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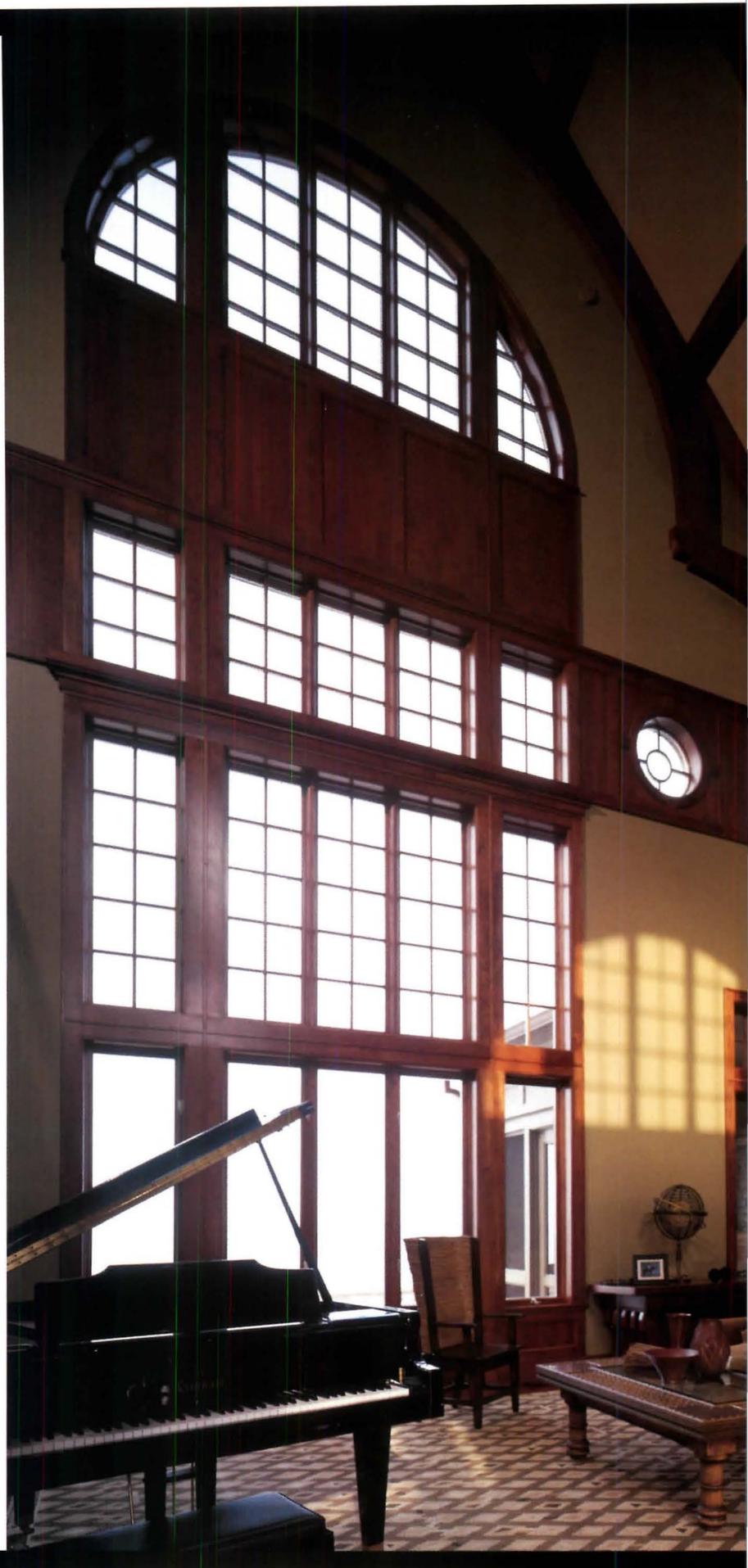
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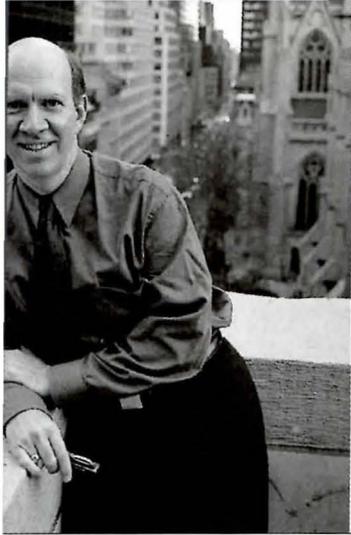
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Otherworldly, yet familiar

Editorial

By Robert Ivy, FAIA

Standing in the dust of the Forum Romanum at the spot where all roads lead, surrounded by marble shards, echoes from the stones, like voices, speak. Time and history elide, from 750 B.C. until today. Despite generations of neglect and active pilferage at the hands of Renaissance popes, who adorned the face of a burgeoning new Rome with imperial marble, much remains. Pavers still mark the Via Sacra, the sacred way, through the valley. From the Arch of Titus, a succession of remnants marks the path: the Temple of Romulus, the Temple of Vesta, the Basilica of Maxentius, the Arch of Titus—a captured glimpse of a civilization.

Here, an aedicula with two Ionic columns marks the House of the Vestal Virgins; there, three Corinthian columns on a plinth, the Temple of the Sibyl—stores—the DNA of another civilization, the architecture of which can still be read, reverberating with us after 2,000 years. Physical facts provide the pattern, erupting intermittently with texture, scale, form, and rhythm, overlaid and smoldering with two millennia of intangibles—culture and time, history and memory and blood. Despite its obvious decay, the Forum attracts us with both otherworldliness and familiarity, and we bathe in the shock of recognition of who we are and who we have been.

Familiarity at the Forum comes from recognition because subsequent architects have replicated the conventions of the Classical past in institutional and residential buildings. Sir Banister Fletcher prepared us for this encounter. Yet much of our comfort derives from what earlier writers would have characterized as sympathetic projection, or empathy. As any student of architectural history knows, the forms and scale of trabeated architecture have direct relationships with the columnar human body, which we sense even in ruined structures.

Beyond the well-trod intellectual roads lie other lessons outside the aesthetic. The entire Forum site rests between the Velia, the Capitol, and the Palatine hills on a willful act of early engineering. Had the settlers not drained the formerly swampy burying ground into an enormous sewer, the city of Maxima, further development after 550 B.C. would have ceased. Roman structures, whose forms had been directly appropriated by the Latins

from the Greeks, quickly grew into the uniquely Roman: Roman technological advances produced pozzolana, a cementitious binder that has hardened like iron, and near-perfect brick, permitting forms the world had never seen, including the broadly vaulted basilicas and baths—immense, capacious structures like the Basilica of Maxentius that continue to confound us with their spatial power and structural acumen.

Following Constantine's conversion, recharged with fresh spiritual energy, the Roman basilica morphed into something new, and the drama proceeded. Despite our preconceptions, Rome never stood still, so never fell. Instead, Republic shifted to Empire, which was sacked, and changed. The Regia became a meadow, while the city lived on. In fact, Roman energy lay not in the forms themselves but in their transformation: Near Eastern and Egyptian to Greek to Roman to our own multivalent world. It is in that spirit, which acknowledges the past and recalls history without becoming enslaved by its outward signs and symbols, that most contemporary architects build. Remembering, but moving on, is how we write about architecture.

With that same sense of challenge, we are embarking on a new way of presenting this architectural publication. Beginning with the July issue, in a bold new experiment worthy of the Romans, we offer all of ARCHITECTURAL RECORD delivered electronically. Thanks to a new software called Zinio, ARCHITECTURAL RECORD will all be there—the full page, backlit, glowing, but conveniently present in your laptop. And unlike most Web-based magazines, you will be able to zoom on an image, search the material, and archive it. Time, Rome, and ARCHITECTURAL RECORD move on.

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Letters

Where is Classicism now?

Most students of architectural history know, the fortress of early-20th-century Modernist ideology stood challenge until the 1960s, when various practitioners and critics began to question its assumptions and theoretical underpinnings through both practice and critical inquiry. This skepticism evolved into the so-called postmodernist sensibility, wherein historicist architectural vocabularies regained acceptability, including a resurgence of interest in the Classical tradition.

In 1968 the organization Classical America was formed for the purpose of breaking the Modernist stronghold and replacing it with a renewed Classical aesthetic. By the 1970s, several more organizations sprang forth, and one accredited architectural school—the School of Architecture at the University of Notre Dame—launched a curriculum devoted to the propagation of classical principles.

The 1990s was an especially fertile decade for proponents of classicism. Great private wealth generated by the high-tech boom fueled an explosion of building. Dozens of classically minded firms took shape and grew in response to the market demand. In the residential sector, at least, it seemed like traditionalism had completely dominated the landscape, whereas homes designed in Modernist idioms often went begging unsold.

Today the echoes of a roaring economy are only faintly heard, and the number of Classical firms have recently become more subdued. While it would be easy to ascribe the contraction to the economic slowdown, it may be equally the harbinger of a sea change in the architectural climate.

Certainly, there are many positive aspects to what transpired. Many

now recognize that Classicism, our civilization's defining architectural system, remains irrefutably our cultural DNA. Then, too, the return to Classical ideals has restored a humanist perspective to the architectural dialogue. This perspective provides a welcome antidote to the profession's taste for mechanistic aesthetics, and the dehumanized, often banal environments that stem from this attraction.

Traditional sensibilities, of which Classicism is one offshoot, have been particularly manifest in the field of town planning. New Urbanism, a humanistic and classically derived approach to the philosophy of the human habitat, evolved in parallel with the Classical resurgence. But whatever one's position on the subject, New Urbanism has helped us confront the issues of sprawl and other suburban dilemmas on a national level. Concomitantly, a renewed focus on civic ideals can be linked to a consciousness that the physical setting of public life has degraded in the Modern era, in part due to Modernism's faltering effort to provide a viable language of civic expression. Nevertheless, looking at the portfolio of genuinely Classical and traditional projects generated over the past decades, however, one must acknowledge some deficiencies. One problem involves creativity. To what degree has late-20th-century Classicism explored fresh avenues of architectural development? Relatively little, it can be admitted—certainly as compared with an enormously innovative period like the American Renaissance in the late 19th century, when Classicism was brilliantly reinvented in the face of new building types, construction technologies, and urban development patterns. Some will argue that the quest for novelty is a Modernist preoccupation, and a faulty one at that. But novelty is not the goal; relevance is.

The characteristics of irrelevance are obsolescence and creative stagnation. The crisis of imagination afflicting Classicism is overshadowed by the even greater problem of a shifting cultural paradigm.



Resort houses in Rosemary Beach, Florida, by Alfonso Architects.

The simultaneous and ongoing impacts of the technological revolution, new demographic patterns, economic and cultural globalism, and a host of other novel conditions have transformed the world since the 1990s. While it is too early to tell how architectural production will respond to the altered cultural outlook, it is increasingly difficult to rationalize an undiluted Classicism under these circumstances.

For Classicism to survive and remain relevant, it should aim for a "new synthesis." Draw from the success of a resurgent Modernism, not the flawed Modernism of the fractured, blobular, or cultural-theoretical schools, with their jargoned pretense to disorder and brutalist celebration of the ugly. Nor need one rehash Postmodern excursions into irony and mannerism. Look instead to a thoughtful, visually sensuous Modernism of younger and lesser-known practitioners that is beginning to make itself felt. One mecca of the

"new synthesis" is the resort development of Rosemary Beach, in the panhandle of Florida's Gulf coast, where more recently built houses on the north side of the main street indicate a noticeable shift to a more contemporary take.

These architects and others respond smartly to the criticisms leveled at the Modern movement by creating urbanistically responsible environments that human beings want to be in.

One last point directed to diehards in both camps: In some respects the conflict between Modernism and Classicism is misplaced. The real struggle is between good and bad design. Ninety percent of our country's built environment is created without the participation of design professionals, and it is those structures that will truly define our landscape in the years to come. If the greater good is the betterment of the world we build, then let us jointly find a way to achieve that goal in whatever form it can take.

—Donald M. Rattner
Studio for Civil Architecture
New York City

Corrections

In the June article about the AOL Time Warner Center [page 86], Ismael Leyva Architects should have been credited as the design architecture firm for the center's residences. In the June story about the Automated Trading Desk (ATD) [page 156], architect Niall Cain's name was misspelled, as was the name Myerberg. In May's Lighting Resources [page 345], the Annoncé line should have been referred to as a group of wall sconces. Also in May, the lighting consultant for the Oxbow School was Dan Dodt, and Bendheim Wall Systems supplied the Lamberts LINIT U-Profile glass used in the faculty house.

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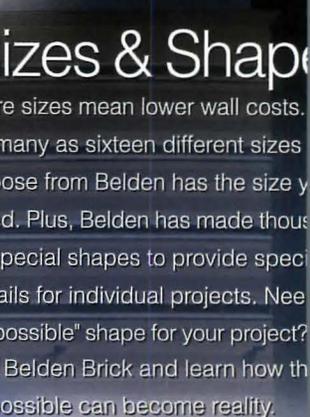
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Libeskind, Port Authority agree on transit hub; environmental review process begins for WTC

Architect Daniel Libeskind reached an agreement with the Port Authority of New York and New Jersey ensuring that Libeskind will design the main part of a new transit hub on the World Trade Center site. Libeskind had already secured a contract with the Port Authority to develop his master plan and design guidelines for the site, and has another with the Lower Manhattan Development Corporation (LMDC) to design the transit museum and cultural buildings.

The June 18 agreement came at a time of intensifying conflict among parties involved in the site. On May 30, *The New York Times* reported that Larry Silverstein, the developer who holds the lease to the space on the site, would not allow Libeskind to design the buildings he plans to erect there, citing concerns about Libeskind's lack of experience in designing tall buildings. The *Times* reported that Libeskind's plan would "inspire" any work done by whatever architect Silverstein eventually hires.

Such language worries the members of the Civic Alliance to Build Downtown New York, a coalition of community groups

brought together by the Regional Plan Association. On June 11, the Civic Alliance denounced plans to alter the design, specifically naming Silverstein and the retail developer Westfield Properties as offenders. Westfield has brought legal action against the Port Authority, claiming that Libeskind's design will not provide enough retail space of the type Westfield wants.

The Civic Alliance also released images (shown here) that depict the potential effects of a series of changes to the World Trade Center master plan. The images show the basic layout of Libeskind's plan with the sunken memorial site raised to ground level and surrounded by mundane glass-box skyscrapers of the heights that Libeskind specified. Another image shows a potential result of Westfield's legal wrangling, a crowded suburban-style mall.

Libeskind's agreement with the Port Authority encouraged the Civic Alliance. "It's a positive step, and we'll continue to monitor the process carefully," said Jeremy Soffin, a Civic



The Civic Alliance rendering (right) replaces buildings in Libeskind's design (above) with "mundane" office buildings.



Alliance spokesman.

Kevin Rampe, the president of the LMDC, took issue with what he called the Civic Alliance's "erroneous" report. "The report contained a lot of misinformation that evinced no understanding of what we're doing in the process," Rampe told RECORD. "We've engaged in what is the most open and transparent planning process ever, at least for a project of this size. The LMDC has

stood for architectural excellence from the beginning."

Meanwhile, the LMDC continues to work toward the ultimate goal of actually rebuilding. The group hopes to complete the environmental review process in time to begin construction in the summer of 2004. The LMDC will hold a series of community forums to determine how best to use its remaining federal funds. *Kevin Lerner*



Civic Alliance images (right two) show the possible effects of alterations to Libeskind's memorial site (above).





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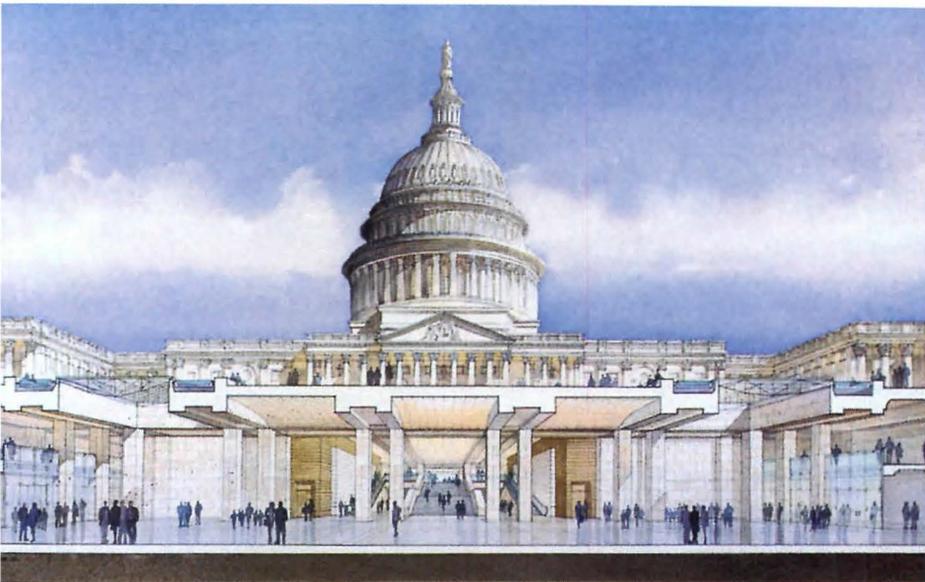
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U.S. Capitol Visitor Center progresses as overall cost increases to \$373 million

Excavation is well under way on the underground U.S. Capitol Visitor Center in Washington, D.C., as the estimated costs of the project continue to rise. In April, the architect of the Capitol awarded a \$144 million contract for completion of the facility, the initial reference for bidders of that contract was \$120 million. The overall cost is expected to top \$373.5 million, far more than the \$265 million estimated when the project was approved in 1999. Scheduled to be complete by the end of 2005, the project has been a major disruption to the east front of the Capitol building—Washington's Big Dig.

The costs increased, in part, because Congress approved \$70 million additional funding for House and Senate office space and \$38.5 million for enhanced security in the wake of the September 11 attacks.

The April contract was awarded to Manhattan Construction, a Tulsa, Oklahoma-based contractor that recently constructed a dome on the Oklahoma State Capitol.

As excavation progresses, approximately 250 to 400 truckloads, or 2,500 to 4,000 cubic yards of dirt are hauled away each day. To execute the dig, 100 linear feet of a 70-foot-tall slurry wall (pictured, right)



The below-ground visitor center (section, top) will have a view of the Capitol dome through a skylight (above).

was constructed. The slurry wall has allowed the excavation to go on while not disrupting the Capitol building structure.

The 580,000-square-foot, three-level visitor center was designed by RTKL Associates, with D. Rodman Henderer, AIA, as principal in charge. The space will accommodate 3,400 visitors per hour, with a security checkpoint, exhibition space, gift shop, orientation theaters, and food service facilities.

A film auditorium for the Library of Congress is included, as well.

Besides the costs, critics contend that, with some trees taken out, the dig and construction is disrupting the original Frederick Law Olmsted landscape. The East Plaza will be redesigned with respect to Olmsted's landscape plan.

John E. Czarnecki, Assoc. AIA



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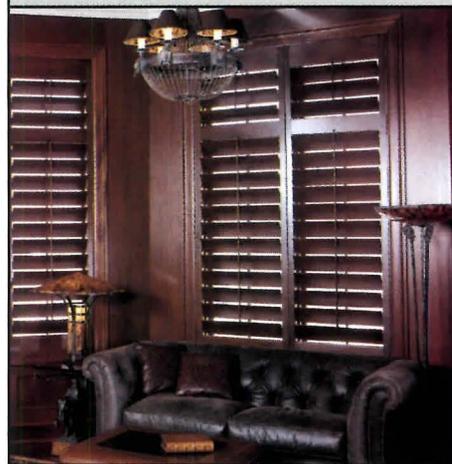
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Record News



Rijksmuseum satellite brings art to Amsterdam's Schiphol Airport

As the Rijksmuseum in Amsterdam launches a major renovation and expansion, a new satellite museum at the city's Schiphol Airport has brought works by Dutch masters, including Rembrandt, to the duty-free zone. Billed as the first permanent museum exhibition in the world to be set within an airport, the Rijksmuseum Amsterdam Schiphol was designed by architects Benthem Crouwel and opened last December.

A joint venture of the airport and the museum, the new exhibition space is situated

A suspended, gold-and-black-framed box appears to float above the museum shop

behind passport control along a shopping corridor. A suspended, gold-and-black-framed box appears to float above the museum shop, designed by Studio Lindeboom. Reached by a staircase, and with gold-colored louvers at each end, the 1,700-square-foot space imparts the feeling of being inside a shutterbox, or perhaps a frequent-flier sky lounge. For climate and security control, the paintings are set behind heavy glass panels on opposite sides of the space. With prominent seams in the reflective glass pan-

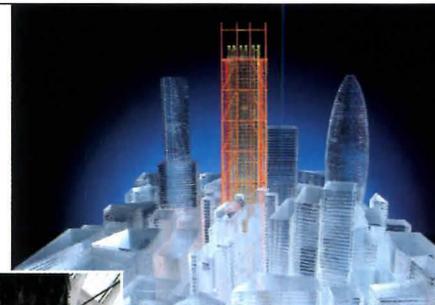
augmented by rather dim lighting, the installation has less the character of a museum than of a tourist curiosity. Still, showcasing fine art to travelers who are not required to pay admission is a marketing strategy that may attract more visitors to the museum itself.

In addition to the paintings on loan from Rijksmuseum's permanent collection, the Schiphol venue will team with the Netherlands Institute for Cultural Heritage to showcase smaller exhibitions. *William Weathersby, Jr.*

Foster curates exhibition of tall building models

Norman Foster is the curator of *Sky High*, an exhibition of tall building models at London's Royal Academy, now through August 10. Foster has brought together an eclectic selection of 50 models. From pre-medieval Indonesia to 21st-century China, the exhibits cover a broad range of locations. *Sky High* marks a departure for the 235th Royal Academy Summer Exhibition, an annual opportunity for amateur artists to show their work. This is the first time architecture has occupied center stage. *Sky High*, which is in the Royal Academy's grand 19th-century lecture hall, is divided into two hemispheres: The models from East and West compete for attention on elevated plinths.

Some of the projects are established landmarks. Models of the Chrysler Building, the original World Trade Center towers, Mies van der Rohe's Seagram Building, and the spiral minaret of 9th-century Iraq, are all on display. The more interesting projects are lesser known, or have yet to be



Models exhibited include a Dubai project by Sir Michael Hopkins and a London project by Richard Rogers Partnership (above).

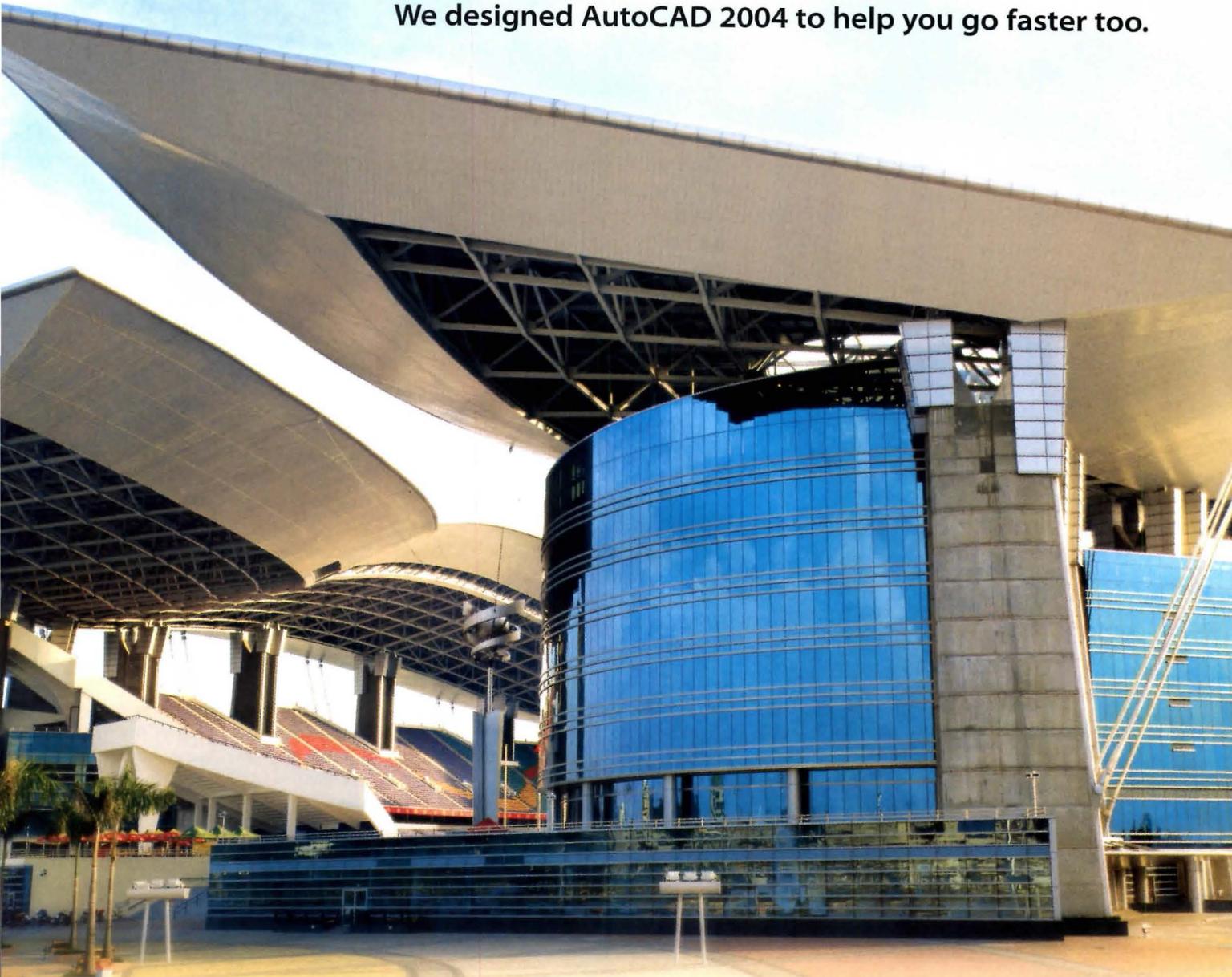


realized, including two wind towers designed by Foster himself. The Foster models propose towers that can generate their own power through the use of wind turbines that are either on rooftops or suspended between the towers.

A prototype weather-responsive tower from Munich, Germany, is on display. Designed by the Dusseldorf practice Ingenhoven Overdiek and Partners, the tower has hundreds of hypersensitive portholes punctuating its glass skin that close up in bad weather. *Adam Mornement*

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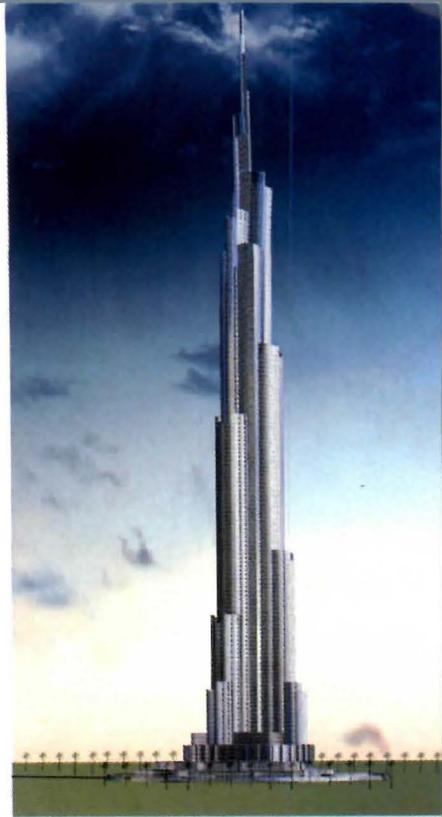
Record News

SOM designs world's tallest tower for Dubai developer

Skidmore, Owings & Merrill (SOM) wants to once again be recognized as the designer of the world's tallest building. Partner Adrian Smith and managing partner George Efstathiou, both of SOM's Chicago office, have developed a design for a \$500 million Burj Dubai tower in Dubai, United Arab Emirates. The SOM design was selected as the winning entry in an invited competition held by Emaar Properties of Dubai. Emaar owns Dubai Bank, and its chair, Mohammed Ali Alabbar, is the Dubai government's director of economic development.

The *Chicago Sun-Times* reported that the tower would be about 1,900 feet tall. Pamela Kane, director of marketing for SOM's Chicago office, said the firm could "neither confirm nor deny" that reported height.

Smith described the design in a written statement: "The design of Burj Dubai is derived from the geometries of the desert flower, which is indigenous to the region, and the patterning systems embodied in Islamic architecture. The tower is composed of three elements arranged around a central core. As the tower rises from the flat desert base, setbacks occur at each element in an upward spiraling pattern, decreasing the mass of the tower as it reaches toward the sky. At the



The Dubai tower could be the world's tallest.

top, the central core emerges and is sculpted to form a finishing spire. A Y-shaped floor plan maximizes views of the Persian Gulf." The building will include mostly residential and hotel uses, but will also include office space, as well. Construction could begin later this year.

Malaysia's Petronas Towers are the world's tallest at 1,483 feet each. SOM's Sears Tower in Chicago is 1,450 feet tall. *J.E.C.*

Sri Lankan architect Geoffrey Bawa dead at 83



Sri Lankan architect Geoffrey Bawa died at his home in the capital, Colombo, on May 27. As the country's foremost architect, Bawa (pictured here in 1990) integrated Sri Lanka's lush backdrop with contemporary architecture to create a prolific blend of local culture and modern design. He was 83.

Educated in English and law in England, Bawa returned to Sri Lanka and apprenticed for an architect and became qualified as an architect in 1957 at age 38. He worked first with Danish architect Ulrik Plesner, until 1967, then with engineer K Poologasundram for the next 20 years. Bawa went on to salvage the firm of Edwards, Reid and Begg, which became the most prominent firm in Sri Lanka.

Bawa's designs for hotels, resorts, and government buildings provided new ideas for the tropical business atmosphere and drew added attention to tourism.

In 1978, the architect received his largest assignment, to design a new parliament building for the Sri Lankan government. His design combined traditional Sri Lankan and South Indian architecture with an international Modernist influence resulting in a series of copper roofs of varying height shielding terraces that surge upward out of an artificial lake. Bawa designed Ruhunu University in the 1980s with a complex of pavilions and courtyards that merge the outdoors with enclosed spaces.

Bawa suffered a stroke in 1998 that left him paralyzed and unable to speak, but he continued to work from home with a small group of associates who followed designs that he had begun previously. In recent years, he completed the president's private residence and a hotel in Panadura. Bawa was honored in 2001 with the Aga Khan Foundation Chairman's Award. *Caroline Mitgang*

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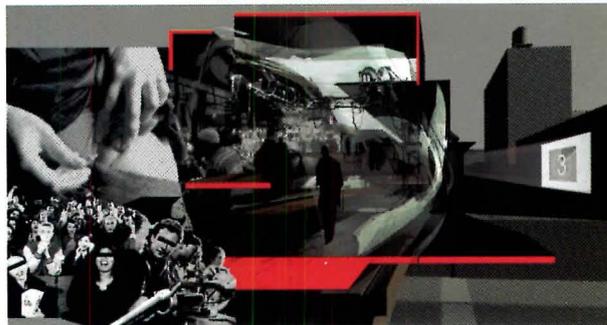
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Record News



The scheme **Black Market Crawler** has commerce functions in a boxcar

The ideas competition's two other winners are Ernesto Mark Faunlagui of Hoboken, New Jersey and Hugo Beschoor Plug, based in Berlin. Faunlagui proposed incising sections of the railway to allow daylight and views to the street below. Those cutouts would then be reused in designing the furniture, parapets, and other features of

High Line competition yields 4 winners

From a proposal that transforms New York City's High Line elevated rail line into a 1.45-mile-long swimming pool to another that envisions it reclaimed by nature, the four winning designs of the "Designing the High Line" competition represent the wide array of ideas proposed in the 720 entries submitted. The competition was sponsored by Friends of the High Line (FHL), a nonprofit organization that has championed railbanking the unused elevated railway.

The swimming pool proposal was submitted by Nathalie Rinne of Vienna. Matthew Greer and Karin Taylor of New York imagined the High Line's continued evolution into a wild field and proposed running a boxcar along the tracks.

a new, elevated path. Hugo Beschoor Plug's *Black Market Crawler* would house a number of commercial, cultural, and public functions in a contemporary boxcar.

What unifies these schemes, says FHL cofounder Robert Hammond, is their embrace of the grittiness of industrial-era structures and neighborhoods: "It was really important to the jury to not lose sight of the metaphorical shadow of the High Line," he says. Jurors included architects Steven Holl, Bernard Tschumi, and Marily Jordan Taylor, as well as landscape architects Julie Bargmann and Signe Nielsen. A selection of entries are on exhibit at New York's Grand Central Terminal now through July 26. *David Sokol*

Rose Bowl renovation proposed to lure NFL back to L.A.

In order to lure a professional football team to relocate in Los Angeles, the Rose Bowl Operating Company (RBOC) has unveiled plans to renovate and expand Pasadena's landmark Rose Bowl stadium. The organization, operated by the City of Pasadena, commissioned HOK Sport + Venue + Event to design the overhaul, which is estimated to cost \$500 million.

HOK Sport Principal Jonathan Knight says that, in addition to updating the stadium's features, input from community groups suggested "that we come up with a solution that was respectful of the historic fabric, or even bring back some of the fabric that had been lost."

To achieve that objective, the design calls for expansion to occur primarily out of sight. Underground concourses will improve access to



The Rose Bowl (exterior, top) would be renovated and modernized.

seating and include concession stands and other amenities previously housed in outbuildings in the Arroyo Seco. Above grade, 140 luxury suites would be added, but at the same level as existing press boxes. The design also retains the stadium's 1949 neon sign.

The project would expand the stadium from 700,000 square feet to approximately 1.5 million square feet—although modernizing the width and depth of seats and

stair treads, respectively, would reduce the number of seats by almost one third, to 64,000.

For the project to come to fruition, the National Football League will have to agree to fund construction costs and guarantee that a team will make the Rose Bowl its home. No official partnership has been announced. *D.S.*

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Record News

Global urbanism explored in Van Alen Institute exhibition



The exchange of ideas for rebuilding the World Trade Center has recently helped thrust urban design into the spotlight. The exhibition *OPEN: New Designs for Public Space*, at the Van Alen Institute in New York City, directs that spotlight around the world, demonstrating that the urge to make creative, successful urban spaces is active well beyond Gotham.

The show, which runs now until October 31, features images, plans, drawings, documentary films, digital animations, and models of contemporary public spaces from Macon, Georgia, to Melbourne, Australia.

"There are some really exciting things happening," says curator Zoe Ryan, who hopes the exhibition will infuse the dialogue about Lower Manhattan with an "international scope."

"We're trying to inform the public of who and what it takes to make these projects and get them done successfully," she said. Van Alen Institute is a nonprofit organization committed to improving the design of the public realm through exhibitions, books, workshops, and competitions.

The show features more than 20 projects from six continents, and is divided into five thematic sections: plazas, streets, information centers, meeting grounds, and memorials.

Some examples, like London's bold new City Hall by Foster and Partners, Melbourne's unorthodox Federation Square by Lab Architecture Studio, and Graz's daring Island In The Mur by Acconci Studio, are complete, and



Projects in the Van Alen exhibition include Fourt Grace (top) in Liverpool, by Alsop Architects; Southeast Coastal Park (middle) in Barcelona, by FOA; and Westergasfabriek Park (above) in Amsterdam, by Gustafson Porter.

have already become important public centers.

Many others are still under construction or on the drawing boards. Projects tackle issues ranging from avoiding the blandness of globalization—a stated goal of Genoa, Italy's Ponte Paro project—to building over toxic sites. Amsterdam's Westergasfabriek Park is on a former gasworks. Visit www.vanalen.org for more information on the Van Alen Institute and the exhibition. Sam Lub

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Sustainability is an often-used term these days. Well, consider the drinking fountains installed in the Oats Park School in Fallon, Nevada. Built originally in 1915, the school is now being renovated as the town's Performing Arts Center.



To maintain as much of the original flavor as possible, the Arts Council decided to retain the twin Haws drinking fountains that line the main entrance. What's the opposite of planned obsolescence? Haws, of course!

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Lectures

July 15
Case Study
Houses

Elizabeth A.T. Smith,
Chief Curator,
Chicago Museum
of Contemporary Art



PHOTO BY JAMES F. HOUSEL

July 16
The Miller/Hull Partnership
2003 AIA Architecture Firm Award

July 23
The Architecture
of Philip Johnson

Hilary Lewis, architectural historian
and urban planner

Exhibitions

Building Images:
Seventy Years
of Photography at
Hedrich Blessing
through July 27



BILL HEDRICH, 1939 © CHICAGO HISTORICAL SOCIETY

Picture This:
Windows on the
American Home
through August 11

Do It Yourself:
Home Improvement in
20th-Century America
through August 17

Saving Mount Vernon:
The Birth of Preservation
in America
through September 21

National building museum

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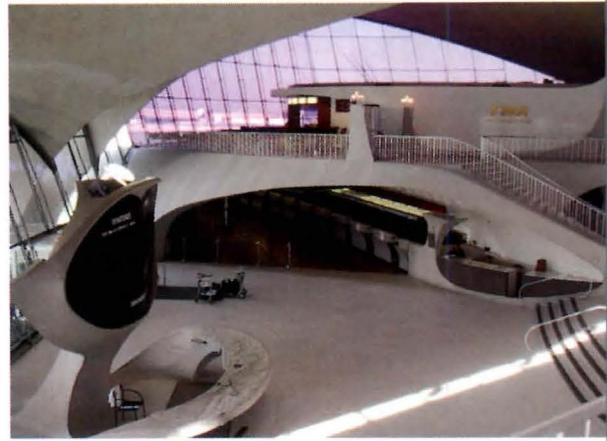
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Record News

TWA Terminal placed on National Trust's endangered list

Eero Saarinen's TWA Terminal at John F. Kennedy International Airport and urban houses of worship top this year's list of the 11 most endangered places, as named by the National Trust for Historic Preservation. As has become traditional for the National Trust's lists, the selection includes several specific buildings and some general categories of buildings. The trust's naming of urban places of worship to its annual list coincides with the Bush administration announcement that federal funds can now be used to renovate religious buildings that have been named historic landmarks. A ban on such grants had been in place since the 1970s, for fear of violating the



Saarinen's TWA Terminal has been shuttered in recent years.

cut it off from views of the airplanes nearby.

The architect Robert Mills designed the U.S. Marine Hospital in Louisville, Kentucky, which was built in 1851 and is now the country's only surviving inland marine hospital. The three-story Greek Revival structure has been vacant since 1975 and has severe termite and water damage.

The Michigan Boulevard Garden Apartments in Chicago were built in 1929 to house the city's growing African-American working class. The musician Quincy Jones and prizefighter Joe Louis both lived in the complex, which now sits boarded up and vacant, awaiting redevelopment.

The other places on the list are Bathhouse Row, Hot Springs, Arkansas; Little Manila, Stockton, California; Ocmulgee Old Fields, Macon, Georgia; East Side and Middle Schools, Decorah, Iowa; Amelia Earhart Memorial Bridge, Atchison, Kansas; Minuteman National Historical Park, Lexington, Lincoln, and Bedford, Massachusetts; and the Zuni Salt Lake and Sanctuary Zone, in Catron and Cibola Counties, New Mexico.

The National Trust also lists some recent successes in its preservation campaigns. The Dwight D. Eisenhower VA Medical Center in Leavenworth, Kansas, will be rehabilitated, and the Chancellorsville Battlefield in Virginia has survived one of its major threats. The Gold Dome Bank in Oklahoma City, which made last year's list, has a new owner that is transforming the building into a business and cultural center. K.L.



Michigan Blvd. apartments had social history.

Constitutional separation of church and state. *The New York Times* reported that some Constitutional experts feel that the use of federal money for historic churches would be permissible, as long as the funds do not support religious programs.

The TWA terminal is the best-known single work of architecture on this year's list. Completed in 1962, the swooping concrete structure came to symbolize flight in the way that Grand Central Terminal symbolized train travel. The air terminal sits vacant, and development plans call for the destruction of the building's two satellite concourses and construction of a large new facility that would surround Saarinen's building and



Bathhouse Row in Hot Springs.

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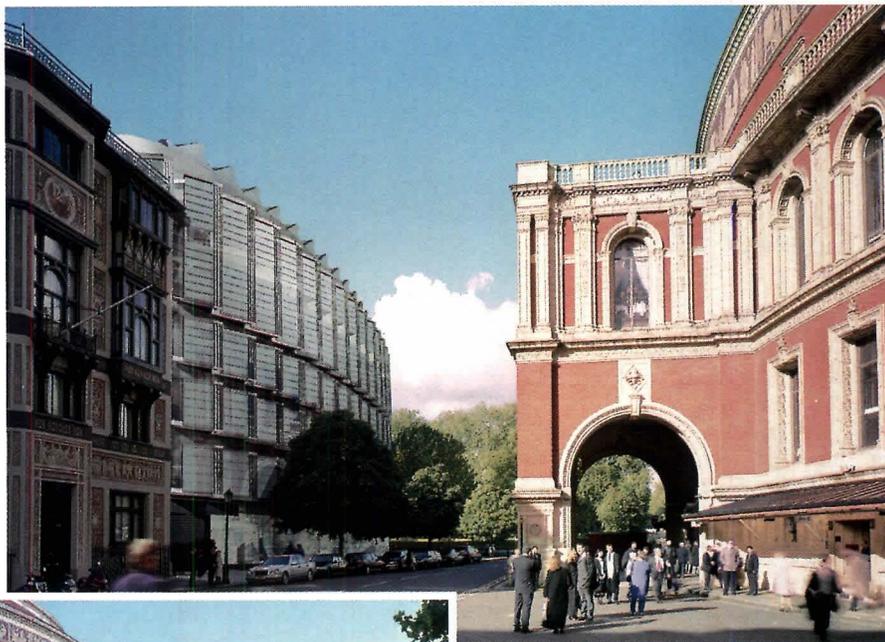
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Record News

Grimshaw's Royal College of Arts design raises ire in London



A proposed \$43 million extension to London's Royal College of Arts (RCA) has provoked fierce debate among the city's architecture and heritage communities. The site of the six-story, ellipse-shaped structure, designed by Nicholas Grimshaw, is between three heritage-listed buildings—the Royal Albert Hall, the Royal College of Organists, and the Royal College of Arts' Darwin Building, which dates from the early 1960s.

