing studs, to support a flat roof and allow for a band of clear glass between old and new roof levels. This configuration gives their roof a light, floating quality.

Equally subtle design moves enrich the generally straightforward plan, now encompassing 2,800 square feet. On the front elevation, a perforated stainless-steel sunscreen—sheer and draped like a curtain hangs from the eaves on tracked rollers. Operated by an indoor crank, it can slide sideways to veil, or to completely reveal, a large window. Elsewhere, windows pivot outward from exterior corners or slide back to





create beguilingly open corners—made feasible by the absence of screens in this virtually bugless coastal climate. Obliquely angled fireplace hearths and outdoor stairs and terraces counter the building's dominant orthogonality. A large, cast-concrete fin wall rises like a megalith from the study at the bottom of the stairs to an attenuated peak above the stair railing in the living room. Rough marks left by wooden forms help make this piece of structural sculpture—cast monolithically with the stair—one of the design's most artful elements.

In a rather densely built neighborhood, on a lot measuring only 50 by 150 feet, the architects skillfully achieved streetfront privacy with openness in the back. The clients, serious cooks, especially enjoy the large and amply equipped kitchen. Integrally connected to the dining room, this favored family area opens, in turn, to the garden. With comfortable, lightfilled spaces that blur indoor/outdoor boundaries, Daly, Genik created a house that fits right into the Modernist tradition of Southern California living—functionally, aesthetically, and symbolically.

Sources

Door: Paneltec (sliding aluminum

Plumbing: Kohler (faucets, sink, tub); Moen(tub, shower); Kindred (sinks)

www For more information on the people and products involved in this project, go to Projects at architecturalrecord.com



Jacques Moussafir inventively skews

the symmetry of a cube with his

STEIN-FLEISCHMANN HOUSE near Paris

By Claire Downey

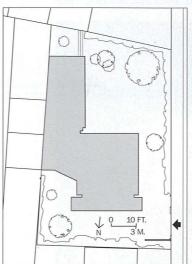
Iternative housing in Suresnes, France, usually means a péniche, or houseboat, on the Seine. Converted barges, which often resemble small mansions and probably don't see much sailing, line the quay of this affluent suburb, just 5 kilometers west of the Champs-Elysées. Here, bland, white apartment blocks, interspersed with traditional shuttered homes, abound. Hard not to notice, then, the Stein/Fleischmann House, set behind an aluminum gate, with its facade of opaque glass, tinged light green, and its main staircase, a pitched, polycarbonate-sheathed volume that glows at night. Although the house measures only 2,045 square feet, it conveys a sense of procession and expectancy.

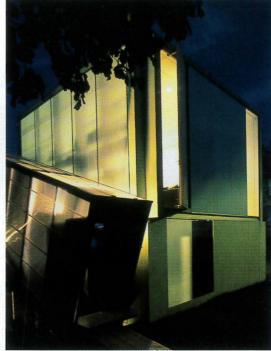
At once connected to the urban fabric and detached from it, the building stands at the city's edge,

just before Suresnes breaks down into primarily freestanding houses. The architect, Jacques Moussafir, wanted the house to parallel the street with enough mass to hold its own among nearby apartment buildings, while still retaining the intimacy of a single-family home.

The family here is a young couple—she's an artist; he's in advertising and passionate about architecture—and their two children. When they called on Moussafir, now 44, he had just set up his own practice after years in the offices of some of France's best-known architects, including Henri Gaudi, Christian Hauvette, and Dominique Perrault. Around this time, Moussafir had designed a school for the arts at the University of Saint Denis [RECORD, November 2001, page 202] that would bring him some international attention. "Still," says Moussafir, "the client—an old family friend—was taking a big risk, as I had never yet completed a project on my own, and their money was tight." After buying the lot, the couple was left with only \$180,000 to construct a house and artist's studio.

Yet Moussafir achieved a design that moves us up, down, and through its different zones as smoothly as he rolls off his richly accented English. (South African born, he spent part of his childhood in Greece and England before settling in France.) One of the first decisions he made was to put the bedrooms and studio on the ground floor and the living





room above. With a thicket of live bamboo, a high wall of iron grillwork, and an aluminum gate separating the site from the street, the bedrooms actually enjoy privacy at the garden level. Each bedroom has a sliding glass door opening directing onto the lawn, as well as thick, wood exterior shutters, which can be pulled closed. The lower-level ceilings are lined in steel decking: formwork intentionally left in place after the upper-level concrete floor slab was poured. Besides its aesthetic qualities, the steel adds rigidity to the living room floor.

The living room itself is a cube, rising 13 feet. Seven full-height vertical openings—five of which are glazed—flood the space with light, yet leave enough solid wall to create a sense of enclosure. Respecting the northern European mania for fresh air, the two unglazed apertures actually have tall doors of tropical Iroko wood, which swing outward. This wood will lighten to gray with exposure, but heartily withstands humidity and temperature change. A railing protects the unsuspecting from a sudden free fall down one story. Even in winter the doors might be open

Project: Stein-Fleischmann House, Suresnes, France

Architect: Moussafir Architectes Associés—Jacques Moussafir, principal

Contractors: ERMIF (electricity and masonry); La Seconde (timber and metalwork); Dewerpe (glazing); Sanitoit (heating and plumbing)

Claire Downey is ARCHITECTURAL RECORD's Paris-based correspondent.

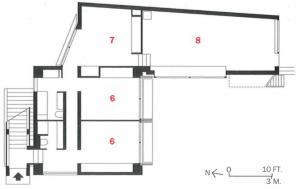




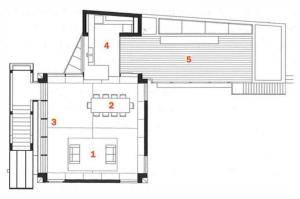
Behind a clear glass panel on the luminous book wall, the entry stair's canted polycarbonate envelope is visible (opposite, top and bottom). The cubic form of the combined library, living room, and dining room is animated by the hinged flaps of Iroko wood

doors and by long, vertical slots of fixed glass: apertures that permit an occasional slash of light to cut across the room (above and opposite). The compact kitchen's counter (above and opposite, bottom) cuts horizontally into the volume of this 13-foot-high room.









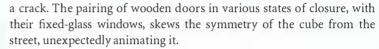
ENTRY LEVEL

- 1. Living
- 2. Dining
- 3. Library
- 4. Kitchen
- 5. Deck
- 6. Bedroom
- 7. Master bedroom
- 8. Studio





The view of a tree outside is glimpsed at the top of the entry stair (top), with its angled, rhythmic structure accentuating the experience of ascent and arrival. Steel formwork from the upper-level concrete floor is exposed on the lower level's ceiling (bottom).



The journey through the house constantly leads you through a door toward a window, or catches you on axis between two views. "Each view is a vignette of the surrounding context," says the Moussafir. "And I wanted the house to breathe." The very small kitchen, open on three sides, allows you to survey the entire building from a pivotal position between

THE JOURNEY THROUGH THE HOUSE **CONSTANTLY CATCHES YOU** ON AXIS BETWEEN TWO VIEWS.

the main cubic volume and the thin extension of the studio wing. Where the rear of the house abuts a neighboring structure, Moussafir inserted a long light well, enhancing the luminosity of the studio. One of the house's most interesting features is the striking contrast between apparent exterior solidity and interior openness, achieved through light and skillfully incised openings.

The qualities of light and color constantly change throughout the building. The mark of the resident artist, who influenced the palette, shows up in some of the wall hues, such as dark blue in the ground floor hall or lavender blue in the kitchen upstairs.

The Stein/Fleischmann House is a surprisingly seductive place. The simpler its clean-lined volumes appear, the more interesting and nuanced it becomes, ultimately seeming much bigger than it really is. Yet it is so comfortably compact. When the owners' young children eventually need more room, the family will, they imagine, build another house, rather than disturb Maison Stein/Fleischmann's finely integrated spaces. One thing is sure: They won't be changing architects.



Sources

Exterior stucco: La Seignerie Polycarbonate cladding: Everlite Danpalon

Glazing: St. Gobain (double laminated and sandblasted)

Wood: Iroko

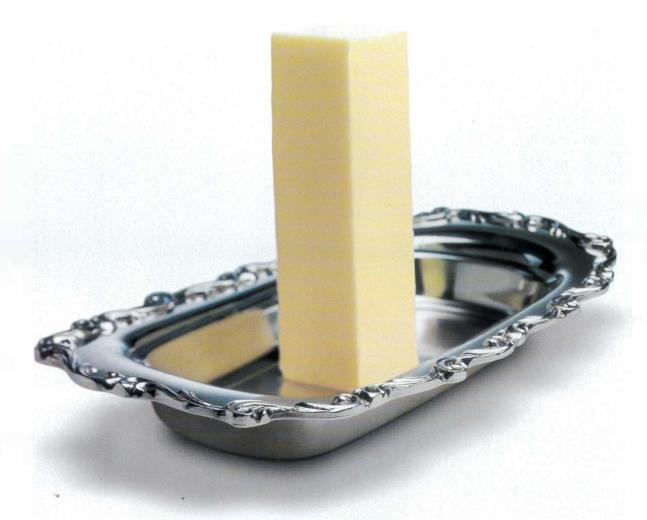
Perforated plasterboard: Knauf

Lighting: Erco (wall washers) Concrete surfacing: Durcisseurs Francais (with integral color)

www For more information on the people and products involved in this project, go to Projects at architecturalrecord.com.