In spring 2000, Grimshaw won the commission for the RCA extension against David Chipperfield, Branson Coates, Michael Hopkins, Wilkinson Eyre, and Will Alsop in a RIBA-managed competition. From the outset, both architect and client were "hyper aware" of the site's significance. "We wanted a modern building in a sensitive architectural context. Not everybody was going to like it," says Sally Mason, the RCA's director of development.

Grimshaw's elliptical form is driven by a desire to complement the curves of the Royal Albert Hall and minimize the impact on views of the Royal College of Organists. The use of glass

The RCA addition is shown in context with the Royal Albert Hall in all three photomontages.

also afforded views of the context at ground level and the potential for natural light to penetrate exhibition and study spaces inside.

English Heritage and the Commission for Architecture and the Built Environment (CABE) are the two most powerful forces in British architecture, and were quick to express their views. While the former was unexpectedly complimentary in stating, "We consider it acceptable in mass, scale, and height, and applaud the elliptical plan," CABE recommended alterations to the ground-level elevations to improve accessibility.

The 20th Century Society, a single-issue lobby group dedicated to the preservation of 20th-century landmarks, is fervently opposed to the development. The final decision rests with the planning department of Westminster City Council, which will rule by the end of July. *A.M.*

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News Briefs

Pavilion is first Niemeyer design built in Britain

This summer, visitors to London's Kensington Gardens have a chance to explore the first architectural design by Brazilian architect Oscar Niemeyer to be built in the U.K. The temporary concrete-and-steel pavilion has been built on the Hyde Park lawn adjacent to the Serpentine Gallery, which commissioned the structure. The design, by Niemeyer with José Carlos Sussekind and ARUP, takes the form of a cantilevered deck 5 feet above ground, which is accessed via a ramp. The angular building further invites exploration through its semi-transparent facade. Niemeyer's is the fourth design of the Serpentine Gallery's annual program to commission temporary works for the



Niemeyer's pavilion cantilevers over Hyde Park.

lawn. The first was by Zaha Hadid, followed by Daniel Libeskind and Toyo Ito. Niemeyer's pavilion will be in place until September 14.

Designed as a public space with a café, the pavilion provides additional space for lectures, films, and exhibitions, and also introduces "architects who already are respected to a wider audience," explains Serpentine Director Julia Peyton-Jones. Niemeyer, who at 95 continues to work daily, recently completed the Novo Museo in Curitiba, Brazil. *Zoe Ryan*

Chrysler ends design awards program

After 10 years of honoring leaders in the design profession, the Chrysler Group ended its Chrysler Design Awards program in early June. Each year, the company awarded \$10,000 to six U.S. designers that were outside of the automobile industry. The decision to pull the program was based on its failure to generate more sales for the company, according to Chrysler senior vice president for design Trevor Creed. In a letter explaining the cancellation, Creed wrote that the corporation "determined that the company's dollars had to be placed specifically toward our core business—selling cars."

Chrysler reported a second-quarter \$1.2 billion operating loss. *D.S.*

NEA appoints new director of design

In June, the National Endowment for the Arts (NEA) named Jeff B. Speck its new director of

design. As director, Speck will be responsible for supervising grant making, as well as the Mayors' Institute on City Design and Your Town programs. Speck, 39, was most recently director of town planning for Duany Plater-Zyberk (DPZ) and coauthored *Suburban Nation: The Rise of Sprawl and the Decline of the American Dream* with Andrew Duany and Elizabeth Plater-Zyberk. He joined the Miami-based DPZ in 1993 as a project manager. At the NEA, Speck replaces Mark Robbins, who left in 2002. *D.S.*

ICC names James Lee Witt new C.E.O.

James Lee Witt has been named the C.E.O. of the International Code Council, a position formerly held by Bob Heinrich. Witt, director of the U.S. Federal Emergency Management Agency in the Clinton administration, has 25 years of work in disaster management. *D.S.*

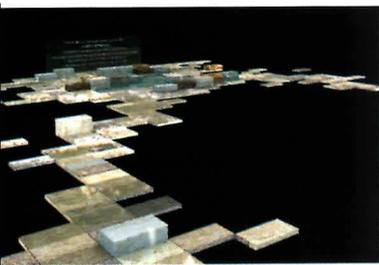


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The right basics—at the right price.

I. selects Arquitectonica-designed memorial After a long invited competition, United Nations has chosen Arquitectonica's design for a memorial dedicated to U.N. workers who lost their lives in the field. Now under construction, the memorial, sited in the North Garden of the



U.N. memorial has stones around a pool.

United Nations headquarters in New York, will be completed in September 2003.

Against a glass wall inscribed with the phrase, "Remember here those who gave their lives for peace," 60 large stones quarried in various continents will be arranged in an irregular pattern around a pool.

The stones will vary in height, some of them providing seating for visitors; the entire pattern will be lit from below, according to a design by L'Observatoire. The memorial is meant as a contemplative refuge from the city, says Arquitectonica cofounder Bernardo Fort-Brescia.

The U.N. will pay for the construction of the memorial with the proceeds of the 1998 Nobel Peace Prize, which was awarded to the U.N. Peacekeeping Forces. Arquitectonica provided its services to the U.N. pro bono. In a statement, U.N. Secretary-General Kofi Annan also announced that the \$1 million he received with the 2001 Nobel Peace Prize will be used to establish a fund for the children of U.N. personnel killed in service. *D.S.*

Rogers to work for National Assembly of Wales again

Richard Rogers Partnership (RRP) is part of a consortium bidding to con-

struct the design that the firm developed for the National Assembly of Wales. The bizarre scenario is the latest chapter in the stormy relationship between the firm and the Assembly. RRP won the competition to design the Assembly's new debating chamber in 1998 but was removed from the project in July 2001 [RECORD, September 2001, page 33] after costs rose 50 percent above original estimates. RRP claimed that it had not been fully paid for its services. Subsequently, a court ordered RRP to be reimbursed, and recognized the Assembly as the owner of the design. In fall 2002, the Assembly decided to select two contractors to bid for the project. At the beginning of this year, a consortium led by Taylor Woodrow, with RRP as its architect, was selected as the "preferred bidder." The consortium is expected to deliver its proposal by the end of June. When eventually



Rouse

complete—possibly by the end of 2006—the debating chamber will occupy a prominent site on Cardiff's waterfront. *Adam Mornement*

Philadelphia developer Rouse dies

Developer Willard G.

Rouse III, who helped shape the Philadelphia skyline, died of lung cancer on May 27 at age 60. Rouse founded Rouse & Associates in 1972, which became Liberty Property Trust in 1994. He developed the Liberty Place skyscrapers, including One Liberty Place by Helmut Jahn, completed in 1987 and still the tallest building in Philadelphia at 947 feet. His properties include the Philadelphia Stock Exchange Building and the Kimmel Center for the Performing Arts. He also oversaw development of the Philadelphia Convention Center. Rouse, a trustee of the Enterprise Foundation, was the son of developer Willard G. Rouse II. *J.E.C.*

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Dates & Events

New & Upcoming Exhibitions

Thomas Jeckyll: Architect and Designer New York City

September 17–October 19, 2003

This is the first exhibition of the work of the British architect Thomas Jeckyll, who excelled in the design of Anglo-Japanese metalwork and furniture. He was also an important designer of public and private architecture. The exhibition provides a comprehensive examination of Jeckyll's career, with 160 loans, including furniture, metalwork, works on paper, photographs, architectural fragments, interior fittings, and textiles. At the Bard Graduate Center. Call 212/501-3000 or visit www.bgc.bard.edu.

Presence Into Presence

New York City

September 3–October 3, 2003

This exhibition showcasing the art, architecture, and design of remembrance will examine the multitude of ways in which, throughout history, men and women have struggled to hold on to what is by its very nature fleeting. The exhibition will look at works of funerary architecture; demonstrate how great architects have used the memorial genre to develop their own forms and theories; examine the difficulty of memorializing an event as complex and unfathomable as the Holocaust; and consider a range of aesthetic, cultural, and political issues that affect the process of remembrance. In the David and Sheila Aronson Galleries at Parsons School of Design. Call 212/229-8987 or visit www.newschool.edu.

Measurements from the Collection

New York City

October 14, 2003–April 18, 2004

The Nancy and Edwin Marks Collection Gallery introduces two installations each year featuring a wide range of objects from all historic periods and creating a visual encyclopedia of the collections. International in scope and possessing some of the most diverse and comprehensive collections of design works in existence, the museum's holdings range from the Han Dynasty to the present and total more than 250,000 objects. Call 212/849-8400 or visit www.si.edu/ndm.

Solos: SmartWrap

New York City

August 5–October 10, 2003

The first show in a new series, *SmartWrap* features a pavilion by the Philadelphia architecture firm Kieran Timberlake Associates in the Cooper Hewitt Arthur Ross Terrace and Garden. *SmartWrap* is a concept for a customizable building material that would incorporate a building's facade as well as

emerging technologies in heating, lighting, and solar energy. At Cooper-Hewitt, National Design Museum. Call 212/849-8400 or visit www.si.edu/ndm.

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Dates & Events

March 8, 2003–Spring 2004

In *Fantastic*, MASS MoCA showcases contemporary artists—Miguel Calderon, Gregory Crewdson, Alicia Framis, Nils Norman, and the artist collective Temporary Services—all of whom embrace a world of hallucinatory, visionary, utopian, and otherwise “fantastic” ideas. At the Massachusetts Museum of Contemporary Art. Call 413/662-2111 or visit www.massmoca.org.

Of Our Time: 2002 GSA Design Awards Show

Washington, D.C.

March 27–October 19, 2003

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

Picture This:

Windows on the American Home Washington, D.C.

March 29–August 11, 2003

Picture This presents windows through multiple perspectives and offers an entertaining two-century history of a building element that opens a view into the changing nature of American domestic life. Actual windows, advertisements, film and television clips, models, drawings, and photographs help to explore how windows shape our understanding of the world inside and outside of our dwellings. At the National Building Museum. Call 202/272-2448 or visit www.nbm.org.

National Design Triennial 2003: Inside Design Now New York City

April 22–January 25, 2003

The Triennial is a review of cutting-edge trends and future horizons in the fields of design practice, from architecture, interiors, and landscape design to product design, graphic design, fashion and new media. The exhibition details the work of emerging designers operating at the most innovative and provocative level in the field today, including the work of 80 artists with specially commissioned installations. At the Cooper-Hewitt National Design Museum. Call 212/849-8400 or visit www.si.edu/ndm.

Traces of India: Changing Views of the Monuments of a Subcontinent Montreal

May 15–September 14, 2003

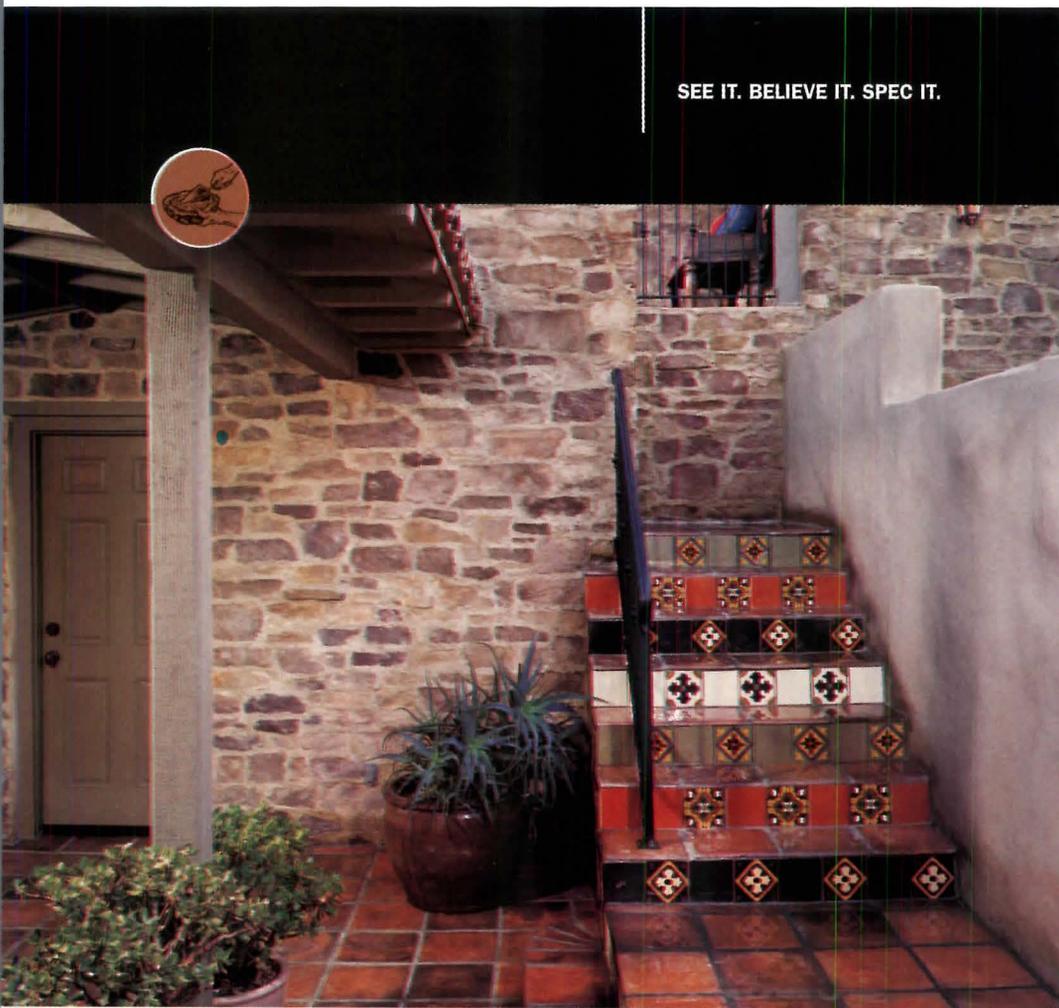
The exhibition will present more than 200 master photographs taken by travelers, military surveyors, and professional studios within the context of the British colonial era, exploring some of the greatest architectural sites of the Indian subcontinent. At the Canadian Centre for Architecture. Call 514/939-7000 or visit www.cca.qc.ca for further information.

Fragile Jewels of India: Preserving an Extraordinary Architectural Heritage New York City

May 29–September 10, 2003

The show focuses on Jaisalmer, the legendary Golden Fort of the Rajasthan desert, and also features other historic and endangered sites and cities. Through architectural details, architectural and contemporary photographs, textiles, tools and crafts, the exhibition explores the historic architecture and conservation of many sites. At the World Monuments Fund Gallery. For more information, call 646/424-9594 or visit www.worldmonuments.org.

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Dates & Events

Off the Wall New York City

June 12–August 22, 2003

An exhibition for the Society for Environmental Graphic Design (SEGD) invites visitors to experience the dimensions of communications and information, way-finding and signs, identity and environments, interpretive exhibits and retail. Designed by Lee H. Skolnick Architecture + Design Partnership, the installation is comprised of three sections: 1) The Work, 2) The SEGD Portal, and 3) The Design Dialogue. At the

American Institute of Graphic Arts (AIGA). Visit www.scolnick.com for more information.

USDesign 1975–2000 New York City

June 19–September 28, 2003

Featuring more than 250 designs and objects, this exhibition explores some of the most significant developments in the fields of graphic design, architecture, and decorative and industrial design in the U.S. from 1975 to 2000. The show presents the work of three generations of internationally recog-

nized and emerging designers whose style matured after 1975, including Frank Gehry, Michael Graves, Steven Holl, Maya Lin, Thom Mayne, Ross Menck, Katherine McKoy, Karim Rashid, Deborah Sussman, and Robert Venturi. At the Museum of Arts and Design (formerly the American Craft Museum). Visit www.americancraftmuseum.org call 212/956-3535.

Sound West Hollywood, Calif.

Various dates, June 28–September 20, 2003
Sound, at the MAK Center's historic Schindler House, presents annual summer concerts featuring experimental musicians and composers interacting with the landmark Modernist residence. At the MAK Center for Art and Architecture. Visit www.makcenter.org or call 323/651-1510 for schedule of performances.

Luxury Textiles East and West Los Angeles

Through August 15, 2004

Commemorating the 50th anniversary of LACMA Department of Costume and Textiles, this exhibition highlights extraordinary examples of the textiles of America, Asia, and Europe from the department's extensive holdings. At the Los Angeles County Museum of Art. Call 323/857-6000 or visit www.lacma.org for more information.

Pere Noguera: Lands Barcelona

Through August 31, 2003

A poetic reflection on the design of elements of earth used in architecture, in the home, for domestic utensils, for furniture, decoration, the garden, and everything that surrounds us. At the Ceramics Museum, as part of the Year of Design 2003. Visit www.designyear2003.org.

Conferences, Symposia, Lectures

Furniture Philadelphia 2003 Philadelphia and Wilmington, Del.

May–August 2003

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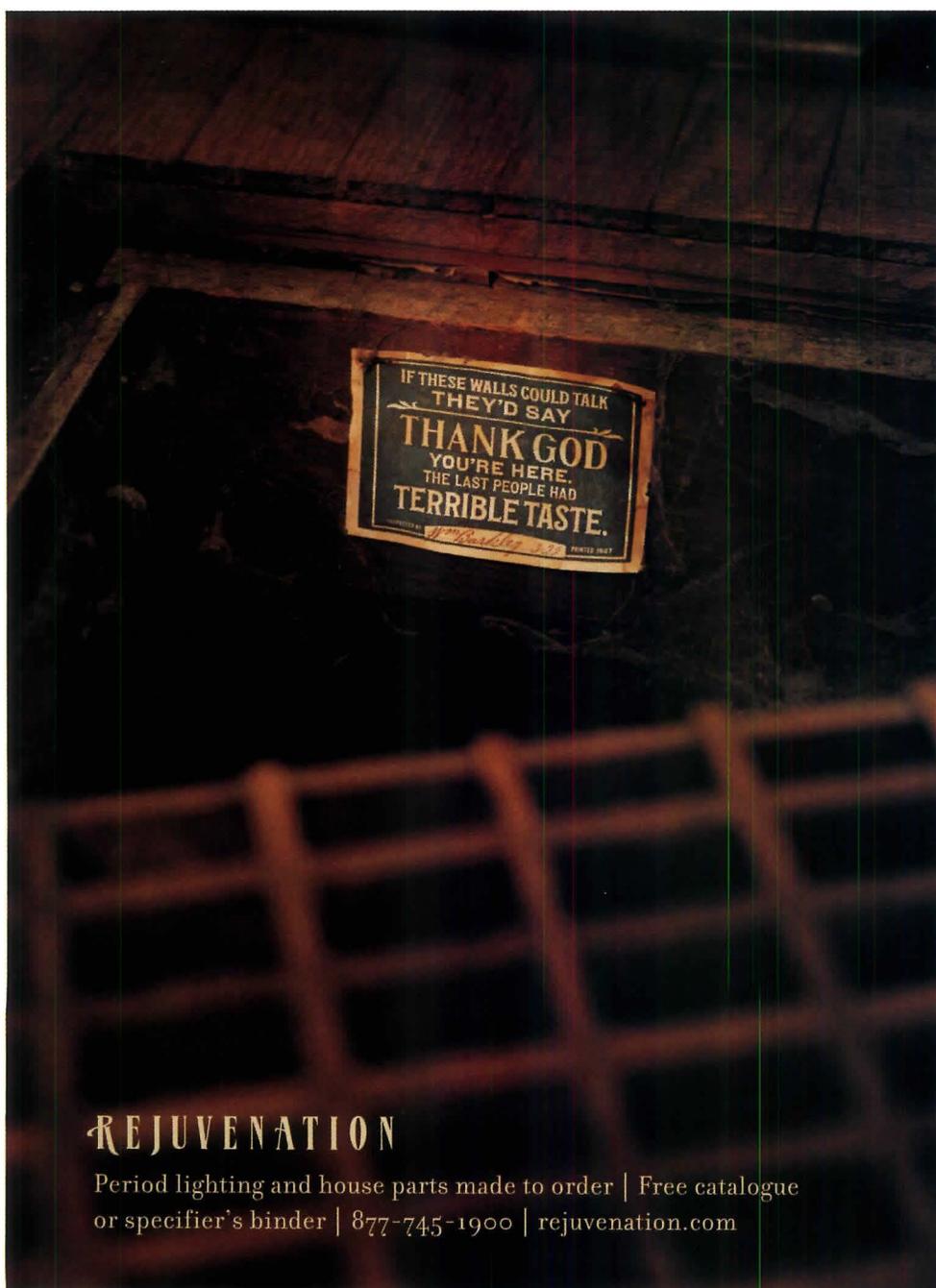
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archrecord2

FOR THE EMERGING ARCHITECT

DEPARTMENTS

For many architects trained at schools on the cutting edge, it is Modern architecture that is most familiar and comfortable. This month in archrecord2, the Design section profiles an architect who prefers to work in a Modern idiom, but who is equally comfortable with columns. And in this issue, two architects, an architectural historian, and a graphic designer take so much comfort in the late Modernism of New Haven, Connecticut, that they turned the whole city into a museum.

DESIGN

Ease with a Cor-ten hut



For Scott Williams, the founder and principal of SAWA ARCHITECTURE, a pool house in New Jersey marks a career turning point. The pool house contains a bar, a changing room, a water closet, and an outdoor shower. A 12-foot-high arc of Cor-ten steel shields the front of the structure. It is a thoroughly modern and striking building, reminiscent of a Richard Serra sculpture, but layered and functional. And it's a complete contrast

to the new porch structure added to the rear of the house at the other end of the pool. The porch has shutters, pilasters, and a definite Colonial style.

Williams designed that, too.

In fact, much of Williams's built work hews more closely to the Classical orders than to Corbusier. His work in the Classical idiom comes as much from his training as from his taste. "My father owned a furniture company on the East Side of Manhattan," Williams said. "And when he died seven years ago, I rushed in to take over the daily operations. I got to know the decorators, and then I found myself doing renovations of Fifth Avenue apartments. You read about these architects who start off doing bus shelters in Omaha or teeters, but for me, it was the complete opposite."

Williams earned a B.Arch. from the Pratt Institute in Brooklyn, New York, and an M.Arch. from the Southern California Institute of Architecture, in Los Angeles. While there, he worked for Michael Rotundi at RoTo Architects, then for Charles Gwathmey at Gwathmey Siegel & Associates in New York. Then his career took a stylistic turn as he took a job at Ferguson Murray & Shamamian, a New York firm known largely for its high-end traditional houses and apartments.

He went to the firm's library and immersed himself in classical architecture and the work of Palladio. And when he wouldn't choose to work in a style heavy on columns and pediments if given the choice, Williams found



**Pool House,
New Jersey, 2003**

The Cor-ten steel arc in front of this pavilion was fabricated in a factory in Maryland and trucked to the site. From the exterior, the building's skylight appears to float above the structure. The interior is finished in plaster and terrazzo.



(continued from previous page) Classical architecture satisfying. In particular, the need for hand drawings suited Williams well: No matter what style he works in, he draws everything by hand.

The commission for the sunporch addition in New Jersey came to Williams even before the clients had contemplated the idea of the pool house. But when the idea came up in conversation, Williams asked for a weekend to do some preliminary drawings, and the clients were impressed. They gave Williams the go-ahead and took his design ideas on faith.

"They didn't have any idea of what they were getting," Williams said. "We barely had any idea what they were getting ourselves."

What they got was a Modernist counterpoint to his new porch, and an architect who was proud of both, even if he has a clear preference for one.

"Modernism is my style, 100 percent," Williams said, "though it's fun to go back and forth. I never try to impress my style on a client, but things come to the surface when they see your passion." *Kevin Lerner*

Go to architecturalrecord.com/archrecord2 to see more projects and product designs by SAWA RCHITECTURE.



9/11 Staten Island Memorial Competition,
Staten Island, New York, 2003
Alternating glass walls and steel plates memorialize names and provide access to interactive information via fiber optics.



WORK

Turning a city into a museum

Marisa Angell, a doctoral candidate in architectural history at Yale, was in B "doing some language work," she n but she also intended to go out and the architecture of the city.

"But I realized I was spending m time in museums than going out to buildings I wanted to see and photo while I was there," Angell said, "and to think about why that was."

The answer she came up with ha something to do with the explanato nature of museums, and it inspired begin thinking about her academic h New Haven, as the basis for a new k museum, one that takes the building the city itself as its exhibitions. She the project the Urban Museum of Mo Architecture, or UMMA.

Angell began to work on a serie brochures for seven of New Haven's important buildings: Paul Rudolph's Art and Architecture Building and Cra Manor; Eero Saarinen's Ingalls Hocke

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Rink; Louis Kahn's Yale University Art Gallery and the Yale Center for British Art; Robert Venturi and John Rauch's Dixwell Fire Station; and the Beinecke Rare Book Library, by Gordon Bunshaft of SOM.

"The common thread in this project is that all of these significant buildings were constructed within a 20-year period in New Haven," said Richard

Garber, partner in charge of Emergent Office, an architecture firm that worked with Angell on the project. Emergent Office designed the seven "INFOjects" that hold the brochures that Angell wrote. But the INFOjects also disseminate information about the projects through the texts that are printed on them. Each INFOject responds to the building it describes. The INFOjects stand in the museum galleries of the buildings.

"Marisa originally came to us to ask

about off-the-shelf booklet racks," said Nicole Robertson, the other partner in Emergent Office.

The brochures were designed by the third member of this collaboration, graphic designer Christine Moog. Each brochure tells the history of its subject, and some show other works by the same architect, or buildings that the one under discussion was influenced by, or a picture of the site before the current structure went up. But none have pictures of the buildings.

"I wrote the text in a way that would encourage people to turn the same eyes to architecture that they use when they walk into a museum," Angell said.

Each brochure also contains a map to the other UMMA sites, so that visitors can create their own walking tours. The INFOjects and brochures will be displayed at least through December 2003.

"The INFOjects have weathered pretty well so far," Garber said, "except for the one at the Ingalls Hockey Rink, which gets whacked at by every little kid with a hockey stick." *Kevin Lerner*

Go to architecturalrecord.com/archrecord2 for the other five INFOjects, and to see UMMA's brochures.



"INFOjects" contain brochures about the Yale Center for British Art (left) and the Beinecke Rare Book Library (above).

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Obstructed vision: Constraints limit WTC memorial even before design is selected

Critique

By Michael Sorkin

DEPARTMENTS

first duty of reconstruction is remembrance. Whatever design is chosen for the World Trade Center memorial, it will frame the meaning of the events of 9/11/01 in both its depiction of loss and in its mnemonic of memory: What is built will convey to future generations both what happened and to whom. The second duty is healing. This must include both balm for the sufferings of the bereaved and dressing of the wound to New York. The jury for the memorial competition faces very serious issues, both in the artistic specifics of its choice and in balancing the potentially conflicting claims of these two obligations.

There has already been a desire to decide to conflate healing with restoration, to make urbanism a surrogate for lives lost. In the months since the tragedy, the idea that the appropriate response is to revive the character and uses of the site before the attack has been fixed. In the current master plan, this means both the total replacement or enlargement of what was lost—huge skyscrapers, vast amounts of shopping, transit space, and so on—as well as the repair of the urban damage done by the World Trade Center itself via the reconnection of several cross-site streets severed by the original construction.

Reflecting this ambivalence, the 13-member competition jury, which includes designers Maya Lin, Enrique Norten, and Michael Van Kenburgh) is already bridling at its

Contributing editor Michael Sorkin is director of the urban planning program at The City College of New York.

constraints. Shortly after being tapped, several jurors declared their willingness to “break the rules” by entertaining submissions that ignore the announced requirements. Even the brief for the competition hedges its bets by stating that “design concepts that propose to exceed the illustrated memorial site boundaries may be considered by the jury if, in collaboration with the LMDC, they are deemed feasible and consistent with the site plan objectives.” Juror James Young put it most strongly: “Anything [competitors] might have in mind, any response, will be considered here.”

It is easy to understand the jury's unease, given the constraining character of the master plan. The Libeskind scheme is not simply a proposal for the organization and reconstruction of the site, but a large-scale cooptation of the grammar of memory. Clearly, the plan is itself intended as the primary memorial and thus dramatically deforms the scope and possibilities of the competition, much as the two rounds of architectural consultation were themselves hemmed by a program that brooked no variation on the commercial character of the project.

For those trying to produce the memorial-within-the-memorial, the constricting influence of the master plan will be felt in two registers. To begin, the location of the memorial site 30 (or 70) feet below grade and its surrounding by the bloated Libeskindian apparatus of train station windows, neatly glazed bathtub, dancing waters (the wall that held back the Hudson now apparently

needs protection from the rain), giant waterfall, ramps, cantilevered cultural facilities, and gigantic towers, will certainly influence the mood of the place. Indeed, the insistence on descent as the appropriate memorial kinesthetic has already aroused strong opposition from people who live and work in the area: A recent poll shows that 70 percent of those

murdered, the object of the attack—and of its commemoration—is reduced by this mock-patriotic metonymy with its banal association with the Statue of Liberty, her torch replaced with TV antennae.

On June 12, Governor George Pataki, at a meeting with representatives of 9/11 survivors, declared his opposition to current plans to con-



The USS Arizona Memorial rests above the site where the battleship sank.

living and working in the neighborhood want the memorial to be approached from street level.

But it isn't simply that the one instance of sanctioned public participation must speak from a pit, it's the command of aura that offers the biggest challenge to free imaginative access. Libeskind's elaborate iconographic program is a straightjacket for meaning. Its most prominent component is that 1,776-foot tower, an Ayn Randian totem of patriotism as machismo. This decision to Americanize the event assures that we accept Al Qaeda's intended meaning for the attack. Never mind that hundreds of people from 92 countries other than the U.S. were

struct a bus garage beneath the memorial site. The statement refined his earlier insistence that the footprints of the Trade Towers were consecrated ground and the central armature for commemoration. While this strategy seemed straightforward, a parsing process had begun months ago, prompted, in part, by the fact that the idea of the footprints was largely conceptual, all evidence of their presence having been cleared from the site. How deep were the new prints to be? How high? Could they be moved? And what might appropriately occur in and near them without infringing on their aura?

After selecting the Libeskind scheme in February, the LMDC called

Critique

for the garage below the memorial and the architect quickly obliged by raising the level of his commemorative pit by 40 feet. Now the governor, reflecting widespread sentiment, has insisted that the footprints descend to bedrock and has dramatically changed the terms of the current memorial competition.

If ever a commemorated event was site-specific, it is here: We are marking a killing field, a crime scene. Given the coincidence of marker and event, what special qualities are implied? This is not a commemoration at a distance, like the Vietnam memorial. That somber wall responds to the geometries and meanings of the Mall and, in its modest descent into the earth and its simple foregrounding of the names of the dead, it aptly commemorates a still ambiguous but unquestionably tragic event without the usual triumphalism of war memorials or any overwrought

iconography. This is our first memorial to a war we lost and it rightly focuses on sacrifice. Libeskind's project—with its bellicose iconography of strength, its gigantism, and its emphasis on heroism—seems to commemorate victory.

As evidenced by Gettysburg, the USS Arizona in Pearl Harbor, and Babi Yar in the Ukraine—which are commemorated in situ—the symbolic finds its most pregnant source in the particulars of place. The topography of the massive gathering of armies, the submerged hull, and the painful ravine, all supply an infusion of both forms and ghosts. Like that sunken battleship, the WTC footprints are a kind of readymade. And the dust of the victims abides in place. How to mark this coincidence?

In the immediate aftermath of 9/11, a highly aestheticized discourse arose. Forced to use familiar categories to assimilate an unfathomable

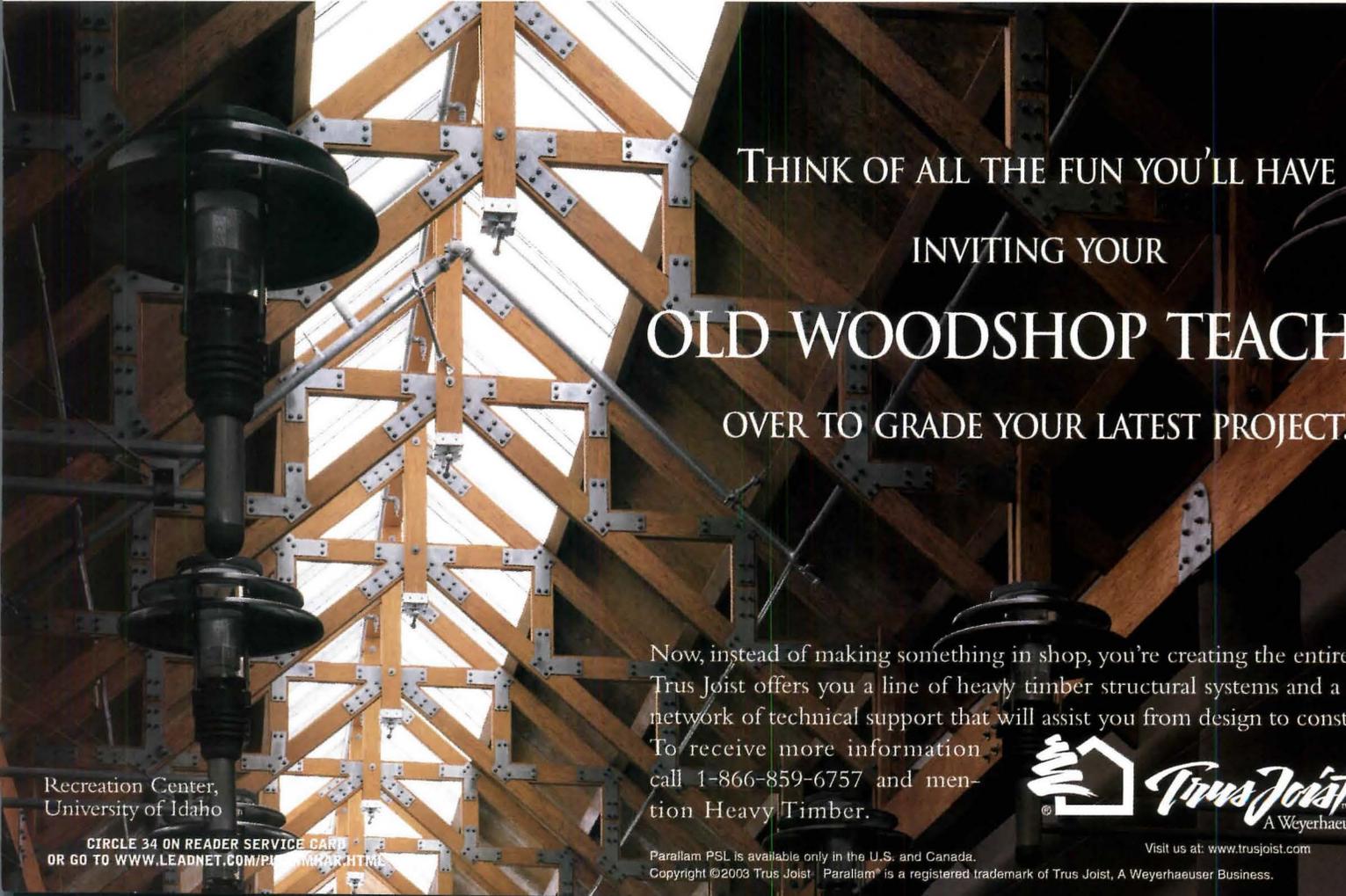
event, many of us lapsed into the language of the sublime. Typical was the widespread call for the careful conservation of the twisted facade of the south tower as a memorial. And it was hard to resist finding it beautiful, a resonant icon for the event. But the domination of the debate by aesthetic categories distracted us from broader questions. The conspiracy buff in me, for example, thinks the LMDC set up Beyer Blinder Belle for its rejection on artistic grounds, enabling Libeskind to return several months later with almost exactly the same project, now wrapped in ziggy-zaggy signifiers of "architecture."

Libeskind has been widely criticized for his own favored (and seemingly universal) iconography—that of things shattered, wounded, twisted, slashed—and the objection has merit. We revere not just what we make beautiful but also the forms we inscribe in memory to stand for the events themselves. There is a difference (not to mention a choice) in remembering the spectacular mushroom cloud over Hiroshima or the

muscular hardware of the Enola Gay instead of the incinerated bodies and the lingering cancers.

How to find both the ground and the grounds of remembrance Ground Zero? Thinking hard about this issue these past 20 months, I have come to believe very strongly that all of Ground Zero should remain as open, public space. Just as New York's premier expression of private property is the skyscraper, our best public spaces are our parks. It seems to me this should be the frame for memorial, with private interests relegated to the abundant opportunities available at and beyond Ground Zero's physical periphery. Just as Central Park forms an attractor for the cultural institutions around it, so this site might be a point of dissemination for public use and space.

Passing the site several times a week, I am increasingly struck by its power and coherence as a space. No building will ever achieve the eloquence of this void in speaking of the event. We do not hallow this ground simply by filling it with buildings. ■



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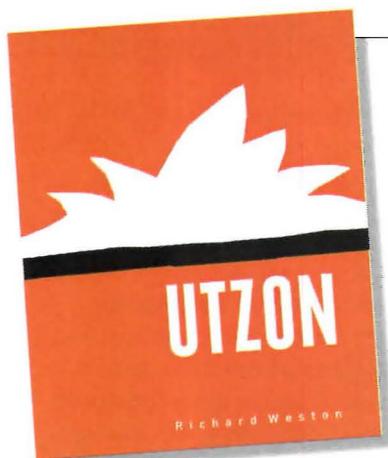
From Down Under to Over the Top, Sydney to Cirque du Soleil

Books

Utzon: Inspiration, Vision, Architecture, by Richard Weston. Copenhagen: Edition Axel Bonhoeffer, 2002, 432 pages, \$40.

Though Jørn Utzon, winner of the 1966 Pritzker Prize, created one of the most famous buildings in the world, both the Sydney Opera House and Utzon himself have remained elusive. Throughout his career, Utzon has closely guarded his privacy and declined offers to collaborate on monographs. However, after Richard Weston completed much of the legwork for this volume, Utzon agreed to contribute to it. The result is a gorgeous, intimate monograph that overflows with images, anecdotes, and Utzon's admiration for the Danish architect.

Weston focuses on the architect's design process and his personal relationship to architecture. In providing sketches and details about the genesis of many projects, the author emphasizes Utzon's sources of inspiration, the influences on him, and early design decisions of his work. In addition to hundreds of images—documenting the architecture but relatively slim body of text from the 1962 Kingo Housing in Ålborg, Denmark, to the 1994 house in Majorca—the monograph includes many writings by Utzon that delineate his vision of modern architecture as harmonizing nature and contemporary society. The writings reveal an earnest, dedicated personality. Utzon's character becomes



particularly relevant in Weston's re-evaluation of the Sydney Opera House controversy. Although the building was completed 30 years ago, the literature on Utzon is largely restricted to that project, the most recent volume being *Jørn Utzon, Architect of the Sydney Opera House*, by Françoise Fromont (Ginko Press, 2002). Weston recounts the well-known saga—how Utzon spent nearly a decade in Australia, beleaguered by engineering difficulties and back-room bickering, only to withdraw from the project in 1966—and reconsiders allegations that Utzon was to blame for the difficulties. To support his claim that Utzon's reputation was unfairly tarnished, Weston cites the different perspectives and approaches of the architects, the engineers, and the politicians. He concedes that a few of Utzon's ideas were misguided, but points out that modern technology would have resolved the conflicts between the architect and the building's engineers. Publicly seen as a failure after leaving Sydney, Utzon continued to develop his style and grow as an

architect. Weston follows Utzon's signature architectural element, the platform, as it reappears throughout his career, most notably in competition designs from the 1960s. The author also applauds Utzon's exploration of new techniques, such as "additive architecture," an approach to prefabrication characterized by building with a kit of parts and repeating a limited number of architectural elements.

Weston writes unashamedly out of love for Utzon's architecture, and the author's enthusiasm for it is infectious. *Diana Lind*

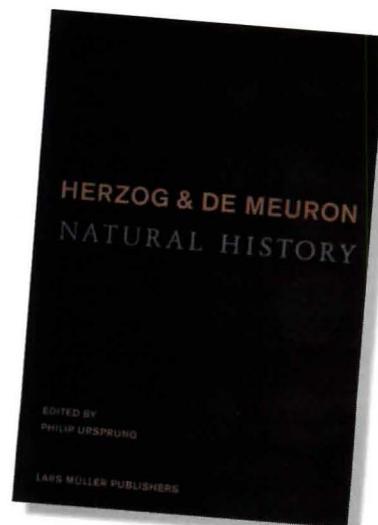
Herzog & de Meuron: Natural History, by Jacques Herzog, Pierre De Meuron, Philip Ursprung, Phyllis Lambert, Kurt W. Forster. New York: Distributed Art Publishers, 2003, 455 pages, \$65.