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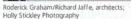
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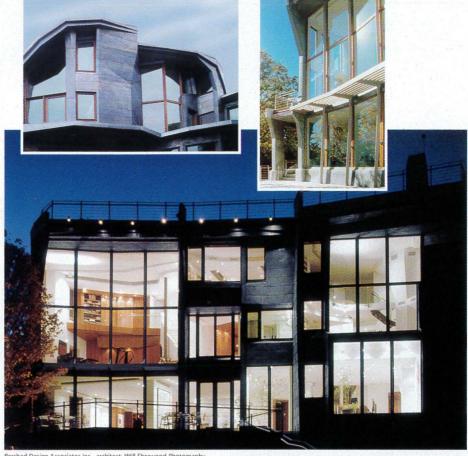
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Architects discover the flexibility of lightweight and durable fabrics

ADVANCES IN FILMS AND COATINGS MAKE FABRIC AN EXCELLENT ALTERNATIVE TO GLASS

By Todd Willmert

abric lacks the permanence of masonry or metals, yet certainly the material has as long a history in architecture. The Roman word velarium—which is still used today—meaning a large awning, especially one suspended over a theater or amphitheater, hints at fabric's importance in providing shade within these building types. Today, the generic term "fabric" refers to a wide assortment of materials: fiberglass; polyvinyl chloride (PVC); ethyltetrafluoroethylene (ETFE) foils; and polyester—and their many coatings, such as polytetrafluoroethylene (PTFE), or Teflon—that represent an evolution similar to the one glass has enjoyed due to recent advancements in films and coatings. Christian de Portzamparc's Louis Vuitton Moët Hennessy (LVMH) tower in Manhattan, for example, uses 24 different kinds of glass, each one with a different U-value and shading coefficient.

Now new fabric materials are gaining acceptance as both an alternative to glass and to other building materials. Traditionally, fab-

ric's primary architectural use has been for awnings to block the sun, but current work is challenging this concept. Increasingly, architects are exploiting its light-transmission characteristics—either allowing day-

Todd Willmert is an architect and researcher at the University of Minnesota's Center for Sustainable Building Research at the College of Architecture and Landscape Architecture.

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 190 and follow the instructions.

LEARNING OBJECTIVES

After reading this article, you should be able to:

- 1. Describe how fabrics can be used to transmit light.
- 2. Explain the current popularity of fabrics in architecture.
- 3. Discuss recent projects using fabrics to control light transmission.

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



The Samsung visitors center at the Winter Olympics in Salt Lake City, designed by Imagination, was made of a polyvinyl chloride skin stretched across a space frame.

light in or keeping electric light out—within temporary or portable projects and permanent buildings, as well.

Temporary applications

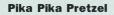
Projects by Tokyo-based Klein Dytham Architecture over the past several years have explored the vocabulary of light within lightweight structures. Its "Pika Pika Pretzel" project, built in 2000 [RECORD, November 2000, page 73], was a temporary, promotional structure for a prominent site in one of Tokyo's busiest shopping districts. The international developer, Velogx City Investment, wanted to capitalize on the site's 111-foot street frontage to create something eye-catching and unusual, to boost their entry into the Japan market and pique interest in the retail center for nine months prior to construction.

Pika Pika (Japanese for "shiny") consists of the four 6-meter high "pretzels" made of polyurethane-coated nylon, the same material as high-altitude balloons. The reflective pretzel body—achieved with metalized polyester laminated to the nylon—contrasts with the translucent white material of the pretzel holes, which glow after dark when the inflatables are internally lit. Similarly, the set of five portable canopies that Klein Dytham designed for Festival UK 98, a yearlong celebration in Japan organized by the British Embassy and Council to feature information on British products, services, and culture, become beacons when lit from within by their by 20 sodium halide lights. The inflatable "pillows,"

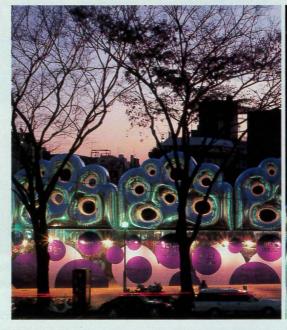


Festival UK 98

Five portable canopies by Tokyobased Klein Dytham Architecture were made of polyurethanecoated nylon and lit from within by 20 sodium halide lights.



Klein Dytham designed this temporary, promotional structure (right and far right) for a busy Tokyo shopping district. Made of polyurethane-coated nylon, it is inflated and lit from within so that it glows at night.





also fabricated from polyurethane-coated nylon, and their aluminum framing were designed to be dismantled and reassembled at as many as 30 locations throughout the year.

More recently, the Olympic Rendezvous @ Samsung (OR@S) stood for two weeks in February at the Winter Olympics in Salt Lake City. Designed by Imagination, a London-based multidisciplinary

ARCHITECTS ARE EXPLOITING [FABRIC'S] LIGHT TRANSMISSION—ALLOWING DAY-LIGHT IN OR KEEPING ELECTRIC LIGHT OUT.

design firm, to create an interactive visitors center to showcase the electronics manufacturer's products, the two-story, 12,500-square-foot pavilion was essentially a white, space-frame/truss structure with a PVC skin stretched over it. The roof and three sides of this structure were opaque (blackout PVC) so that the exhibition designers controlled the theatrical and exhibit lighting effects. The front side was made of a clear PVC (actual light transmittance of about 80 percent), which allowed light to shine in during the day and out at night. This clear face also enabled the pavilion's internally illuminated front billboardlike facade to be viewed from the pavilion interior.

The front facade was actually a separate structure that sat in front of the pavilion's clear PVC entrance. This structure was composed of internally illuminated, molded fiberglass wave forms, on which there were both scenically painted and applied vinyl graphics and integrated LED video wall components. Visitors passed through these wave forms to enter the pavilion, and, when inside, they could project their own images on the outside screens through picture phones using a Web-based picture kiosk. These images of visitors were displayed along with scrolling text messages and live videos from competition action.

As with most of these materials, PVC's ability to transmit light is quantified through testing. Some architects, however, prefer a more intuitive, hands-on approach. Alan Parkinson, who designs Architects of Air's luminaria (sculptural, pneumatic, immersive environments), does not specify light-transmission percentages; rather, he spends time at the factory lab participating in the process of producing and testing materials.

"The chemistry of PVC, the material we use, appears to be quite prescriptive, in that it is hard to actually get good, clean, luminous

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Luminaria

Inflatable, sculptural environments by Architects of Air are made of both reinforced and unreinforced polyvinyl chloride (PVC). The material is cut and glued by hand in a former lace factory in Nottingham, England. Portable sections are zipped together on-site, and the structures are inflated by large fans. They can reach more than 30 feet in height and cover 10,000 square feet.



colors that are neither too opaque nor translucent," he explains. Just as light traveling through stained glass picks up the glass color, light is "stained" when it passes through the PVC. Since the luminaria's luminous effect hinges on the PVC's color and light transmission, Parkinson's attention to material fabrication is essential. In specifying, Parkinson also is most mindful of the PVC's flexibility and reaction to

"PVC IS ALSO WATER IMPERVIOUS AND HAS A LOW EXPANSION/CONTRACTION RATE FROM TEMPERATURE CHANGES."

cold temperatures, all-important factors impacting a structure's portability. As the luminaria travel from site to site, much as circus tents do, such considerations affect the long-term durability of the PVC and the structure itself.

Parkinson works with the Belgian firm Solvay developing PVC to his specification and uses off-the-shelf PVC from the French manufacturer Ferrari for the structure's high-pressure elements—the exoskeleton-ribbed structures that support entry areas, the airlock, and

the entrance canopy. Parkinson works with Solvay's specially commissioned, unreinforced PVC for the main chambers of his luminaria structures. In contrast, the Ferrari PVC is reinforced with woven nylon, giving it relative dimensional stability critical to airlock function. The luminaria's entry components are conventionally supported and reinforced, and the structures themselves are continually inflated with six to eight small fans, depending on luminaria size, to balance the air lost as people go in and out. The slight movement and swaying in the unreinforced PVC spaces, and their curvilinear surfaces and lighting effects, all contribute to the luminaria's unique environment.

A space frame obviously creates a different type of environment, although it too has a PVC skin. In the Samsung pavilion, Mike Sloan, an architect and head of 3D design at Imagination, addressed factors informing material selection. "PVC material is stronger structurally than other materials in the same price range, allowing us to achieve greater spans between structural members," says Sloan. "PVC is also water impervious and has a low expansion/contraction rate due to temperature changes. Both qualities were critical in Salt Lake City, where the weather can change radically from day to day. The PVC

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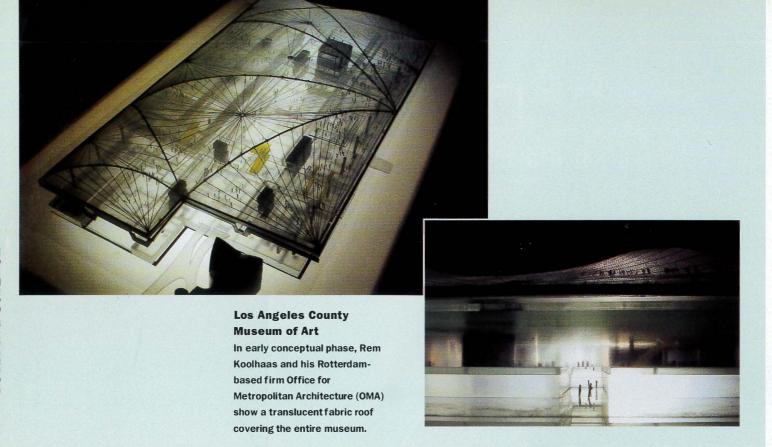


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material also came in the bright white color we were looking for, while still staying within our budget."

Permanent applications

Some of the most striking fabric applications are structures for exhibitions or other temporary uses. Fabric is perfect for these situations, and fabric structures have as well long been used in bubble domes and other similar facilities. But the material use is not limited to these temporary or semipermanent structures, with some current applications on building types with more exacting environmental standards. The advantages and quality of a luminous fabric roof are not sacrificed to other important considerations.

Marwan Al-Sayed's recent House of Earth and Light in Phoenix [RECORD, March 2001, page 47] and Rem Koolhaas's Office for

THE MATERIAL USE [OF FABRIC] IS NOT LIMITED TO TEMPORARY OR SEMIPERMANENT STRUCTURES.

Metropolitan Architecture's (OMA) proposal for the new Los Angeles County Museum of Art (LACMA) both utilize luminous fabric roofs that filter daylight. In fact, the light filtration is central to each project's parti.