Swiss crypto-twins Jacques Herzog and Pierre de Meuron were born in 1950, attended the same schools in Basel, opened their architecture office there in 1978, and brought home the Pritzker Prize in 2001. Pritzker juror Carlos Jimenez commented on "their capacity to astonish," to transform the ordinary into "something truly extraordinary." Take, for example, the copper-wrapped railway Signal Boxes in Basel, a stark monolith rising from intersecting railways; the unarticulated cubic Eberswalde Library, in Germany, inscribed with hovering images; or the "information skins" for a 1991 competition entry for an arts center in Blois, France. Materials, as you might guess, are

the firm's métier.

Neither a monograph nor an enhancement for coffee tables, this book attempts, above all, to comprehend the phenomenon of Herzog and de Meuron, how their work has drawn upon art (past and present), and how they join architecture with art in buildings that "prove capable of absorbing an artist's contribution," in the words of Kurt Foster. Editor Philip Ursprung writes that the public still hasn't decided whether Herzog and de Meuron's image-saturated projects are about art or architecture; that, he says, seems to suit them, perhaps because they challenge the boundaries between the two. At the same time, they are trying to "recover for architecture a standing granted only to art, while avoiding the treacherous aspiration of turning building itself into an art," in Foster's words.

The volume accompanied an exhibition, *Herzog & de Meuron: Archaeology of the Mind*, organized



Books

by the Canadian Centre of Architecture (CCA). The exhibition originated at the CCA last October and continues at the Heinz Architectural Center, Carnegie Museum of Art, Pittsburgh, through September 7. Like the show, the book includes unfinished items and fragments from the partners' storage room. Attempts to understand the work of Herzog and de Meuron prompted interpreters to "pour over their biographies like an archaeologist," writes Ursprung.

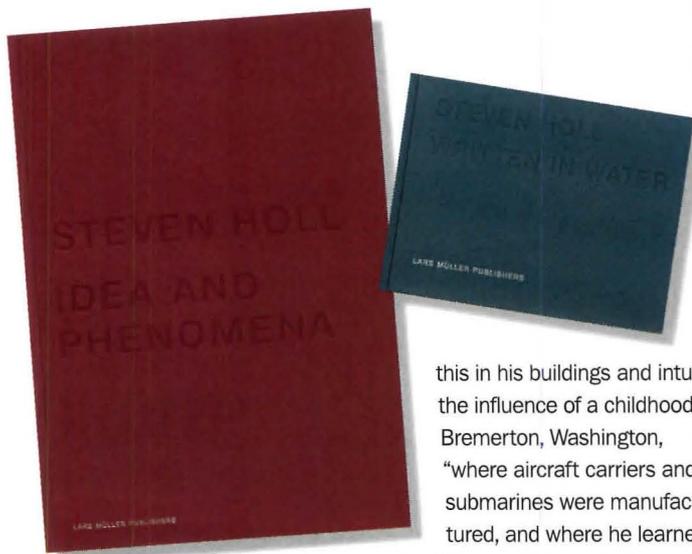
It should come as no surprise that the people who run the CCA, a museum in the business of exhibiting architecture, are fascinated by Herzog and de Meuron, architects known for their designs of museums and exhibitions of their work in museums, most memorably eight years ago at the Centre Pompidou in Paris. Their Tate Modern transformed a giant London power

station into a suite of galleries. Their de Young Museum in San Francisco is scheduled for completion in 2004, and their extension to the Walker Art Center in Minneapolis is expected to be finished in 2005.

The book unfolds in six thematic portfolios, each accompanied by essays from artists, scholars, and other worthies and by a statement by Herzog and de Meuron, always speaking with a single voice. About architectural approaches or style, for instance, they say, "You can pit picture-makers against iconoclasts or an ecological approach against a technically oriented one. Such contradictory pairs are legion but ultimately they overlap."

This is a provocative, intriguing book. *Andrea Oppenheimer Dean*

Steven Holl: Idea and Phenomenon, by Steven Holl, Dietmar Steiner, Michael Bell.



Baden, Switzerland: Lars Müller and Architekturzentrums, 2002, 128 pages, \$50.

For all his fame, Steven Holl has done it his way. Austrian critic Dietmar Steiner writes that Holl works independently of the cultural and architectural visions of his peers. In another essay, British artist Yehuda Safran says, "He approaches everything with a mind unclouded by current opinions." You may sense

this in his buildings and intuit the influence of a childhood in Bremerton, Washington, "where aircraft carriers and submarines were manufactured, and where he learned about the spatial complexity and intense gray atmosphere of those spaces," says Safran.

This isn't a monograph per se. With its stylish design and choice of affecting images, the book focuses on a reflective form of architectural work and on the sculptural expression inherent in Holl's designs, his compositions, materiality, and wonderful use of light. These qualities are apparent, for instance, in the Sarphatistraat offices in Amsterdam (1996-2000). The book showcases 13 projects v

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pletion dates from 1997 to 2004. Buildings and projects from through 2001 are cataloged at the back of the book.

Perhaps more to the point than Steiner's or Safran's high-level, philosophical essays are the book's images. They show how work, from first sketch to completed design, is intended to convey spiritual and emotional messages and is tightly bonded with the buildings. Borrowing a quote from Kant, Safran writes, "Concepts without intuitions are empty; intuitions without concepts are blind." He writes that concept drawings are my secret weapon." A.O.D.

Steven Holl: Written in Water, Steven Holl and Lars Müller. Zurich, Switzerland: Lars Müller Publishers, 2002, 400 pages, \$50.

A brick-size book, measuring 7 inches and 2 1/4 inches thick, it contains 365 drawings created between 1992 and 2001. It is a book of design ideas rendered in

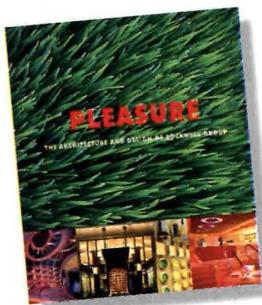
watercolor, a perfect medium for an architect known for the sculptural qualities of his buildings and for his manipulation of light. In a short introduction, Holl writes, "Often the small paintings are playfully vague; yet at the same time they capture the idea that will drive the design of an entire project." He says that while architects need to use all the resources that computerized architectural production offers, "I believe the idea of a building, the 'seed germ' as Louis Sullivan termed it, is born with an early intuition.... The initial sketch still begins the process."

Some of the drawings in this little volume became the basis for buildings, such as a dormitory at MIT. Yet, Holl writes, "regardless of their fate, [the drawings] remain a probe of intuition and chance, aimed at liberating the imagination." The sketches

are very telling. A.O.D.

Pleasure: The Architecture and Design of Rockwell Group, by Kurt Andersen, Paola Antonelli, Arnold Aronson, Raul A. Barreneche, Michael Bierut, et al., New York: Universe Books, 2002, 224 pages, \$65.

Face it. The architecture we most admire tends to be very, very serious, pared down, and way cool. Then there's the Rockwell Group, whose work is effervescent, lush, and emotion-laden. Critic and novelist Kurt Andersen writes that the group's "love of color and spectacle and sentiment guaranteed their exclusion from the 20th-century canon." They took Venturi-esque ideas and ran with them, turning the lobby of the W Hotel in New York's Union Square into a topiary garden, erecting a tent at New York's Lincoln



Center for an AIDS fund-raiser that looked like a bazaar with stylized minarets and glittery beads, and designing a gallery exhibition with every artifact suspended from the ceiling.

As in his theaters for Cirque du Soleil, David Rockwell approaches architecture as a fun-loving impresario creating magical spaces to draw crowds. Known for his casinos, theaters, and restaurants, he is pigeonholed as an entertainment architect. Indeed, he belongs to the tradition of P.T. Barnum, who put up grand buildings to house extravaganzas and ignored the conventional boundaries between theaters and museums and circuses, a tradition revived by Disney. But the Rockwell Group also brings life and a sense of comfort to hospitals and hotel rooms. Its designs may resemble stage sets, but the stage sets are stunning and have elegance and verve. Some of the firm's work comes as a breath of fresh air, as does this book. A.O.D.

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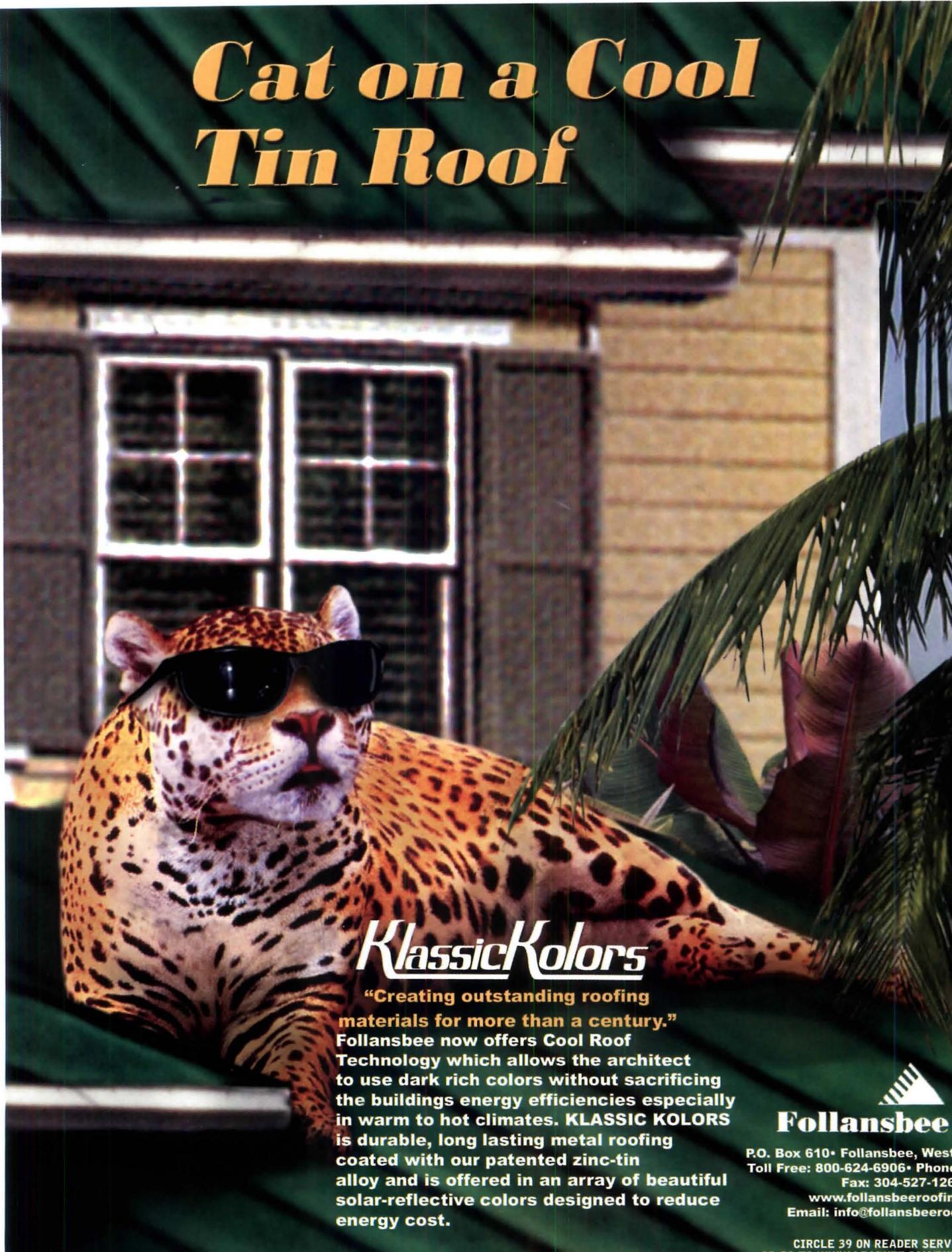


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The Chrysler Building's strange starring role in *Cremaster 3*

Exhibitions

By Christina Rogers

master 3. A film by Matthew Barney. Part of the exhibition *Cremaster Cycle*, shown at the *Mon R. Guggenheim Museum*, New York (ended June 11, 2003). *Five films in the series can be seen nationally in selected theaters.*

It may not be uncommon to get glimpses of notable works of architecture in films, the Chrysler Building is itself a character in *master 3*, Matthew Barney's theatrical film that was shown in a recent exhibition *Matthew Barney: The Cremaster Cycle* at the Guggenheim Museum in New York. Although the show has closed, *master 3* lives on: It is being presented across the country through the end of the year (see schedule at www.archrecord.com, In the Cause of Architecture). In many ways, the Chrysler Building is the protagonist of an evocative tale, where inner conflicts and external obstacles beset the tower as it nears completion. The story is set vaguely in the 1930s, as it traces the construction of the tower—and its fictional partial destruction—through a visual narrative so stunningly beautiful it makes up for the lack of dialogue.

The story centers on an ongoing struggle between the building's architect, Hiram Abiff—a character from Masonic lore, played by Richard Gere—and the "Entered Apprentice," a rugged-looking fellow played by Matthew Barney. Despite the architect's attempts to complete the

structure, Barney spends most of the film trying to sabotage the skyscraper by ascending from the lobby to the spire through the elevator shaft. At the same time, the tower has begun to implode at its base. In the lobby, five 1967 Chrysler Crown Imperial sedans ruthlessly ram into and destroy a 1930s model Chrysler Imperial New Yorker, trashing the marble entrance hall of the tower in the process. Meanwhile, the apprentice has seized an elevator car and, filling it with concrete, sends it plummeting to the ground floor. At the heart, the tower represents the conflict between forces that systematically scheme, order, build, betray, and destroy.

Barney got the idea for the demolition derby after learning that in the 1930s a car showroom occupied the ground floor of the Chrysler Building. The lobby in the film is a replica of the actual space, built to dimensions slightly larger than those of the actual lobby, and filmed in a warehouse in Sunset Park, Brooklyn. Before constructing the set, Barney's production team photographed the walls, floors, and ceilings of the actual Chrysler Building lobby and digitally enhanced them. A local billboard company then had images reproduced on large rolls of vinyl and paper. Hence, the lobby that appears so vividly in the film is mostly made of paper glued

The Chrysler Building (right). Matthew Barney scales the Guggenheim Museum (bottom left). Barney as Entered Apprentice (below left).



on ¼-inch plywood board in front of 6-ton concrete blocks. Red clay dust, matching the marble in the lobby, was added to the wall cavities, so any impact would look like marble being pulverized.

To recreate the exterior of the

Chrysler Building as it appeared during its construction in the 1930s, digital effects artists Matthew Wallin and Alex Martinez of the Mantron Corporation researched photographs, and then grafted planks, beams, and metal framing to the

Exhibitions



Barney took artistic license recreating the Chrysler Building's now demolished Cloud Club.

computer model of the building.

Initially, Barney had hoped to turn the 180-foot spire into a real-life maypole. Given the cost and danger of this idea, he decided to ask Wallin and Martinez to render the maypole scene using exterior footage of the building shot by helicopter.

While there were also a number of scenes filmed in the actual spire of

the tower, the scenes in the Cloud Club had to be completely reconstructed as a stage set. By the time production had begun on the film, the actual Cloud Club had been entirely gutted. In reconstructing the space, Barney took liberties with its design, modeling it on photos of bars he had seen in Dublin. He also placed the Cloud Club farther up in the tower in order to incorporate the triangular windows and give the space an off-balance feel. While the elevator car that Barney sends plummeting to the lobby was also a set, the scene in the shaft of Barney climbing the elevator cables is authentic—it was filmed in a neighboring 50-story building. (In spite of the strenuous and often dangerous circumstances, Barney prefers to perform all his own stunts.)

In the midst of the Chrysler Building's story, the film's narrative makes a short excursion to the Guggenheim Museum for an episode

called "The Order," where the architect and apprentice appear again as opponents. Again, architecture stands at the heart of their struggle. Barney must climb the vertical side of the museum's ramps to reach the architect who is throwing Vaseline against a black canvas on the top tier. Along the way, Barney meets chorus girls, punk bands, and a half-woman/half-leopard temptress. All the scenes in the Guggenheim were shot in the museum's rotunda, including the shots of Barney climbing the ramps. "It was a circus," says production designer Matthew Ryle. "There was the equipment for the bands, the cameras, and lighting, plus dancing girls. And the museum was still open, so people were watching the shoot."

In a film that celebrates the dual urges to simultaneously create and destroy, it is only appropriate that this theme is reflected in the making of the film itself. Perhaps for Barney, the film and its creation are two processes that mirror each other. It also seems that the film and the architecture are the only

survivors of this process. In the the Chrysler Building, in spite of deadly assaults, remains standing. The vicious 1967 Chrysler Crown Imperials have left the lobby, and the building's spire pokes through the New York City skyline. Meanwhile, both the architect and apprentice are struck down, presumably for their arrogance. The tower outlives its creators, just as the artwork survives its creation.



Richard Serra, cast as the architect Hiram Abiff, shown in the Chrysler Building set.

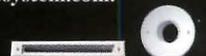


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Snapshot



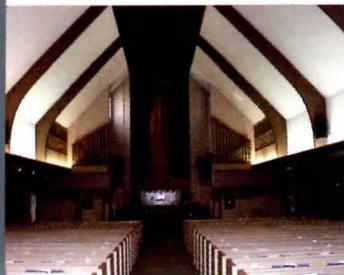
Joseph Giovannini

From the first day, light has been the fundamental metaphor of religious revelation and a raw material with which architects have long shaped religious space. The first rays of dawn still crack through temples in Egypt and the megalithic monoliths in Stonehenge. Divine light filters through stained-glass windows in Gothic cathedrals and hidden sources in Baroque churches. The art of the mystery of light, however, often eluded Modernists because glass, lots of it, diffused light and decreased the

sense of its rarity and specificity. Light became lighting, an issue of lumens rather than illumination, function rather than mystery.

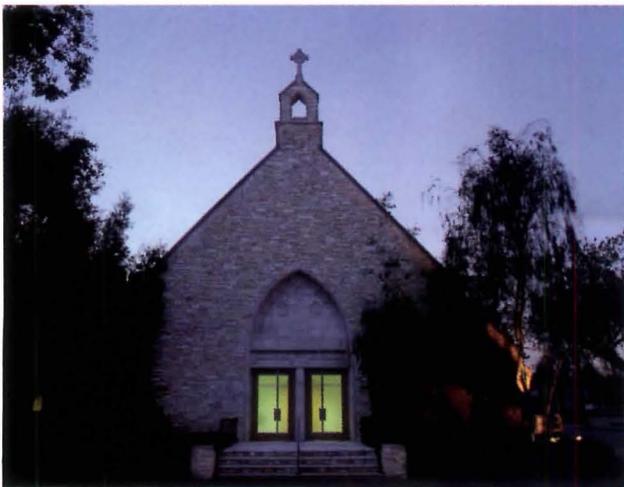
Housed in an A-frame church, vintage 1954, with a dated and lugubrious interior (photo, left), the congregation of the First Presbyterian Church in Encino, California, hired a local firm, Abramson Teiger Architects of Culver City, to create a more uplifting congregational space. The budget—less than

A California church is reborn with uncanny light



Snapshot

The budget—less than a million dollars—for the 6,200-square-foot church meant the architects could only address the interior: The charming stone-faced exterior, resembling an English country church (below), would remain largely untouched.



a million dollars—for the 6,200-square-foot church meant that the charming stone-faced exterior, resembling an English country church, would remain largely untouched.

Trevor Abramson, partner in charge of design, working with Michael Cranfill, project architect in charge of design, wanted to create a gentle interior that would embody the church's message. Employing many physical models, the architects studied how to use abstract wall planes to translate into space the visual metaphor of hands cupped in prayer, with fingers interlaced.

From the apex of the A-frame structure down to the base walls, the architect laminated tall, wide wall planes onto the glulam structural frames in a shifted, asymmetrical pattern. The planes hide not only the glulams (which are sheathed with plaster) but also the sources of light, which seem to pool in pockets, feathering out from the sides.

The basic structure of the church becomes a luminous backdrop for the backlit planes, which read as silhouettes floating in space. The architects have succeeded not just in lightening the church, but in making it buoyant: The formerly somber interiors register all the phenomenal shifts in the sky, from subtle to intense. Even the color of light differs subtly—the south side of the A-frame is warmer than the north. The effect is at once fragile and powerful, and it reinforces the metaphor of the church as a vessel and vehicle of illumination. The architects have used light, like brick, as a basic material with which they construct aura. The medium is the message. ■

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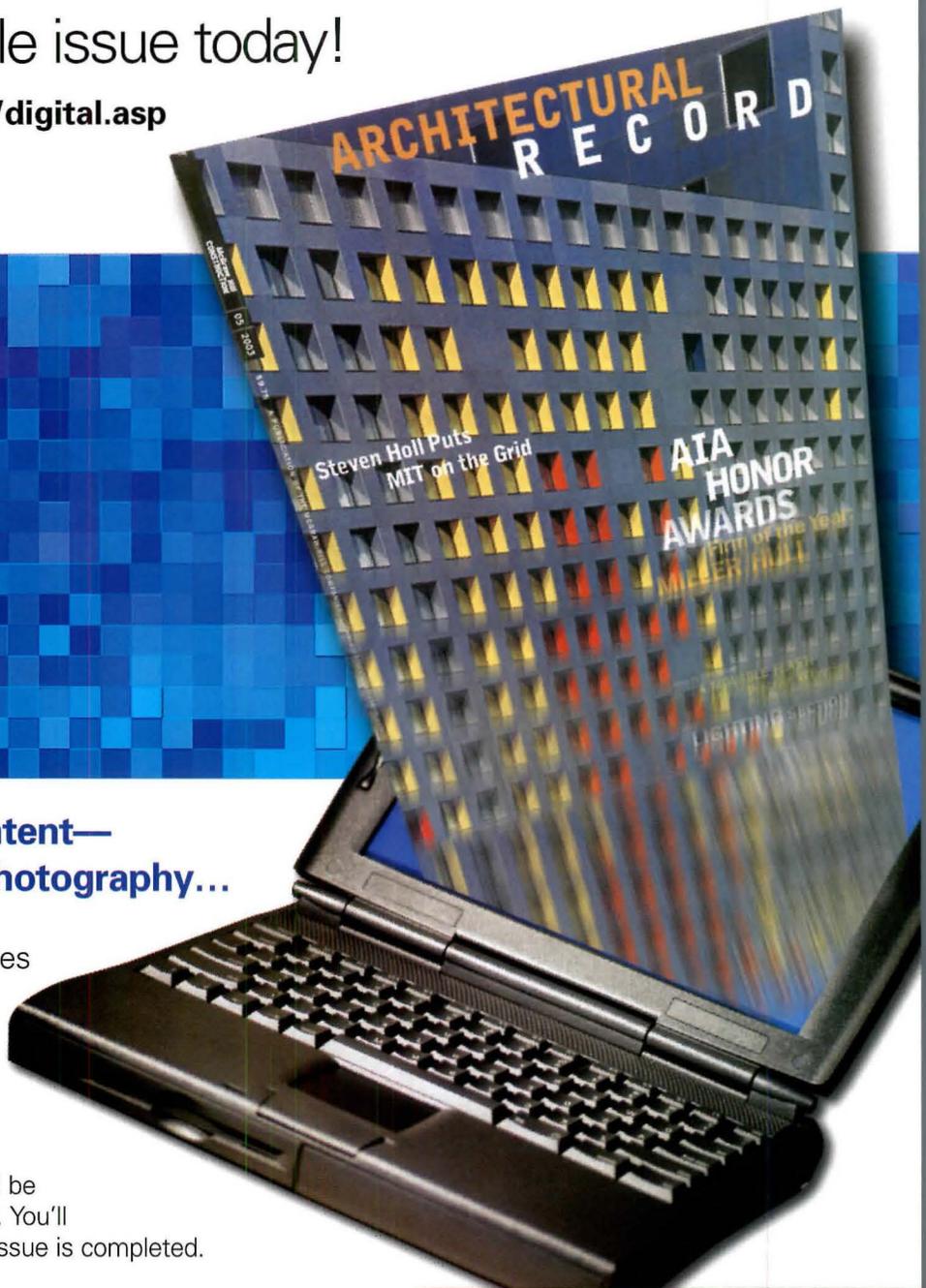
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Today's "prototype" house:
Robert A.M. Stern's *Life*
magazine house (1994),
Kenneshaw, Ga. (opposite);
Marwan Al-Sayed's
design for the Houses
at Sagaponac, N.Y. (right).



PHOTOGRAPHY: © PETER AARON/ESTO (OPPOSITE); THE BROWN COMPANIES (ABOVE)



The Gap Between the Promise and the Prototype

By Thomas Mellins

For many Americans, that special dwelling, the "dream house," is full of traditional architectural elements: a front porch, a gabled roof, a stone hearth. And while Americans have historically tended to ally themselves with the "new," and particularly with technological innovation, the lure of the familiar, as far as domestic architecture is concerned, is strong. The intimate connection between historicist residential design and notions of "home,"

Thomas Mellins is a RECORD contributing editor and Web curator for the National Building Museum's Building America site.

FEATURES



Designs by Hariri and Hariri (above two) and Shigeru Ban/Dean Maltz (below) for Sagaponac, N.Y.; Toll Brothers' best-selling model in the Northeast,

the "Cornell" (bottom). Contrasting interpretations of an ideal home aside, Toll Brothers and the Houses at Sagaponac offer residences of similar size.



familial harmony, and belonging to a larger community remains unbroken for many house buyers today.

So, whatever became of the "house of the future," an aesthetically innovative residence that, at an affordable price, would skillfully introduce the American family to a new and better way of living? Though the 20th century is rich with examples of daring, and in some cases even "way-out," case-study houses sponsored by magazines, museums, and trade organizations [RECORD, April 2003, page 112], traditionalism continues to hold sway. Still, some architects argue that the "house of the future" is imminent, and that technological changes in the way designs are developed, materials are produced, and houses are constructed will make radically new aesthetic alternatives widely attainable in the next few years.

Clearly a dramatic shift has yet to occur. As we noted in April [page 118], Genesis Homes, the national modular-house manufacturer, showcased a Shingle Style "Cottage" at the National Association of Home Builders' International Builders' Show in Las Vegas in January of this year. Paul Jarvis, a Genesis Homes vice president, claims that the "Cottage" constitutes "a home for tomorrow." This comes almost a decade after Robert A.M. Stern offered a Shingle Style design to serve as *Life* magazine's popular "Dream House" in 1994. By 1996, more than 1,000 house plans had been purchased and the design built in locations across the country.

Whether or not "the house of tomorrow" will look like the house of yesterday, bold architectural forms are currently available to the privileged few. On the east end of Long Island, New York, an area known for its turn-of-the-20th-cen-

WHAT BECAME OF THE 20TH CENTURY'S "HOUSE OF THE FUTURE?"

tury Shingle Style mansions, Harry Joseph ("Coco") Brown, a former theatrical producer turned developer, is undertaking the construction of an untraditional residential enclave. He is entering a turf where, in the post-World War II era of the 1960s and '70s, architects such as Charles Gwathmey designed Modernist houses, and Postmodern architects, notably Stern, interpreted and revived the area's Shingle Style heritage in the 1980s and '90s. In both cases, knockoffs followed.

Now, Brown's 100-acre development, known as the Houses at Sagaponac, features "good old modern" along with truly "cutting edge" projects. They are designed by more than 30 of the world's best-known contemporary architects, including Richard Meier, Richard Rogers, Henry Smith-Miller and Laurie Hawkinson, Steven Holl, Zaha Hadid, Peter Eisenman, Lindy Roy, and Shigeru Ban.

So far, there is not a gable or a pediment or a shutter in sight. Brown says, "One of the things that will happen with this community is that people will start to rethink what they're building. They'll see a real alternative that will be socially acceptable." Yet, however accepted Modernism is in the Hamptons, the price tags of these houses—between \$1.45 and \$4.5 million—will render them virtually irrelevant to discussions of mass-market development.

One explanation for the current conservatism in



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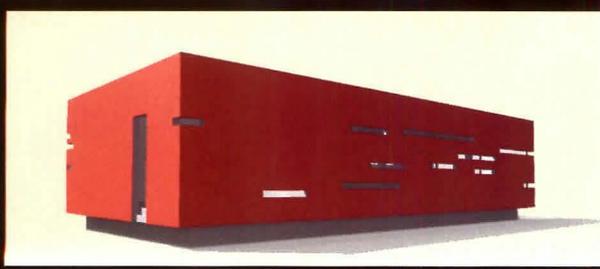
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A planned community, Prospect New Town, Colorado (above), boasts innovative residential design. Massie Architecture uses pre-

fabricated elements in the Sipe House and the Red House (below and bottom). The Red House is one of the firm's nine prefab prototypes.

FEATURES



mass-market residential design is simple: money. Unconventional designs tend to cost more. For example, an ordinary house can be built with precut metal or wood studs, but high ceilings may obviate that possibility and require more labor. Additionally, innovative houses typically are appraised for less, in part due to the lack of comparable properties on which valuations are made. Leading home builders, such as Toll Brothers, which builds large houses in sought-after locations, offer a variety of styles unequivocally rooted in historicism. As long as sales and resales remain brisk, why would developers change what they are doing?

Ironically, the American house is changing in size and plan. In 32 years, from 1970 to 2002, the size of the average single-family house exploded from 1,500 square feet to more than 2,300 square feet. Formal living rooms, notes Gopal Ahluwalia, a vice president at the National Association of Home Builders, are increasingly being replaced by double-height Great Rooms, which incorporate kitchens. Yet, in Americans are buying houses that reflect economic and lifestyle changes in plan and construction, the enclosing walls and roofs are still historicist.

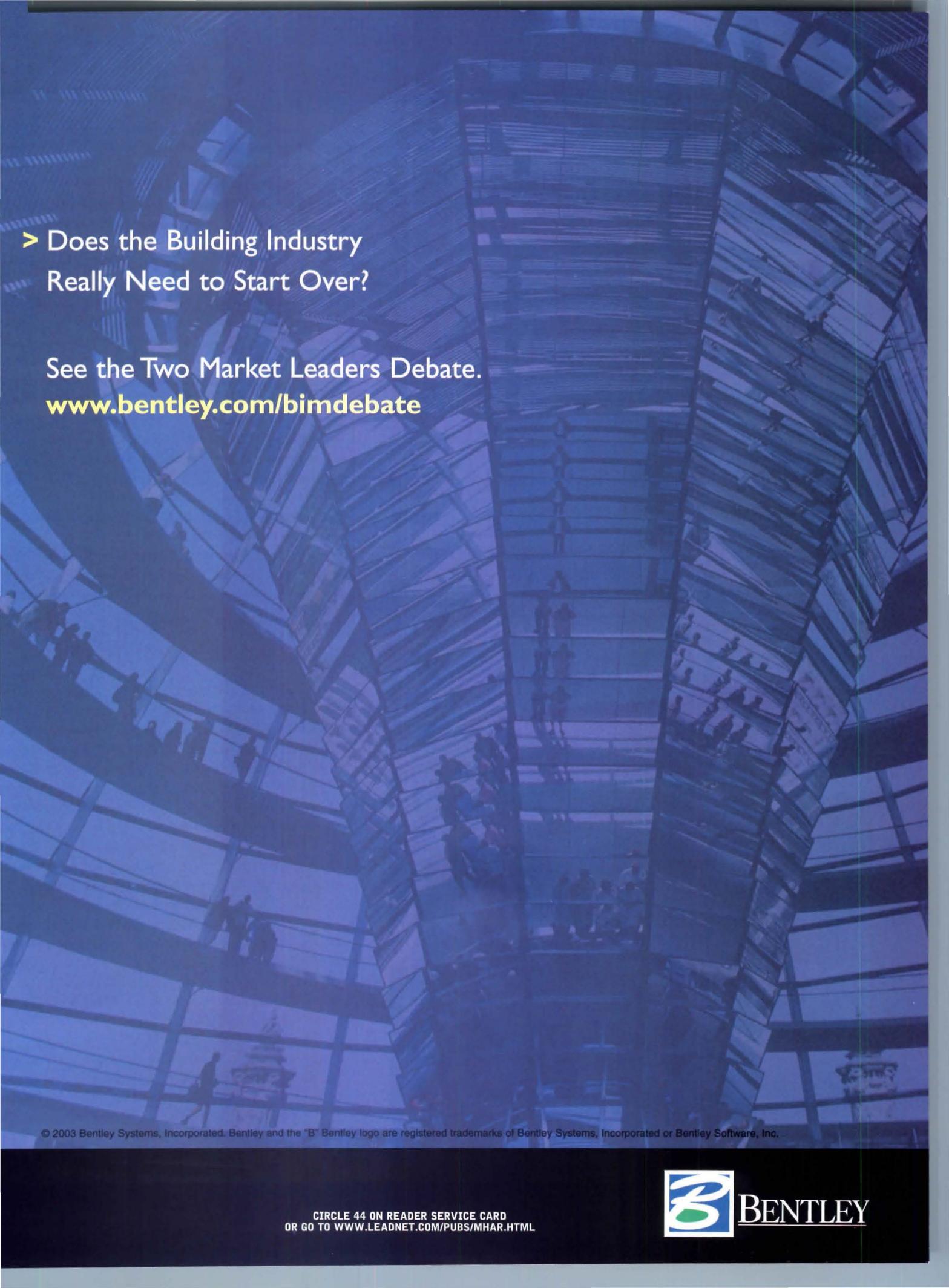
Challenging the easy response that people want what they are used to, many practitioners contend that there is no shortage of consumer demand for aesthetically bold design. Roberta Feldman, an architect and a professor at the

BETWEEN 1970 AND 2002, THE SIZE OF THE AVERAGE HOUSE EXPLODED

University of Illinois at Chicago School of Architecture points out that the problem is that, unlike other fields, there are no niche markets in mass-market housing. Although 5 to 10 percent of the house-buying public constitutes a large number, developers are unlikely to offer a product unless they are confident it will appeal to 90 percent of the public. This stance seems to be predicated both on industry traditions and the particulars of the economic risks involved.

A developer, Kiki Wallace, who is building stylistically adventurous houses in the new development of Prospect Colorado, asserts that Modernism "is not a hard sell. Young people are looking for cutting-edge design. If there are cost savings, it will happen." Yet, short of something to jump-start such change, developer-trad may well continue to thrive.

Although prefabrication, particularly outside of the United States, is currently opening up aesthetic possibilities, perhaps the most promising shift is in computer-assisted and computer-controlled methods for designing and building. As Bryan Bell, director of Design Corps, a nonprofit group based in Raleigh, North Carolina, that provides low-cost architectural services to underserved populations, puts it, "On a mass-market level, innovation starts with industry and moves toward pure design." Some have noted, as has Joseph Rosa, the architecture and design curator at the San Francisco Museum of Modern Art, that in the past five years, digital production has evolved significantly and is now far more accepted by both architects and builders. Trade unions are increasingly open to these production techniques, as well. And architects besides Michael Bell [RECORD, April 2003, page 118], including Greg Lynn [RECORD, December 1999, page 104, and November



> Does the Building Industry
Really Need to Start Over?

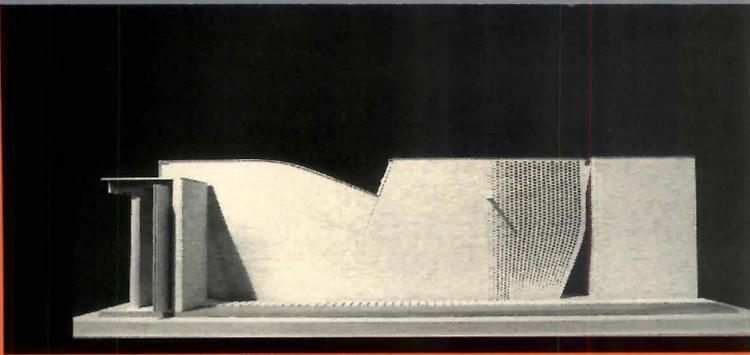
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BENTLEY



Office dA's residence for artists in China (top) and the Macallen Building in South Boston (above) show technology is shaping the form and function of housing. Interloop

A/D's Klip House (1998) uses mass-produced components. One of several potential uses is a medical post (bottom). A binder (below) serves as the housing's infrastructure.



FEATURES

2000, page 78], William Massie, Mark Rakatansky, and Office dA, are actively exploring new materials and building technologies for daring residential designs.

Chief among the innovations are a host of techniques made possible by computer numerically controlled machining, commonly referred to as CNC. Pioneered by the automotive and aeronautic industries, CNC is currently being used on a small scale in home building and promises to be more broadly adopted. Laser and water-jet cutting can reduce costs, in part due to more direct communication between architect and fabricator. And sophisticated CNC machinery is itself becoming more affordable: A CNC milling machine that cost \$65,000 in 1985 might cost around \$20,000 today.

One potential effect of CNC technology is what architect Scott Marble, of Marble Fairbanks in New York, calls "the change from mass production to mass customization." Structural insulated panels, known as SIPs, can be efficiently "edited" from a drawing put on a CD-Rom. Similarly, mass-produced windows can be economically built in nonstandard sizes through the use of CNC technology. William Massie, associate professor of architecture at Rensselaer Polytechnic Institute, in Troy, New York, notes that because of changes in construction, "increasingly, cost cannot be used as an excuse for poor results. In the near future, design will dominate construction, not the other way around."

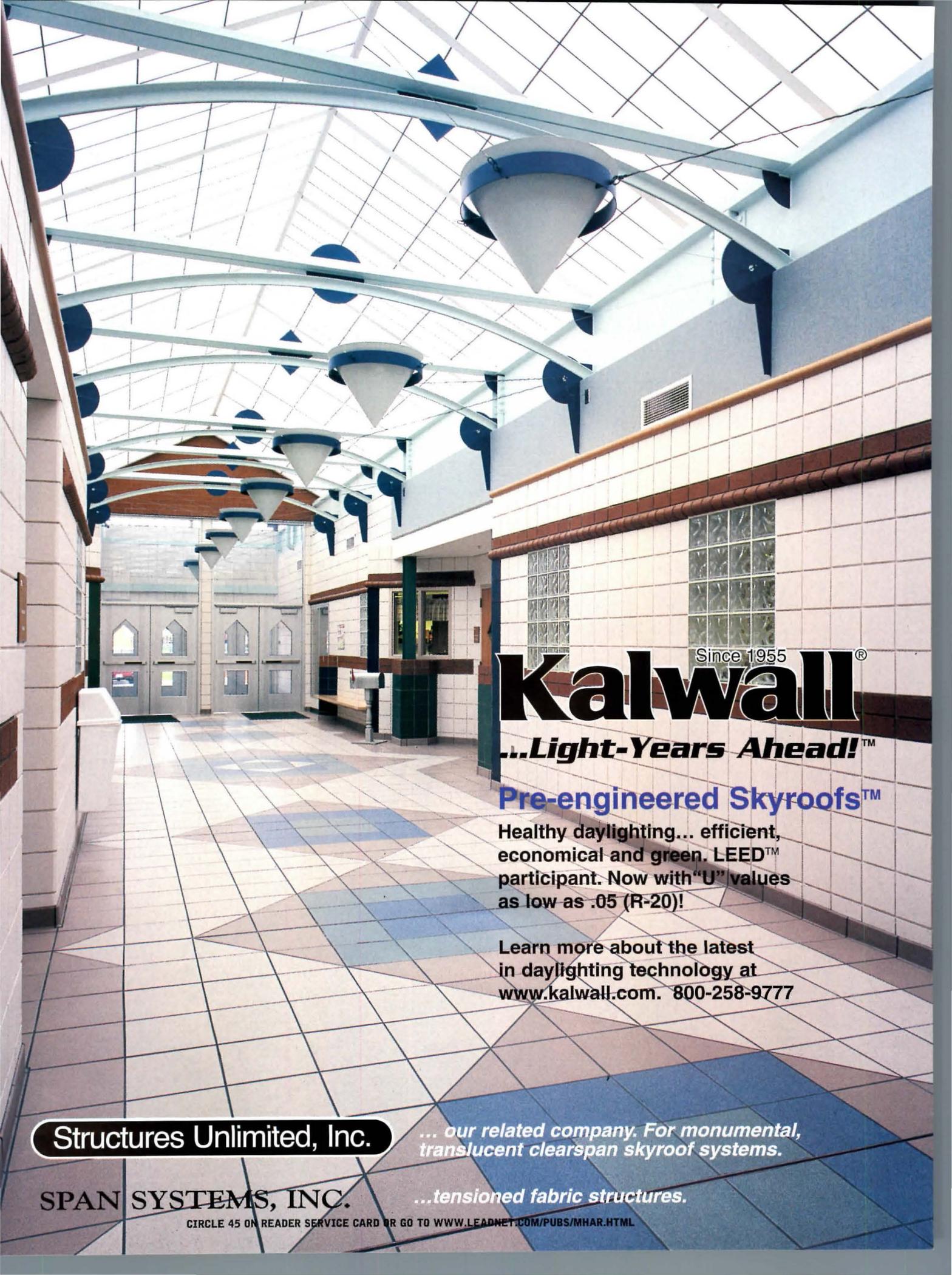
When, exactly, is the "near future?" Michael Bell, associate professor at Columbia University's Graduate School of Architecture, Planning and Preservation, who in

COMPUTER-BASED MACHINING IS AFFECTING HOME BUILDING NOW.

1998 organized 16 architecture firms to design innovative houses for Houston's Fifth Ward [RECORD, April 2003, page 118], predicts, "Production as applied to architecture is about to change significantly. There will be a landslide of change in the next three years, with a far more serious integration of production and design than has existed previously. With so many architects looking to break the mold, we may witness a true paradigm shift."

Others, such as Mark Rakatansky, also a Columbia GSAPP faculty member, are optimistic that people in the building industry, not just architects, are ready to change. He points out, "The *Time* magazine success of Frank Gehry's work makes the computer-assisted generation of unconventional shapes and geometries, as well as the employment of new construction techniques, far more acceptable to developers." How and why mass-market products change can be difficult to determine; as Rakatansky adds, "A decade ago, who would have thought McDonald's would be serving radicchio?" Throughout the American economy, high-tech methods of production and distribution are continually being developed, and they in turn alter the way Americans live, regarding everything from food to music to health care.