The House of Earth and Light juxtaposes heavy, poured earth walls (a mix of soil and portland cement that is poured into concrete forms) with a lightweight, layered fabric roof held aloft by eleven metal trusses. The house's moniker—Earth and Light—is found in these two key building elements that comprise walls and roof. Eighteen-inch walls play against the metal frame and fabric roof in a game of contrasts between heavy and light materials, but they also address the environmental performance. The walls' high thermal mass counterbalances the lightweight roof, to help stabilize temperatures. Al-Sayed



House of Earth and Light

Marwan Al-Sayed's House of Earth and Light in Phoenix has a lightweight fabric roof supported by 11 steel trusses. The roof is constructed of two layers. The outer layer reflects sunlight and absorbs heat. The interior layer is waterproof and separated 6 to 15 inches from the exterior by an air space.





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notes that he "banked on the relative high performance and technical advancement of fabrics such as the Ferrari Solstice and 702 Floutop T, which have excellent UV inhibitors, very good heat rejection, and low heat-transmission properties."

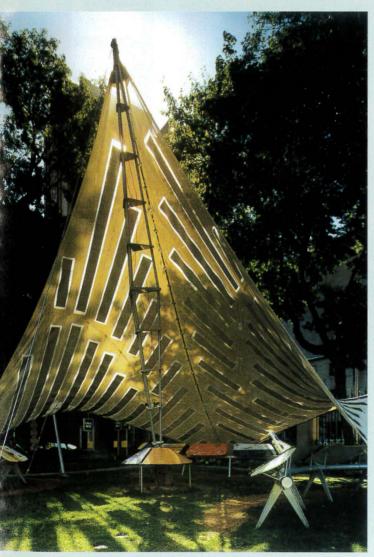
In addition, he also based the design on the "principle of layered skins." The top layer is the microperforated Solstice fabric—a so-called

TRANSPARENCY AND UPLIFT ARE MANIFEST IN THE RIBBED ROOF, CROWNING AND OVER-ARCHING THE ENTIRE MUSEUM COLLECTION.

"sacrificial" layer insofar as it takes the brunt of the heat and direct sun and reflects it back into the sky or absorbs it. This layer thus protects and shades the second layer, the Floutop T fabric, which still allows light transmission. This second layer is the waterproof layer, separated from the top layer by about 6 to 15 inches of exterior air space, both layers attached to the top and bottom chords of 11 custom-designed steel trusses.

The original design called for an additional inner layer creating 6 inches of dead air space between the second layer and this last interior layer. However, the owner opted not to add that fabric layer, one that Al-Sayed would have used to introduce subtle colors within the house. As it is, the trusses and fabric ductwork within them, both light elements, allow the roof to "act as an ever-changing filter with the outside world," according to Al-Sayed. The layers of translucent and light-transmitting fabrics dematerialized the roof, revealing the sun's movement and the shadows of passing clouds and birds.

Similar poetic notions drove OMA's LACMA scheme, but at a vastly greater scale. The proposed redesign of LACMA literally puts the collection under one roof, the top-floor exhibition area surmounted by a translucent fabric roof resting on a metal frame. Visitors will ascend through the exhibitions from the plaza level below, their movement guided by the luminous roof. Transparency and uplift are manifest in the ribbed roof, crowning and overarching the entire permanent museum collection.



The tensile pavilion (above) at the Cooper-Hewitt exhibition had PVs laminated to the polyester fabric. The U.S. Army is investigating a field tent (right), called the TEMPER, an acronym for Tent Modular Personnel, which has PVs bonded to the fabric surface with pressure-sensitive adhesives.

Fabric and photovoltaics

A corollary to fabrics that transmit light are fabrics that capture light. Photovoltaics (PV) are being integrated with fabrics, just as they are with other building components, such as windows or shingles. Applications include fabric structures that shade while simultaneously converting sunlight into electricity.

The Cooper-Hewitt National Design Museum's 1998 exhibition *Under the Sun* featured a 32-foot-high tensile pavilion, the first fabric structure to incorporate PV technology into its design. Flexible, thin-film photovoltaics were laminated to a translucent fabric, a woven polyester cloth coated with PVC. The structure, designed by New York–based FTL Happold, demonstrates off-grid power capacity for a variety of temporary or permanent applications, including light shade pavilions for parks, parking lots, and urban open-space shelters for school and other

community groups in rural and remote areas; deployable camps for travel; and military use.

FTL Happold's design for that installation led to two current projects. One is with the New York State Energy Research Development Authority (NYSERDA), to develop commercial products employing fabric and PV. The other is with lowa Thin Film and the Department of Defense (DOD) devel-



oping photovoltaic fabric for military applications—a project particularly relevant given the U.S. military's need to maintain far-flung troops, often in offgrid locations.

The idea behind military PV fabric applications stems from the DOD's need to establish camps for hundreds or thousands of soldiers and support personnel, requiring fuel and generators for extended duration. Power with photovoltaic field tents—such as the photovoltaic tent fly currently under investigation—can reduce the logistical burden associated with managing fuel supplies and depots. FTL is developing mock-ups to explore such issues as folding, wiring, handling, and manufacturing.

The leap from PV tents to more architectural applications is not great, as suggested by NYSERDA's interest in the technologies, especially with the increasing interest in building integrated photovoltaics [RECORD, January 2001]. Today, fabric is used architecturally to give shade or as an architectural skin; it will perform those tasks tomorrow, too, with the potential to generate electricity, as well. *T.W.*



OMA partner Dan Wood notes that the design is still in the proposal stage, but preliminary numbers suggest that the "fabric roof offers cost savings over a more conventional concrete shell or other roof material, primarily due to its lightness, with the advantage of more effectively bringing in light throughout the total exhibition area," says Wood.

A museum's UV filtration and light-control requirements pose just two problems that must be solved. Films and coatings can effectively address the former, with light controlled by fabric layers. Wood offers this analogy: "Just as one can take two pieces of perforated metal and arrange

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and overlap them to admit varying degrees of light, we propose the same with fabric layers, offsetting them to vary daylight levels." Not only does OMA propose that the roof will address the museum's light demands, they plan to capitalize on the roof vault in other ways. Retaining the current structure as a service and mechanical plinth, OMA and Arup plan to deliver conditioned air low at the levels of the art and the people, with a layer of stratified, less-conditioned air near the ceiling as insulation.

OMA has long pursued novel fabric applications. The well-publicized Bordeaux House features a chimney fabricated from fire-resistant fabric, and the Educatorium features fabric ductwork. OMA proposes that the LACMA roof will push fabric use in additional ways. The actual roof might consist of an outer skin of a translucent PVC polyester fabric, while the inner membrane layer is made of a transparent ETFE membrane supported by a cable network. But as the project proceeds over the course of the next decade, and the design moves from a competition proposal to construction documents, OMA counts on capitalizing on the evolution of fabric technology.

Whether the applications are temporary or permanent, architects and designers—with the active support of the Industrial Fabrics Association International (IFAI), a nonprofit trade association with 2,000 members—are literally pushing the envelope with all the new and improved fabric materials, and challenging the preeminence of glass as the transmitter of light. IFAI estimates that the demand for manufactured fibers will expand 5.4 percent each year, reaching 44 million metric tons by 2005. Its Sourcebook series, Fabric Architecture, and the annual Designers Guide are resources developed especially for architects. Thompson, Ventulett, & Stainbeck's Georgia Dome (1992), Richard Rogers's Millennium Dome (1999), Fentress Bradburn's Denver International Airport (1995), and, most recently, Nicholas Grimshaw's Eden Project [RECORD, January 2002] are dramatic examples of the advantages fabric presents over glass. It appears that fabric's time has come.



AIA/ARCHITECTURAL RECORD CONTINUING EDUCATION

INSTRUCTIONS

- Read the article "Architects Discover the Flexibility of Lightweight and Durable Fabrics," using the learning objectives provided.
- Complete the questions below, then fill in your answers [page 190].
- Fill out and submit the AIA/CES education reporting form [page 190] or download the form at www.architecturalrecord.com to receive one AIA learning unit.

QUESTIONS

- **1.** Which word is the original Roman word meaning "large awning"?
 - a. atrium
 - b. velarium
 - c. forum
 - d. solarium
- 2. Traditionally, fabric's use in architecture was to block the sun; now it is used for which purpose?
 - a. absorb heat
 - b. reflect light
 - c. transmit light
 - d. block heat and light
- 3. PVC can be made somewhat dimensionally stable by reinforcing it with which?
 - a. woven nylon
 - b. aluminum
 - c. fiberglass
 - d. air pockets
- 4. Samsung used PVC for its pavilion because of which quality?
 - a. PVC is impervious to water
 - b. PVC has a low contraction/expansion rate
 - c. PVC is stronger than similarly priced materials
 - d. all of the above

- 5. Fabrics are appropriate for architectural use in which?
 - a. temporary structures or exhibits
- b. semipermanent and temporary structures
- c. mild weather applications and temporary structures
- d. all-weather permanent and temporary structures
- 6. When designing with layered skins, the top layer does which?
 - a. keeps water out
 - b. keeps heat out
 - c. allows heat in
 - d. keeps light out
- 7. What is meant by the term "dematerialize" the roof?
 - a. the roof is not opaque
 - b. the roof is nonexistent
 - c. the roof cannot be seen
 - d. the roof is not important
- 8. Fabrics are challenging the preeminence of glass for what purpose?
 - a. filtering light
 - b. transmitting light
 - c. capturing light
 - d. dispersing light
- 9. The generic term "fabric" refers to which?
 - a. PVC only
 - **b.** polyester and its coatings
 - c. fiberglass and PVC
 - d. a variety of materials including PVC, fiberglass, ETFE foils, and polyester
- **10.** The light transmittance of PVC ranges from opaque to what percent transmission?
 - a. 100%
 - **b.** 90%
 - c. 80%
 - d. 75%



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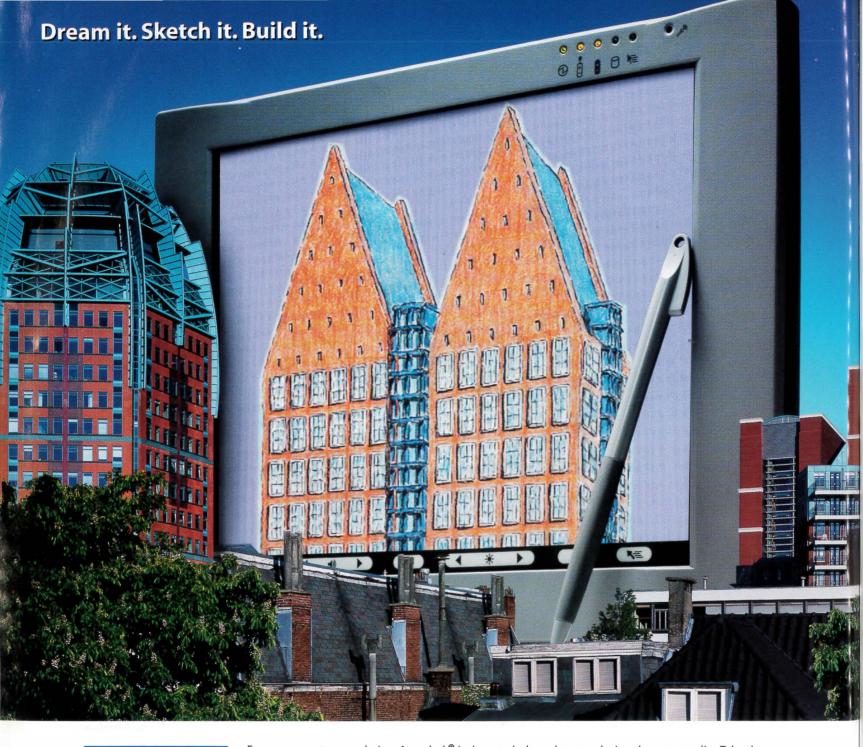
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Digital Architect

The convergence of CAD standards

By Jerry Laiserin, FAIA

Cynical observers have long said that architects must love CAD standards, because we have so many of them. In an ideal world, a CAD standard would be just what the name implies: a single set of rules and procedures for documenting and conveying building design information regardless of the software used to create it or the medium in which it is viewed. But in the real world. there are multiple, overlapping standards, each of which addresses a different set of issues regarding the organization and appearance of CAD files and the sharing of information with non-CAD applications. Steady progress has been made on these fronts over the past few years [RECORD, May 1999, pages 57-58; October 2000, pages 185-86], but the goal of a unified standard has remained out of reach—until now. Recent advances among standardsetting organizations offer renewed hope for more widespread adoption of existing standards, convergence of standards, and perhaps even unification of the various standards frameworks.

The primary players driving this integration are the National CAD Standard (NCS), produced under the auspices of the National Institute of Building Sciences (NIBS)

Contributing editor Jerry Laiserin, FAIA, provides strategic consulting services to architects and their technology providers.

www For more information on technology for architects, including reviews, vendor lists, and links, go to Digital Architect at architecturalrecord.com.

in Washington, D.C.; and the Industry Foundation Classes (IFCs), developed by the International Alliance for Interoperability (IAI), across the Potomac River in Alexandria, Virginia. [Note: RECORD publisher McGraw-Hill is an active participant in IAI].

Drawn and quartered

The NCS is the result of a conver-

gence among three previously independent standard-setting efforts: the AIA's CAD Layer Guidelines (CLG); the Construction Specification Institute's (CSI) Uniform Drawing System (UDS); and the Department of Defense's Tri-Services CAD Center's plotting standards. Collectively, these components define how design files are organized internally (CLG); what goes into a drawing, how drawings are aggregated onto

sheets, and sheets into sets (UDS); and how the digital components are printed or plotted.

Version 3 of the standard will be available later this year and will include new terms, abbreviations, and layers from architecture-related disciplines such as civil engineering, piping, communications, and so forth, as well as a new administration section that clarifies many optional components for conformity to the standard. According to Alexander "Sandy" Shaw, who coordinates NCS activities for NIBS, these incremental

improvements show the maturity of NCS "in the 2D organizational direction." He adds, "We will continue to reach out to related disciplines to expand the usefulness of the 2D information; however, we're also looking beyond 2D toward objects and the facility lifecycle information model."

The need to advance NCS beyond drawings is echoed by

zation and classification information for objects, which naturally pushes NCS closer to IAI and its IFCs."

Object lessons

While 2D CAD merely automates the familiar work of hand drafting, CAD objects represent a new, more intelligent representation of buildings and building components. The real power of objects lies in their

Ist FLOOR C2 DRAWING TITLE

> Having the National CAD Standard built into CAD software, as shown here in ArchiCAD, automates drawing tasks such as title blocks and sheet titles, and ensures coordination and consistency of detail and sheet formats.

Michael Tardif, Assoc. AlA, director of the AIA's center for practice and technology. "Of course, there's still work to be done on drawings, especially the addition of metadata in drawings that will ensure predictability of printed output regardless of the output device or setup," he says. "But to move past drawings, NCS must develop organi-

ability to present virtual buildingsjust like physical objects, CAD objects have attributes and behaviors, such as the handedness and swing of a door, However, interoperability among different programs is far more problematic for complex CAD objects than it is for simple 2D lines. This is where IFCs come in—a system of definitions for classes of

Digital Architect

objects, such as doors, walls, and stairs. If two or more programs, such as space-planning software, a CAD tool, and a cost-estimating package, all comply with the same IFC standard, then they can use and operate on each other's model data.

Since its founding in 1995, IAI has released several versions of IFCs. While many of IAI's 600-plus member software firms chose to wait for the most recent FC 2.x before integrating the standard into their wares, a significant number of IAI members, operating separately under the banner of Building Lifecycle Interoperable Software (BLIS), chose to get a head start by incorporating the earlier IFC 2.0 standard into their products. For

IFC 2.0-compliant CAD Connector can then use the data in the ArchiCAD model to quantify building assemblies for Timberline's Precision Estimating package. Dianne Davis, president of AEC Infosystems, a CAD consultancy and ArchiCAD dealer in Baltimore, sees the BLIS initiative as "taking the technical interoperability of IFCs and building the business case of company-to-company connections around them."

Recently, several major CAD vendors, including Graphisoft, as well as Autodesk (Architectural Desktop), Bentley Systems (Microstation Triforma for Architecture), and Nemetschek North America (VectorWorks Architect) agreed to move forward only CAD product to incorporate support for both the NCS and IFC 2.0 in the same program.

Playing tag

Because IFCs support the ability to move data via "tags," or descriptors, in the Web language XML (Extensible Markup Language), standards enthusiasts such as Tardif at the AIA foresee an opportunity to Using some form of XML will smooth that process."

Shaw at NIBS is hopeful that intermediate steps such as XML will help bring the NCS and IFCs closer together, because that path leads to the utility owners need from their facility information. "After the first release of NCS, NIBS changed the committee name from CAD Council to Facility Information Council (FIC),"

INTEGRATION OF STANDARDS COULD ENABLE A SURGE IN PREDESIGN AND POST-OCCUPANCY SERVICES.

add XML tags to NCS drawing entities so they can be integrated more easily with IFCs. "The goal of converging NCS and IFCs is to get an interconnected set of 2D and object representations for the same data," he says. Facility owners and managers have a keen interest in this

integration, Tardif
notes, adding that entities like corporations,
universities, and medical facilities "do not
want to develop and
maintain their own
drawing and object
standards, and they
don't want to integrate
or translate between
2D standards and
object standards. They
just want to receive
standardized data."

David Jordani, FAIA, agrees. His company, Jordani Consulting Group, in Minneapolis, helps

large organizations such as General Motors and the University of Minnesota manage their facility information. "Owners still have to confront the dominance of legacy

information—2D drawings for hundreds of millions of square feet of space," he says. "NCS provides the continuity and consistency for drawings, but companies moving to object models like IFC need to manage their migration and be committed to maintaining the extended value of the model data.

says Shaw. "That group still develops NCS, but it also does outreach to the IAI and to the OAA [Owners' Association Alliance, a confederation of real estate and industry groups]." A subset of the FIC, the Facility Maintenance and Operations Committee, is preparing to release an XML schema that plugs into IFCs and also allows building equipment manufacturers to publish operating manuals in electronic form that can be read directly by computerized maintenance management software used by owners.

Stirring the alphabet soup

Folks outside the Beltway are easily overwhelmed by the proliferation of TFLAs (three- and four-letter acronyms), but they provide a convenient verbal shorthand for communicating complex issues. As both the NCS and IFCs blossom, with cross-pollination by various forms and flavors of XML, it is clear that FIC and IAI will grow closer together. NIBS will spread an expanding umbrella over the activities of AIA, CSI, OAA, and other interested parties.

This near-cryptographic complexity will benefit architects by increasing the value of the design data we create and extending that value both upstream, toward predesign planning services, and downstream, toward post-occupancy management services, within the total facility lifecycle. No matter how you mix and match the acronyms, that formula spells success.



ArchiCAD is the first product to implement and integrate both the objectbased IFC 2.0 standard and the 2D-based National CAD Standard, a trend likely to be followed by other vendors that have recently committed to IFC 2.x.

example, a space-planning spreadsheet in Microsoft Excel can be converted to a simple floor plan in Microsoft Visio and then turned into a 3D object CAD model in Graphisoft's ArchiCAD—all through the interoperability features of IFC 2.0, without file conversions or reentry of data. Timberline's

over the next three years with implementations of IFC 2.x comparable to what the BLIS project achieved with IFC 2.0. Even previously IFC-aloof Revit Technology joined in the announcement, possibly under the influence of the firm's pending acquisition by Autodesk. However, ArchiCAD is thus far the

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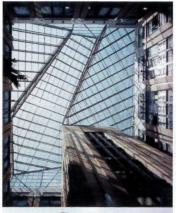


New Products While the overall window and door market may be down a few percent in 2002, manufacturers haven't stopped developing new window and skylight technologies, such

as the historic replications shown below. New trends include an increase in the **number of windows per home**, the adoption and implementation of new energy requirements, and improved style throughout the entire market, Rita F. Catinella

New windows appear historic without sacrificing energy efficiency

Bruner/Cott & Associates of Cambridge, Massachusetts, has earned a reputation designing new, energy-efficient window systems that are visually indistinguishable





15,000 square feet of glass make up each atria of the Landmark Center.

from the historic originals. Two projects-the Watertown Arsenal in Watertown, Massachusetts, and Landmark Center in Boston—showcase their talent for window replacement and restoration.