Will domestic architecture be next to change? The familiar will undoubtedly continue to have many adherents. Yet, for those longing to live in a "house of tomorrow," ongoing technological innovation may well mean that they will not have too long a wait. ■



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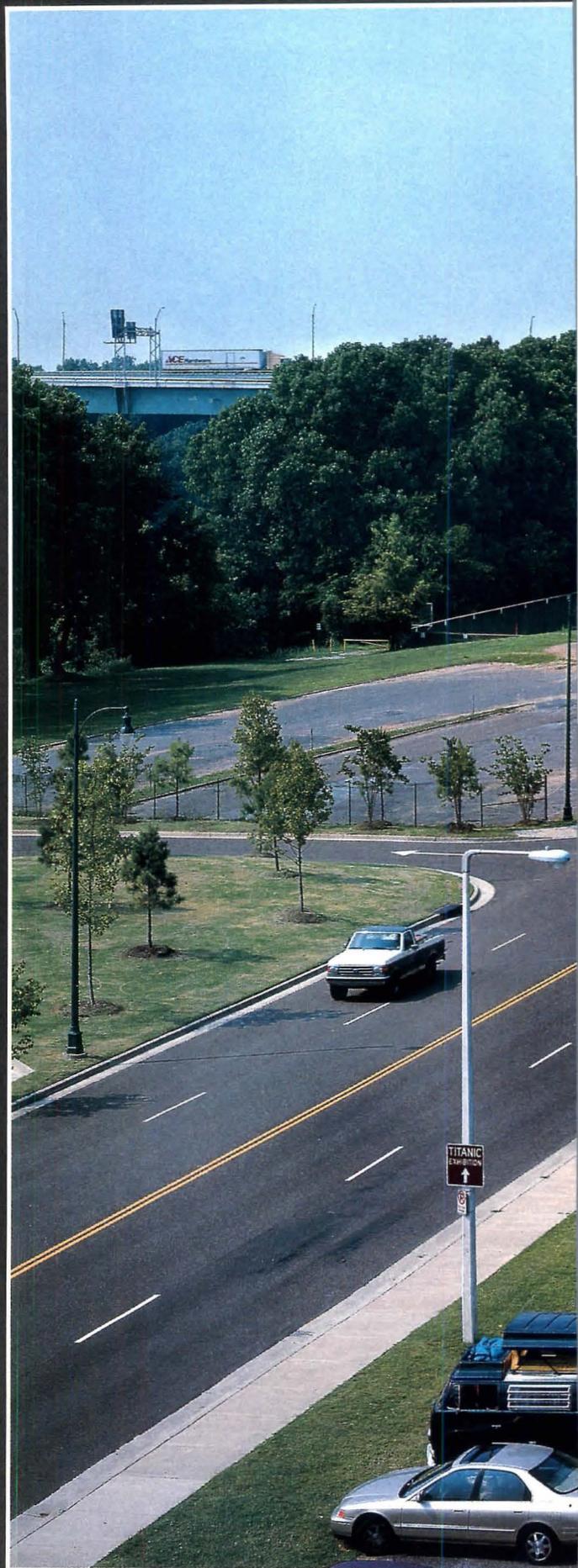
The Quirkiness of the Quotidien

Photographs by Joshua Lutz

PHOTO ESSAY

Among those who have turned their critical attention to the everyday landscape in the modern world is Joshua Lutz, a New York photographer. Lutz is attracted to variegated spaces that illustrate how “our priorities have dictated the transformation of the land.” With this in mind, he has captured on camera those unexpected moments when the quotidien takes on a certain quirkiness and, in some cases, a poignancy. This is particularly the case with Soldier Field, in Chicago, as shown by Lutz’s photograph of the stadium before the current remodeling obstructed the view of its classical colonnade. Lutz is a graduate of Bard College (1997), where he studied photography under Stephen Shore before opening a studio in Manhattan. In the past few years his work has been published in *The New York Times Magazine*, *Newsweek*, *House and Garden*, and *Fortune*. Recently, he has turned his lens to Coop City, in the Bronx, and to the Meadowlands sports complex, in New Jersey. As he says, “I want to challenge the viewer to reexamine the spaces we live in.” *Suzanne Stephens*

Memphis on the Nile:
Memphis, Tennessee, natives enjoy a tailgate picnic between two highways near the Pyramid Arena.





My Grandparents:

A portrait taken in the early morning of former New Yorkers in their Mediterranean-style home in Boca Raton, Florida.



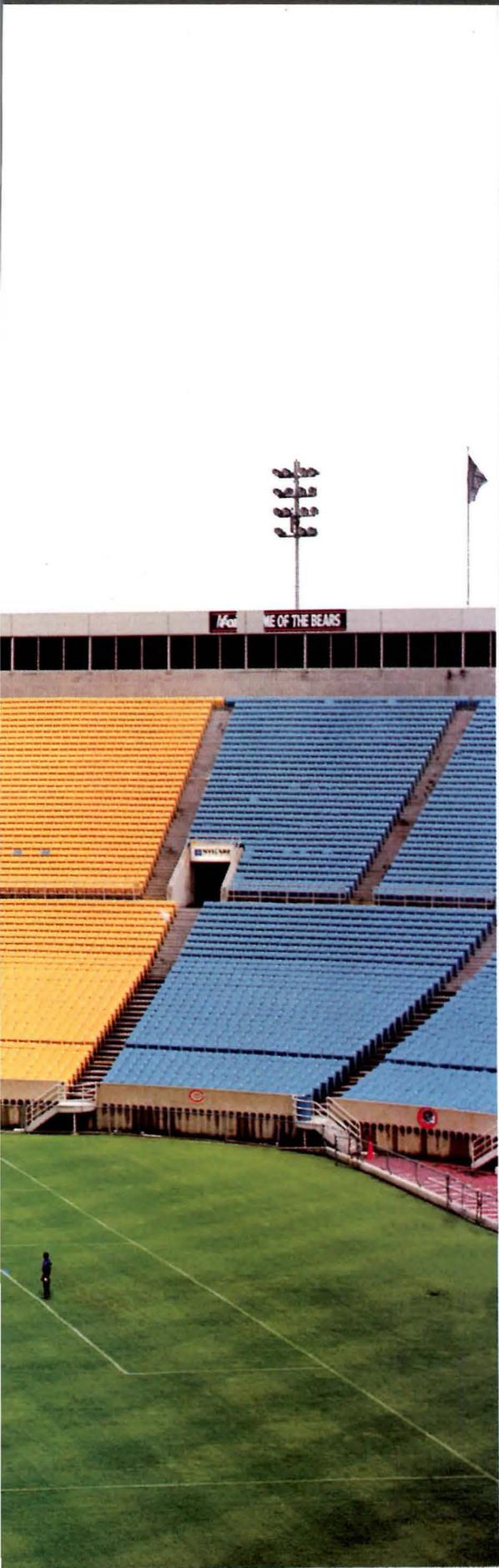






Sienpost: A new apartment building looms over historic Scheveningen, a seaside resort in the Netherlands.





Soldier Field: This view of the classical colonnade of the historic Chicago stadium designed by Holabird and Roche (1922–28) is blocked by the current remodeling.

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hibition whose work seemed so far-out have fared well, too; Look at the minor over the Guggenheim Bilbao by Frank Gehry, FAIA, in 1997. And comes the hoopla surrounding the opening of Gehry's performing center at Bard College (page 106), not to mention Zaha Hadid's temporary Art Center, which just opened in Cincinnati.

And announcing the avant-garde moment is *The New York Times Magazine's* "Tomorrowland" issue (May 18, 2003), in which projects by Rem Koolhaas, Coop Himmelb(l)au, Kolatan/MacDonald, Steven L. AIA, and Thom Mayne, AIA, among others, are enthusiastically presented. As writer Arthur Lubow exclaims, architecture's "widespread appeal evokes comparison to a pre-Modernist Eden, when Verdi was a popular hero and Dickens a best-seller."

Does this really mean that the public is ready to fully embrace these architects pushing the boundaries of architecture (and construction)—or is it just a media flirtation? After all, it's happened before. Architecture is periodically "discovered" by the general audience media, then summarily dismissed. (Remember when Postmodernism was heralded by *Time* magazine's 1979 cover of Philip Johnson holding the model of the AT&T building?)

Paradoxically, the current hubbub over the avant-gardies occurs even when much of the American populace remains entrenched in a predilection for traditional design, particularly with houses. If the public can't buy the "real" thing (from the 18th, 19th, or early 20th century), a new knockoff will do, and is often preferred, since modern improvements are built in (see "The Gap Between the Promise and the Prototype," page 74). Not only are traditional houses favored: Many colleges and universities have embarked on serious programs to bring the classical and Gothic styles back to campus. Indeed, Princeton University's recent decision to have Demetri Porphyrios of London evoke its collegiate Gothic quad style for the design of a new dormitory has drawn the ire of architects such as the always avant-garde Peter Eisenman.

Porphyrios is not alone in his strong allegiance to past styles. A rich culture of Classicist architects, including Allan Greenberg, AIA, in Washington, D.C.; Quinlan Terry, and—an unusual variant—John Bram, in England; or Leon Krier, now in southern France, continue to attract very supportive clients, as do Michael Graves, FAIA, in Princeton, New Jersey, and Robert A.M. Stern, FAIA, in New York. The Classical movement is disseminated stateside through such organs as the School of Architecture at the University of Notre Dame, in Indiana, and the Institute of Classical Architecture and Classical America, in New York. Donald Rattner, a New York architect who helped found the Institute for the Study of Classical Architecture in 1991, argues, however, that the classical language has become too static and a "new synthesis" is required (see *Letters*, page 21).

Understandably, the familiar is comfortable and reassuring, particularly in periods of rapid change. At the same time, says Fred Gage, professor at the Laboratory of Genetics at the Salk Institute for Biological Studies, La Jolla, California, "We are novelty-seeking beings." Novelty, he explains, causes arousal in the brain, whether it's positive or negative. This arousal, which can come from the architectural environment, is important, he stated in a keynote address given at the AIA's annual convention in San Diego in May, because the stimulation of the brain may help generate new brain cells as one ages. "The environment—the structures we live in—affects our brain and our behavior," he told the assembled architects. "It's time we work together to find ways to collect information we can all use to live in a better and more supportive environment." Gage's comments marked a new initiative of the AIA to create the Academy of Neuroscience for Architecture, which is currently being set up by the San Diego Architectural Foundation and the local AIA

chapter. According to John Eberhard, FAIA, the director of research and planning at the AIA, it will bring together architects and neuroscientists to investigate specific influences of the environment on the brain.

The implications are interesting. Seeking novelty needn't be shrugged off as a desire to be fashionable—especially if it is naturally stimulated by shifts in sociocultural conditions. As the current generation of creative architects attests, worthwhile innovative efforts respond to changes in living patterns, culture, and new materials and building techniques, not to mention the possibilities presented by computerized design. Yet the feverish attraction for today's avant-garde expression can also fade: With replication and repetition, the new and challenging eventually gets stale. Or, as Louis Menand more accurately put it in *The New Yorker* (March 24, 2003), "Every paradigm contains the seed of its own undoing."

Why not accept a both/and situation—as Jean La Marche explores in *The Familiar and the Unfamiliar in 20th Century Architecture* (2003)? Neuroscientist Larry Squire, of UC San Diego School of Medicine and San Diego's VA Medical Center, points out that a tension between novel and familiar environments is desirable—one to stimulate the brain and keep it active, the other to help it focus on matters at hand. Hence the familiar, per se, need not be dismissed as mind-numbing and boring. The familiar and the comfortable clearly have a place, for they provide a haven to assimilate the new. We profit from learning from history and tradition, and by being grounded by them.

This said, even the familiar is more interesting when it challenges us to think and look in new ways. On the following pages we present architectural designs that celebrate the familiar—but with a twist. The projects all make use of known architectural elements and forms, but handle them unconventionally. Frank Gehry's performing arts center at Bard College, in the Hudson Valley in New York (page 106), juxtaposes unfamiliar shapes (if increasingly familiar to the cognoscenti) with very everyday, even banal, boxy buildings to make us rethink our definition of architecture.

The renovation by Wendy Evans Joseph, FAIA, of the top floors of Frank Lloyd Wright's Price Tower in Bartlesville, Oklahoma, into a hotel (page 118) shows respect for the master's now very familiar iconic work (once viewed as an alien object by the community). Yet, in designing the furnishings and the fittings for the hotel and restaurant, Joseph eschewed replicating Wright's style and subtly established her own design identity.

At first glance, the Irish Hunger Memorial in New York's Lower Manhattan, by artist Brian Tolle and 1100 Architect, looks very familiar, even kitschy, like an Irish potato field dropped into Battery Park City (page 102). But the juxtaposition in this context makes you look again, as does the very abstract Modernist base that contains the entrance to the memorial itself.

With the design of a hall for St. Edward's University, in Austin, Texas, Andersson-Wise was expected to defer to the Texas Victorian context (page 94). The architects chose to do so by designing seriously abstracted forms that evoke associations with other historic—but more modern—works by Charles Rennie Mackintosh and Louis Kahn.

In the case of the DOMA Gallery in Maryland (page 126), Barbara Wilks, FAIA, takes an old, dilapidated barn and inserts a pristine Miesian glass box into it. The conjunction of a familiar icon of the American vernacular with a familiar icon of Modernism generates a provocative, dynamic result. The intersection yields an unexpected play of light and shadow, and of shaggy textures and sleek surfaces. It is a sophisticated exercise where a sense of fragility and stability are in constant counterpoint. These and other strangely familiar projects are arresting because they make us think about our perceptions and our preconceptions. They demonstrate how the tension between the familiar and the novel can enrich our environment, and stimulate our minds. ■



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For TRUSTEE HALL at St. Edward's University, in Texas, Andersson-Wise Architects deftly abstracts the traditional

By David Dillon

The first building in a new millennium carries cachet; the first building in a new master plan carries the burden of proof. Every detail, good or bad, becomes a potential precedent. Andersson-Wise Architects wrestled with this dilemma in designing Trustee Hall at St. Edward's University, in Austin, Texas, a small (4,200 students) Catholic school with aspirations of doubling its enrollment in 10 years.

Sited on the highest point in the city, the university overlooks downtown in one direction, and hill country with a fringe of the coastal plateau in the others. At the center of campus stands a pair of turn-of-the-century masonry buildings by the revered Texas architect Nicholas Clayton: The heavily rusticated and fancifully towered Main Hall and the somewhat plainer and blunter Holy Cross Hall. Together, the two structures established a hierarchy and material palette that prompted a response from every architect subsequently building on campus.

In the larger arena, different architects have parsed the precedent issue in different ways. The go-for-the-bold faction, the Gehrys and Eisenmans of the profession, like to challenge convention and tradition by introducing unfamiliar forms and materials that cut against the prevailing vernacular. Confrontation rather than complaisance is the name of that game, and such campuses as the University of Cincinnati [RECORD, February 2000, page 81] document the results, each with a roster of well-known architects, and every building generating its own context.

The more conciliatory approach merely tweaks the architectural status quo, thereby reinforcing the sense of continuity and tradition so dear to alums—and for which they are often willing to pay generously. Theme and variations instead of *Sturm und Drang*. Yale, Princeton, and the University of Virginia come immediately to mind.

St. Edward's stands firmly in the context-and-continuity camp. "Originality for the sake of originality is not our goal," its new master plan states. "Appropriateness is." The document warns against buildings conceived of as "isolated elements" and recommends that new designs "have roots firmly planted in history and place." In practi-

David Dillon is a contributing editor to RECORD and the architecture critic of The Dallas Morning News.

Project: Trustee Hall, St. Edward's University, Austin, Texas

Architect: Andersson-Wise Architects—Arthur W. Andersson, AIA, F. Christian Wise, AIA, principals; Christopher Sanders, Adam Pyrek, Vincent

Moccia, Erlene Clark, Tim Dacey, Jim Moore, Grant Rimbey, project team

Engineers: Architectural Engineers Collaborative (structural); Aguirre Corporation (m/e/p); Baker-Aicklen (civil)



cal terms, these guidelines mean brick and stone, deep windows, and pitched roofs—preferably red—and an assortment of sporty towers and cupolas rising tall against the sky. And, as the document suggests, the school trustees intend to remake the university's image by replacing "marginal" buildings from the 1950s and 1960s—signs of an institution in perpetual transition, in their view—with ones that "balance individual expression with an appropriate contextual response."

Some of the most recent structures, including Trustee Hall, will form the edges of new academic quadrangles, designed to reinforce the campus's pedestrian character. "The trustees kept reminding us that the Clayton buildings stood at attention with good posture," recalls Arthur Andersson, "and that ours should do the same."

Programmatically, Trustee Hall is clarity itself: 12 classrooms, 20 faculty offices, and 3 computer labs, all clustered in a corner tower. For the materials, the architects said no to Texas limestone, which appears everywhere in Austin, because of its relatively high cost and the false sense of importance they felt it would have given the building. They chose instead a soft, hand-formed Mexican brick, similar in color to the Austin Common brick that Clayton had used on Holy Cross Hall, but with a richer texture. Arthur Andersson and Chris Wise also

acceded to the demand for a red metal roof, though their version is simpler and slightly flatter than its neighbors. Three copper-covered exhaust stacks rising from the roof directly above the computer rooms offer a crisp, contemporary response to the stone turrets of Main and Holy

THE MONOLITHIC SOUTH FACADE IS THE MOST DRAMATIC DEPARTURE FROM THE CAMPUS VERNACULAR, WHICH IS UNEQUIVOCALLY MODERN.

Cross Halls. The most dramatic departure from the campus vernacular is the concrete south facade, which picks up the color and some detailing of Main, yet is unequivocally modern in its finish and construction—with huge, monolithic slabs. "Concrete is a 2,000-year-old material," says Wise, "but we used it to show how buildings are made today."

In addition to showing "good posture," the facade supports a network of exterior corridors, balconies, porches, and staircases. When classes are in session, it becomes a gigantic theater set punctuated with surprising entrances and exits for students and faculty. Compared to it, the other elevations seem formulaic.

Inside, the bones of the building show through in concrete floors and raw concrete columns, accented with simple metal railings and window frames. Utility and efficiency are the

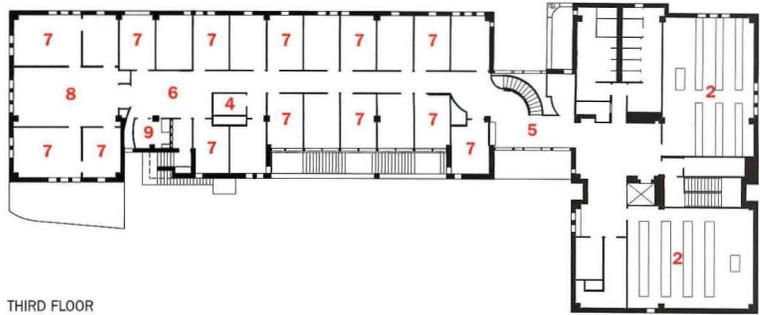


Computer labs and classrooms occupy nearly windowless brick tower, which is distinct from the rest of the building (left). Metal detailing of staircases and window frames appear uniformly simple and direct (above). Trustee Hall (opposite, top) helps define the campus's new north edge. As seen in nearby Holy Cross Hall (left and opposite, bottom), red metal roofs are a staple of the St. Edward's vernacular. Austin's relatively mild climate allowed the architect to put much of the circulation on the building's exterior.

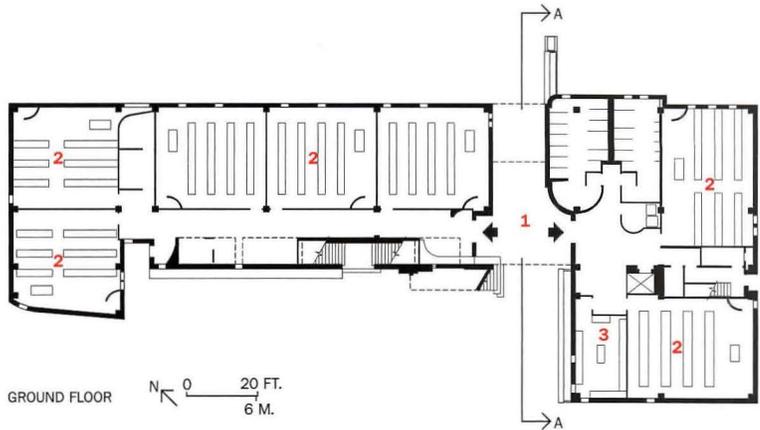




A 5-foot-wide space wide enough for staircases, balconies and landings—separates the south facade from the main volume of the building.

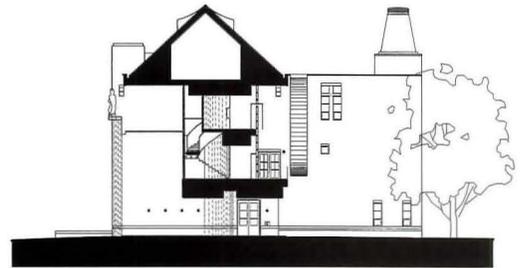


THIRD FLOOR



GROUND FLOOR

1. Loggia
2. Classroom
3. Computer lab
4. Copier
5. Lobby
6. Reception
7. Office
8. Secretaries
9. Kitchenette

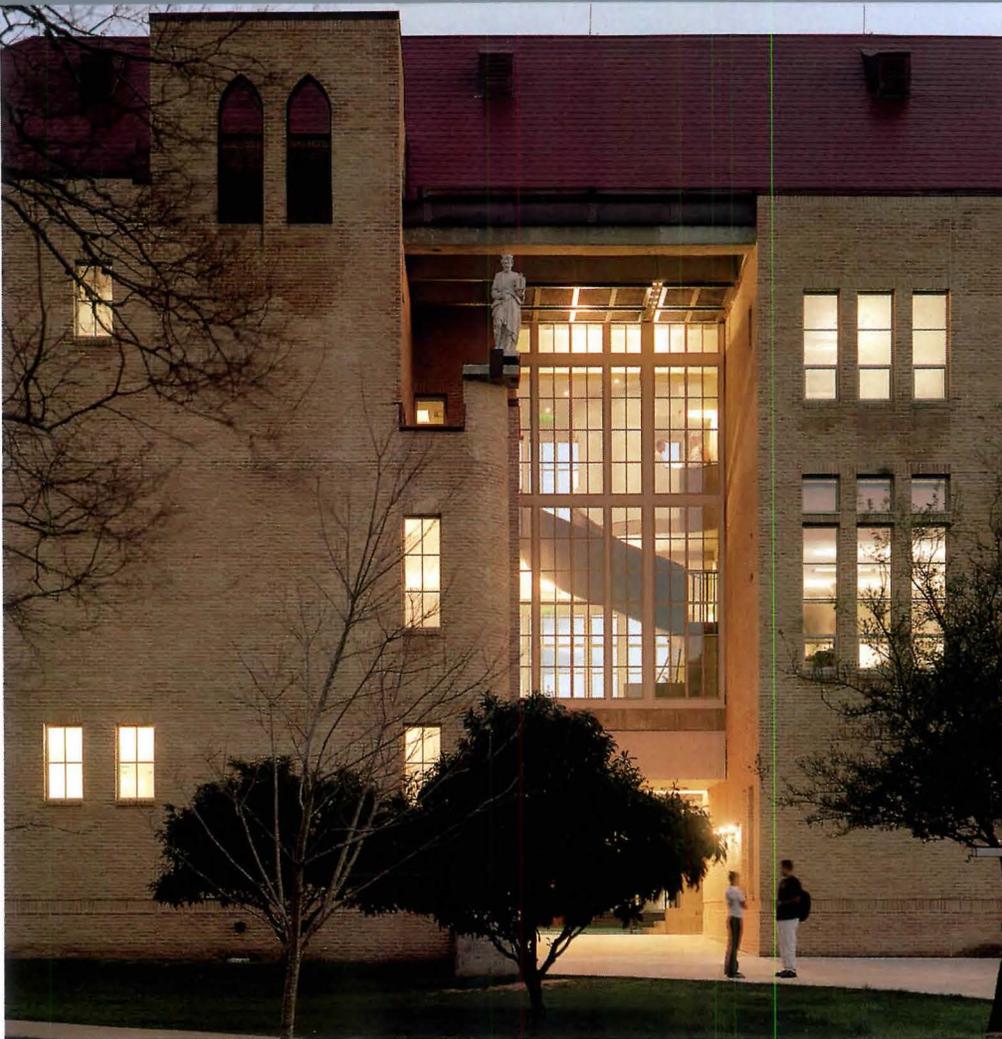


SECTION/ELEVATION A-A

0 20 FT.
6 M.

The view from the top of the main staircase (above) includes the campus chapel and a statue of St. Edward, the university's patron saint. Simplified versions of Clayton's pointed-arched windows look out onto the campus, with the building's exterior layers creating a cloister-like effect (right).





Mexican brick on the Trustee Hall's north facade is punctuated by clusters of tall, narrow windows (left). The fenestration relieves the volume's potential blockiness without destroying its sense of weight and mass. The hall's central staircase appears through a large, multistory window (center at left). The interiors (below) are extremely spare with polished concrete floors and exposed concrete columns. Small seating niches along the corridors provide places to rest or gather.

themes, especially in the classrooms. Yet the overall mood is calm and reflective, almost like a cloister, where architecture helps turn the mind inward on itself. Except for pointed-arched windows, a too-obvious reference to Clayton, the effects are not forced.

Andersson and Wise started out working for Charles Moore in the 1980s, learning the subtleties of collaboration and the importance of focusing on people instead of ideology. Yet these architects show far more interest in construction than did their mentor. Moore was a teacher and proselytizer, who liberated several generations of young architects but didn't know or care much about actual building. By the time construction started, he was usually onto something else, leaving the details for others to work out.

Andersson-Wise takes a more pragmatic approach. If some of the firm's earlier projects, such as Washington State History Museum [RECORD, October 1996, page 70], were awkward compromises between memory and invention, Trustee Hall is not. It is neither superficial nor narrowly mimetic. With a few exceptions, details borrowed from surrounding buildings are flattened and abstracted into something more contemporary. The monolithic south elevation, facing the center of campus, is more Kahn than Clayton. And unlike many buildings with a Postmodern pedigree, Trustee Hall looks built to last. ■



Sources

Structural system: CIP Concrete Pan Joist System

Exterior masonry: Ladrilleras El Fuerte

Concrete: Phoenix Concrete; Capitol Aggregates; Peri Formwork Systems

Roofing: Siplast Pardiene (elasometric); Berridge (metal shingles)

Doors: Kawneer (entrance); Steelcraft (metal);

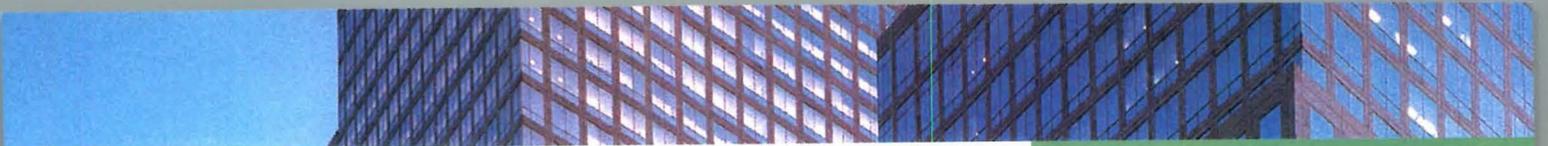
Mohawk Door (wood); Smoke Guard (fire control)

Hardware: Corbin Russwin (locksets); Hager (hinges); LCN (closers); Von Duprin LCN (exit devices); Kawneer (pulls); Blum, Accuride, Hafele (cabinet hardware)

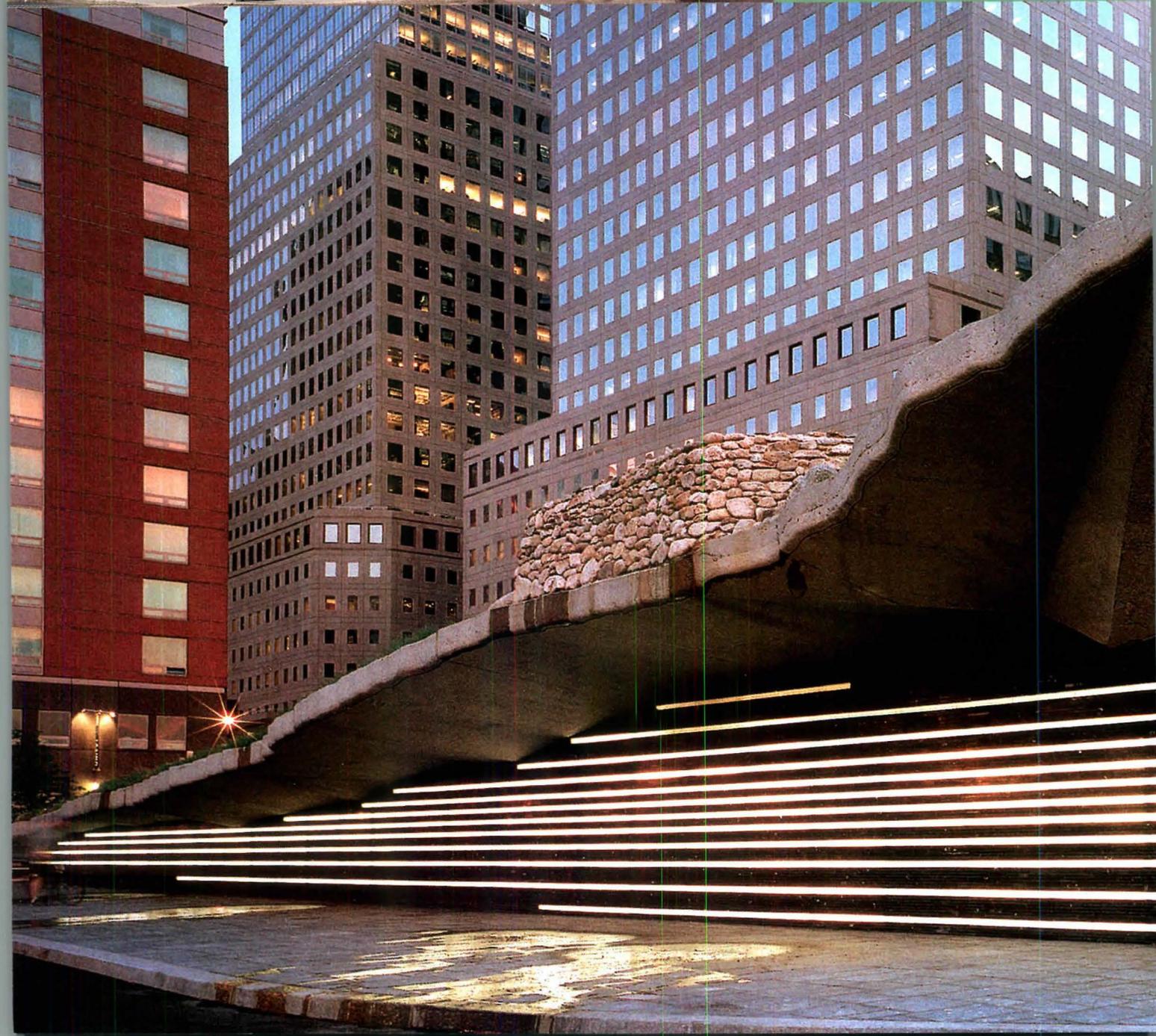
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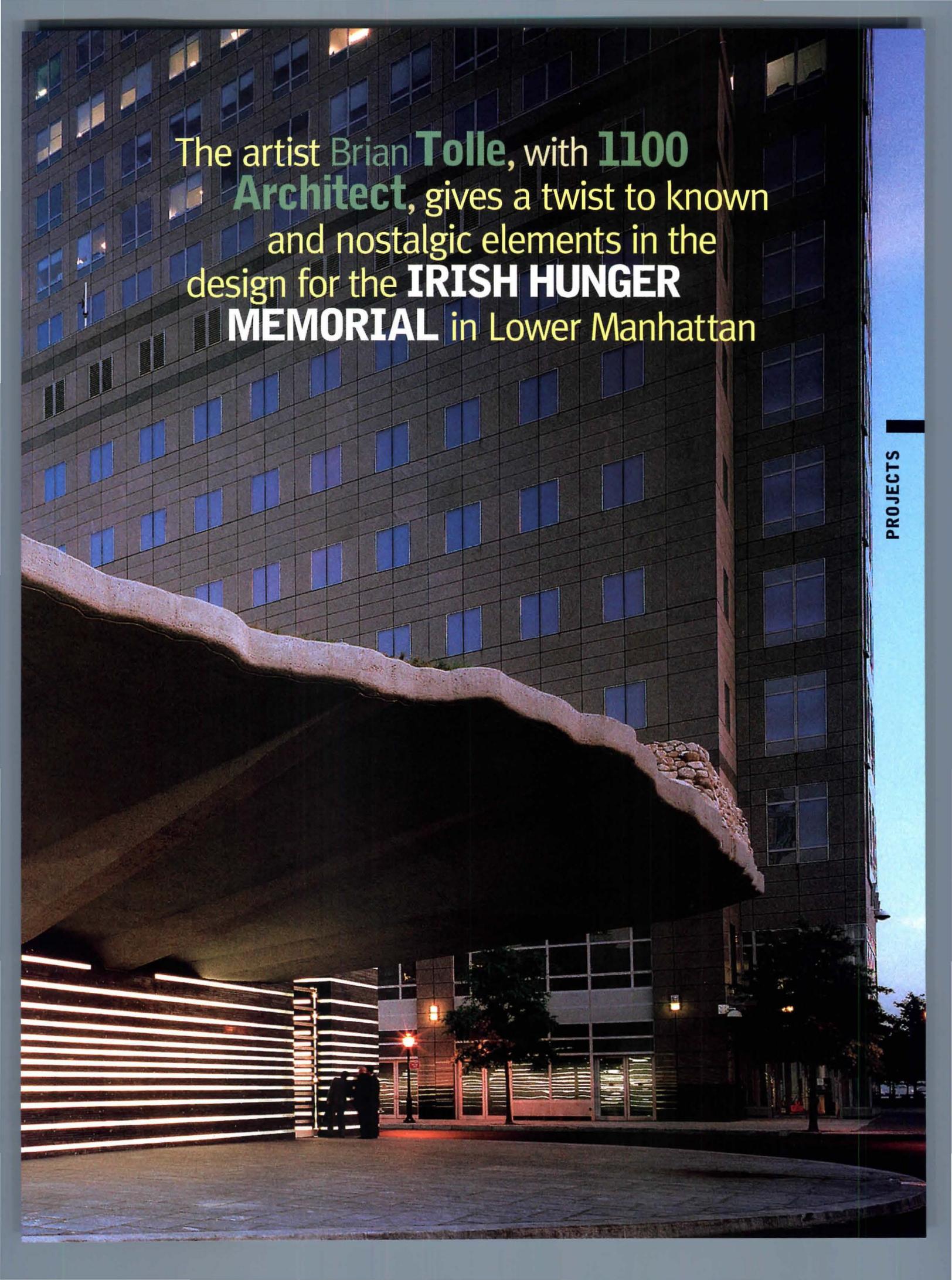
The curving central stair is a sculptural piece in an essentially rectilinear environment.





In Battery Park City, the Irish Hunger Memorial rivets the attention of passersby surprised by its sod, boulders, and wildflowers (left). The landform rests on a concrete slab that tilts surrealistically upward toward the Hudson River, where the main entrance is located.



A photograph of a modern building at night. The building has a grid of windows, many of which are illuminated from within. In the foreground, there is a large, curved, illuminated architectural element that appears to be a canopy or a large overhang. The lighting is a mix of warm yellow and cool blue tones. The overall scene is a nighttime urban setting.

The artist Brian **Tolle**, with **1100 Architect**, gives a twist to known and nostalgic elements in the design for the **IRISH HUNGER MEMORIAL** in Lower Manhattan

By Cynthia Davidson

As apartment towers continue to rise above the landfill of Battery Park City, bringing prosperity to a waterfront once the home of rats and rotting piers, a memorial to hunger seems incongruous at best. Manicured park grounds, meticulously maintained paving, iron fencing, and solid brick buildings give way to a rustic slope of wildflowers and grasses. This other landscape mysteriously rises off the ground across the street from the buttoned-up brick Embassy Suites Hotel. One wonders, what is this thing, so out of place, yet uncannily so perfectly out of place? So familiar, yet so unfamiliar? So absurd, yet so intriguing?

This is the Irish Hunger Memorial, designed by artist Brian Tolle in association with 1100 Architect and landscape architect Gail Wittwer-Laird. Theirs was the winning entry in a five-team invited design competition in 2000 for a site donated by the Battery Park City Authority. The scheme, as Juergen Riehm, AIA, of 1100 Architect says, is meant to communicate how conflicts and natural disasters affect the land in ways that lead to hunger. Ironically, even this quarter-acre of well-maintained “land” has already seen its difficulties. Dedicated in July 2002, it underwent extensive repairs this spring due to the overuse that came with success and to a particularly hard New York winter.

When Tolle made a research trip to Ireland during the competition phase, he was struck by “the power of absence” in the abandoned villages, and by the layers of geological history in the cliffs along the sea. The challenge, he says, was to drop a physical reminder of the famine and poverty that occurred in mid-19th-century Ireland across from a \$300-a-night hotel and cineplex. “The piece wouldn’t be believable as a landscape,” Tolle notes. “It had to become a sculptural object.” There also needed to be, he adds, the “comfort of recognition” in the memorial—a “familiarity”—as well as things “to disturb” that recognition.

With a hotel as an immediate neighbor, the memorial naturally attracts tourists. All of the elements of tourism kitsch are present: “a piece of the old sod,” a reconstructed abandoned roofless cottage from County Mayo, buttercups typically rubbed on cows’ udders on May Day, even the gentle roll of potato drills, and walls built with stones from every county in Ireland. What

PLAYING THE KNOWN AGAINST THE UNKNOWN CREATES THE AMBIGUITY NECESSARY FOR A WORK OF ART.

raises the memorial above the kitsch and gives it meaning is the tension generated through the designers’ integration and juxtaposition of these elements with the strikingly modern, striated base of backlit acrylic glass and fossilized gray Kilkenny limestone. This monumental base, Riehm says, is also a container for accumulated, and accumulating, history. It supports the plane of sod, gives entry to the cottage and the field, and provides a surface for the stories that had to be included in the memorial—the writing on the walls.

Playing the known against the unknown creates the ambiguity necessary for a work of art. In its strange familiarity—it is convincingly “a piece of the old sod”—the Irish Hunger Memorial invites viewers to approach the illuminated bands of text, to enter the western ramp and the rebuilt fieldstone cottage, and through a contemporary experience gain some understanding not only of the events of 1845–50 in Ireland, but also of the effects of hunger throughout the world then and today. Despite the obviousness of its symbols, such as the empty cottage and abandoned potato field, and its strangeness to the Battery Park City landscape, the memorial’s aspect of the familiar in no way tempers the hardship of the Irish famine. Rather, the ragged edge of the concrete platform reinforces the idea that this bit of land was ripped from the hills of Ireland, as were the people who were forced to emigrate to survive. Its very presence disrupts the familiar landscape of plenty to remind us that hunger—and art—is simply a matter of degree. ■

Cynthia Davidson, the former editor of Architecture New York, writes frequently for ARCHITECTURAL RECORD.

Project: Irish Hunger Memorial, Battery Park City, New York City

Designers: Brian Tolle (artist); 1100 Architect—Juergen Riehm, AIA, and David Piscuskas, AIA; Gail Eileen Wittwer-Laird (landscape architect)

Client: The Hugh L. Carey BPC Authority

Structural engineer: Robert Silman Associates

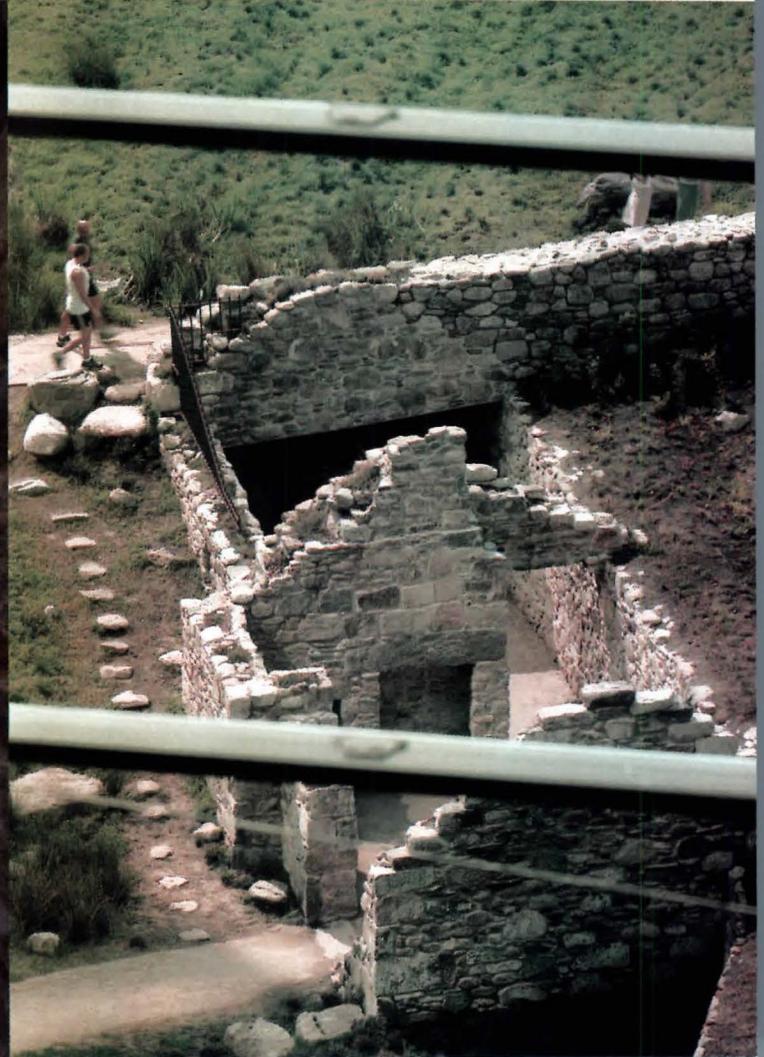
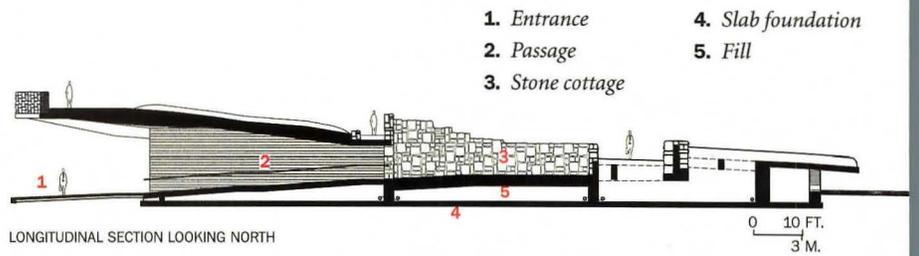
Graphic design: Piscatello Design Centre

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PHOTOGRAPHY: © PETER AARON/ESTO



The winning scheme by artist Brian Tolle and 1100 Architect for a memorial to the Irish potato famine of 1845–50 combines literal and abstract references, including a reconstructed roofless Irish limestone farmhouse (left and below right). The entrance to the memorial (right) is under a 35-foot concrete cantilever on Vesey Place. A passage in the concrete base is lined in fossilized Kilkenny limestone and striated backlit acrylic glass inscribed with pertinent texts. Beyond are the open-air rooms of the stone cottage (below).



PROJECTS



As one approaches the Fisher Center for the Performing Arts at Bard College via a winding drive, the main hall (right) appears to be an indeterminate size—grand in relation to people, small in comparison to the surrounding pastoral landscape. Next to it (above), the second theater, with its low, swooping roof, seems downright cozy.



Frank **Gehry** merges intuitive and rational forms at **BARD COLLEGE** to create an evocative performing arts center



By Suzanne Stephens

The strange, the sublime, the familiar, and the banal come together in a compelling and provocative manner in Frank Gehry's recently completed Richard B. Fisher Center for Performing Arts at Bard College. Located in Annandale-on-the-Hudson, the center is nestled in a bucolic setting on the northern edge of Bard's campus, some 90 miles from New York City. The complex of two buildings—where the main auditorium and a second theater are enclosed by the bold, sculptural contours of the stainless-steel cladding over a base primarily of poured-in-place concrete—is simultaneously monumental and picturesque. The evanescently undulating forms of the shiny carapace are by now familiar to many, especially after the resounding reception given Gehry's titanium-wrapped Guggenheim Bilbao [RECORD, October 1997, page 74]. But Bard boldly displays a "Queen Anne front" and a "Mary Ann behind," to borrow a phrase from a song by the late architect and composer Robert Schertz.

This amalgam of architecturally organic forms gives way to just plain old building as one moves past the abstract swirls of metal spilling down over the two halls to the back parking lot, where the rectilinear structures prevail. True, the boxy portions, mostly poured concrete,

THE BARD CENTER EMBODIES BOTH GEHRY'S ASPIRATIONS TO ARCHITECTURE AND THE FUNCTIONALLY MODERN ORIGINS OF HIS OEUVRE.

partly concrete block, have a white stucco finish that lends more polish than the beige brick or gray concrete block backside of a shopping center. Nevertheless, the blocky rear elevation makes one think of Venturi and Scott Brown's "decorated shed," where a "sign" or facade is appended to a box—a Gehryism noted elsewhere by Joseph Giovannini with regard to Bilbao's less prominent west facade. Yet, there is a major difference between Venturi, Scott Brown's approach and Gehry's. Gehry has gone past the facade into an extensively three-dimensional, expressionistic realm. He has melded both the decorated shed and what to Venturi and Scott Brown was its reviled antithesis—the symbolic "duck."

Because of such an admixture, some argue that this is not truly "Architecture." Yet Gehry's merging of expressionist "duck" and the Modernist "shed" is extensive—and honestly stated. The result is that the center looks like a butterfly not quite separated from the cocoon. The latest of Gehry's spectacularly shimmering metal-clad creations embodies both his aspirations to architecture and the humble, boxy, functionally Modern origins of his oeuvre. No matter how sculptural Frank Gehry's buildings are, they begin with a box, as the models piled around his Los Angeles office attest. He uses dumb, boxlike constructions to work out programmatic requirements and scale relationships, along with the organization of the masses on the site, before he starts sketching and then manipulating the sinuous skin [RECORD, May 1999, page 187].

At Bard, the shiny curving metal roof, so distracting (so attracting), still does not seem intended to conceal the concrete and concrete block real stuff poking out at the large end of the 107,612-square-foot complex. "Architecture" for Gehry is a "both/and" proposition (to borrow from Venturi and Scott Brown again)—both the fancy cloak and the clunky body.

Gehry had originally designed the center—with the main auditorium for 900, plus a black box theater next door for 300—for a site adjacent to the two existing arts buildings on Bard's architecturally polyglot campus. However, preservation groups nearby, including financier and preservationist Richard Jenrette, kicked up a fuss. The area, known for its dramatic ravines, waterfalls, and forests, had inspired the Hudson River School of painters in the 19th century to memorialize its beauty. Much of the natural setting remains, including the grounds of Montgomery Place, with its superb 1805 Federal-style manor house. Gehry's first center squatted in a ravine at the edge of the property adjoining Montgomery Place. Its fly space shot up about 100 feet in height (although only 88 feet would have been visible due to its low site). Bard needed

Project: *The Richard B. Fisher Center for the Performing Arts at Bard College, Annandale-on-Hudson, New York*

Architect: *Gehry Partners—Frank O. Gehry, FAIA, principal; Randy Jefferson, AIA, project partner; Craig Webb, project designer; John Bowers, project architect; Tadao Shimizu, assistant project architect*

Acoustic designer: *Nagata Acoustics—Yasuhiwa Toyota (room acoustics); Robert Mahoney and Associates (assistant to Nagata)*

Consultants: *DeSimone Consulting Engineers (structural); Cosentini Associates (m/e/p); Morris Associates (civil engineering); Olin Partnership (landscape); Theater Projects Consultants (theater)*

Gehry's intriguing play of both abstract and quasi-figurative elements constantly arrests the eye: The main building's roof looks like a crouching rabbit with a large, shiny metal carapace blanketing its haunches (opposite, top). At night it takes on an eerie glow when light emanates from within the main hall. In contrast, the second theater (opposite, bottom, at left) looks like an abstracted version of an English cottage by Voysey, only in stainless steel, not thatch.

PHOTOGRAPHY: © PETER AARON/ESTO



The animated form so visible from certain viewpoints disappears from others. Along the eastern face (this page), the steel frame supporting the stainless-steel cladding is explicitly revealed, as it is from the outside of the first theater (opposite).







a variance from the 35-foot height restriction, and the preservationists argued that the back of the building would be too visible from many vantage points. Ada Louise Huxtable described it in the *Wall Street Journal* (November 24, 1998) as the Bard center's "most massive, uncommunicative, and forbidding elevation." Ultimately, the town did not issue a permit.

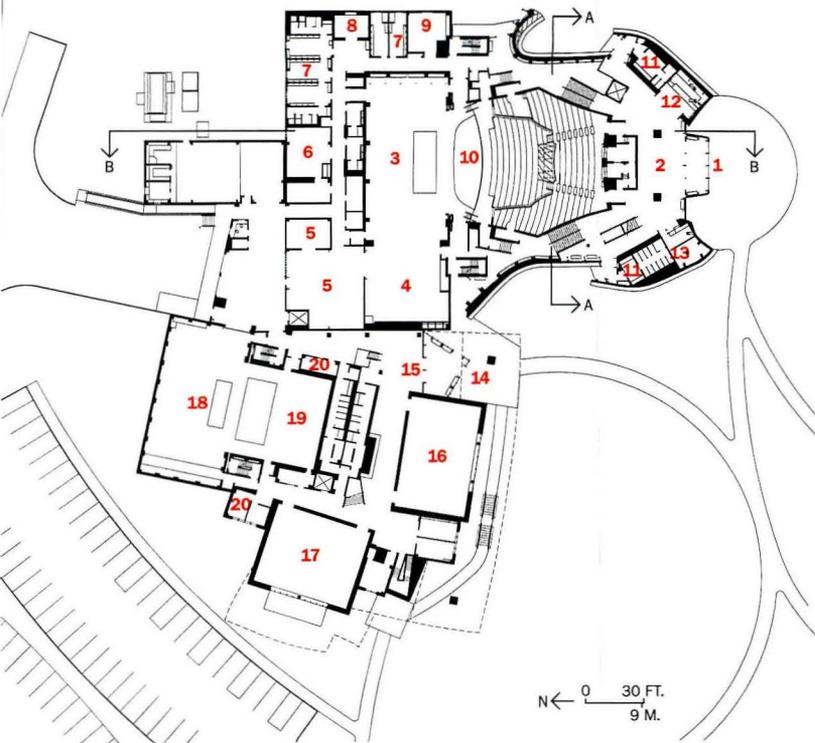
The center had to be moved to the north end of the 550-acre campus, and more money spent—\$62 million rather than the original \$25 million—to include some spaces that could otherwise have been located in the existing arts buildings. In one of those rare happy endings where everyone wins, the new location proved quite acceptable to the preservationists, and particularly propitious for Gehry's design. Now the center has its own ample space around it. Just in the way the new center doesn't spoil the view for preservationists, visitors who desire to see the Gehry in full metal jacket don't have to pick it out among a clutter of less distinguished college buildings.



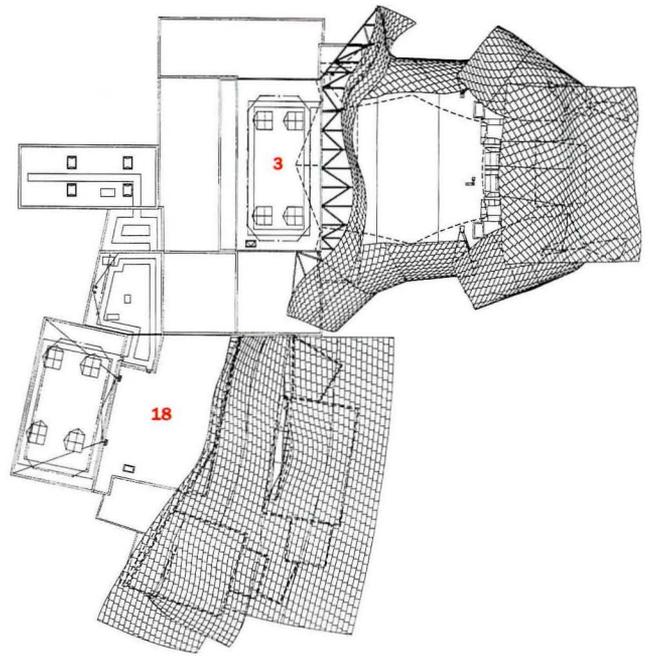
Sosnoff, the 80-by-40-foot stage has a fly space for scenery and a forestage with hydraulic lift. The forestage lift is lowered for opera productions, creating an orchestra pit for 80 musicians. For other performances, the stage lift can be raised and the stage extended from 40 to 52 feet.

The auditorium, like the rest of the center, reflects the commitment of Leon Botstein,

A Queen Anne front gives way to a Mary Ann behind at the Bard center, as you gradually move around to back (above and left). Blocklike stuccoed walls poke out from under the shiny steel skirt facing the parking lot, and soon associations generated by the sculptural front are ripped away by the strictly business rea

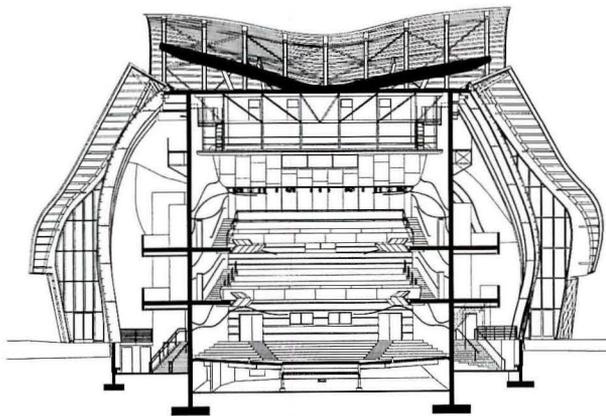


FLOOR PLAN - THEATER 1 AND 2



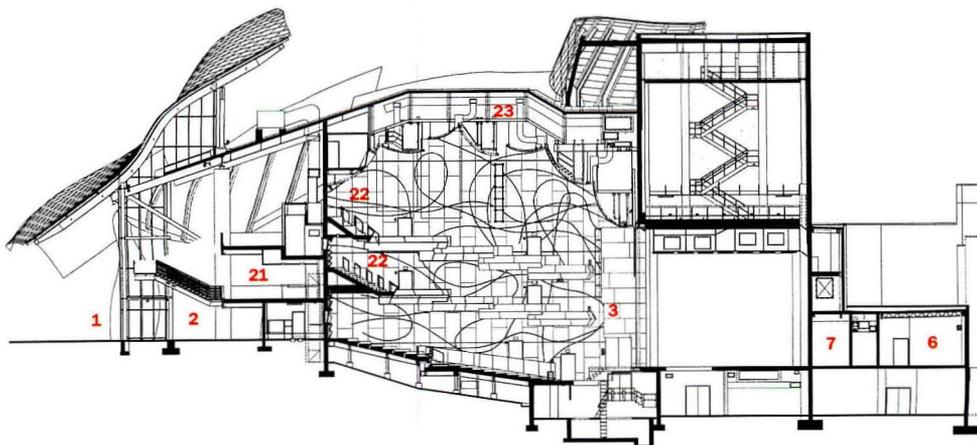
ROOF PLAN - THEATER 1 AND 2

- main entrance
- lobby
- theater 1
- stage right
- storage
- costume shop
- pressing rooms
- practice room
- green room
- orchestral lift
- rest room
- concession
- box office
- theater 2 entrance
- lobby, theater 2
- dance rehearsal
- drama rehearsal
- black box theater
- teacher storage
- offices
- lobby balcony/bar
- house balcony
- catwalk



TRANSVERSE SECTION AA - THEATER 1

Each theater has its own separate lobby, storage, and office space, and for public purposes each functions as a separate building—neither theater can be entered via the entrance to the other. However, they are joined at the hip behind the scenes, where the buildings share scenery and costume shops. In addition, theater 2 has four rehearsal rooms.



LONGITUDINAL SECTION BB - THEATER 1

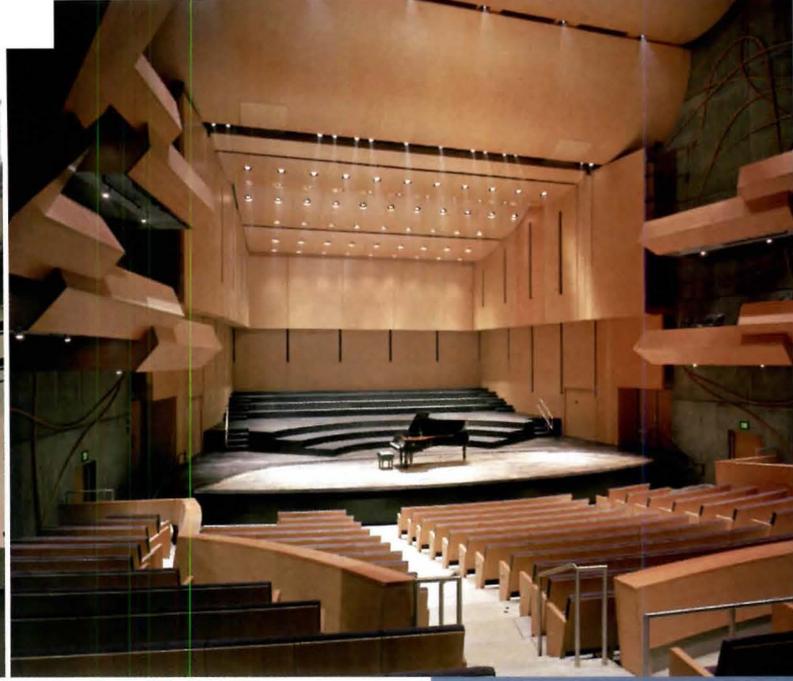
0 20 FT.
6 M.



With its grand proportions, its exposed steel framing supporting the stainless-steel cladding (left and bottom left), and its concrete structure (bottom center), the lobby, at first glance, has the ambience of football stadium. At the same time, tantalizing glimpses of the shape of white plaster over drywall construction (opposite) enclosing ancillary spaces (e.g. box office, rest room and mechanical room) add an unexpected elegance and artful refinement. The lobby of theater 2 (bottom right) receives additional, dramatic natural illumination through the expansive clerestory-like openings.







president of Bard College—and music director of the American Symphony Orchestra—to make the Fisher Center the hub of an arts community in the Hudson Valley. For this reason, it is designed to accommodate symphony orchestra and chamber music concerts, as well as dance and opera performances. (Dramatic productions are held in the black box theater in the adjoining building.)

In terms of the acoustics, the sound in the main auditorium is bright, particularly the brass on the opening night's performance of Mahler's Third Symphony (with the versatile Bard president conducting the American Symphony Orchestra). If this had been a Broadway musical, you might say it was overly amplified. But of course electronic amplification is not an issue here. A large orchestra in a moderate-size hall can do it. Nevertheless, subsequent performances of chamber music reportedly proved beneficial for woodwinds and piano.

What makes the familiar different at Bard's performing arts center is Gehry's pitting the two languages of curving expressionism and straightforward Modernism against each other.

WHAT MAKES THE FAMILIAR DIFFERENT HERE IS THAT YOU NEVER EXPERIENCE THE BUILDING AS ONE IMAGE: THIS IS NOT A ONE-LINER.

skin is both the prime architectural element and at the same time the instrument by which the forsaken parts (the white boxes) are revealed. More to the point, the entire complex presents a mini timeline of his own oeuvre, from the days of designing the Rouse Company headquarters in Columbia, Maryland, in the early 1970s, to the nitty-gritty exposed structure of the Santa Monica House and the Cabrillo Marine Museum in San Pedro, California, in the late '70s, to the big and shiny whammies of the Weisman, Bilbao, and Disney Hall, conceived in the late '80s and '90s. Bard offers a *mise-en-abîme*—a story within a story—of Gehry's architecture. But it is a difficult prototypical strategy for others to follow, for the balance between the unfamiliar and the banal is so tricky that you need a very special sensitivity (and talent) to pull it off. ■

Sources

Stainless-steel exterior cladding: A. Zahner
Structural steel: Columbia Wire and Iron Works; Berkshire Bridge & Iron
Fixed seating: Poltrona Frau
Theater equipment: JR Clancy

Theater drapery: Syracuse Scenery & Stage
Lighting

Sound and video: SPL Integrated Solutions

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

A special acoustical shell of 13 "towers," elongated boxes of Douglas fir and dryw was designed with acoustical consultant Yasuhisa Toyota of Nagata Acoustics and mounted on the concrete wall. Weighing 7,000 pounds each, the towers range in height from 31 to 36 feet, and are 8 feet wide. The fir walls are 2 inches thick and attached to a frame of steel tubes and channels, with the upper part of the box motorized and projected from the lower one. All told, these towers provide the right amount of reverberation on the surface, supplemented by contoured ceiling canopies of Douglas fir with steel backing.



Wendy Evans **Joseph** turns an iconic work by Frank Lloyd Wright into **THE INN AT PRICE TOWER** with no edginess lost

By David Dillon

PROJECTS

On the 9th of February in 1956, Bartlesville, Oklahoma, residents lined up for blocks to tour Frank Lloyd Wright's bizarre addition to their downtown. Soaring sunscreens, thrusting balconies, no right angles: how to make sense of it? Locals referred to it as a spaceship, a hood ornament, and "Price's folly," a reference to Harold C. Price, who had given the commission to Wright.

"People thought it was crazy because it didn't have walls until the very end," recalls Price's daughter-in-law Carolyn. "It looked like the backbone of a fish. But over the years they've come to like it. You could say it went from crazy eccentric to wonderfully eccentric."

Bartians (rhymes with Martians) are hoping that the old magic continues now that the tower has been converted to an arts center, with a 21-room boutique hotel designed by New York architect Wendy Evans Joseph, AIA. The town is still reeling from the recent departure of the Conoco/Phillips headquarters and in need of a boost. The Inn at Price Tower could be it. Where else can you visit a Frank Lloyd Wright skyscraper and also get to spend the night?

Harold Price had made a fortune in the pipeline business and wanted to give something back to his hometown, something special, a new civic icon perhaps [RECORD, February 1956, page 153]. So in 1952, Wright proposed a pinwheeling, 19-story, poured-concrete tower, with floors cantilevered from a central core like branches on a tree and supporting a combination of offices, apartments, and shops. It was an elaboration of his unbuilt St. Mark's in the Bowerie project of 1929, though with an asymmetrical plan and more complex program. Taliesin apprentice Fay Jones contributed to the working drawings.

"Tap root" schemes turn up repeatedly in Wright's work, including this exotic, mixed-use project in a remote Oklahoma oil town. The Bartlesville tower is an architectural summa of Wright's views on integrated living and working, the liberating power of technology, and the primacy of instinct and emotion. It is as much a social manifesto as a work of architecture.

Harold Price balked at first. He had been thinking of a two-, maybe three-story build-

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

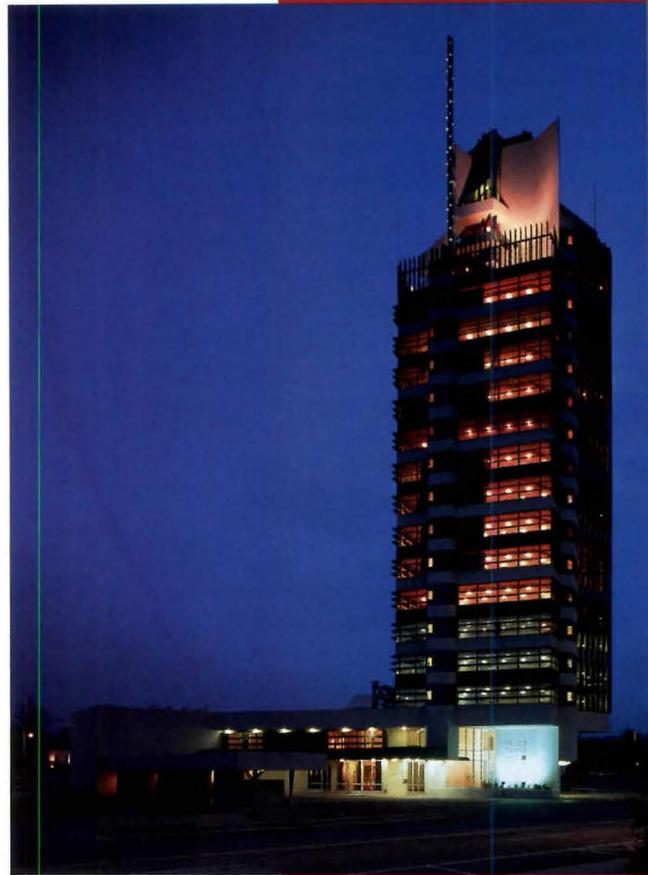
Project: *The Inn at Price Tower, Bartlesville, Oklahoma*

Design architect: *Wendy Evans Joseph Architecture—Wendy Evans Joseph, AIA, principal; Robert Furno, AIA, Farzana Gandhi, Manan Shah, Thruston Pettus, Liz Burrow, Liza Beaulier, design team*

Client: *Price Tower Arts Center—C.J. Silas, chairman; Richard P. Townsend, executive director*

Architect of record: *Ambler Architects—Scott Ambler, principal; Jim Charles, engineering technician/project manager*

Furniture, guest-room rugs, and mural design: *Wendy Evans Joseph Architecture*



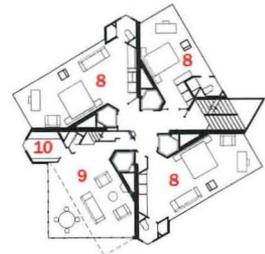
In 1956, Frank Lloyd Wright's 19-story Price Tower in Bartlesville, Oklahoma, was the tallest thing around. Seen at first as an alien object, it soon became a familiar icon and now the top floors have been turned into a boutique hotel.

PHOTOGRAPHY: © CHRISTIAN KORAB

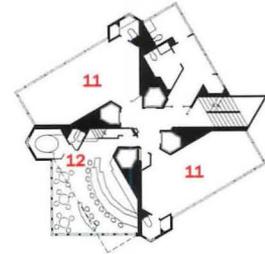




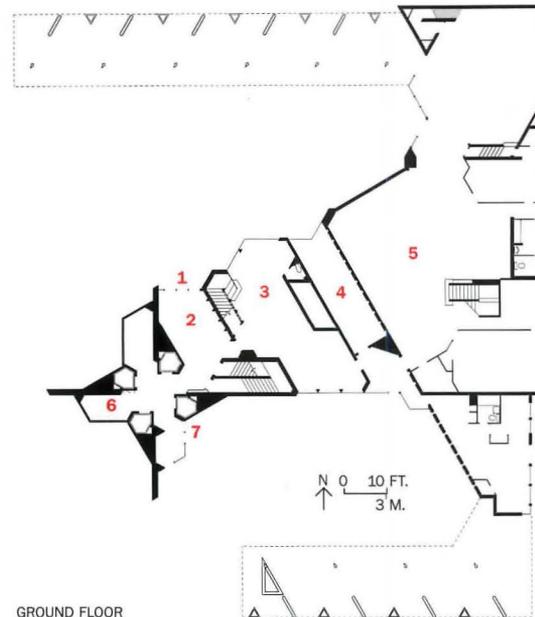
1. Entry
2. Lobby
3. Museum reception
4. Museum theater
5. Temporary exhibition
6. Hotel reception
7. Service entry
8. Guest room
9. Guest suite, lower level
10. Kitchen
11. Conference room
12. Restaurant, lower level



TYPICAL GUEST FLOOR



FIFTEENTH FLOOR



GROUND FLOOR

IN WRIGHT'S MIXED-USE TOWER, THE APARTMENTS TURNED OUT TO BE TOO SMALL, HOT, AND EXPENSIVE. SO THEY WERE CONVERTED TO OFFICES.

ing, he told Wright. "Too much wasted space," the architect replied. "But it's such a big building for a small town," Price continued. "Not at all," said Wright. "I just stood it on end."

And so it went, with Wright ultimately getting everything he wanted, even a drive-up branch of the Public Service Company of Oklahoma. (The Art Center's main gallery sits where the pay window used to be.) He also busted Price's budget by \$1 million.

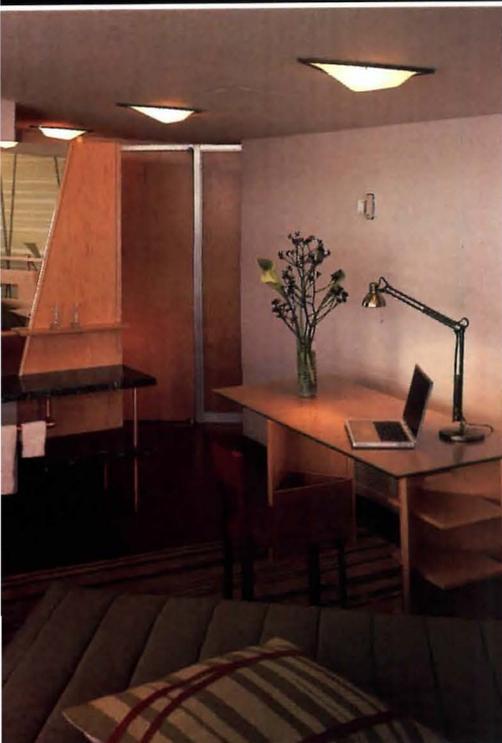
But dismay turned to delight. Price put the tower on the cover of *Tie-In*, the company magazine, and rarely passed up a chance to tout its brilliance. Employees reportedly liked the building. "You weren't stuck in a cubicle," remembers Bill Creel, head of the company's

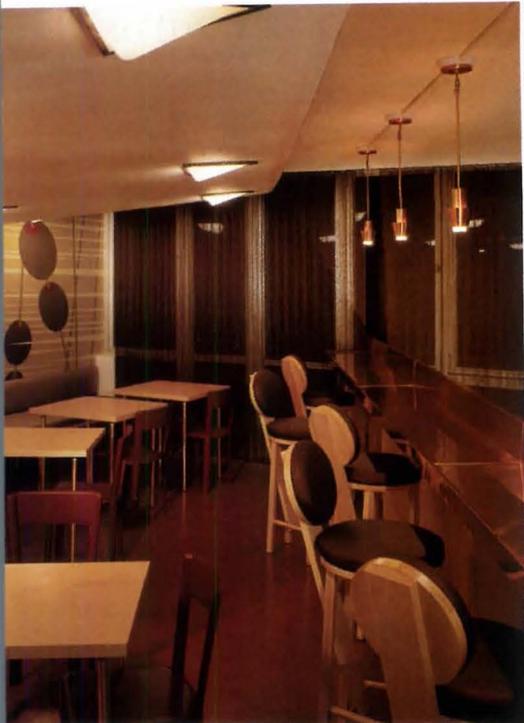
pipeline-coating division. "You could get up and walk around and look at the sky and the prairie. You get a lot of good ideas with views like that." But others weren't so impressed. The duplex accommodations on one quadrant of each floor turned out to be small, hot, and expensive, too

much like Manhattan apartments. Price later converted most of them to offices, which proved unworkable because of so many triangles and so little flexibility.

The Price Company occupied the tower until 1981, then sold it to Phillips Petroleum,

Originally, each level of the poured-in-place concrete structure was a combination of single-level offices and duplex apartments. In this incarnation, Werner Joseph converted the top eight floors into a 21-room hotel, with duplex suites (above left). The color scheme, materials, and furniture that Joseph designed (opposite) defer to Wright's own aesthetic while creating a new identity for the inn.





Visitors to the hotel and arts center can take an elevator from the restored lobby (above) to Copper, the bar and restaurant (left three and opposite) on the 15th and 16th floors. In remodeling the interior, Joseph designed its furnishings and murals to diverge from the triangular form Wright used in order to keep the two approaches distinct. The curved bar itself (left) has a copper sheet top and is faced with maple plywood and Lucite strips. The chairs and bar stools are maple and copper pipe, while the banquettes are maple.



which used it for 20 years before turning it over to the Price Tower Arts Center, a nonprofit institution for contemporary art and architecture. Founded in 2001, the center has an ambitious agenda of exhibitions and public programs, which it hopes to fund in part with income from its hotel and restaurant. It is also trying to raise \$15 million for a new museum by Zaha Hadid [RECORD, June 2003, page 30], a low horizontal building that will wrap around the tower like a boomerang while reaching out to a performing arts center designed by Wright's son-in-law, William Wesley Peters. Perhaps Hadid's bold geometry will spark another public debate and the familiar/unfamiliar cycle will begin all over again.

Wendy Evans Joseph's hotel carries on a spirited dialogue with Wright's building without lapsing into either mimicry or glibness. She complements, at times contests, but never copies. It wasn't easy, she explains, because "the building is so specific, with such strong geometry and so few materials, that I wondered if there could be another response. I wanted to leave Wright alone, yet I found I had to contend with him at every turn."

She approached this strictly as an interiors job. She made no structural changes to the tower; the spaces remain as Wright designed them, but with different contents. Eighteen offices and three of the original apartments have become guest rooms (\$125–\$250 per night), with a fourth turned into the restaurant Copper. The lobby, complete with Wright's favorite quotation from Walt Whitman, has been faithfully restored, along with Harold Price's office on the top floor, which looks as if it had been shrink-wrapped the day he departed.

Joseph succeeds in preserving the spirit of Wright while updating the materials and technology. She uses abundant copper in the guest rooms and restaurant, for example, but in the form of tubing and thin industrial mesh instead of heavy patinated panels. Likewise, her carpets and upholstery fabric recall Wright motifs without copying any particular one. His metaphor for Price Tower, "the tree that escaped the crowded forest," served as the starting point for the contemporary, even slightly Japanese, murals in the guest rooms.

Wright's tables and chairs were exercises in pure form, miniature sculptures, while hers consist of long thin strips of maple that highlight construction and invite rearrangement. His seem anchored; hers seem to float in their spaces. Because the tower's elevators are the size of phone booths, the individual pieces had to be hauled up one by one and assembled on-site, the same approach Wright had used.

The visual high point is Copper, a two-level restaurant on the 15th and 16th floors that was formerly an apartment. The bar is a long, gentle curve with lapped maple sides—a wry allusion to Wright's swirling Guggenheim—and a faceted copper top. The dining tables are covered with a thin copper mesh slipped between sheets of glass; the same mesh is used for the window drapes, providing a fluid counterpoint to the heavy copper sunscreens on the outside of the building. The room is like a three-dimensional sculpture in which no two surfaces, and no two views, are the same.

With the completion of this \$2.1 million renovation, the Price Tower has come full circle—from curiosity to avant-garde symbol to corporate castoff to community icon. Its prototype, St. Marks, was all apartments; its most recent incarnation is a residence of a trendier and more transient kind. "It is a unique opportunity to honor the spirit of Wright," says Arts Center director Richard Townsend. "It's also a chance to create the kind of community focal point, the town square, that Harold Price had in mind." And, in the process, to reintroduce the public to one of the most romantic, idiosyncratic, and fiercely individualistic works of architecture in America. ■

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Sources

Fabric seating: Maharam

Fabric for draperies: Jack Lenor Larsen

Guest-room lamp lighting: Lite-Source

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

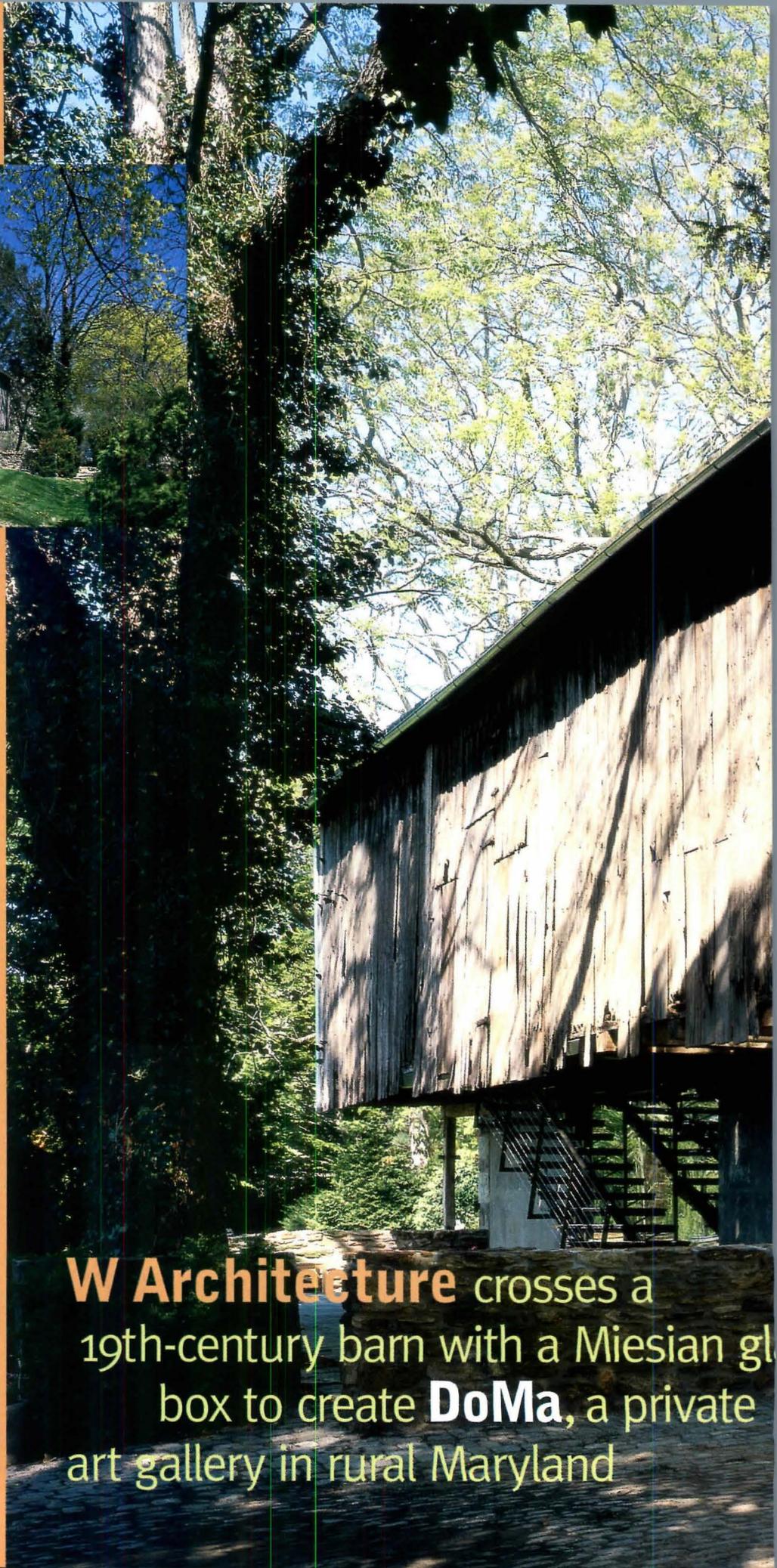


The nonprofit Price Tower Arts Center occupies the first two floors of Wright's only skyscraper. Here, Joseph created an architect and design gallery (above) that features Wright's objects. The original 19th-floor office for Harold Price with the furniture designed by Wright, has been kept intact as part of the museum (opposite).





The architects preserved the view of the 1870s barn from the farmhouse (above). But along the property's entry drive, to the west, they fully revealed the intersection of the barn with a glassy Modernist structure (right).



W Architecture crosses a 19th-century barn with a Miesian glass box to create **DoMa**, a private art gallery in rural Maryland



By Sarah Amelar

Sure, a simple barn may look like a close cousin of a traditional monopoly-piece house—but at their essence, houses and barns are polar opposites. While a house usually needs full enclosure, even insulation, from the elements, a barn wants to breathe, allowing air to flow through random slits in its loosely joined cladding. Somewhat ramshackle by nature, wood barns remain fairly free to shift and settle over time, whereas houses tend to be more fixed. But differences aside, many a romantically weathered barn has inspired an owner or architect to convert it into a house. And whatever the approach—there have been plenty of variations—the farm building typically gets lost in the process. More often than not, its well-seasoned shell ends up tightened and sealed, retaining little of the shed's former personality, other than a bit of texture on its exterior and perhaps rugged posts and beams on its interior.

In DoMa, a Maryland barn-turned-gallery-and-guest-house, however, the outcome is more unexpected. Here, W Architecture tackled the conversion dilemma with a strikingly simple,

A PRISTINE GLASS BOX LITERALLY INTERSECTS A SHAGGY FARM STRUCTURE, ACHIEVING THE UNLIKELY MERGER WITH REMARKABLE SUCCESS.

yet inventive, strategy, and in the end managed to preserve the character and key elements of an old barn—without sentimentality—while inserting the crisp lines of a pure Modernist form. At DoMa, a pristine glass box literally intersects a shaggy farm structure and achieves the unlikely merger with

remarkable success, simultaneously distilling qualities of both components. The individual elements are familiar, but the nature of their juxtaposition is not.

It all started with the clients' desire to preserve views of the original barn from their 1830s farmhouse while transforming that outbuilding into a venue for their contemporary art collection. The 85-acre property, a former dairy farm with an 1870s bank (or hillside) barn, had been a breeding ground for prize basset hounds before becoming the weekend retreat of its current owners, Nancy and Stan. The couple—a partner in a venture capital firm and a recently retired labor lawyer, now an art history graduate student—settled into the farmhouse with its cozy warren of small rooms. But their collection of sculpture and large paintings by established and emerging talent needed a more open, expansive space. So, they looked to the picturesquely dilapidated barn as a potential home gallery and social gathering place. The couple's bent toward simultaneity—conserving the old while assertively introducing the new—combined with the barn's strong character, inspired the architectural intervention.

W Architecture partners Barbara Wilks, FAIA, and Alex Washburn, AIA, decided early on to keep the formerly red wood barn as a ruin—at least visually. But the stone-based building was, as they soon discovered, on the verge of collapse, with only “antique” hay stored in its lower level supporting the upper floor. So, to make the ruin structurally sound, the architects unobtrusively added steel plates and rods that strengthen its skeletal form. “It's all strung up like a guitar,” says Wilks. “Sometimes you can hear it ping.”

Leaving the cladding's shaggy edges just as they'd found them, the architects applied a clear, matte wood preservative to halt further deterioration.