At Watertown Arsenal, a 750,000-square-foot former U.S. Army manufacturing arsenal, Bruner/Cott developed a system of replicating original steel sash with insulated glazing units. The renovated buildings feature more than 1,000 custom-designed aluminum, doublehung sliding sash with thermally broken insulated glazing. The firm worked with window subcontractor J.K. Glass to design the windows to replicate exactly the lines of the original wood and steel ones, using styles appropriate to each building's historic period (1850s-1950s).

Landmark Center was originally developed in 1929 by Sears. Roebuck & Company. In addition to completely replacing 1,100 steelsash units at Landmark Center with



The Watertown Arsenal required more than 1,000 new windows.

energy-efficient aluminum framed windows, and fully restoring several hundred existing steel sash, the firm also built two new 5,000-squarefoot atria with vast glass skylights. The angular, asymmetrical planes of the skylights were a contemporary

interpretation of the building's original Art Deco design. 800/345-7899. Architectural Skylight, Westboro, Maine, CIRCLE 200 617/578-0800. J.K. Glass, Boston. CIRCLE 201 207/761-4455. Fenestra, Portland, Maine. CIRCLE 202

New vision for vinyl windows

Visions 2000 vinyl windows and doors from Weather Shield come in a multitude of shapes and sizes that allow builders and remodelers to customize projects. Visions 2000 vinyl windows are available in singleand double-hung, single- and double-slide, casement and awning, and direct-set styles. All Visions 2000 windows come standard with an integral nailing fin and fusionwelded corners for increased strength and durability. A multichamber frame and sash design reduces seasonal expansion and contraction.

Weather Shield Visions 2000 windows feature accessory grooves

that can accommodate a number of snap-on add-ons to ease installation. Available solutions for

installation challenges include mull covers to eliminate unsightly grooves between the windows and a full vinyl jamb extension that matches any interior wood trim for easy finishing.

Customizable alternatives include a full selection of glazing options for energy efficiency and ultraviolet

protection, including Low-E glass; vinyl extrusions available in true painter's white or tan; and a comprehensive selection of grilles.

Vision 2000 doors are avail-

able in sliding patio, in-swing or outswing patio, and furniture entrance door styles. 800/477-6808. Weather Shield, Medford, Wis. CIRCLE 203



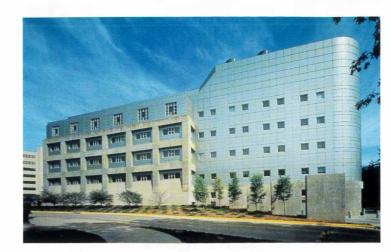




An array of window styles are possible with the Vision 2000 series of vinyl products.

◄ Welcoming windows

A key component of the warm environment at the Baptist Memorial Hospital in Collierville, Tennessee, is the window system from Wausau Windows and Wall Systems. Wausau worked with Nashvillebased architectural firm Earl Swensson Associates on the project, which features windows with integral venetian blinds and green reflective glass to produce a stateof-the-art image. 877/678-2983. Wausau Window and Wall Systems. Wausau, Wis. CIRCLE 204



▲ What the doctor ordered

The renovation and addition at the College of Pharmacy building at the University of lowa, by Brooks Borg Skiles Architecture Engineering of Des Moines, has an exterior that blends aluminum and concrete. As a final touch, the 69,300-square-foot facility features Moduline's custom Evenline Series window with venetian blinds and its Preferred Pressure Wall System. 800/972-9110. Moduline, Wausau, Wis. CIRCLE 206

► Glowing pyramid

Glass Architects of Santa Rosa, California, designed Empire College with a large ATS skylight system set atop the entrance that creates a glowing pyramid visible at night. Provided by Skywall Translucent Systems, ATS is a self-supported, 24' x 24' guttered, dryglazed, thermally broken, and drainable system. 800/869-4567. Skywall Translucent Systems, Terrell, Tex. CIRCLE 205





Naturalite collaborated with Elbasani & Logan Architects of Berkeley, California, for three years to provide working details of the custom skylights for the Stonebriar Mall in Frisco, Texas. The advance planning coupled with the flashing design of the BMS-3000 Skylight System enabled Naturalite glaziers to install the skylights before the flashing. This meant the general contractor could finish the roofing after the skylights were in place. 800/869-4567. Naturalite Skylight Systems, Terrell, Tex. CIRCLE 207



and are inherently energy efficient. The University of Rhode Island Library in Kingston, Rhode Island, is shown directly above. 603/625-5403. Kalwall, Manchester, N.H. CIRCLE 208

▲ Mall rat heaven

or out with minimum interrup-

tion to the use of the building.

Kalwall's system is suitable for a vari-

ety of applications, including the tricky

task of daylighting libraries. The win-

dows are glare free, help protect

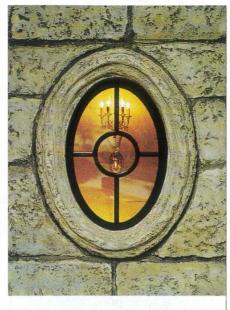
precious items from direct sunlight,



New Products Residential

► Black is the new sandstone

In response to an increase in custom requests for black cladding, Norco has introduced that color to its spectrum of color options available in aluminum-clad windows. Black is the newest addition to a color range including white, brown, sandstone, Hartford green, burgundy, and vanilla cream. Norco clad wood windows are crafted with a heavy-duty extruded aluminum cladding on the frame and sash. While some window brands use vinyl



nailing fins or roll-form aluminum on the sash, the extruded aluminum on Norco's clad windows preserves each window's uniformity and structural integrity. 800/877-9482. Norco, Hawkins, Wis. CIRCLE 209



▲ Gold and platinum members

The PRISM line of replacement windows and doors from Simonton is highlighted by the Platinum collection. Centered

around fusion-welded construction, PRISM Platinum's design is anchored by the Double-Hung. Both moveable sash operate effortlessly, aligned through a system to ensure performance throughout the life of the window. Possessing many of the same attributes as

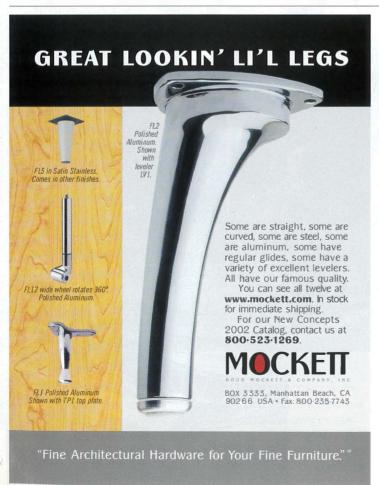
Platinum, Gold windows offer strength and performance at a budget-conscious price. 800/SIMONTON. Simonton Windows, Parkersburg, W.Va. CIRCLE 210

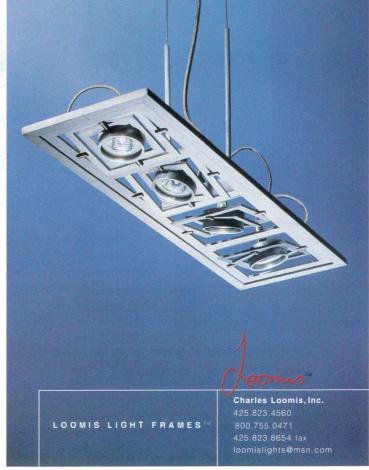
► Sunroofs for the home

ODL offers 10" and 14" skylights with one-piece flashing systems that eliminate roof leakage. Each roof flashing system has been designed for use on specific roof types, such as tile, asphalt, slate, wood shake, flat, and pitched roofs. UV-resistant acrylic domes and a prismatic diffuser in the ceiling located at the end of the tube shaft help spread light evenly throughout the room. 800/253-3900. ODL, Zeeland, Mich. CIRCLE 211



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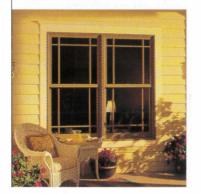


▲ Concealed jamb liner

Pozzi's Precision Double-Hung window features a new concealed jamb liner. Standard features include clear insulating glass with UltraEdge warm-edge technology, noncompression tilt balances equipped with block and tackle mechanisms for smooth operation, and hardware available in white, bronze, or champagne. 800/877-9482. Pozzi Wood Windows, Bend, Ore. CIRCLE 212

▼ Tougher clad products

Marvin now uses extruded aluminum on both sash and frame and a finish that exceeds the industry's toughest specification, the American Architectural Manufacturers Association 2605-98. Marvin also uses a 70 percent Kynar or Hylar coating for weatherability, and Flurospar, a formulation for added protection against dents or scratches. 888/537-8266. Marvin Windows and Doors, Warroad, Minn. CIRCLE 213

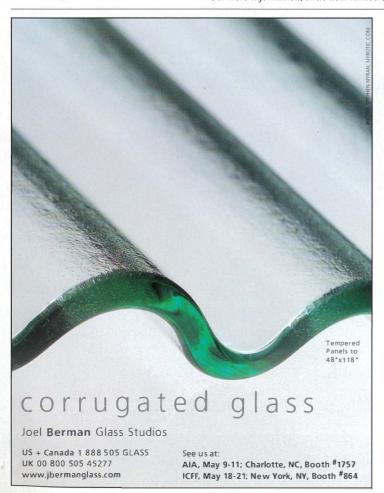




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Product Briefs



◆ Cast-concrete creations

Arizona-based designer
Larry Kornegay has
created a series of castconcrete planters for use
in landscape design. The
containers are available
in natural concrete color
as well as a palette of
integral colors. The series
features several designs in
various sizes that accent
landscaping without overwhelming other elements.
Also included in the series
are accent pavers, plat-

forms, and the Leaf Rush bench shown here. The bench surface features a combination of smooth concrete and impressed botanical leaf patterns. The top is mounted to a steel stand, available in natural or rust patina finish. The bench is 54" long x 18" wide x 17" high. 480/967-6787. Kornegay Design, Tempe, Ariz. CIRCLE 215