The design is based on a series of shells—with the barn's skin partially sheathing a glazed volume, which, in turn, contains a service/chimney core, enclosed in stacked pine planks (anchored on threaded rods). Neither expecting nor forcing the original siding to keep out rain or cold, the

yet inventive, strategy, and in the end managed to preserve the character and key elements of an old barn—without sentimentality—while inserting the crisp lines of a pure Modernist form. At DoMa, a pristine glass box literally intersects a shaggy farm structure and achieves the unlikely merger with

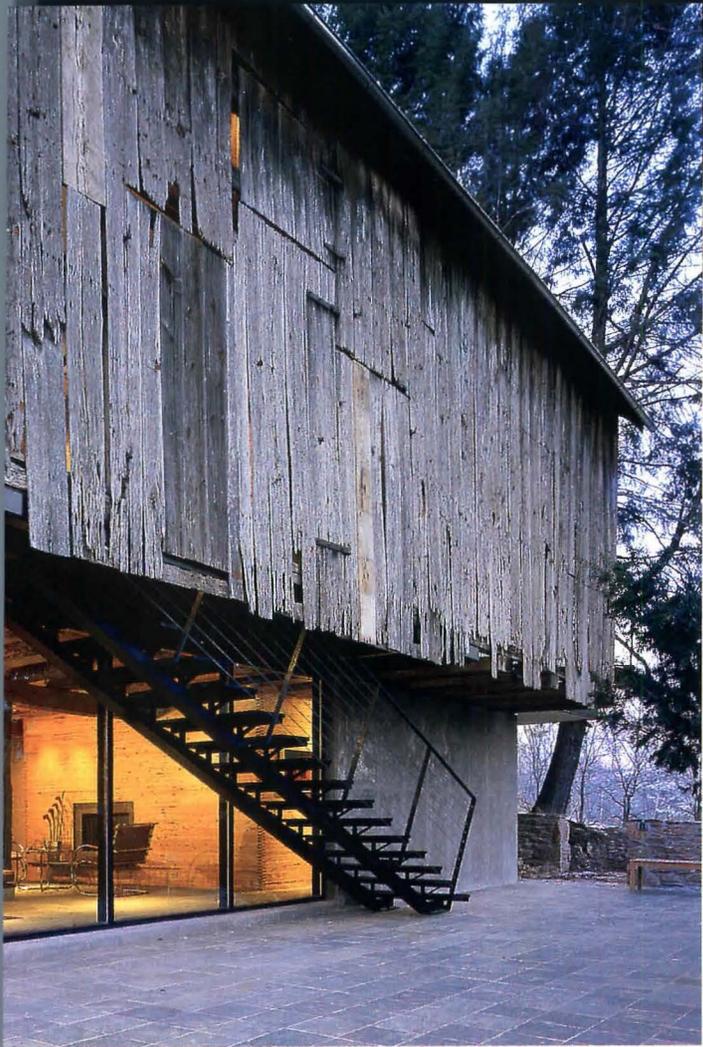


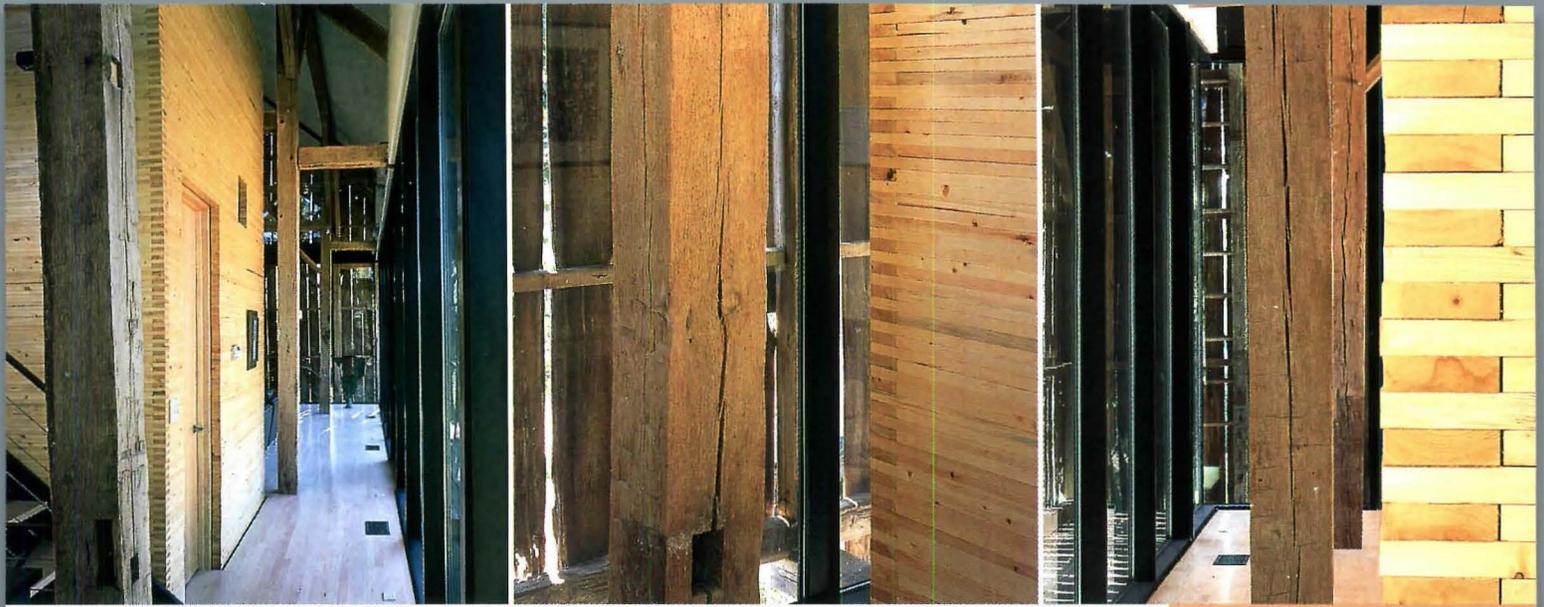
Project: DoMa, Baltimore County, Maryland
Architect: W Architecture—Barbara Wilks, FAIA, Alex Washburn, AIA, principals in charge; James Coleman, project architect; Scott Rae, Michel Hsuig, Andrea Steele, project team

Interior designer: Johnson & Berman
Engineers: Robert Silman Associates (structural); Spears/Viotto Associates (mechanical/electrical)
Lighting: Luke Tighe
General contractor: Henry H. Lewis Contractors

PHOTOGRAPHY: © ALAN KARCHMER/ESTO

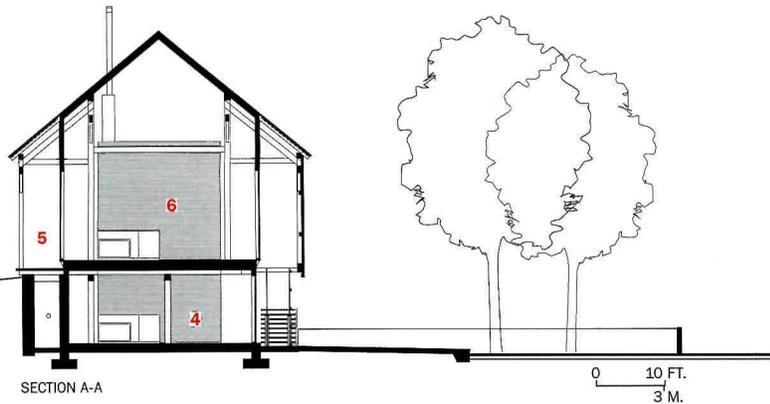
Original fieldstone walls, along with ne concrete ones, encl the guest quarters occupying the barn's lower level (opposite top left). The barn's floor joists are partially exposed, and a reveal like window separates an old stone wall from a new concrete one (top right). The clear lined, glazed volume plays against the sil mature, vine-wrapped trees (bottom left) against the shaggy barn side (bottom right). The architects stripped the building's north elevation to its structural members, opening to glazing to views and light (this page, below)





Stock planks, anchored on threaded rods, form the central service core (top row). Part of the barn's original interior has been further enclosed, in glass, while other areas have become more exposed, as in the entry zone where a new steel-grate stair ascends beneath exposed floor joists, arriving in a semi-outdoor porch (left). The glazing accentuates the play of light penetrating slots in the cladding (opposite).





- | | |
|---------------|-------------------|
| 1. Deck | 4. Gallery/living |
| 2. Study loft | 5. Porch |
| 3. Dining | 6. Guest quarters |

architects used it solely for brise-soleils and semi-outdoor passages or porches.

Through a process of judicious editing, the design team determined which elements to remove and which to retain. Placing the gallery, living, and dining areas on the main level with guest quarters below, inside the barn's stone base, they turned a cellar into a light-filled bedroom, with glass replacing large expanses of masonry walls. Above this room, the original wood elevations remain intact to the south and west, preserving the clients' favored views from the farmhouse, while screening the gallery's long south side from intense sunlight. "For looking at art, a wall of glass facing south wouldn't make sense," says Wilks, "but with light entering only between the slats, southern rays give the most dramatic effect." On the north side of the building, she and Washburn took the more radical step of stripping the barn to its heavy timber structure, completely opening the northern glazing to gentler light and meadow views.

For all the simplicity of DoMa's volumes and the modesty of its 3,480 square feet, you still need to walk entirely around the building and throughout its interior to grasp just how the overall configuration works. New elements insert into, and project from, the old in varied ways—as the original barn yields outdoor, indoor, and in-between spaces. The old cathedral ceiling remains open, its gable extending out seamlessly from the interior to overhang an open deck above the dining area. Reflections in the glazing now accentuate the slashes of light penetrating the siding's irregular slits.

The project draws much of its success from the interplay of materials, rhythms, and textures. While ragged barn siding contrasts with smooth planes of glass, subtle echoes of form occur throughout the building—for example, between light-filtering slats and steel-grate entry steps or among the parallel lines of wood siding, stair-rail cables, and exposed floor joists and roof purlins. Masonry textures range from the barn's craggy fieldstone base to the newly troweled concrete walls adjoining them, the property's worn cobblestone pathways, and the new slate pavers extending from the entry patio into the guest room.

This material palette was achieved without extravagance, but within strict budgetary and value-engineering allowances. The aluminum window-wall system, for instance, is off-the-shelf, while ordinary stock lumber, cleverly assembled, encloses the central service core. "The key here," says Wilks, "was extreme care with proportions and finishes." Also, formal purity and close attention to junctures allowed the architects to bring together the familiar and the unexpected without a jarring effect.

At the outset, the client envisioned the living room/gallery as a multipurpose space, for which W Architecture designed movable, visually floating art-display panels. "But along the way," recalls Stan, "Nancy and I decided not to include them. We realized that the barn with its glass was a work of art in itself—and we didn't want to block it." ■

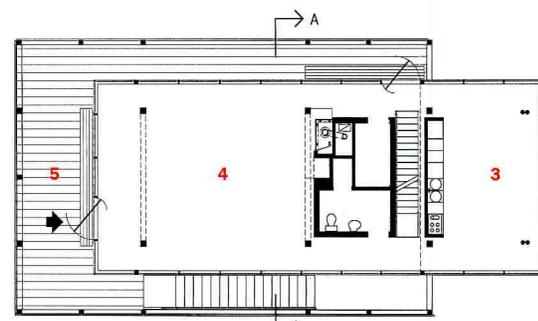
Sources

Curtain wall: *Kawneer*
Lighting: *Bruck (downlights)*

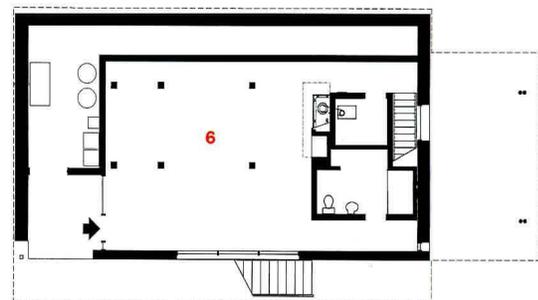
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LOFT LEVEL



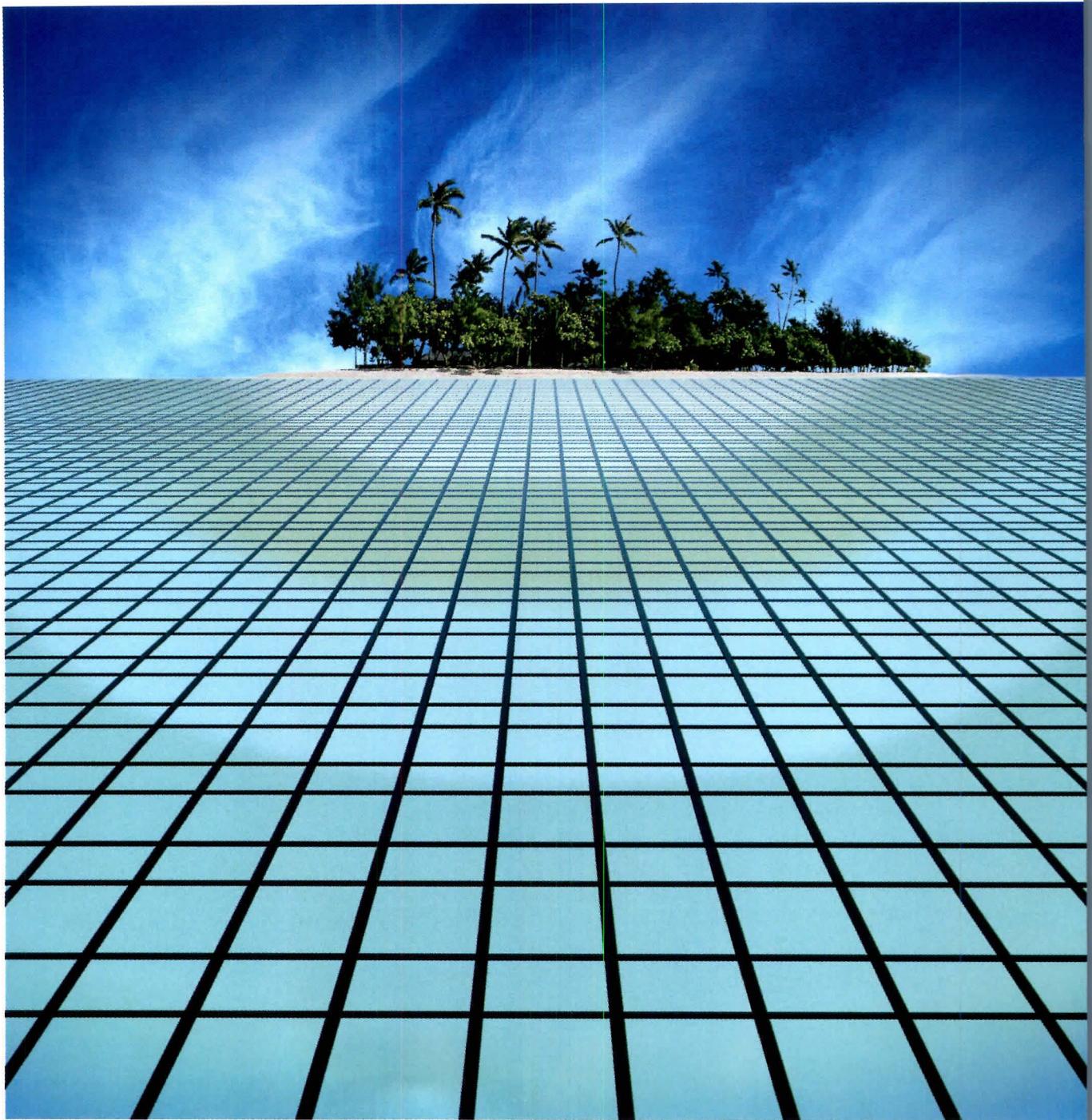
MAIN LEVEL



LOWER LEVEL

In the living/gallery area, smooth new wood elements contrast with the old timber structure (opposite, top). The original cathedral ceiling remains open, with the new service core rising from the guest quarters (opposite, bottom right) to a study loft, without reaching the roof (opposite, top). A linear kitchen borders the stairway leading down to the guest room or up to the loft (opposite, bottom left).





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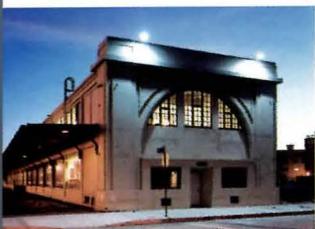
OVERLAYS, SUBTRACTIONS, INSERTIONS: THERE IS NO SINGLE FORMULA FOR A SUCCESSFUL RENOVATION, BUT THE BEST ONES INFORM RATHER THAN DICTATE DESIGN.

By Deborah Noonian, P.E.

1.

Los Angeles, California

Gary Paige Studio/GPS teams with his SCI-Arc colleagues to turn a monolithic structure into a singular teaching and learning experience.



2.

Los Angeles, California

John Friedman Alice Kimm Architects transforms a warehouse into a visually punchy furniture showroom in a neighborhood shaking off its past.



3.

Rome, Italy

Massimiliano Fuksas inserts a municipal arts, exhibition, and conference center into the ruin of what was once a Renaissance horse stable.



4.

Seattle, Washington

Olson Sundberg Kundig Allen Architects retools a former machine shop at the city's edge into a flexible office space for an ad agency.



What is it about an updated classic that strikes the heart fondly? Whether it's the BMW G3 reengineered with 21st-century swoopiness, the release of a 1950s film onto DVD, or baseball players donning vintage-style uniforms on game days, we all have designs on the past. Nostalgia itself has become an industry: Every pastime and hobby boasts a clan of enthusiasts who keep the flame of history alive through reenactments, rereleases, and reactivities ad nauseum, and companies of all stripes who pay handsome fees for market research on how to capitalize on our collective yearning to sell everything from furniture to footwear.

For architects overhauling existing buildings, however, straight-up nostalgia can be tough to choke down, as those who have grappled with review boards or conservative clients can attest. Yet when the parties agree to favor reinvention over replication, creating a new program out of what's on hand presents a greater challenge than starting from tabula rasa. As Antoine de Saint-Exupéry noted, "Freedom and constraint are two aspects of the same necessity."

The following four projects put the spotlight on adaptive reuse with a wide range of scales and complexities: Freight depot to university, warehouse to furniture showroom, horse stable to community exhibition and conference center, machine shop to office building. In each case, existing structures were used as a springboard for creativity, like a jazz musician who improvises around a central melody. Adhering to the timeless (and shameless) principle of "if you've got it, flaunt it," the architects highlighted the strong points of these four buildings, namely their robust shells and generous interiors. With that framework in place, they focused on the broader goals: to modernize outmoded formal solutions, to add space for new programmatic elements, to find uses for existing materials, to freshen up neighborhoods with glorious or checkered pasts. Of the four structures, only the freight depot now occupied by SCI-Arc is protected by historic-preservation standards—and perhaps not surprisingly, its competent yet reserved renovation runs counter to the school's cutting-edge reputation.

Though it wasn't planned as such, it makes sense that three of these projects are located in the American West—long our country's geographic stronghold for pioneers and tradition-busters—and the fourth in Rome, a city whose fortunes have ebbed and flowed over centuries.

Architects and clients must not be afraid to project visions of the future onto places with existing narratives. A respectful departure from the past is often the best way to ensure a future worth remembering. ■

more information on these projects, go to Projects at www.architecturalrecord.com.

Southern California Institute of Architecture Los Angeles, California

1

GARY PAIGE STUDIO/GPS TRANSFORMS A FREIGHT DEPOT FOR HIS ALMA MATER AND EMPLOYER IN A QUARTER-MILE-LONG STRUCTURE.

By Joseph Giovannini

Design architect: Gary Paige Studio/GPS—Gary Paige, principal in charge; Sunhee Baik, Craig Stewart, Susie Tashiro, David Valdes, design team

Consulting architects: Studio Works—Robert Mangurian; Guthrie Buresh Architects—Tom Buresh

Executive architect: Kappe Architects Planners—Ray Kappe, FAIA

Client: SCI-Arc; Dynamic Builders (owner)

Engineers: Nabih Youssef & Associates (structural); The Sullivan Partnership (mechanical); Nikolakopoulos & Associates (electrical and lighting)

Consultants: Tim Thomas & Associates (lighting); Davis Langdon Adamson (estimating); CSI & Associates (specifications)

Contractor: Matt Construction Corporation

Size: 82,363 square feet

Cost: \$6.9 million

Sources

Steel: D&M Steel

Windows and glazing: Giroux Glass

Paints and finishes: Dunn-Edwards Paints (by donation)

Ambient lighting: Columbia; Contech; Hubbell; Lam Lighting

For more information on this project, go to Projects at

www.architecturalrecord.com.

The design of an architecture school inevitably attracts close scrutiny, but the highest expectations—and the highest risk of perceived failure—belong to progressive schools that have made the radicalization of design their mission and badge. The example of their own digs should measure up to the standard and promise of their stated position.

The Southern California Institute of Architecture (SCI-Arc) has long been one of America's most vocally avant-garde schools, and recently it decamped from its warehouse facility on Los Angeles's Westside to a promising former freight depot just east of downtown, next to a nascent loft district. Designating and encouraging the next generation of Southern California figures beyond that of the well-known eminences Thom Mayne and Eric Owen Moss, SCI-Arc's then-director Neil Denari looked to his faculty to design the space. He selected Gary Paige, director of the undergraduate program at the time. Paige had built little but was an ensconced denizen of SCI-Arc, having taught there since his graduation. He had designed the library interiors at the school's previous location.

Program

The building, an industrial leftover in Los Angeles's sprawling rail-yard

Joseph Giovannini is a New York City architect and the architecture critic for New York magazine.



landscape, was a mixed blessing. The robust poured-in-place concrete structure, built in 1906, came with Herculean transverse beams, generous volumes, and scores of large openings for former loading docks. Time had been generous to it, giving the interior surfaces a seasoned patina akin to character lines on a wise face. The problem was the typology: Being as long as the Empire State Building is tall, the shotgun building was unremittingly linear, with only one jog breaking the monotony of its quarter-mile length.

The way the school acquired its new building became a second, unanticipated challenge. In a complicated lease-to-buy arrangement, SCI-Arc rented the building from a developer who pursued historic nomination for the structure to

obtain tax credits. The terms of the designation restricted what Paige could do to the exterior, effectively prohibiting any eruptive interventions that would break through its perimeter walls.

Still, the project had enormous potential, especially given the school's official posture of challenging conventional practice through critical invention. In this case, the rules to be challenged and subverted included the linearity and almost obsessive regularity of the modular building, preservation restrictions, and a budget that left no wiggle room.

Solution

Paige's own interests—rhizomic organization, chaos theory, and serial variation—seemed promising concepts with which he could dis

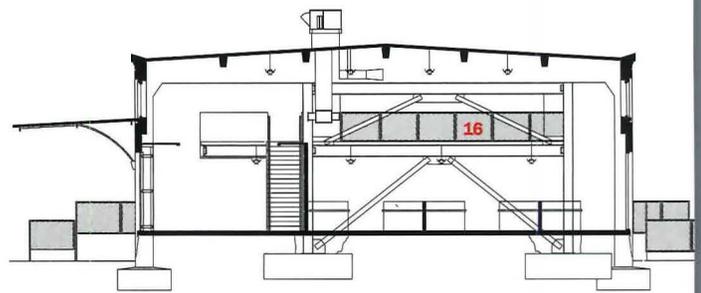
the freight depot's
g, low-slung profile
opposite and right)
presented a significant
sign challenge.
ate-glass windows
talled in the freight
ys (below) let in sun-
nt and afford views
downtown, but stu-
nts suffer when the
at builds up inside.



The entrance to the library, a double-height volume at the school's northern end, doesn't announce itself with a significant street presence.



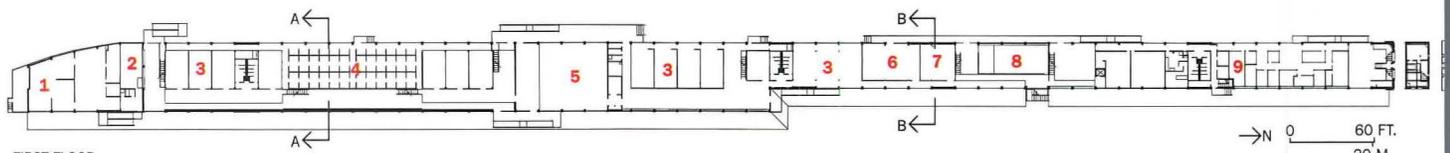
SECTION A-A



SECTION B-B

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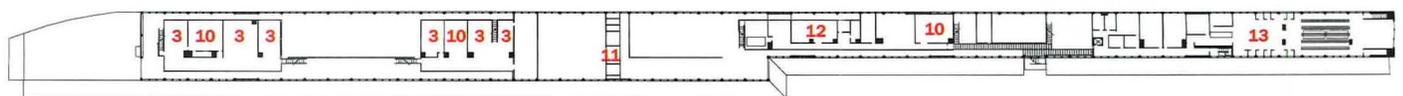
- | | |
|-------------------|---------------------|
| 1. Wood shop | 5. Main space |
| 2. Student lounge | 6. Store |
| 3. Studios | 7. Media center |
| 4. Thesis pit | 8. Exhibition space |



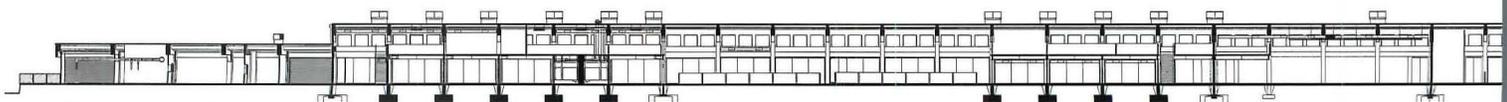
FIRST FLOOR

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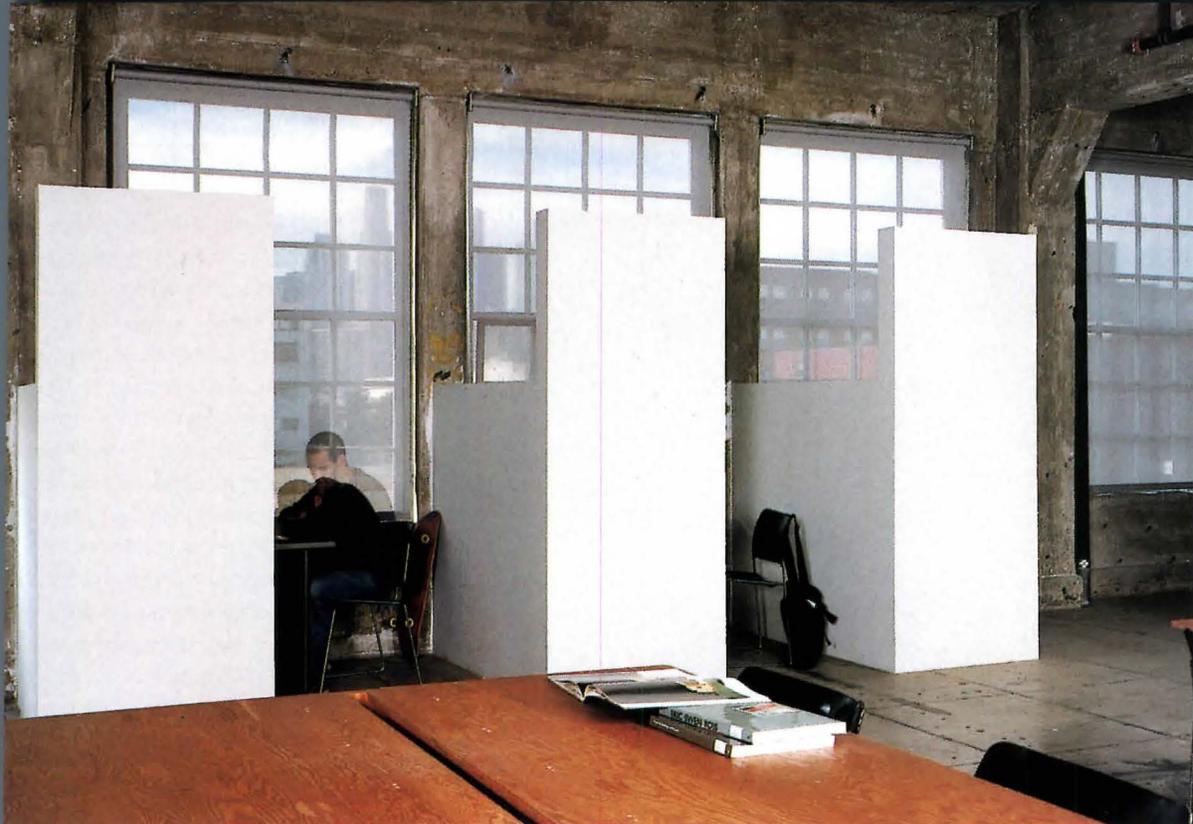
- | | |
|-------------------|---------------|
| 9. Administration | 13. Library |
| 10. Seminar room | 14. Entrance |
| 11. Facilities | 15. Bathroom |
| 12. Computer lab | 16. Mezzanine |



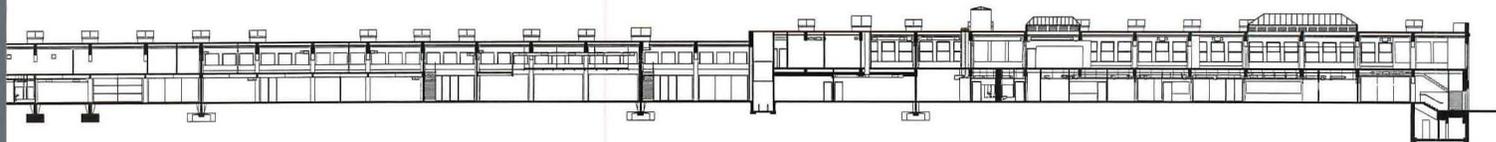
SECOND FLOOR



LONGITUDINAL SECTION



Library study carrels lined up along the raw concrete interior (top) are given extra privacy with squared-off partitions. Studio spaces are placed along the former freight bays to take advantage of natural lighting (bottom). Half-height partitions separate the studios from other areas.



Immense beams and columns were left exposed and unadorned, showing the structure's brute-force interior, now interceded by orthogonal volumes that define programmatic spaces.



cate the building's typology and restrictions to generate a supple interior that could help students realize their own potential, both a community and as individual tale. Paige consulted with students and other faculty members in a collaborative design process.

Ironically, this permissive school of architecture allowed its to come under restrictive preservationist rules, and Paige failed to perform a successful end-run around them and the tight budget. Pivoting doors that might have announced a principal entry proved too costly; freight bays were fitted entirely with plate glass because preservation standards required that the bays look either open or closed (as in the original use of the building). Paige somehow talked himself out of installing glazed, operable garage doors in those bays, which would not only have harvested west-facing views of downtown skyscrapers, but might also have enabled crosscurrents that originally ventilated the structure.

Inside, Paige inserted three steel mezzanines, structures with a structure, to add a necessary 35,000 square feet of space to the existing 61,000-square-foot building, and to stabilize the shell seismically. The architect left the shell unengaged to reveal its bones and framework, and each mezzanine is sited and shaped uniquely. He wanted to create a variety of spaces at different scales that pull and pull, close and release, pacing along the length of the runway. The parti and its execution are certainly reasonable, but no more original than many open-landscape interiors at vaguely hip agencies in corporate office parks in California and beyond.

Commentary

Today, as a practical matter, a first-time visitor to SCI-Arc can't find the main entrance; students bake in the afternoon heat because of the sun-punishing glare through the plate-glass windows filling the former freight bays; and the library is liter-

marginalized at the farthest end of the structure. Basic practical and grammatic concerns that should have been handled as a matter of course loom as unexpected issues that question the credibility of the design achievement.

Paige maintains that he was trying to build "a piece of infrastructure that can sustain change and evolution," applying a light rather than heavy touch to the building. The admitted modesty of these ambitions trumped the theories and ideals he professes to pursue, resulting in surprisingly corporate interiors that domesticate this raw and powerful building. Paige has created a well-tempered environment whose local regularity adds up to a global uniformity that reinforces the regimentation of the shell, rendering it all the weaker for lack of significant contrast.

Although Paige professes to champion porosity, the basic plan promotes rather than challenges fundamentally cellular organization. Orthogonal and extruded, the plan itself is plain and uneventful, a setback never retrieved by subsequent inventions in materiality program.

Paige won the battle but lost the war by seeking an agreement between parts with the whole. The interior is classical in the sense that all parts fit within a hierarchical order determined by the shell. Paige's politeness yields a competent but unexpected classicism that challenges neither the building nor the student. This overly controlled environment never truly comes alive. The architect capitulated to the restrictions of the commission rather than pushing his theories to their fullest potential. This is a lost opportunity.

SCI-Arc is above all a post-classical school, but Paige has created an environment that is conservative to the point of self-expression. Serviceable as a space, it does not serve the students as a didactic role model. The environment itself will do little to educate the next generation of young Turks. ■



The strong points of the library (far left) are its high ceiling and abundant natural light. Steel mezzanines (near left and below) increased the building's floor space by more than 50 percent.



Los Angeles Design Center

Los Angeles, California

2

JOHN FRIEDMAN ALICE KIMM ARCHITECTS BREATHE NEW LIFE INTO A WAREHOUSE COMPLEX FOR A THRIVING FURNITURE BUSINESS.

By Joseph Giovannini

Architect: John Friedman Alice Kimm Architects—John Friedman, AIA, principal in charge; Dan Brunn, project architect

Client: Cisco Brothers Corporation

Engineers: Mackintosh & Mackintosh Structural Engineers (building); Franceschi Engineering (wood siding, fence, gates); William K. Koh & Associates Structural Engineer (sign)

Consultants: Orange Street Studio (landscape); Fire Ltd. (lighting); Garza Group Communications (graphic design)

Contractor: Brunswick Builders (general contractor)

Size: 80,000 square feet

Cost: \$1.2 million

Sources

Metal/glass curtain wall: Polygal

Cement-board siding: Maxi Plank

Entrance canopy: Copperworks

Fabric canopy: Shade Sails

Concrete floors and sign: Creative Masonry

Skylights: Bristolite

Paints and stains: Benjamin Moore

Plumbing fixtures: Kohler

Stainless-steel doors and hardware: The Welding Junction

Acrylic door panels: Acrylic Specialties

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

In the spirit of moving beyond collective trauma and civic stigma, South Central Los Angeles—the scene of the Rodney King beating and subsequent riots—has been renamed South Los Angeles and designated an economic empowerment zone. But the few projects that have been erected over the past decade in this manifestly unbeautiful part of Los Angeles are generally festooned with Spanoid facades, the city's overused, all-purpose stage set. Without substance, these veneers of style are the architectural equivalent of the cheap fast food often sold just behind the stucco: Let them eat cliché.

A couple of blocks south of Western and Slauson Streets, however, an ensemble of reinvented 1920s-era warehouses, each as unexpected as an apparition, breaks the rampant urban anomaly. Welcome to the Los Angeles Design Center, a new furniture showroom designed by John Friedman Alice Kimm Architects.

Program

Francisco Pinedo, owner of furniture manufacturer Cisco Brothers, founded his company in a garage 15 years ago. His enterprise has since blossomed into a \$15-million-a-year business. The company occupied a number of warehouses in an area of South Los Angeles that has become the heart of the city's nascent furniture industry. Pinedo needed a



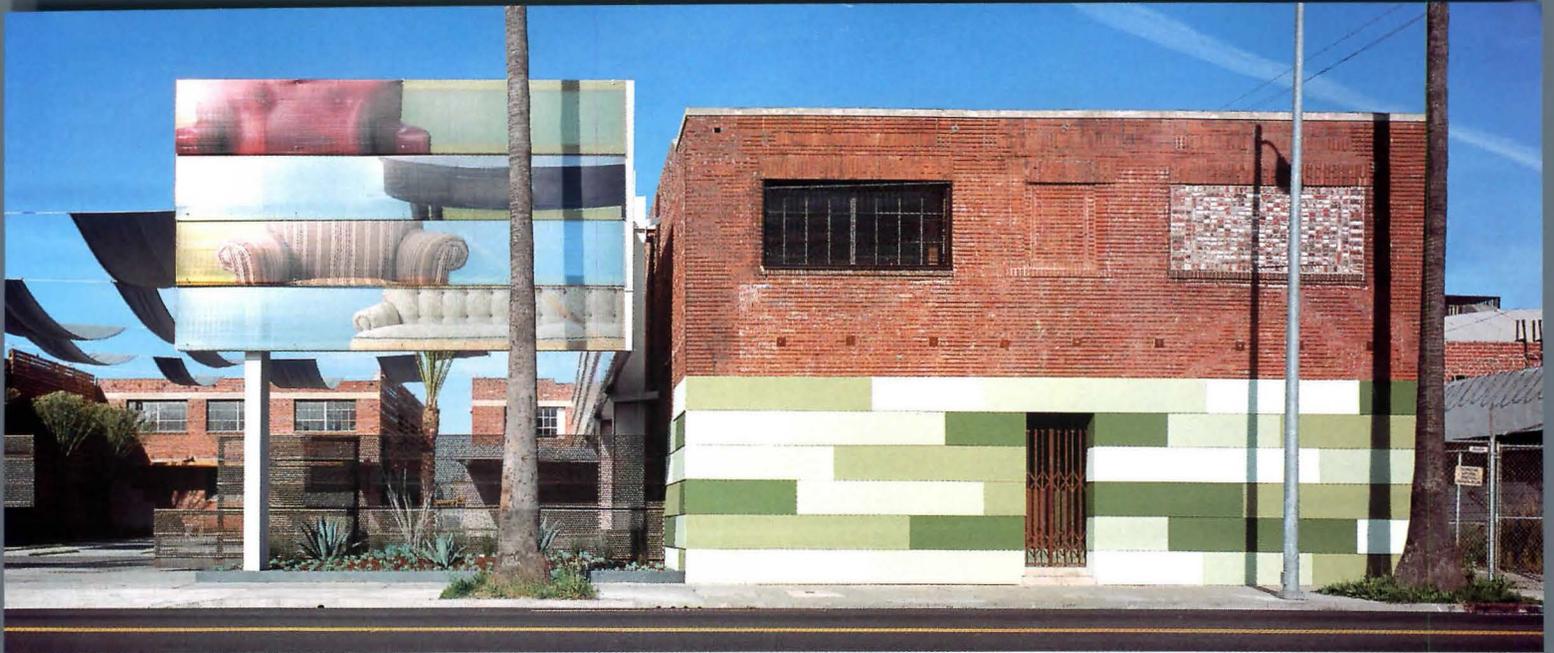
showroom, and he thought other manufacturers could benefit from a local presence outside the Westside's high-rent design district. He asked the architects to design the core of what might grow into a much larger development (one warehouse is completed; the other is still under renovation).

If the project's budget was frugal, its design potential ran high. The

firm had the benefit of working with a found object with high ceilings, good light, and substantive materials—brick walls, wood floors, and steel beams. The architects' strategy was to utilize these givens, transforming a workaday structure through a process of layering.

Solution

The building itself offered clues



Colored polycarbonate panels and signage (opposite and above) announce the design center with a lively street presence. Tarps suspended over the parking lot (below) define this space as a public plaza and a gateway to what will one day be a larger development.



about how to proceed. The steel columns, retrofitted on the outside, suggested a scaffolding for what became a new facade of translucent polycarbonate panels, applied like shingles along the length of the facade that faces the parking lot. The architects turned the facade at the front so that it ran parallel to the street, giving the parking lot more closure and the front facade more presence. With this billboard structure, the architects absorbed the notion of visual street language in their design.

A variegated appliqué of horizontal, greenish concrete panels,

scaled to be glimpsed obliquely from cars sailing past, signals a refined design sensibility that offers not just cautious reinvestment in the neighborhood, but also authenticity, even joy. The panels wrap portions of the two, two-story brick warehouses and share facade space with what appears to be a billboard partially spanning the parking lot between two primary structures. Suspended tarps sail above the parking lot like magic carpets, just beyond a fence of punched steel.

Inside, Freidman, the principal in charge, sited a few strategic interventions. Removing a section of t

A new staircase (above) rises from an inserted first-floor landing used for furniture displays. Brick walls and wood ceilings (below) were sandblasted for a cleaned-up finish.



floor, he placed a hardwood
 ing, large enough for furniture
 lays, from which a staircase with
 sparent siding leads to the sec-
 floor. He terraced a section of
 second floor (raised to accom-
 late a loading dock below) to
 e advantage of the level change.
 north side of the terrace was
 ed off with another layer of shin-
 polycarbonate panels. All the
 ves were large, to the point of
 ng environmental.

The most transformative
 ght was turning the parking lot
 a public space. At the Design
 ter, the lot comprises a watering
 e, piazza, and party space with a
 ple of deft, inexpensive moves.
 polycarbonate facades add
 nness and shimmer to the space;
 overhead tarps contain it by
 nning its height; and concrete
 king pads in different shades of
 y, separated by planted strips
 t follow construction lines drawn
 n the surrounding structures,
 ate a lively patchwork quilt
 erfoot. Eventually, the parking lot
 serve as a point of origin for a
 n leading to other buildings in
 expanded project.

The modest budget was spent
 gesture rather than detail.
 rking with subcontractors in
 at was effectively a design-build
 ccess, the firm saved unique
 ements in their design from the
 vy hand of value engineering.