► Child-compliant

Elkay Manufacturing Company has introduced the first line of single-level, barrier-free watercoolers and drinking fountains designed specifically to meet Child ADA requirements, providing full accessibility for children 12 and under. All models also feature Elkay's No Lead design, which regulates the levels of contaminants that can leach from drinking-water devices. Available with wall and mounting plates. 630/574-8484. Elkay, Oak Brook, II. CIRCLE 217





▲ It's a snap

The Rheinzink snap-lock bracket system simplifies installation of bracketmounted gutters, reducing cost and time. The new system consists of a C-profile mounting rail and twist-in gutter brackets. Using screws, the mounting rail is fastened directly to the eaves. With a simple twist, the gutter brackets can be installed at any point on the mounting rail. Gutters are then securely and per-

manently installed with a simple click. Suitable for all eaves situations, the installation can be done independent of roofing. 617/948-2520. Rheinzink Canada, Boston. CIRCLE 218

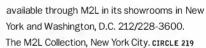
Product of the Month Formaldehyde-free fiberglass

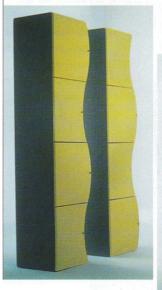
Johns Manville will now manufacture a new line of entirely formaldehydefree fiberglass building insulation for residential and commercial use. The insulation features a new binder composed of an acrylic resin rather than a phenol-formaldehyde binder. The change addresses concerns about indoor air quality in relation to building materials containing formaldehyde. Included in the line is EasyFit perforated fiberglass insulation. Vertical perforations in the fiberglass batts allow each section to be separated by



▼ Cabinet curves

The door fronts of the Blister cabinet are dimpled in either concave or convex curves. The body, a modular grid available either one-by-four-units high or two-by-four-units high, is made of melamine-covered wood with polystyrene door fronts in ivory, orange, or blue. Blister was designed in 1996 by Platt & Young for the Italian furniture manufacturer Driade, whose collection also features pieces by such designers as Philippe Starck, Konstantin Grcic, and Oscar Tusquets and will now be



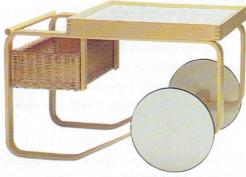




Product Briefs

► Aalto alliance

Herman Miller announced an alliance with Finnish furniture manufacturer Artek to market the company's popular Aalto line in the United States. Artek was founded in 1935 to manufacture furniture designs by Finnish architect Alvar Aalto and his wife Aino. The



Herman Miller offering will include such signature pieces as the Aalto Tea Trolley, 3-Leg and 4-Leg Stools, and the Aalto easy chair, or "Tank Chair." 800/851-1196. Herman Miller, Zeeland, Mich. CIRCLE 220

► Friendly fabrics

In response to the increased demand for environmentally responsible products, Maharam has introduced the Content series, a grouping of six textile designs engineered and manufactured to reduce environmental impact. Woven of 100 percent worsted wool, all six patterns feature subtle weave changes and an extensive color palette ranging from neutrals to brights. 800/645-3943. Maharam, New York City. CIRCLE 221



▼ Refrigerator recordings

The new Amana Messenger Refrigerator has a built-in voice-memo function that allows you to leave voice messages for other household members with the touch of a button. It also monitors a variety of refrigerator functions and alerts you if the door is ajar, if the air or water filter needs to be replaced, or if there's been a power outage. It also features



a front-fill dispenser that accommodates large containers and simultaneously dispenses water and ice. Available in white, black, bisque, and a stainless-steel version. 800/843-0304. Amana, Newton, lowa. CIRCLE 223





▲ New linoleum looks, fun ceilings

Recognizing linoleum's resurgence in the residential marketplace, Armstrong has introduced a new generation of linoleum flooring. With a palette of 16 different colors, Marmorette offers the most extensive color selection for linoleum flooring. Armstrong has also added an "Under the Sea" family of designs to its line



of Cirrus Themes acoustical ceiling panels. The new product features a variety of lighthearted designs that are carved into the acoustical panels' fine-textured surface, making them ideal for spaces such as pediatric wards, doctors' and dentists' offices, schools, and day-care centers. 877/ARMSTRONG. Armstrong, Lancaster, Pa. CIRCLE 222



▲ The look of stone

Milestone Mosaics are the first thru-body porcelain stone-look mosaics. The 3" \times 3" tiles have a subtle, multicolored slate finish that makes them suitable for both interior and exterior applications. The colored porcelain surface will not wear out, even in heavy-duty installations, since the pigment becomes an integral part of the tile during the firing process, rather than applied as a glaze. This procedure lets the body of the tile show through, allowing it to become part of the overall design. Like real stone, there is significant color and texture variation. 931/484-2110. Crossville Porcelain Stone, Crossville, Tenn. CIRCLE 224

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Product Literature

Commercial downlighting

Lithonia Lighting has released a 28-page, full-color catalog that showcases its new family of recessed downlighting for commercial applications. The catalog features ordering information and performance data and also includes a Lighting Guide that simplifies the fixture-selection process. 770/992-9000. Lithonia Lighting, Conyers, Ga.

Revised zinc-cladding book

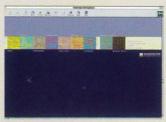
The second edition of the textbook Rheinzink Applications in Architecture gives architects, building owner's, and craftsmen a complete overview concerning Rheinzink zinc cladding. 604/291-8171. Rheinzink Canada, Burnaby, British Columbia. CIRCLE 226

Safety-flooring catalog

Altro has introduced a new catalog to showcase their entire safety-flooring range. All of the colors in the Altro high-performance safety-flooring collection are shown along with installation photography. The catalog is part of a comprehensive product-information series provided by Altro. 800/565-4658. Altro, Mississauga, Ontario. CIRCLE 227

NEW SITES FOR CYBERSURFING

Redesigned site includes a custom floorcovering Web tool called DesignLine



Online. www.mannington.com

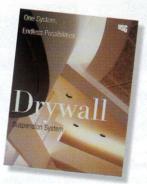
Kentucky Wood Floors complete product line. www.kentuckywood.com

Presentation product information. www.da-lite.com

Technical information on working with and specifying North American hardwoods. www.hardwoodcouncil.com

Free systems guide/reprints

The new 50-page systems guide from USG provides full product information, installation details, and specification data on the company's Drywall Suspension System. The free guide describes the system's entire line of components and accessories. USG also offers a free set of reprints for its Architectural Record/AIA 2001 Continuing Education Series. Reprints of five articles can be ordered by calling 888/874-2450. 800/USG-4YOU. USG, Chicago. CIRCLE 228

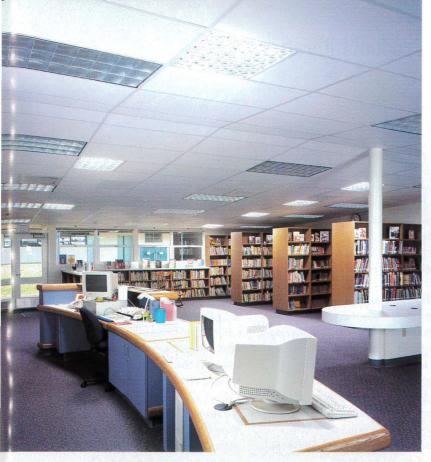








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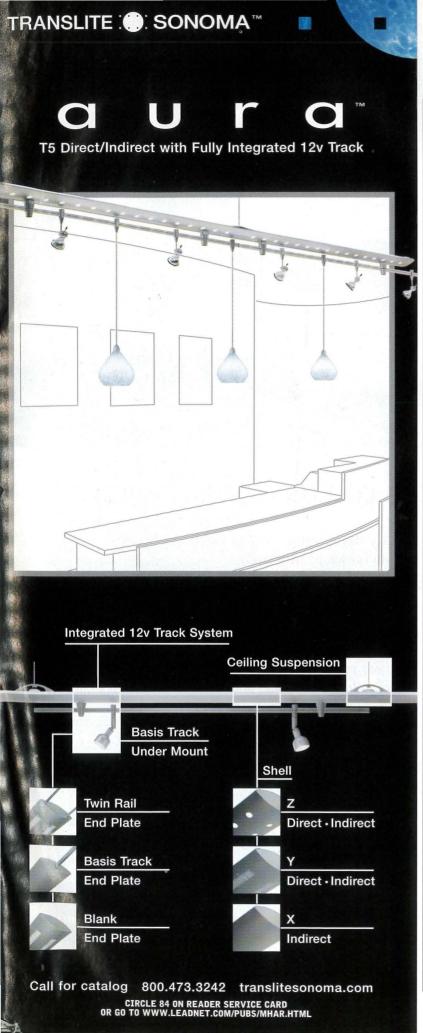
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Product Literature

Louver catalog

Greenheck's new catalog highlights the company's comprehensive selection of louvers. It includes mechanical and architectural louvers, rain-resistant louvers, louvered penthouses, architectural equipment screens, custom grilles and brick vents, architectural shades, and Miami-Dade County—qualified louvers, 715/359-6171. Greenheck, Schofield, Wis. CIRCLE 229

Three in one

For the first time in its history,
Armstrong's Commercial Flooring catalog
includes all three of the major product
categories the company offers: hardwood, linoleum, and vinyl. Totaling 196
pages, the new 2002 customer-tailored
reference tool features new tabs that
call out individual product groupings.
877/ARMSTRONG. Armstrong World
Industries, Lancaster, Pa.
CIRCLE 230