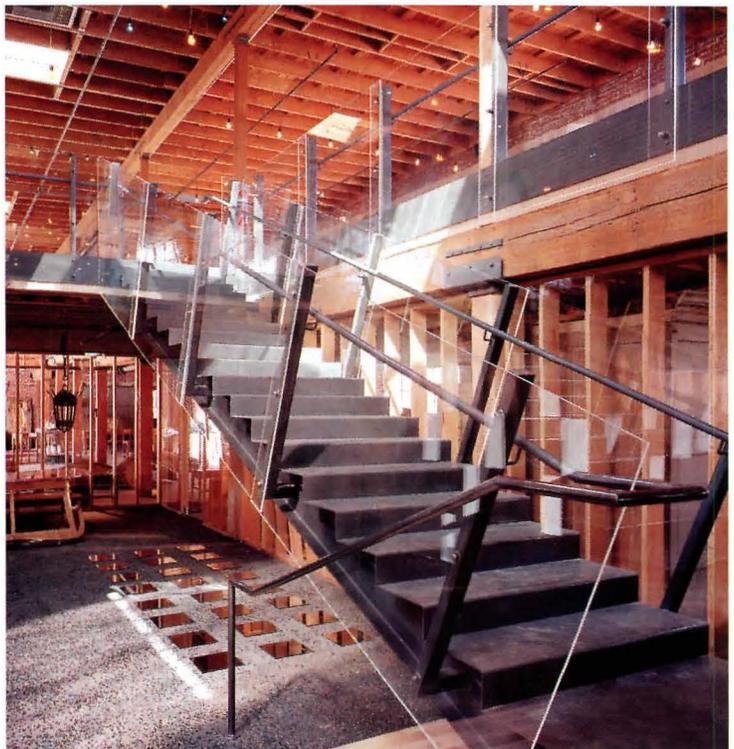
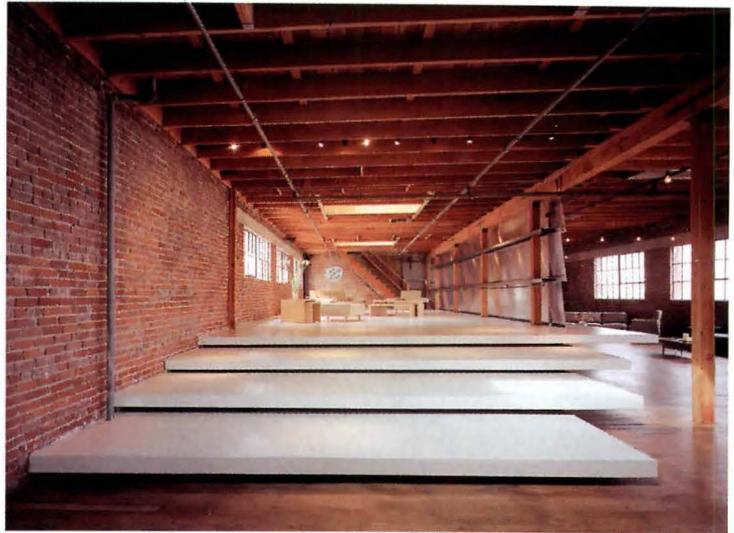
mmmentary

rdman and Kimm did not pander
 designing down to the neighbor-
 od with historical pablum.
 ead, they radicalized the space
 l achieved intensity simply by
 ering complementary materials
 an unexpected spatial collage.
 e revealing the original, cleaned-
 structure and building on its
 engths, the architects have
 italized and refreshed familiar
 numents of the local landscape
 t, after the renovation, remain
 sted. This is an act of psychic
 vestment in the community,
 rmation rather than gentrifica-
 n. The buildings remain old
 ghbors fall on good times. ■



- 1. *Parking lot/
event space*
- 2. *Entrance*
- 3. *Showroom*
- 4. *Office*
- 5. *Future showroom*
- 6. *Overflow parking*

The showrooms are brightened by natural light; polished floors and sleek materials contrast with brick and wood (top and middle). The multilevel display areas in the showroom are divided just enough to encourage visitors to explore (bottom).



Scuderie Aldobrandini

Rome, Italy

3

MASSIMILIANO FUKSAS REVEALS THE LAYERS OF HISTORY IN A NEW MUSEUM AND EXHIBITION SPACE IN THE HILLS SOUTH OF ROME.

By Paul Bennett

Architect: *Massimiliano Fuksas*
Architect—Doriana Mandrelli,
partner in charge; Lorenzo

Accapezzato, project architect

Client: *Municipality of Frascati,*
Rome

Engineers: *Andrea Imbrenda*
(structural); Paolo Bruschi
(electrical)

Consultants: *Paolo Bruschi*
(acoustical)

Contractor: *Consorzio Ravennate*
delle Cooperative di Produzione
Lavoro

Size: *18,500 square feet*

Cost: *\$2.35 million*

Sources

Glass curtain wall: *Saint Gobain*

Concrete: *Consorzio Ravennate delle*
Cooperative di Produzione Lavoro

Floor and wall tile: *Doussier*
Industrial

Office furniture: *Chitarpì*

Reception furniture, fixed seating,
chairs: *Techno*

Interior lighting: *Ilti; Castaldi;*
Targetti

Exterior lighting: *Targetti*

With its facade faded to a patina and large patches of stucco missing to expose raw brick and concrete underneath, the reborn Scuderie Aldobrandini in Frascati, Italy, makes a varied statement about history and architecture. Transformed by Massimiliano Fuksas into a museum, gallery, and conference center, the Scuderie was once the horse stable of the Villa Aldobrandini, a masterpiece of the late Renaissance by Giacomo della Porta. The stable has traveled on a sine curve of ruination and reinvention: The Germans used it as a regional headquarters during World War II; wine makers made it a fermenting house in the 1950s; and when Fuksas arrived in 1999, the structure was being used as a makeshift parking garage.

Program

The client wanted space for exhibitions, lectures, and conferences, as well as for displaying its collection of archaeological artifacts. At any given time, the building might play host to a lecture on astrophysics, an exhibition on Bernardo Bertolucci, and a display of pottery shards from the 2nd century B.C. The architect was faced with a building shell requiring extensive reinforcing, as well as the challenge of integrating these diverse programs into a single structure.

Paul Bennett, a writer based in Rome, is a former editor of Landscape Architecture magazine.



The building's shell more than 400 years old (left); the new service structure of views of Frascati (below). Pottery shards, marble fragments, and other artifacts are arranged on stands and illuminated by delicate halogen lights dangled from the roof to create an airy network of wires (opposite).

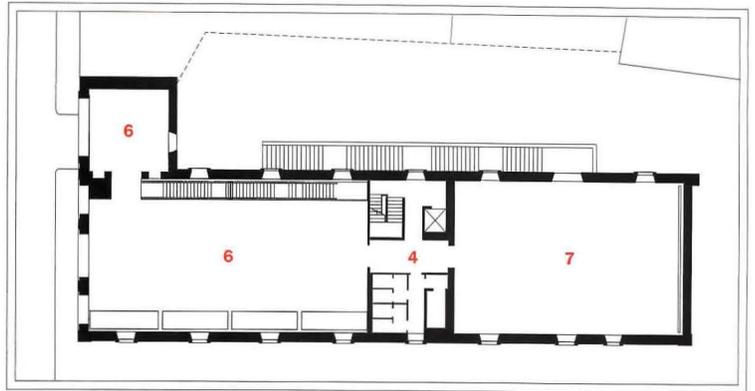
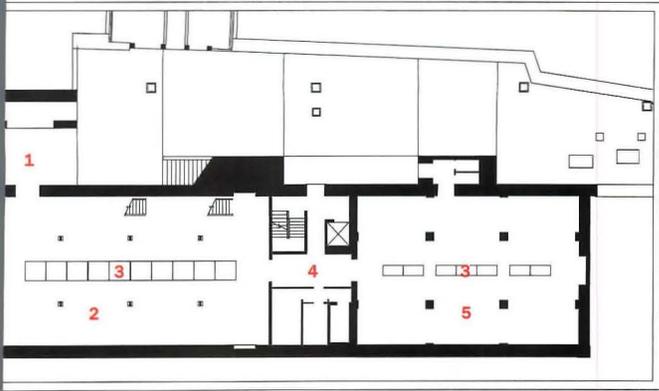


Solution

Fuksas gutted the interior to expose the building's raw structure—brick, stone, and plaster walls that date to the 1600s. The plaster was stabilized and a new steel truss apparatus added to tie the walls together and

support a restored wooden roof. The architect then created two voids in the interior by inserting a three-story structure in the middle for service spaces. Each void was divided into two floors, for a total of four rooms three for exhibitions, one for

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

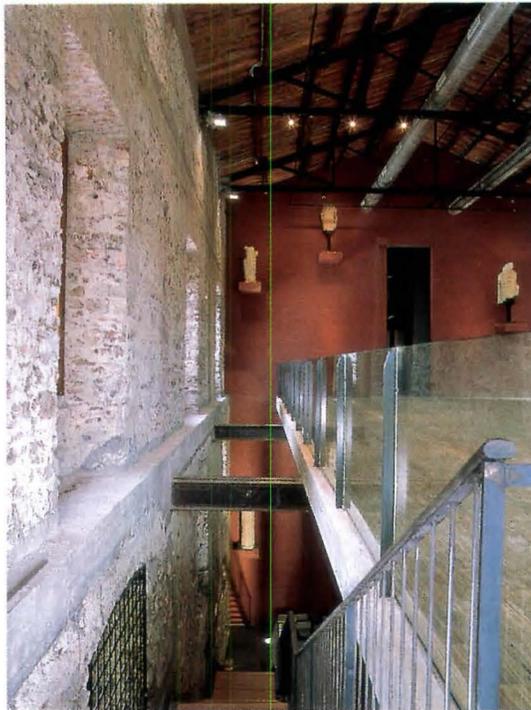


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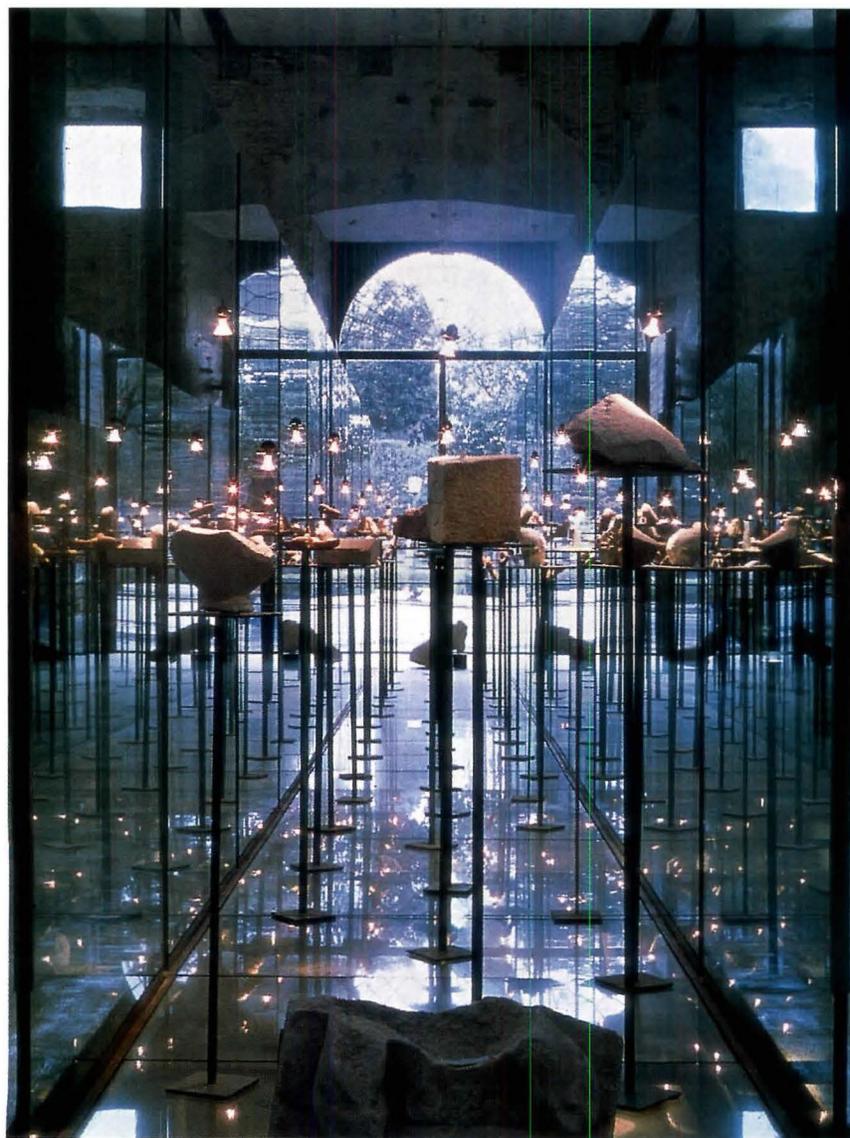
SECOND FLOOR

- | | |
|-----------------------------------|----------------------|
| 1. Entrance | 4. Service structure |
| 2. Main gallery | 5. Gallery |
| 3. Glass-enclosed exhibition case | 6. Exhibition hall |
| | 7. Auditorium |





Exhibition spaces accommodate many types of artifacts (above left). A crisp glass rail acts as a boundary between the restored shell and the new second floor (above right). For the enclosed display (right), the architect used double-paned glass with a greenish tint to give the space depth and to create a sense of kinetics within the ancient walls.



conferences. Museum director Giovanna Cappelli sits in a glass-enclosed steel office at the top of the central service space and enjoys views down through the glittering interior.

Splitting both first-floor exhibition rooms is a glass-enclosed circulation trough that acts as a spine and contains individually mounted artifacts from Tuscolo, an ancient settlement nearby. Beneath the stands, artifacts are displayed in a glass-capped trench dug into the building's floor. Unfortunately, the trench is not climate-controlled, resulting in an unintended (yet nonetheless interesting) murky subterranean cavern.

Adding a second story both increases the floor space and creates a dialogue between old and new. The new floor of glass and steel rests on a raw, rusting armature of structural steel. It seems to float aloft, separated from the old walls by a gap of several feet, which symbolizes an important design concept. "We wanted to be clear about what was new and what was old," says Lorenzo Accapezzato, an architect in Fuksas's office who oversaw the design. "We also wanted to create a new structure inside of the old, so if the client decides to renovate the interior, the museum could be taken out and the shell of the restored building would remain." Details like the Pompeii-red painted walls provide a skein of continuity for the disparate programs within the building.

Commentary

Much of the design is concerned with creating a unified sense of space, easing circulation, and making visitors aware that this building is unique among old buildings in Frascati. The design accomplishes these goals with an air of restraint. "The museum was a fortunate meeting between contemporary architecture and our history," says Fuksas. Adds Accapezzato, "You can see where, in the 18th century, they added more [material] to the walls and inserted a third floor. We wanted to open this up so the visitor can see the stratification of time."

A steel and wood staircase ascends along an old wall to the new second floor, which has exhibition space and a conference room for up to 200 people.



Sedgwick Rd. Seattle, Washington

4

OLSON SUNDBERG KUNDIG ALLEN ARCHITECTS GIVES A LIFT TO AN AD AGENCY WITH AN OFFICE THAT FOSTERS CREATIVITY AND OPENNESS.

By Sheri Olson, AIA

Architect: Olson Sundberg Kundig Allen Architects—Tom Kundig, AIA, principal in charge; Janice Webb, project manager; Alan Maskin, Kristen Becker, Kirsten Murray, Stephen Wood, design team

Client: Sedgwick Rd.; Manning Family (building owner)

Engineers: Holaday Parks (mechanical); Haaland & Associates (electrical)

Consultants: The Seneca Group (owner's representative and project manager); Mike Stanley

Contractors: Schuchart

Size: 33,015 square feet

Cost: \$2 million (construction)

Sources

Steel stairs and rail: Standard Steel Fabricating (drawings); Big Doors (fabricators); CHG Buildings Systems (installation)

Glazing: Emerald Glass

Window coverings: Iris Window Coverings

Doors: All New Glass (steel pivot doors); Tangent Associates (wood doors)

Workstations: Schuchart

Fabric walls: Koryn Rolstad Studios

Cabinetwork and custom wood-

work: Master Millwork

Steel floor: Schuchart

Workstations: Schuchart

For more information on this project, go to Projects at

www.architecturalrecord.com.

Video monitors and computer screens have replaced the steam engines that once rolled off the assembly line in this former machine shop. But it's still a factory, retooled to produce ideas. In 2001, the Seattle subsidiary of New York-based ad agency McCann-Erickson moved and recast itself as Sedgwick Rd., the name of a Port Orchard, Washington, street leading to a ferry dock. "It's the idea that Sedgwick Rd. can take you anywhere," says agency president Jim Walker. Recently, the company turned to Olson Sundberg Kundig Allen Architects of Seattle to dismantle the creative roadblocks thrown up by the traditional design of the company's previous post.

Program

Sedgwick Rd.'s old quarters in a downtown Seattle office tower mimicked the buttoned-down layout of McCann-Erickson's Madison Avenue offices, with executives seated along windows and staff located in the center. "We wanted our new office to reflect the collaborative way our West Coast clients work," says Walker.

According to a company poll, departmentalization and its toll on communication were primary concerns for the staff. Walker wanted to

Sheri Olson, AIA, is RECORD's Seattle-based contributing editor and architecture columnist for the Seattle Post-Intelligencer.



to break down barriers among the agency's creative, media, strategic planning, and branding teams. "Our job was to find ways of mixing up these groups," says Tom Kundig, AIA, the principal in charge.

Walker wanted to create a more open culture by eliminating private meetings. "I wanted the new offices to be comfortable for one person, big enough for two people to stand in and compare notes, but impossible for three to work in," says Walker. He also desired informal areas where people could assemble for ad hoc meetings. "Most of all, they wanted to create a buzz," says Kundig.

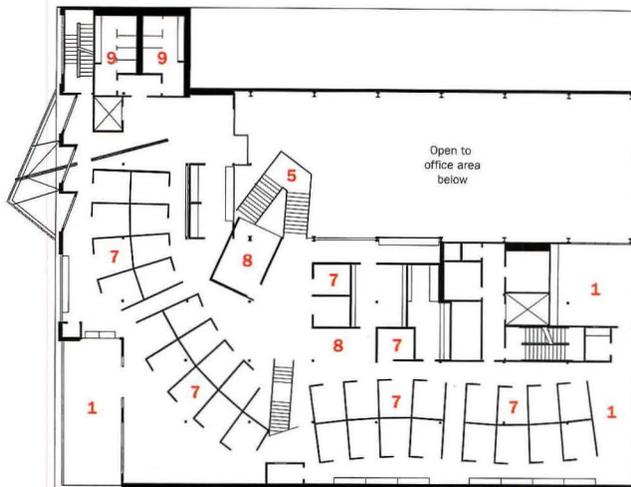
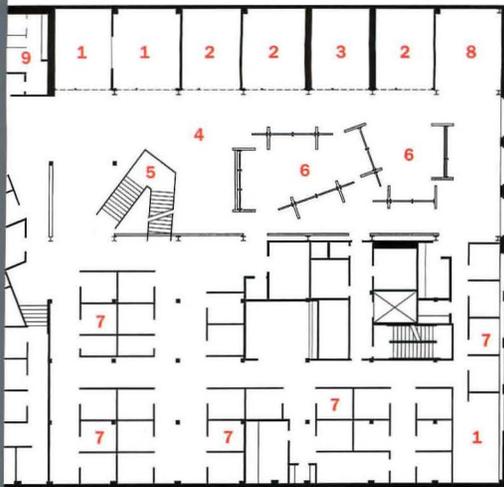
Solution

The new office is on the edge of downtown, in a 1926 brick building unremarkable except for a two-and-a-half-story machine shop with multipaned clerestory windows and

a delicate scissor truss of welded steel angles. "I was looking for a space where everyone could gather for client presentations, officework functions, and fund-raising benefits," says Walker.

The building was already undergoing renovation by the owner to add a fourth floor, and the machine shop floor was piled high with discarded beam cranes, steel-clad doors, and old window frames. The architect immediately saw treasure in the trash. "The first thing we said during the interview was, 'Stop demolishing or you're going to lose the soul of the place,'" recalls Kundig. The comment struck a chord with Walker. "The building has a history, just as the firm does. You don't throw out history even while you're envisioning change," he says.

The architects measured and catalogued what had once been



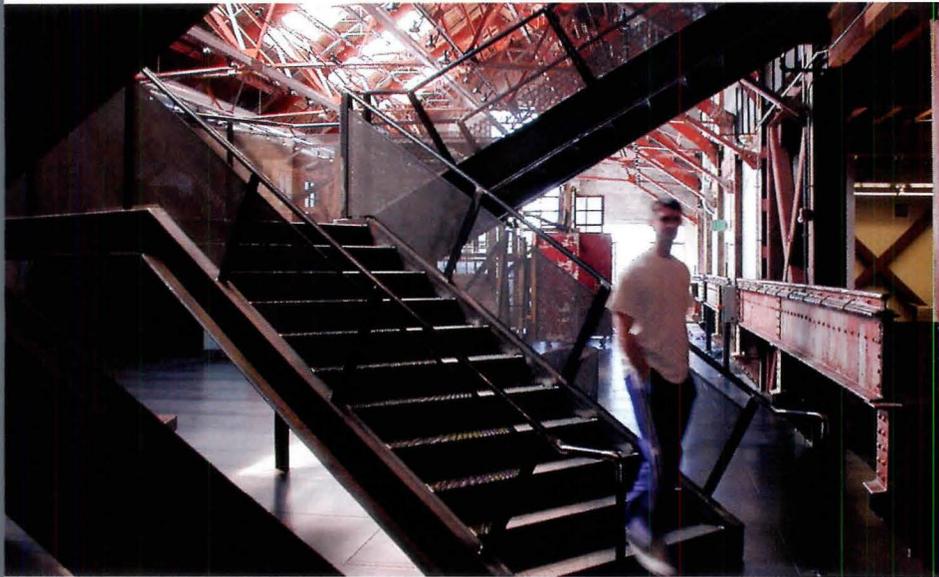
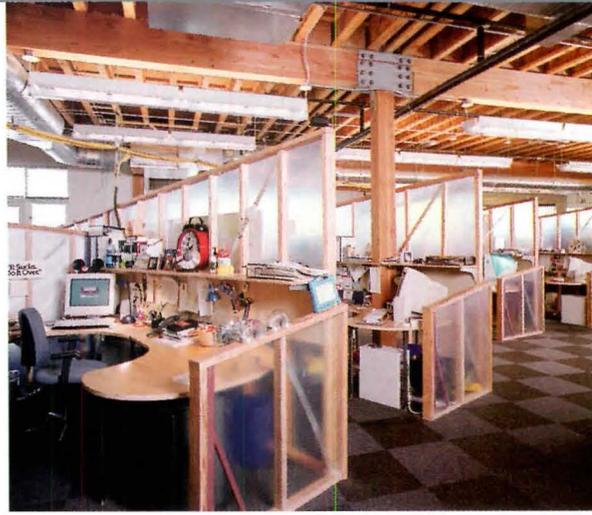
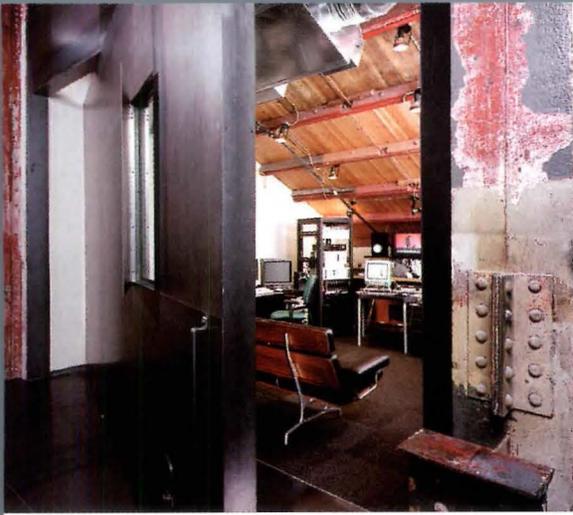
1. Meeting room
2. Editing room
3. Library
4. Open office space
5. New staircase
6. Mobile partitions ("Frankenstein")
7. Office
8. Informal meeting area
9. Rest room

THIRD FLOOR

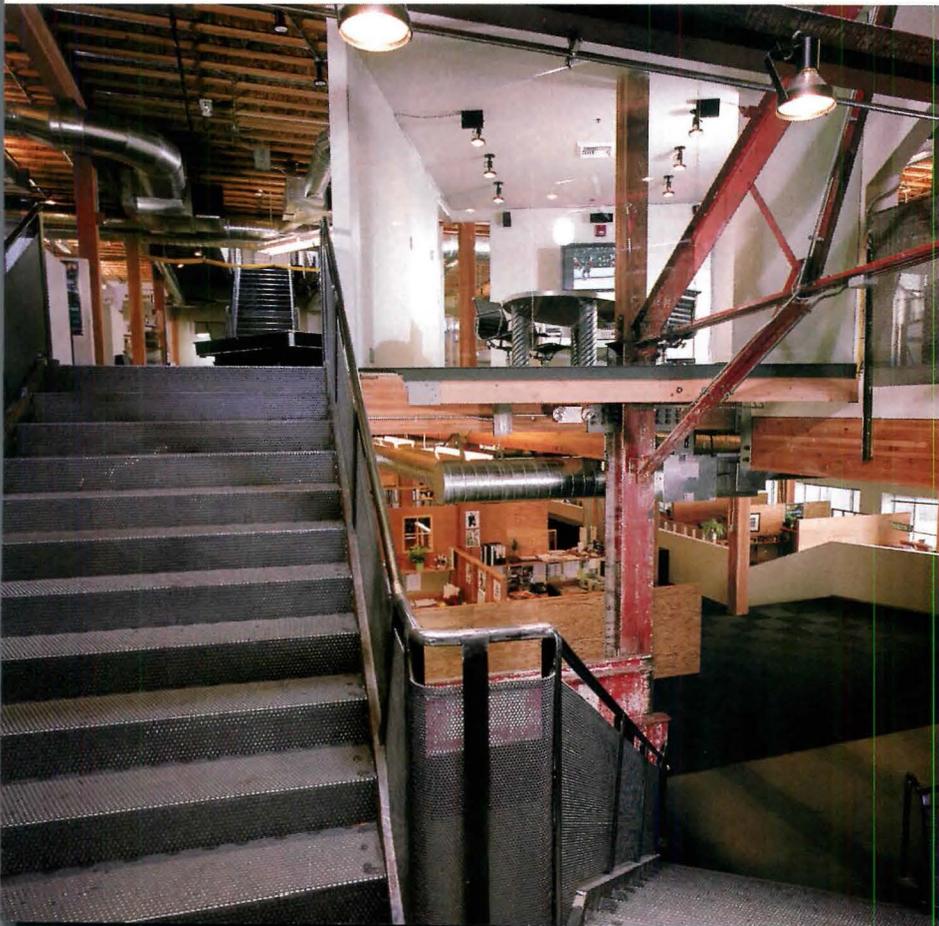
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old machine shop (on the same site) is a bolder choice for an ad firm in its previous corporate space. salvaged materials are assembled into "Frankenstein" (this name), a partition used by project teams to divide the office spaces according to their needs.



An editing room tucked under the low ceiling (above left) has an oversize door that can be left open to the larger office space beyond. Desk partitions were designed using translucent panels to permit natural light to filter through (above right). A sharply angled staircase (left and below) affords users a close-up view of old trusses and columns. The staircase is a popular gathering spot.



debris. "We had all these odds and ends, like body parts, and no idea how we were going to use them. That's how we came up with the idea for Frankenstein," says Kundig. "Frankenstein" is a pet name for a series of mobile panels—mounted on wheels and built using recycled windowing doors, wood windows, and steel beams—that are reconfigured almost daily to create different meeting spaces in the old machine shop.

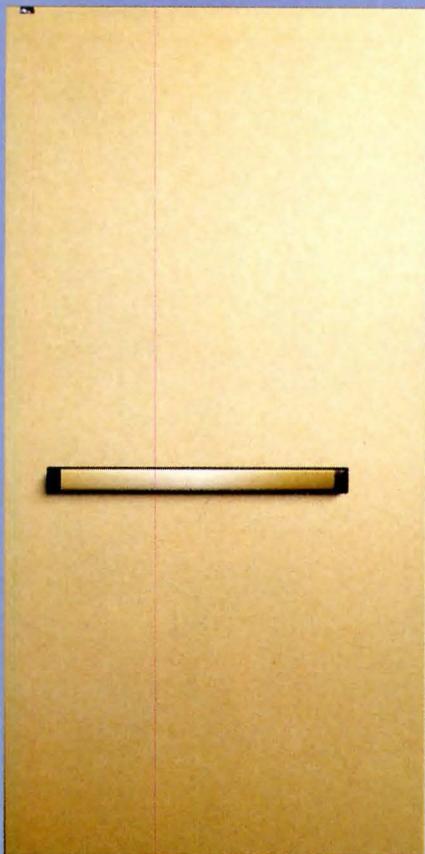
Former tool rooms on the shop's south side now house editing rooms, meeting areas, libraries, and a bar for officewide events. Deceptively heavy-looking steel doors pivot open at a mere touch, opening these smaller rooms to the central area. "The doors are made of sheet steel bolted onto an aluminum frame. It's an inexpensive way to make big doors," explains Kundig.

In the office space overlooking the machine shop, boundaries are not firmly drawn between departments. Instead, desks are clustered or stretched along a sinuous line, freeing up valuable daylight spaces for informal gatherings.

An oversize stair cranks around columns and between trusses connecting the first and second floor. "It's extra wide so that people stop and talk," says Walker. One of his favorite places to answer e-mail is along the balcony overlooking the open office area, on a perforated metal railing.

Commentary

It looks like fun, but is it productive? "Our work has gotten better due to the design; we're all on the same page now," says Walker. The company's performance appears to support his claim—Sedgwick Rd. has grown 30 percent in staff since moving in 2001. Walker also sees the value of a space for an ad agency that is far from neutral. "Sometimes it's hard to sell an idea in a corporate conference room. It can look riskier than it is. Here, the hum of life going on around you provides a more realistic context," he says. Mined for its valuable ideas, the factory is back in business. ■



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Tapping the Synergies of Green Building and Historic Preservation

PROponents of these two highly dedicated and concerned movements are finding ways to work together to advance their many shared values

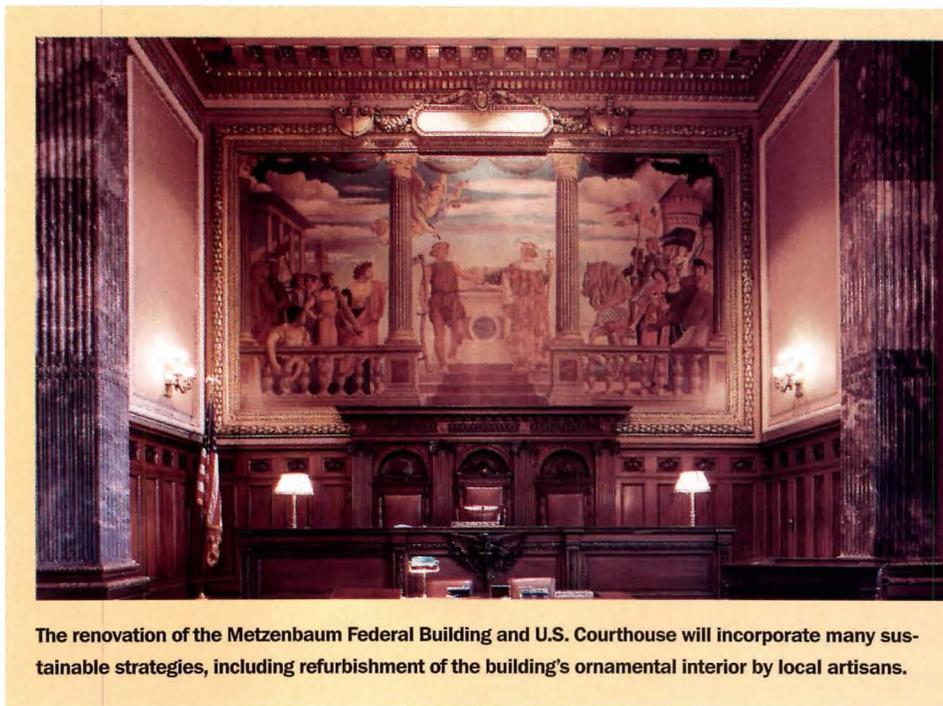
Nancy B. Solomon, AIA

For decades, there has been an underlying tension between historic preservation and environmental design: the former seeking to protect our history and culture, typically by applying traditional methods of construction and conservation to familiar buildings from the past; the latter trying to protect human health and natural habitat and promote alternative sources of energy, often through the application of innovative technologies and construction methods in novel forms. Although the two movements came of age in the mid-20th century, emerging largely in response to the post-World War II era of unbridled development, they eyed each other with suspicion. Like siblings born a few years apart—perhaps feeling threatened by the other's position in the architectural family—it's taken until middle age for them to realize that the ties that bind them are much greater than their differences.

"I'm delighted to see these two camps working together in the past 10 years," says Carl Elefante, AIA, a self-described "solar hippie" from the 1970s working for Quinn Evans Architects in Washington, D.C., a firm devoted to historic preservation. He attributes much of this cooperation to increased dialogue. "There are many synergies between historic preservation and environmental design," says Elefante, "and few problems with resolving conflicts—no big issues, just red herrings."

Indicative of this growing partnership, the U.S. General Services

Nancy B. Solomon, AIA, writes about architectural design, practice, and technology.



The renovation of the Metzenbaum Federal Building and U.S. Courthouse will incorporate many sustainable strategies, including refurbishment of the building's ornamental interior by local artisans.

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 162 and follow the instructions.

LEARNING OBJECTIVES

After reading this article, you should be able to:

1. Explain how historic preservation projects can meet sustainable design guidelines.
2. Discuss ways of retrofitting old buildings with new environmental systems.
3. Describe LEED certification requirements.

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

Administration (GSA), which oversees many of the nation's historic landmarks, now requires LEED certification for all new capital projects, including major renovations. LEED, the acronym for Leadership in Energy and Environmental Design, is a consensus-based rating system developed by the U.S. Green Building Council to evaluate sustainable design measures in buildings. Several historic buildings currently being rehabilitated by GSA, including the Howard M. Metzenbaum Federal Building and United States Courthouse in Cleveland, are working toward a LEED rating. "We don't see a conflict between preservation and sustainable design," says Donald R. Horn, AIA, an architect with GSA's Sustainable Design Program.

In retrospect, this doesn't come as a surprise: After all, conservation underlies the basic principles of both the preservation and the sustainable movement. Many of the typical design strategies of one reinforce the goals of the other. In some cases, new green technologies are helping to resolve the complex demands now placed on our historic structures. And the two movements share some similar challenges. Nonetheless, a few areas of conflict do exist, which for the most part can only be resolved case by case, depending on the specific conditions and the priorities of the client. Some current policies may be unnecessarily exacerbating tensions between the two.

Natural partners

The preservation of existing structures typically has several inherent sus-



The Metzenbaum Building's shallow floor plates wrap around a courtyard, which affords light and air into the interior offices. The space is being converted into a skylit, public atrium.

tainable benefits. First and foremost is the reuse of an existing shell and any interior components. These exterior and interior materials embody energy—the energy that was required to harvest, transport, and process the raw materials and to transport and install the building elements. By saving these already manufactured parts, preservationists also save energy. “In terms of a material, the greenest thing you can do is continue its life. Next comes salvage and reuse, then recycling. Specifying new green materials is last,” says Elefante.

Reuse was one of the priorities in the renovation of the S.T. Dana Building at the University of Michigan in Ann Arbor. Built in 1903, the masonry structure was recently renovated by Quinn Evans in collaboration with William McDonough + Partners, in Charlottesville, Virginia. Elefante calculated that, in terms of embodied energy, the building's bricks alone represent about 135 gasoline tanker trucks of energy. The team also salvaged material from one part of the building for another: Old-growth pine timbers that were removed from a portion of the roof were refashioned into railings and other interior details.

By saving these already manufactured components, preservationists also avoid adding to the waste stream. According to John Ochsendorf, assistant professor of building technology at MIT's Department of Architecture, it has been estimated that 140 million tons of construction waste goes to U.S. landfills each year. “If we build build-

ings well and save the ones we have, we cut back waste,” says Ochsendorf.

Waste reduction is a significant component of the Metzenbaum renovation program. In addition to reusing the shell and a significant portion of the interior materials, the Cleveland architecture firm of vDijk Westlake Reed Leskosky (vDWRL) is participating in a pilot program developed by the Cleveland Green Building Coalition and the Cuyahoga County Solid Waste Management District to determine the feasibility of reducing and recycling construction waste.

Nonhazardous waste is separated, quantified, and tracked. According to vDWRL architect and LEED specialist Monica Green, “Most material is being purchased by businesses for reuse. Hardly any is going to landfill.” All waste is being tracked and quantified, and the net profit (sale of waste minus expense of separation) will be compared to local tipping charges to determine if the program is financially viable.

Restoration of an older building on an already disturbed site means less pressure for construction on green sites. And because historic buildings were typically built in downtown settings, they are usually on a transit line and in close proximity to other establishments, thereby maximizing the use of mass transit and minimizing both transportation-related energy consumption and parking space requirements.

Historic renovations often try to specify regional materials and employ local craftspeople: This former reduces the amount of energy consumed in the transportation of goods, and the latter promotes a sustainable local economy. In addition, in the days before synthetics, air-conditioning, and seemingly abundant and inexpensive energy sources, old construction techniques maximized natural materials, natural ventilation, and daylighting—priorities that have been revived with sustainable design. For example, co-

flooring, popular in the 1930s, has recently made a comeback in green buildings. Shallow floor plates wrapped around a central courtyard, double-loaded corridors, and numerous operable windows were common in older buildings, such as Metzenbaum. This kind of *parti reduit* reduces the need for artificial light and offers occupants more control over the space, thereby helping to conserve energy and improve the quality of the indoor environment.

Green technologies to the rescue

“One of the knocks about historic buildings,” explains Elefante, “is that they have crummy old radiators and boilers that can only be retrofitted with great difficulty.” There is some truth to this, but advances in environmental systems and strategies are offering new solutions to this preservation challenge.

One of the most striking examples of this can be found at Trinity Church in Boston. Designed by Henry Hobson Richardson in 1877, the landmark was recently renovated by Goody, Clancy Associates of Boston. The work included a new undercroft, or mezzanine space, beneath the sanctuary. The architect wrestled with where to put a conventional mechanical system to condition this area. Steep roofs and high visibility made a roof-mounted cooling tower impossible. An alternative mechanical system inserted—only with much effort—into the unus-



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tower-attic spaces would pose a risk to the priceless art below in terms of both vibrations and water damage.

Instead, the design team opted for a geothermal system. About 8 feet from the exterior walls, six holes were drilled 1,500 feet deep and filled with 4-inch-diameter hollow plastic tubes. Water in these tubes will hover between 50 and 55 degrees—the constant temperature of the earth at this depth—providing a moderate source for heating during the winter and cooling during the summer (see diagram, right). According to principal Jean Carroon, AIA, the first costs of the geothermal system was comparable to that of a conventional system in this sensitive renovation project, but over time it will provide an operational payback in terms of lower energy costs.

Preservationists are benefiting from new thinking about indoor environment. For example, Elefante explains that current research suggests that fresh air needs to be delivered to people to breathe, but not necessarily to heat and cool them. Small amounts of air can be distributed via operable windows or underfloor ducts—providing oxygen to the occupant where needed—while room temperature can be modulated more efficiently with other systems. In addition, continues Elefante, studies indicate that radiant systems are much more effective than convective ones in terms of how the human body reacts to temperature change. “Why blow all this air around when I can more effectively change the temperature with water, which is also more efficient to move and takes up less space?” he asks.

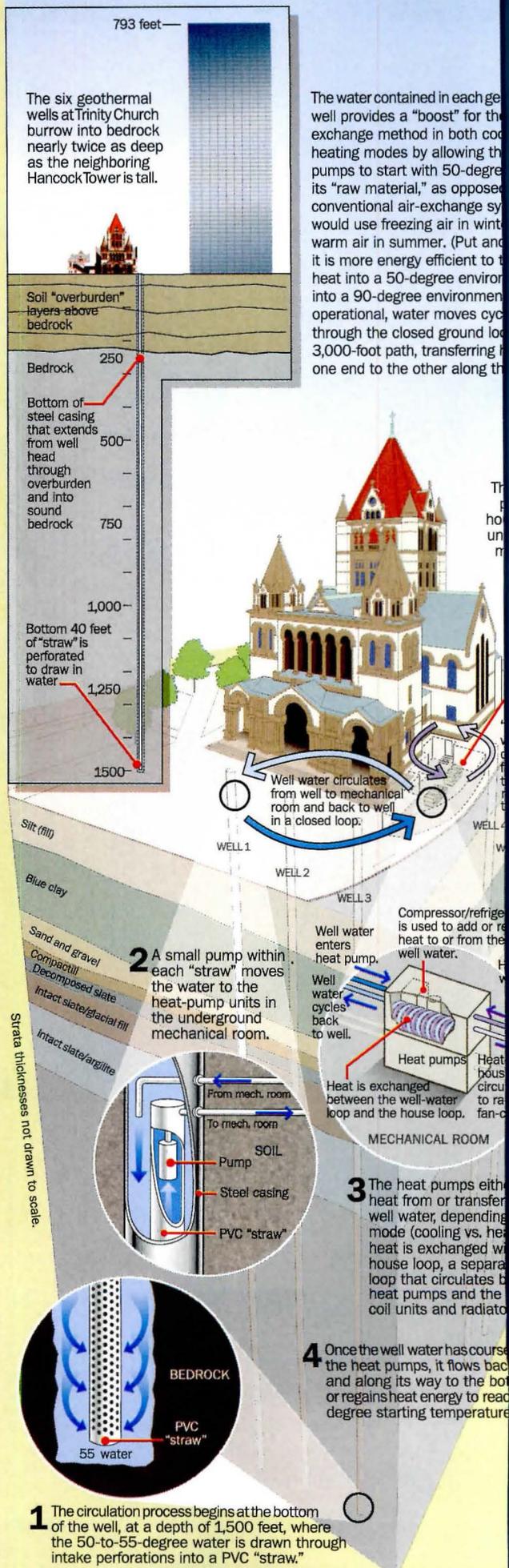
In Dana, the existing operable windows were reconditioned to deliver fresh air, portions of the old steam-heating system were retained, and radiant panels were suspended from the ceiling for cooling. Cold water running through 1¼-inch piping in these panels draws heat out of the rooms on hot days. Integrated with lighting, the thin-profile units eliminate the need for ductwork and suspended ceilings—the bane of historic buildings, which typically feature high and often decorative ceilings.