Daylighting ideas

Major Industries marks its 22nd year by introducing its newest translucent daylighting idea book. This 24-page brochure offers designers a range of insulated translucent fiberglass sandwich panel

system ideas. The idea book features skylights, wall panels, and curved systems. 888/SKYCOST. Major Industries, Wausau, Wis. CIRCLE 231

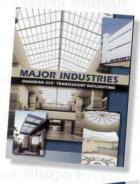
Wood products buyer's guide

The Southern Forest Products
Association has published the 2002
issue of SFPA Buyer's Guide, containing
a complete listing of products and services available from its members. This
annual directory contains the full range
of products manufactured, mill capacities, grade separations, services, and
equipment, and more than 40 speciality
items produced by member mills.
504/443-4464. South Forest Products
Association, Kennar, La. CIRCLE 232

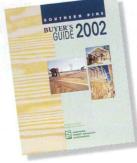
Modular space guide

A new CD from GE Capital Modular Space serves as a user-friendly guide to the modular construction process. It showcases an upscale, modular office complex that the company provided for Southwest Marine in San Diego. Photographs, floor plans, and editorial coverage of the building also are included. The CD guide runs on PCs. 800/523-7918. GE Capital, Devon, Pa. CIRCLE 233









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ARCHITECTURAL RECORD CALL FOR ENTRIES

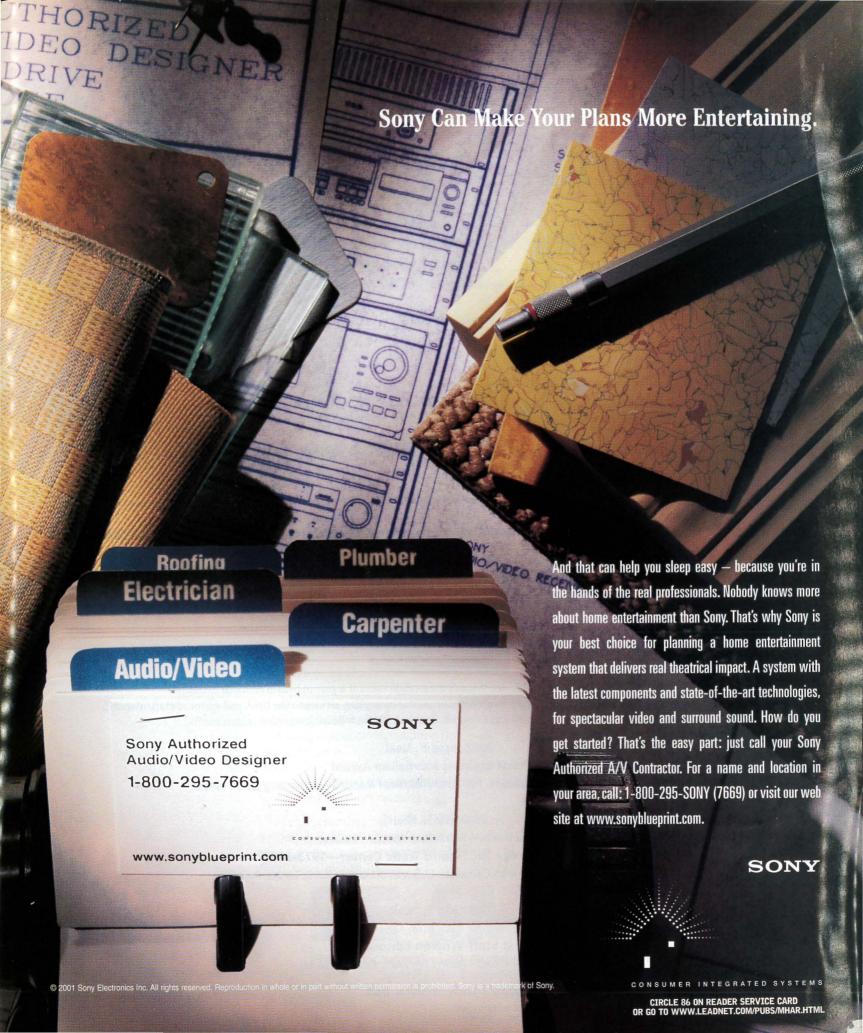
Record 2002 Interiors 2002

The editors of ARCHITECTURAL RECORD announce the RECORD INTERIORS awards program. This program is open to any registered architect. Of particular interest are projects that incorporate innovative programs, building technologies, and use of materials. The entry fee is \$50 per submission; please make checks payable to ARCHITECTURAL RECORD. Submissions must also include plan(s), photographs (transparencies, slides, or prints), and a brief project description bound firmly in an 8 1/2-by-11-inch folder—postmarked no later than April 30, 2002. Anonymity is not necessary. Winning entries will be featured in the 2002 RECORD INTERIORS. Other submissions will be returned or scheduled for a future issue.

Please include a self-addressed envelope with the appropriate postage, and allow 10 weeks for return.

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Type of project (i.e. resident	tial, restaurant, retail, etc.):		
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Agreement: We will not offer the view period at ARCHITECTUR		/ another national design magazine	e during the 10-week
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Architectural Record Editorial Wins 2002 Jesse H. Neal Awards



The American Business Press's Jesse H. Neal Awards are a celebration of a year in b-to-b editorial excellence and are presented annually to those editors who have exhibited journalistic enterprise, service to the field, and editorial craftsmanship.

Again this year, Architectural Record was honored, this time for the following editorial achievements.

2002 Jesse H. Neal

National Business Journalism Award

Best Single Issue of a Magazine for *Architectural Record*—February 2001 issue

2002 Jesse H. Neal

National Business Journalism Awards—Finalist

Best News Coverage for "World Trade Center—1973-2001"

Architectural Record - Editors John Czarnecki, Deborah Snoonian, Kevin Lerner, Sara Hart

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2002 Jesse H. Neal

National Business Journalism Award—Finalist

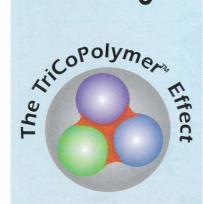
Best Staff-Written Editorials

Architectural Record - Robert Ivy, FAIA, Editor in chief

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Specifications of drywall joint compounds and its applications need your further consideration.

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Since uncontrolled water addition is out of the hands of manufacturers, any warranty given can be considered worthless. In light of this situation, we have spent the last five years researching a solution.

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Dr. Smooth Mud has been developed by top chemists and finishers to replace the bad habit of thinning joint compounds with water. With proper application and use, Dr. Smooth Mud improves all joint compounds. Products that benefit from using Dr. Smooth Mud also include quick-set joint compounds, white gypsum cement, and plasters.

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Notice of AIA Convention Business Items and Candidates

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Eugene C. Hopkins, FAIA Michigan

FOR SECRETARY



Lawrence R. Livergood, AIA Illinois



Larry M. Schneider, AIA Florida

FOR VICE PRESIDENT (choose three)



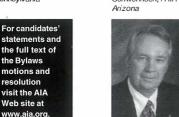
Bruce E. Blackmer AIA Washington



Robin M. Ellerthorpe, FAIA Illinois



Michael L. Prifti, AIA Pennsylvania



Wayne Silberschlag, AIA lowa

Katherine Lee Schwennsen, FAIA

The AIA Board of Directors is sponsoring amendments to the AIA Bylaws and has stated its support for a resolution scheduled for consideration by the delegates at the annual business meeting in Charlotte May 11. Bylaws amendments require the approval of a two-thirds majority of all votes accredited to be cast at convention, while resolutions require approval by a simple majority.

Bylaws Amendment 02-A

Term of the Student Director on the Institute's Board of Directors. The Institute's officers and regional directors take office in December each year. The president of the American Institute of Architecture Students (AIAS) is also a member of the Institute's Board of Directors, but his or her term as AIAS president begins each year on July 1 and continues until June 30 of the following year. This proposed amendment would revise Section 6.03 of the Bylaws to confirm current practice, specifying that the individual who is AIAS president at the adjournment of the annual AIA Board meeting in December shall serve on the Institute's Board from that point until the Board's next annual meeting the following December.

Bylaws Amendment 02-B

Apportionment of Regional Directors. The Institute's Bylaws require that delegate representation at the Institute's annual meeting be based on the total number of assigned Architect and Associate members. By contrast, the count used to determine the apportionment of regional directors is currently based on the number of Architect members (including Emeritus members) only, and does not include Associate members. This amendment would revise Section 6.012 of the Bylaws to provide that the count used to determine regional director apportionment would include both assigned Architect members and assigned Associate members in good standing.

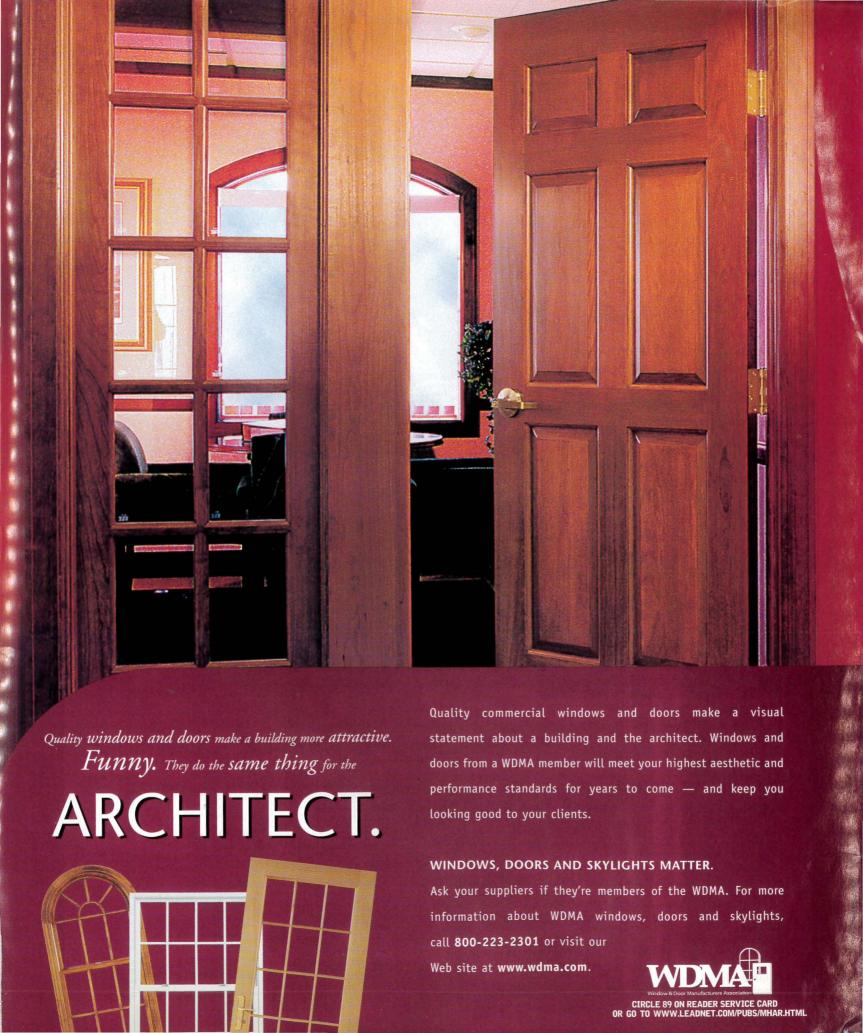
Bylaws Amendment 02-C

Inclusion of Associate Representative on the Institute's Executive Committee. Associate members are currently represented on the Institute's Board of Directors by an associate director, but do not have a representative on the Executive Committee. This amendment would provide that, upon the completion of his or her one-year term on the Board, the associate director would become a voting member of the Executive Committee. This position would be added in December 2004.

Bylaws Amendment 02-D

Creation of an International Associate Membership Category. Individuals who have an architectural license or the equivalent from a non-U.S. licensing authority and demonstrate honorable standing in the profession in the locale in which they are licensed are eligible for Associate membership within the Institute. Under current practice, these individuals are commonly referred to as "International Associates." This amendment would revise Section 2.2 of the Bylaws to create an "International Associate" membership category for which such individuals would be eligible.

Also to be considered for a vote at the convention is a resolution submitted by AIA Philadelphia, "Broadening Membership and Strengthening the Institute," which the Institute's Board of Directors has voted to support. The resolution would allow a limited number of components to run pilot programs designed to increase their membership. Results of the pilot program will be measured and reported to the components annually.



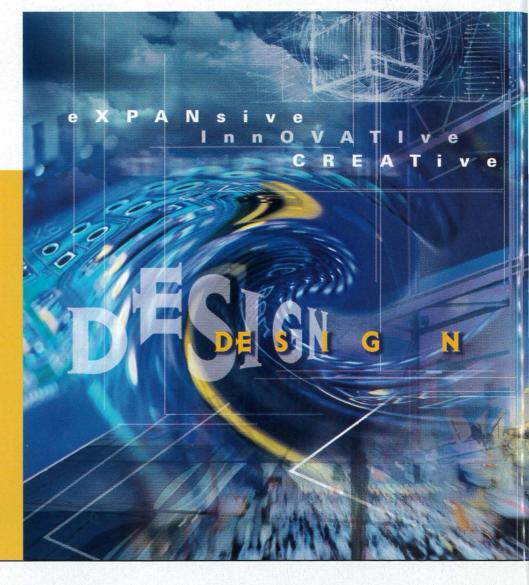
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- Construction Management CG Facility Management/
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- CH Government

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- DF More than 100

- Buying Influence
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- FC □ Recommend
- ED | No Role

Location of Firm's Work

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- FC National
 FD International

Primary Type of Work Commercia

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- GD | Industrial
- GE Cultural/Residential
 GF Transportation
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Reasons for attending the AIA

Convention (check three that are most important to you)

- AA

 Complete continuing Education Requirements
- AB Products and Services in AIA Expo2002
- AC Networking with Colleagues
- AD General Session Topics
- and Speakers
- AE

 Convention City AF Delegate to AIA Business

Have you attended

- past conventions?
 HA Yes, number attended
- HB □ No

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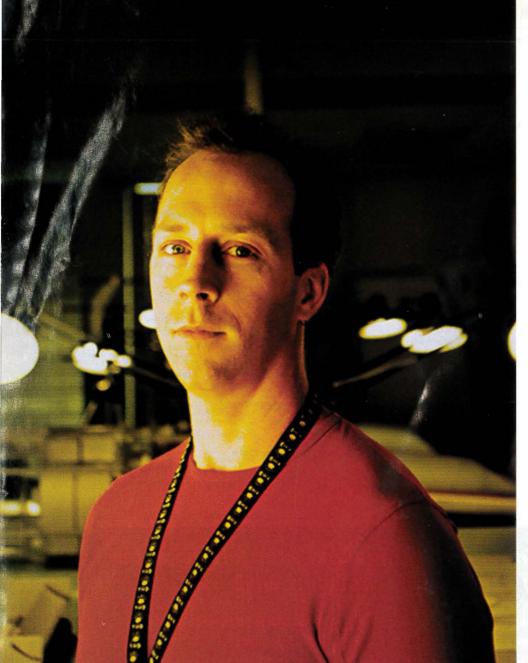
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Profile

How is your job different from that of an "earthbound" architect? Architects often say how difficult it is to be a designer in a developer's world. As a designer in an engineer's world, I contend with the fact that most of those creating the space station are primarily concerned with the function of critical systems and safety and not so much with the human interface. Everything at NASA is built to performance specifications, which require, basically, that everything function. What these specs leave out are the manner and ease of this function and, certainly, aesthetics. Together these are called "habitability" at NASA, and they are what I look out for and design to. The International Space Station (ISS) is first and foremost a place for science. To get the most out of this laboratory, we need a productive crew. As a happy crew is a productive crew, it therefore makes sense to pay closer attention to their surroundings than has been done previously.

We learn about these issues by studying our previous spaceflight experience, particularly Russia's MIR program; talking with astronauts; and researching analogous situations, such as the environments of arctic research stations and submarines. To make their spaces more "habitable," I have to take into consideration all the constraints that are part of space travel. These include how items are made and of what materials, issues of flammability and off-gassing, how they are packed and launched, the launch environment, the effects of radiation, life-cycle costs, and many others. Finally, the most important consideration is that astronauts are people and have normal human needs.

What can architects learn from your experience? In space, nothing is taken for granted. Working at NASA really makes you aware of how much we assume when designing for Earth, from the simple act of breathing to the sheer availability of products from around the world to seeing how systems of all sorts interact. I think buildings need to perform as well as possible. Why is it so uncommon to take into account the environment you are building in and adapt the building to it? While this seems obvious, it must not be,

because it is clearly not done. For example, here in Houston so many houses are built with no consideration of how to keep them naturally cool. Instead, everyone leans heavily on the air conditioner instead of designing to minimize its use. What is your mission, as an architect? We're sending people into an extremely hostile environment, and we still have to allow them to be people. This becomes more and more important the longer a mission might be, as astronauts start to live in space and are not just hacking it for a time. Going to Mars might be a three-year mission, which is a long time to spend even with your five best friends.

Photograph by Will Michels

Garrett Finney brings space habitability down to earth

Interviewed by Ingrid Whitehead

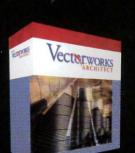
Three years ago, 1994 Rome Prize in Architecture winner Garrett Finney was happily designing furniture in New York City when a former classmate from the Yale School of Architecture called him to see if he was interested in becoming part of a new NASA program. With dreams of designing on Mars, he applied. Now senior architect at the Habitability Design Center of the Johnson Space Center in Houston, he works on designs for the Habitation Module of the International Space Station. A native of Philadelphia, Finney has spent time on this planet as a blacksmith, a carpenter—and he has designed not only furniture, but also houses and residential as well as commercial interiors.

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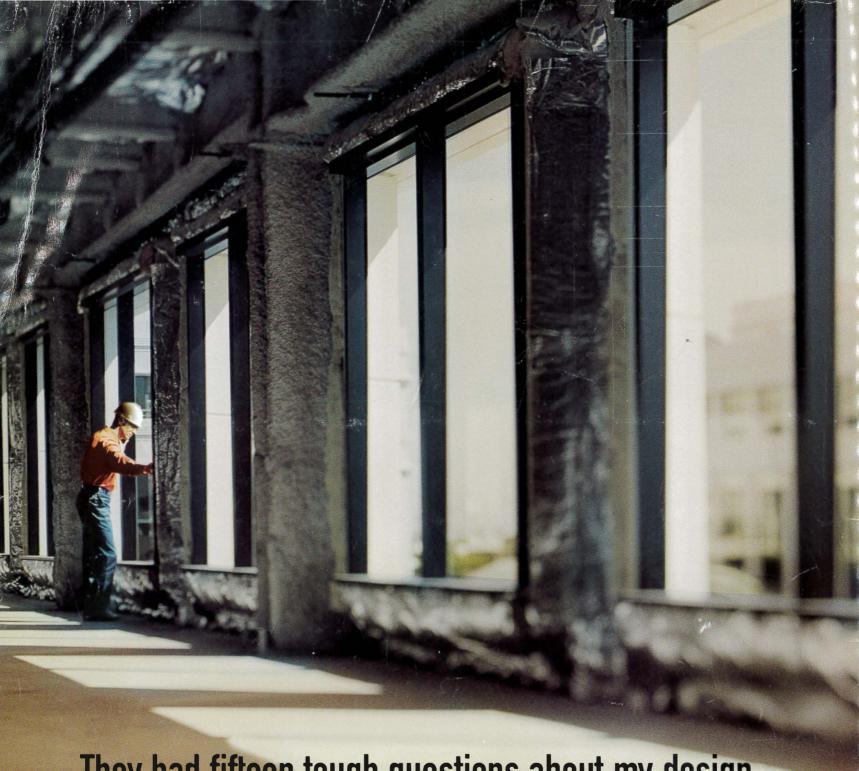


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