Goody, Clancy is looking into other innovative environmental technologies, as well, including photovoltaic panels, green roofs, steam backpressure turbines, condensate-heat-recovery and water-recovery systems, titanium-dioxide window coatings, and fuel cells—for possible application in GSA’s upcoming renovation of the John W. McCormack Federal Building, a 22-story Art Deco building in Boston originally designed by Cram and Ferguson in the 1930s.

The design team—which also includes Cosentini Associates for mechanical engineering and Steven Winters Associates as green-building consultant—hopes these and other green technologies will make this relatively unassuming building less expensive to operate and a great place to work, while maintaining its historic character. In this way, they hope to encourage owners of similar buildings to do the same, thereby helping to sustain the larger urban context. “Unless highly decorative,” explains Carroon, “older buildings are not very fashionable and are therefore most at risk for removal.”

Common concerns

Ochsendorf points out that both preservation and sustainable design share some similar challenges, as well. In regard to materials, for example, all standards address new materials. To reuse a building component, such as a salvaged beam or old flooring, an engineer must undertake a custom calculation. This is an added burden for historic renovations and sustainable design alike. Even worse, existing structures are sometimes torn down simply because standards don’t exist and the average engineer doesn’t know how to calculate the bearing capacity for the older structure. According to Ochsendorf, this was the fate of some Guastavano tile vaultings, despite the fact that they had plenty of extra capacity. “This is a catastrophe from the

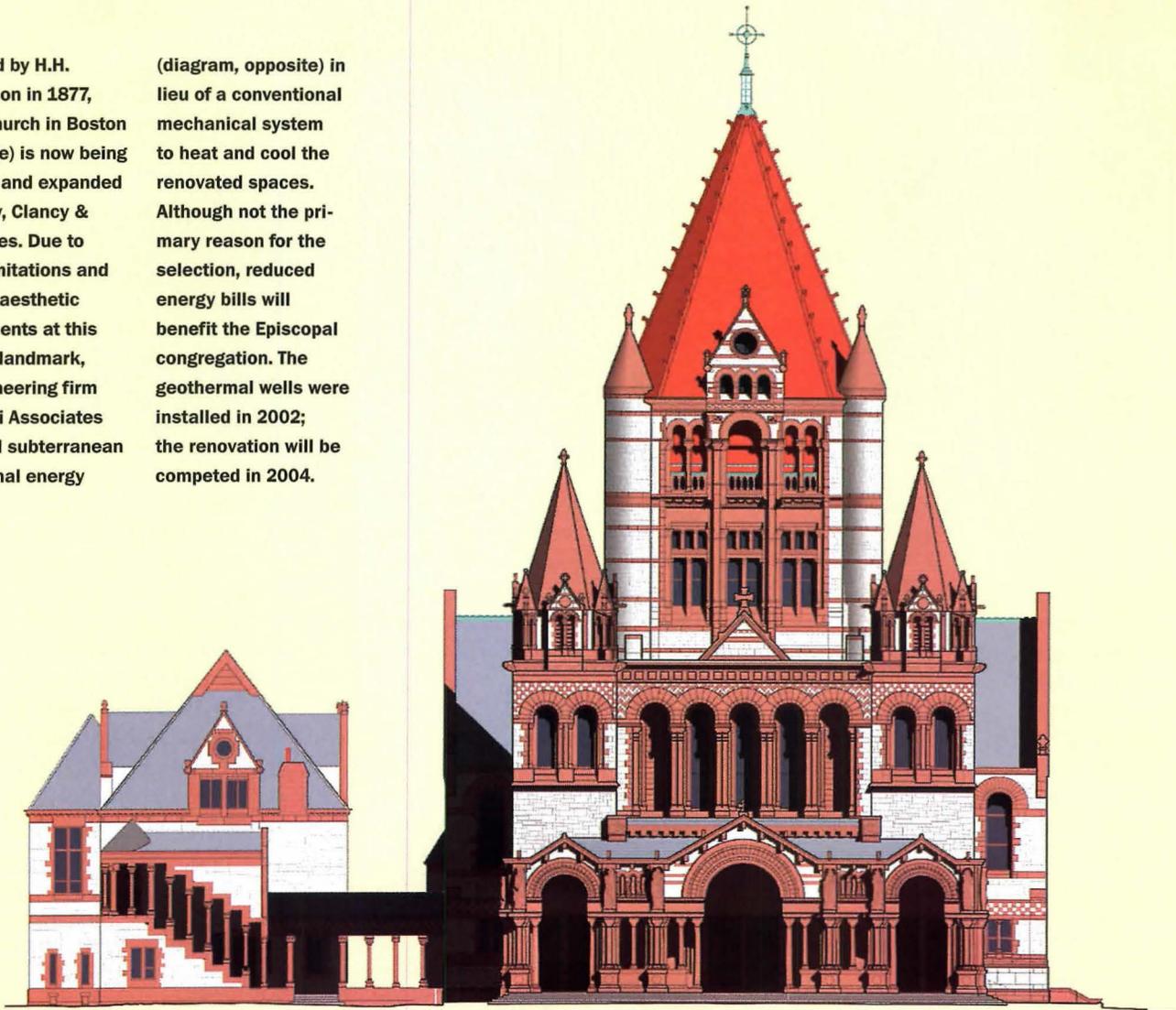


The water contained in each geothermal well provides a “boost” for the exchange method in both cooling and heating modes by allowing the pumps to start with 50-degree water as its “raw material,” as opposed to conventional air-exchange systems that would use freezing air in winter and warm air in summer. (Put another way, it is more energy efficient to take heat into a 50-degree environment than to heat into a 90-degree environment.) Operational, water moves cyclically through the closed ground loop along its 3,000-foot path, transferring heat from one end to the other along the

PHOTOGRAPHY: © 2003 TRINITY CHURCH IN THE CITY OF BOSTON (OPPOSITE); ILLUSTRATIONS BY GOODY, CLANCY

Designed by H.H. Richardson in 1877, Trinity Church in Boston (this page) is now being restored and expanded by Goody, Clancy & Associates. Due to space limitations and rigorous aesthetic requirements at this national landmark, the engineering firm Cosentini Associates proposed subterranean geothermal energy

(diagram, opposite) in lieu of a conventional mechanical system to heat and cool the renovated spaces. Although not the primary reason for the selection, reduced energy bills will benefit the Episcopal congregation. The geothermal wells were installed in 2002; the renovation will be completed in 2004.





In a recent renovation of the S.T. Dana Building at the University of Michigan, built in 1903, a fourth floor was

inserted on top, beyond the sight lines (below). The railing in the new atrium was made from recycled glass (left).



viewpoint of both the preservationists and the environmentalists,” says Ochsendorf. He cites a group in Cambridge, England, called the Bridge Research Center that is working on educating engineers on new methods of structural assessment designed to evaluate older structures.

Inherent conflicts

Despite the many shared values and concerns between preservation and sustainable design, occasionally conflicts do arise and trade-offs have to be made. Energy efficiency is probably the most problematic area, with windows generating the most controversy.

Another pet peeve of preservationists is the practice, required in some jurisdictions, of insulating the interior of thick masonry walls and installing a vapor retarder. In cold climates, this technique can reduce heat loss but can also reduce the ability of the wall to dry out when wet, thereby creating freeze/thaw cycles within the wall that can cause deterioration in the load-bearing masonry, explains engineer Matthew Bronski of Simpson Gumpertz & Heger in Waltham, Massachusetts.

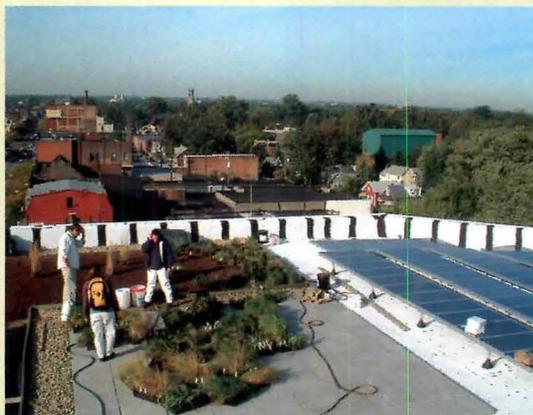
Lighting requirements and preference can also generate conflicts. In the Metzenbaum project, for example, the architects chose to retain the original incandescent luminaires in the courtrooms and judge’s chambers and provide higher light levels by specifying additional, replicated incandescent fixtures to maintain the historic character of

these ceremonial spaces. Says Paul Westlake, Jr., FAIA, managing principal of vDWRL, “We had to clear it with GSA, because we do have so many clients who say they will not have any incandescent.”

Policy glitches

The biggest complaint many preservationists seem to have with the sustainability movement does not pertain to the concepts themselves, but to LEED. First introduced in March 2000, the rating is essentially a checklist divided into six basic categories: sustainable sites, water efficiency, energy and atmosphere, materials and resources, indoor environment quality, and innovation and design process. Within each category are various prerequisites and suggested strategies. A building receives points for implementing a particular strategy within a category. Buildings that earn the required minimum number of points are considered LEED certified.

Although most historic structures undergoing major renovation easily win points on several counts—including reuse of existing shell and proximity to public transportation—some practitioners have expressed concern that the current rating system, which is being required by many and more well-meaning clients, does not give sufficient credit to preservation practices or take into account certain limitations. Jean Carro notes that without significant alteration of the building fabric ma-



The Cleveland Green Building Coalition bought a 1918 bank (above left) and renovated it using many sustainable features, including a green roof (above center), solar panels, a geothermal system, and waterless urinals. A radiant heat system was installed in the 26-foot-high lobby (right).

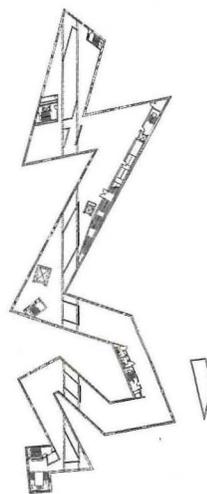


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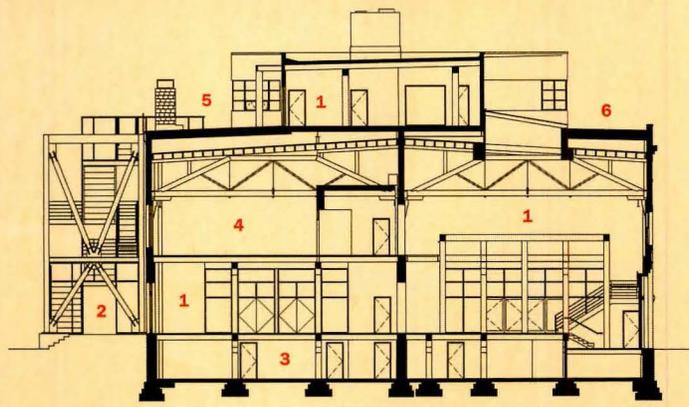
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Renovated in 2001 by Holst Architecture, the Jean Vollum Natural Capital Center in Portland, Ore. (left), is the first historic building to receive a LEED gold rating.



- | | | |
|-------------------|-----------------|-----------------|
| 1. Lobby | 3. Basement | 5. Terrace deck |
| 2. Raised walkway | 4. Event center | 6. Green roof |

unlisted historic buildings cannot meet the tighter envelope requirements of ASHRAE 90.1, which is a prerequisite of LEED. (Fortunately, LEED does make allowances for listed historic buildings.)

To bolster their position, preservationists cite a recent study undertaken by Chris W. Scheuer and Gregory A. Keoleian at the University of Michigan's Center for Sustainable Systems on behalf of the Building Fire Research Laboratory at the National Institute of Standards and Technology (NIST). The admittedly limited analysis suggested some inconsistencies within the LEED credit system. In their general research conclusion, the researchers write: "The lack of comparability between LEED ratings and LCA [life cycle assessment] results indicates that when considered in a life-cycle perspective, LEED does not provide a consistent organized structure for achievement of environmental goals.

Despite these criticisms, no one wants to turn back the clock. Carroon sees LEED's checklist format as a useful tool to motivate those who are less informed, but he believes architects should strive for something greater—integrated design for the long term and in the context of community and culture.

Nigel Howard, vice president for LEED & International Programs at the U.S. Green Building Council, acknowledges that the first version of LEED was not designed explicitly for historic buildings. But another version now in development may be more applicable for at least some aspects of historic buildings. "LEED is on a cycle of continual improvements. I can imagine that these issues will be taken up in future versions of it." One day, then, perhaps, will the sibling rivalry finally end and the two symbiotic movements truly join forces for the common good. ■



AIA/ARCHITECTURAL RECORD CONTINUING EDUCATION

INSTRUCTIONS

- ◆ Read the article "Tapping the Synergies of Green Building and Historic Preservation" using the learning objectives provided.
- ◆ Complete the questions below, then fill in your answers (page 230).
- ◆ Fill out and submit the AIA/CES education reporting form (page 230) or download the form at www.architecturalrecord.com to receive one AIA learning unit.

QUESTIONS

1. The sustainable benefits of preserving existing structures include all except which?
 - a. reuse of existing materials
 - b. save labor costs
 - c. construction-waste reduction
 - d. minimize energy consumption
2. In terms of a material, which is the greenest thing you can do?
 - a. Reuse
 - b. Recycle
 - c. Specify new green materials
 - d. Continue its use
3. Which is the most problematic conflict between preservation and sustainable design?
 - a. Engineering calculations
 - b. Lighting requirements
 - c. Energy-efficient windows
 - d. Insulation of walls
4. LEED certification is required for which projects?
 - a. All building projects
 - b. All government building projects
 - c. All new capital projects
 - d. All new green building projects
5. Which of the following is not true of LEED?
 - a. It is the consensus-based green-building rating system
 - b. It was developed by the U.S. Green Building Council
 - c. It evaluates sustainable design measures in buildings
 - d. It is an acronym for Latent Energy and Environmental Design
6. The basic principle underlying both preservation and sustainable movements is which?
 - a. Conservation
 - b. Technology
 - c. Politics
 - d. Suspicion
7. Embodied energy includes all except which?
 - a. Transporting building materials
 - b. Processing raw materials
 - c. Installing building elements
 - d. Energy given off by burning the building materials
8. The benefits of restoration on an already disturbed site include all except which?
 - a. Less green-site demand
 - b. Less demand for new sod
 - c. Maximizing the use of mass transit
 - d. Minimizing parking-space requirements
9. One of the biggest challenges in restoring historic buildings is which?
 - a. Getting LEED certification
 - b. Hiring local craftspeople
 - c. Designing an environmental system
 - d. Reproducing authentic materials
10. Historic renovation promotes sustainable building benefits through all except which?
 - a. Using incandescent lighting
 - b. Using local craftspeople
 - c. Using natural ventilation
 - d. Using regional materials

Digital Architect

High-tech tools help preserve the past

Alan Joch

Frank Lloyd Wright's Fallingwater, an iconic residence in western Pennsylvania, had a dirty little secret. The exhilarating concrete terraces that hover over Bear Creek seemingly defy gravity, their support coming from reinforcing steel within the concrete. But the terraces were only temporarily fighting off gravity's pull, like an arm wrestler gallantly holding out to a stronger opponent.

Fears that the terraces would eventually fail surfaced during construction of the house, but no one knew the full extent of the danger until the mid-1990s. Armed with special radar devices and innovative measurement tools that daily recorded the movements of microscopic surface cracks, engineers decided to evaluate the historic treasure once and for all. The result was a startling conclusion: The main terrace had sunk 7 inches in about 60 years. Fallingwater wouldn't stand around for another six decades unless it underwent drastic structural renovation. "It was in a state of stress beyond what we were comfortable with," recalls John Matteo, an associate at the Washington, D.C., office of Robert Silman Associates, the engineering consultant.

The analysis, much of it done with nondestructive testing equipment and high-tech computer models, spurred Fallingwater's care-

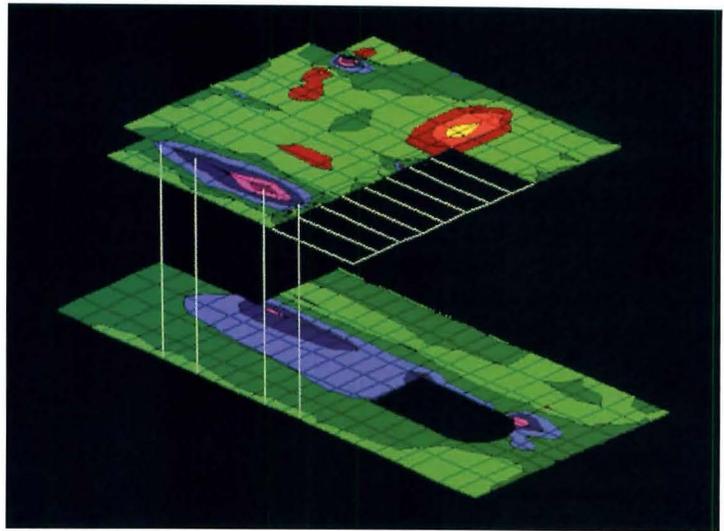
takers into action. An \$11 million preservation effort is now underway to make the building structurally sound and to fix more than 60 leaks that have warped doors, peeled paint, and stained interior walls [RECORD, May 1999, page 97].

Fallingwater's restoration needs are not unique, but the Wright site is noteworthy for the range of technological tools architects and engineers are employing. Used by chemists and metallurgists for years, these technologies are now being adopted to gain a complete understanding of a building's condition while causing the least amount of damage.

High-tech toolbox

Historic preservation is on the rise both for the intrinsic value of maintaining architectural treasures and for economic reasons. The Historic Preservation Act of 1966 provides investment tax credits of 20 percent for owners of historic commercial and public buildings that are refurbished using guidelines established by the National Park Service. Thirty-seven states now give an additional tax credit of 10 percent, and many are considering extending credits to historic homes, says Roy Eugene Graham, FAIA, director of the graduate program in urban conservation at The Catholic University of America, in Washington, D.C.

In addition to knowing the intricacies of preservation standards, architects need to understand the construction methods and makeup of historic buildings inside and out, often without the benefit of original design drawings. No matter how advanced technology becomes, the



Software that assists in nondestructive evaluation highlights where leaks have occurred in a facade (the blue areas show where water has penetrated).

first step in assessing a building's health remains visual inspection. "We use a host of handy gadgets, but the most important one is our eyes," says Eric Hammarberg, associate and interim director of preservation at LZA Technology, a New York engineering consultant.

To probe more completely, architects then may use rectified photography to help assess a building's condition. Rectified photos are manipulated during the printing process for perspective, so that horizontal and vertical edges aren't marred by parallax distortions (most CAD software does this automatically). "If you've done a good job of adjusting for parallax, you can use that image to trace an elevation or a detail," says David G. Woodcock, FAIA, director of the Historic Resources Imaging Laboratory in the College of Architecture at Texas A&M University, in College Station.

To peer inside historic structures, architects also use thermal imaging systems, which depict temperature variations through color

gradations, thus showing where leaks in a facade, window, or other structural element may lead to unseen internal deterioration. "Cooler areas indicate where water [has penetrated]," says Derek Trelstad, senior project director at LZA.

Other tools include X-ray devices that determine the structural components of wall sections without having to drill into them. When surface cracks appear, motion monitors track the almost imperceptible sagging in historic structures over time. The monitors use small wire segments that span cracks and register minute movements as cracks expand and shrink due to temperature fluctuations or settling. Engineers may monitor hundreds of different cracks on a building and track data for a year or more. "The data highlight where we should focus our efforts," says Hammarberg.

Under the microscope

For high-tech diagnostics on a par with the forensic science seen in

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

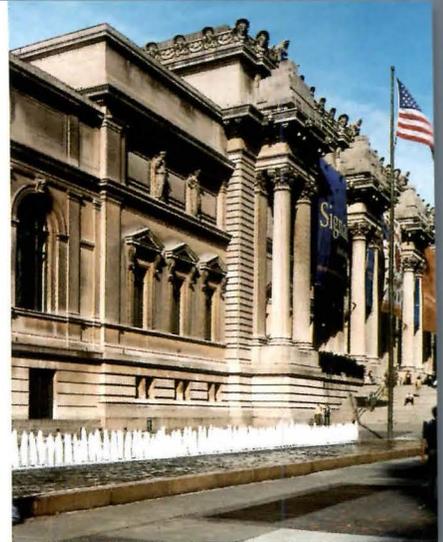
Digital Architect

television dramas, Wiss, Janney, Elstner Associates (WJE) operates its own materials-testing lab at the company's headquarters in Northbrook, Illinois. "If we suspect a problem with a particular material, we send it to the lab for analysis," says Kyle C. Normandin, an architect with WJE's New York office. "It makes our job that much more thorough." His firm is using the lab on an ongoing restoration of New York's Metropolitan Museum of Art's facade on Fifth Avenue. Samples of its Indiana limestone went to the lab, where analysis revealed that problems around the mortar joints weren't allowing water to escape off the facade quickly enough. Lab technicians determined that the cement-to-limestone ratio in the mortar contained too much of the former. Architects are now repointing the area with a more effective composition.

Similar detective work is aiding Fallingwater. Pamela Jerome, senior associate for preservation at the architectural and engineering firm Wank Adams Slavin Associates (WASA) in New York, joined the sleuthing when WASA was hired to guide the Fallingwater restoration effort. Part of her work consisted of restoring the interior paint

finishes. WASA collected paint samples and sent them for analysis to an outside testing lab, where technicians were able to determine the number of paint layers that had been applied to the interior, the chemistry of the paints, and their exact colors. "The lore of the house was that the exterior and the interior were painted the same color, and that appears to be true," Jerome explains. But soon after Fallingwater's completion, someone repainted the interior a much lighter shade. Jerome knows the house was repainted quickly because the analysis showed very little dirt trapped between the first and second paint layers. "We speculated that the family found the interior to be dark and decided to tone it up a few shades," Jerome says. "Or it could have been Frank Lloyd Wright who made the decision. He fussed with the building long after it was built."

Silman Associates used a number of other diagnostic tools to assess Fallingwater's structural integrity. Engineers relied on a structural analysis program from software maker SAP AG to model the building's settling pattern. Motion monitors logged data on cracks in the concrete for a year and a half, and the staff then plotted



The Fifth Avenue facade of the Metropolitan Museum of Art, undergoing restoration by Wiss, Janney, Elstner Associates.

seasonal fluctuations in the sizes of the cracks as well as overall movement trends. To bolster the data, a surveyor pinpointed elevations along the parapets, and these numbers were compared to those on the original drawings. Taken together, the data showed a slow, steady sagging of the terraces from their original positions.

Matteo says that while the data revealed stress points, technology couldn't answer the question on everyone's mind: How much longer would it be before Fallingwater's terraces failed? Stories had surfaced during Fallingwater's construction that the reinforcement of the concrete terraces specified by Wright was inadequate, a rumor had it that the builder doubled the number of reinforcing rods Wright had called for, but no one could verify this claim.

To answer this question, Silman hired GB Geotechnics (GBG), of Cambridge, England, to inspect the reinforced concrete using impulse radar. GBG used a transducer to send a radar wave into the concrete, which reflected the wave back to the surface when it detected reinforcing steel. The transducer sent readings to a data recorder, which then created a rough image of the underlying structure. Engineers compared these readings to the original drawings. The result: "The builder did double the reinforcing," Matteo says. "This was important to know so we could define the building's existing capacity."

Pragmatic preservation

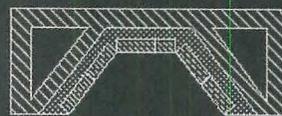
Graham believes that nondestructive diagnostics will become even more important in the years ahead. They allow preservationists to surgically find and fix hidden problems without causing excessive damage. "Because we're more educated about how to evaluate existing buildings, it costs the same or less to fix one that's already standing than to build a new building," he says.

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USG PRESENTS

Designing Partition Systems for Practicality and Performance

Robert Grupe

Director, Architectural and Technical Solutions
United States Gypsum Company

When a project calls for a special partition that incorporates considerations for height and performance, where does one start? Is there a methodology for designing partition systems? Yes, there is a proven technical approach to partition system design.

While architects and designers are all too often inundated with the hype of one product over another, a single product does not make a system. Professionals must consider many design parameters to achieve the best solution to a given problem. This article will analyze key design considerations

CONTINUING EDUCATION

Use the learning objectives below to focus your study as you read **Designing Partition Systems for Practicality and Performance**.

Earn one AIA/CES Learning Unit, including one hour of health safety welfare credit, answer the questions on page 173, then follow the reporting instructions on page 232 or go to the Continuing Education section on archrecord.construction.com to follow the reporting instructions.

LEARNING OBJECTIVES

After reading this article, you should be able to:
• Analyze key design considerations for partitions
• Compare product attributes that affect partition designs
• List six primary factors to consider in designing partitions

and product attributes, as well as provide guidance in designing partitions.

The process starts with the understanding that there are six primary factors: fire resistance, acoustical performance, structural capacity, moisture, abuse resistance and aesthetics. This article will review each one and provide direction on a system solution.

A good designer must look at all facets to determine the best possible design solution.

To illustrate this design process, we will go through the required steps to design a partition in a simulated hospital project. The wall in question separates adjacent hospital bedrooms. Based on the building type and occupancy, the codes dictate that the wall must carry a two-hour fire rating. The floor to deck height is 18 feet. Finally, the client is concerned about moisture conditions, primarily mold.

We will develop a solution as we examine each step of the design process.

Fire Resistance

Fire resistance is determined by local code requirements. The codes will establish if the materials in the partition can be non-combustible and, when installed in a system, what the hourly fire resistance must be. In this case, all the materials must be non-combustible and the fire rating must be two hours. That means the primary framing element, the stud, must be made of steel (as opposed to wood). Gypsum panels are recognized by the code as non-combustible, so we can proceed in determining what we need to do to achieve the two-hour fire rating.

Fire resistance (sometimes called the fire endurance rating) is determined through the test procedure called ASTM (American Society for Testing and Materials) E119 (*Test Specification for Determining the Fire Endurance Rating of Building Elements*). This test method covers what is required of a system to meet the one-, two-, three- and four-hour ratings that the code requires and you specify. Fire endurance ratings are system-based, meaning it is not possible to obtain a fire rating on a single product. Individual products are combined with other products that provide the required fire performance.

When a fire test is performed, there are two aspects of the test specification that must be met. The first is heat transfer through the wall (this article covers only walls, but the test specification also applies to roofs, floors, beams and columns). The idea is to limit the temperature on the side of the wall opposite the fire to where any combustible material adjacent to that wall will not ignite.

The wall is exposed to fire on one side at a predetermined time/temperature curve. The rate of rise is very dramatic. Within the first five minutes, the temperature is more than 1,000 degrees F. The temperature on the opposite side of the wall is measured at nine locations. This is called the unexposed side. Either the average temperature recorded from the nine thermocouples (electronic thermometers) cannot exceed a certain limit or a single point cannot exceed another (but higher) temperature.

The second portion of the test is structural in nature. The wall is subjected to a hose stream of water from a certain distance, pressure and duration.

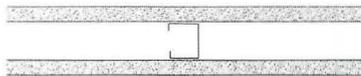
To obtain a one-hour fire rating, all the products shown must be installed together. This installation must also follow the method that was used to obtain the fire rating. For example, the maximum stud spacing is 24 inches on center and, for non-load-bearing conditions, the stud should not be screw-attached to the runner. The screws must be a certain style, type S in this case, and the minimum stud depth is 1⁵/₈ inches. If a two-hour wall is needed, we only have to add additional layers of gypsum board.

FIRE ENDURANCE RATING

1-Hour Rating

Comprising:

- Single layer of 5/8-inch Type X gypsum board
- 25-gauge steel studs
- Joints to be finished
- 1 1/4-inch screws 12 inches on center
- No insulation required



Getting back to our example, an appropriate choice would be Underwriters Laboratories UL Design U419. That means we need four layers (two on each side) of 5/8-inch-thick Type X gypsum board. The minimum stud depth is 1⁵/₈ inches (if a special 3/4-inch-thick gypsum panel is used) and the maximum stud spacing is 24 inches on center. The design listing further specifies what fasteners to use and to what spacing. In addition, the individual gypsum panels must be staggered with respect to adjacent panels.

Stud Selection

Next in the design process is determining the size of the stud needed to obtain the 18-foot height. When determining the depth and steel thickness, one must evaluate three different structural considerations. They are deflection, end reaction shear and bending strength. Deflection is a function of the relative stiffness of the system and is usually limited by the ratio of L/240 for drywall partitions. That is the span in inches divided by 240. If we take a 10-foot high partition and limit it to L/240, we are not allowing the wall to move 1/2 inch at mid-span. Deflection greater than the L/240 ratio doesn't spell imminent collapse (although it may), but more typical is the greater probability that the finish material may crack.

The next item to consider is called end reaction shear. Each stud must carry the load that is applied from its tributary area and transfer that load (called lateral load) back to the structure. In doing so, there is a build-up of stress where the stud terminates into the runner. This is called end reaction. If the stress exceeds the capacity of the web of the stud, buckling—and therefore structural failure—will result.

Bending strength is a measure of the stud's capacity to handle the bending stresses primarily within the flanges of the stud. When a load is applied perpendicular to the stud, the flange closest to the applied load goes into compression while the flange opposite the applied load receives tensile forces. In engineering terms, the combination of compression and tension forces is called "moment" and the maximum moment will occur in the center of the span—considering a uniform load and simple span. A stud running from floor to slab is considered a simple span condition and the maximum bending stress is found at the center of the span.

All of these calculations are readily available in publications such as ASTM



Wall system performance is based on implementation of good design practices.

C754 (*Standard Specification for Installation of Steel Framing Members to Receive Screw-Attached Gypsum Panel Products*) and the Steel Stud Manufacturers Association's *Product Technical Information* brochure. It's a simple matter of picking a load (5 psf for interior walls) and deflection limitation (L/120, 240/360). For drywall, L/240 is recommended and for plaster, it would be L/360. Then pick a stud spacing. Glancing vertically down the page will give you the first stud with the height you need.

Finally, it is important from a design standpoint to specify studs with a corrosion-resistant coating. The best available is a galvanized coating.

Returning to our example, here are a few things to keep in mind. If economy is a prime consideration, then always select a deeper stud at a thinner steel thickness. Also try and choose 24 inches on center. If abuse resistance is a concern, then spacing should move to 16 inches on center.

In this case, since it is a hospital, it would be wise to use 16 inches on center.

The stud chosen was 400S125-54. Steel stud nomenclature has specific meaning. The 400 tells us it's a 4-inch deep stud, the S indicates it's a stud, the 125 means it has a flange width of 1 1/4 inches and the 54 is the mil thickness of the steel.

Sound Control

Now we need to determine what the partition requires in terms of sound performance. The single number system that is used to determine sound attenuation (reduction) in a partition is called STC (Sound Transmission Classification). The higher the number, the better the partition is at reducing the amount of sound that goes through a wall. A 50 STC wall is considered good and a 45 STC marginal.

ASTM E90 (*Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements*) determines the STC. This test is considered a two-room method, where the wall that is being evaluated separates two rooms. The rooms are designed so that the only way sound can move from one room to the other is through the wall. Sound pressures are generated in one room at specific frequencies and the pressure is then measured in the other room. The difference is TL (transmission loss) and is attributed to the wall in question. After all of the frequencies are evaluated and plotted, a graphical analysis provides the composite STC.

Like a fire rating, STC is based on a total system. There is no STC value for a single sheet of gypsum board.

Type of Occupancy	Between Room 1	And Room 2	Quiet	Normal
Hospital	Bedroom	Adjacent Bedroom	52	50

Figure 1. Sound transmission classification rating.

The required STC is sometimes based on local codes. There are also many publications that give advice. The table in Figure 1 suggests that the designer pick a system that gives a 52 STC.

Our example calls for a minimum STC of 52. Many drywall manufacturers refer published tables. In one such table, you will find four layers of 5/8-inch type X gypsum board (two on each side of the metal stud). Further, it requires a 2-inch sound attenuation blanket in the stud cavity. The minimum stud required is a 1 5/8-inch 25-gauge (158S125-18). The system described attains a 56 STC.

Because the stud required is 16-gauge (54 mil) and tests have shown that there is a loss in performance as the thickness of the steel is increased, the 56 STC is now the minimum acceptable.

Moisture

The topic of moisture control has become an extremely important concern. In design and construction, it is critical to understand that moisture control extends beyond traditional design. For example, the chart in Figure 2 outlines moisture issues as they relate to partition design. It takes into account the products that will be used, the design itself, how the building materials get to the job site and are stored, the construction sequence and finally the required maintenance for long-term performance.

Manufacturing: It's important that products be manufactured and made available free of mold (not necessarily mold spores, as that would be impossible, but free from blossoming mold).

Design: Architects and designers should pay close attention to vapor and thermal drives, eliminating the potential for condensation within hidden spaces. Further, redundancy in water intrusion resistance must be included. That includes secondary liquid water barriers, proper flashing and weeps.

Distribution: Building materials must be delivered to job sites free from mold and protected against water.

Construction: Water-sensitive materials must be protected during the construction phase. This includes having the exterior envelope in place prior to installation. It also means that temperature and humidity controls should be maintained.

Maintenance: This is one of the most frequently overlooked areas. Keep a close eye on visible water leaks, as well as those areas where leaks could result. Caulk joints and make sure to control the temperature and humidity within the building at all times.

There are many considerations that need to be analyzed in the area of moisture control. Some key questions we need to answer are:

Will the wall be exposed to temperature and vapor drives?

Or simply, will the relative humidity and temperature be greater on one side of the wall? If the answer is yes, we must design against condensation in the stud cavity. A dew point analysis may cause us to include vapor retarders or vent the stud cavity. To obtain expert advice on this subject, contact a qualified mechanical engineer.

Will the wall have to withstand the direct impingement of water in its liquid state?

The answer may be obvious (as in an exterior wall), but it also may depend on maintenance practices of your client. Will cleaning of the space require constant washing of the wall? If the answer is yes, then the final design should take into account water-resistive finishes and a second line of defense against water intrusion into the stud cavity.

What can be done to minimize the potential for mold growth?

There are three elements that need to be present for mold to grow. They include mold spores, nutrients and water. Because mold spores and nutrients may be found on any surface, the one item that can be controlled is water. The Environmental Protection Agency has stated that the key to mold control is moisture control, as referenced on their Web site (www.epa.gov).

Moisture Challenge	Construction Stage	Moisture Control Strategies
Moisture and mold	Manufacturing	Keep products dry
Moisture intrusion in structure	Design	Create building exteriors with multiple barriers to water intrusion
Moisture exposure during transportation and storage	Distribution	Properly store materials at distribution center and job site
Moisture exposure during construction	Construction	Install building materials when weather protection is in place
Drying building materials	Construction	Maintain ample ventilation and use special drying equipment when needed
Moisture exposure after construction	Maintenance	Stop leaks as they are discovered

Figure 2. Moisture issues related to partition design.

Remember these primary areas for building construction mold control: design, construction and maintenance. There is no single product solution that will eliminate mold. While some products offer mold resistance, given the right environment, mold may grow on them as well. Moisture control is the best defense against mold. Other concerns with moisture are:

- **Delamination**

Prolonged exposure to moisture will cause delamination of finish materials (paint, plaster and bonded finishes) and possibly delamination of paper from the gypsum panel itself.

- **Ridging**

Ridging is a phenomenon where the joints between adjacent gypsum panels tend to buckle outside the plane of the finished wall. When originally finished, the wall may have been perfectly flat, but "ridges" later appear along the wall. This is caused primarily by poor environmental conditions during the installation and finishing of the gypsum walls. Gypsum, like all building materials, will expand and contract as the material is exposed to changes in temperature and humidity.

- **Rot**

Gypsum will degrade in a wet environment. It can take cyclic wetting, but prolonged exposure will cause the material to turn soft.

Moisture control in any construction project, and even for the life of the building, is a major design, inspection and maintenance consideration.

Many manufacturers have opted to use an established ASTM test procedure to determine a product's (not a system's) inherent resistance to mold propagation. This procedure is ASTM D3273 (*Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber*). This procedure is not designed for building materials; it is geared to evaluate coatings. One should be cautioned against using this procedure as the only determinant against mold.

In this test standard method, the material to be tested is applied to a 3- by 4-inch panel, or in our case, the panel is the test specimen. One or more of these panels are suspended over a non-sterile dirt bed that has been inoculated with three specific types of mold spores. The test panels are then kept in an environmental condition of 95 to 98 percent relative humidity and 90 degrees F for four weeks. The samples are visually inspected for mold growth each week.

A single number rating system is used, with a 10 being the best rating against mold growth.

There are some very significant limitations to these tests, among them:

1. The test is designed for interior coatings. The scope of the test itself states that the test should not be used for determining system performance.
2. A 3- by 4-inch sample suspended over dirt does not simulate actual building system conditions.

3. The three chosen mold spores do not necessarily fully represent those found in buildings.
4. The test influences building system performance. As mold develops, it releases mold spores that affect all elements on the original test specimen.
5. The rating is ambiguous. The final number (0-10) cannot be related to time for mold to develop in a given environment.

Returning to the example, our client is concerned about mold in a health facility. Therefore, there are two choices. We can select a moisture- and mold-resistant paper-faced gypsum panel product, which yields an 8 on the ASTM D3273 test. This product scores and snaps identical to standard drywall. The other option is to choose to a gypsum fiber product. This product is a little harder to install, but rates a 10 on ASTM D3273 and offers increased strength and abuse resistance.

Abuse Resistance

The next step in the design process is to look at abuse resistance. Modeled after British Standards, a category system has been developed that allows designers to select systems based on their abuse resistance. It looks at a system's resistance to abrasion/indentation (typically a function of the selected finish material), along with its impact resistance—either concentrated or over a larger surface area—and finally security. Abrasion is destruction of the finish on one side, impact is the destruction of one side of the partition (breach into the cavity) and security is penetration of the entire wall.

Looking at our example and relating to the table shown in Figure 3, we determine the desired category is 2.

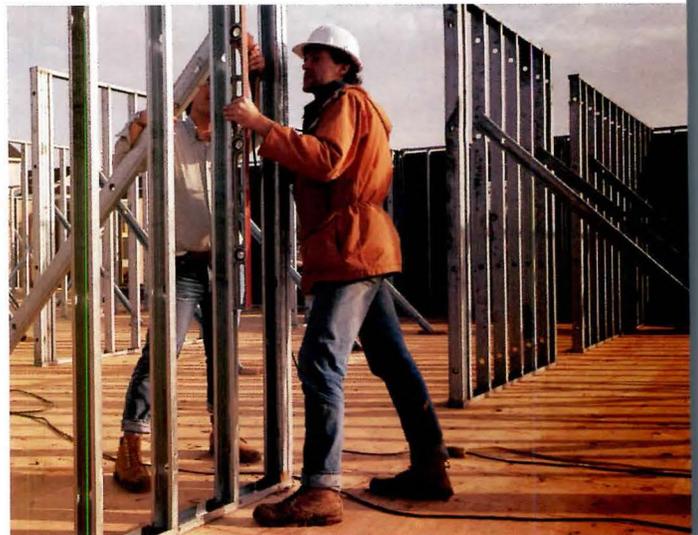
This means we can use a primer/surfacer over the moisture- and mold-resistant paper-faced gypsum board, or use the gypsum fiber panel with conventional all purpose joint compound.

Aesthetics

Several years ago, the Gypsum Association (GA) and Association of the Wall and Ceiling Industries International (AWCI) published a document that helps manage expectations of finished gypsum wallboard systems. Further, they suggested which level to specify for a desired finish material. This can now be found in ASTM C840 (*Standard Specification for Application and Finishing of Gypsum Board*) and Gypsum Association publication GA-214 (*Recommended Levels of Gypsum Board Finish*). Figure 4 provides suggested levels for desired results.

PERFORMANCE TYPES					
Level	Description	Abrasion	Indentation	Hard-Body Impact	Soft-Body Impact
Category 1 Light duty	Improved resistance to incidental surface and impact damage from people and objects	15 cycles	0.15 in.	30 ft.-lbs.	120 ft.-lbs.
Category 2 Moderate duty	Moderate resistance to incidental surface and impact damage from people and objects	30 cycles	0.13 in.	40 ft.-lbs.	180 ft.-lbs.
Category 3 Heavy duty	Resistance to heavy surface and impact abuse from people and objects	100 cycles	0.10 in.	80 ft.-lbs.	210 ft.-lbs.
Category 4 Extreme duty	Resistance to extreme levels of surface and impact damage from hard objects	500 cycles	0.08 in.	110 ft.-lbs.	300 ft.-lbs.
Category 5 Security	For areas requiring forced-entry and ballistic resistance	1,000 cycles	N/A	N/A	N/A

Figure 3. Abuse-resistance categories.



Building professionals must consider various design parameters to achieve the best solution to a p

Level one is a single coat of joint compound and joint reinforcing tape. It may not look finished, but it is acceptable in hidden spaces.

If the desired finish is ceramic tile, then specify a Level 2 finish. This allows for two coats of joint compound and paper reinforcing tape.

If we want to use a heavy texture finish or heavy wall covering, we should specify Level 3. This allows for two coats of joint compound over the initial coat and joint tape.

Level 5 is for critical lighting conditions. This is defined as any surface where the lighting is such that it will accentuate any surface blemish.

This typically calls for "skim coating" the entire surface with joint compound. An alternative would be specifying a veneer plaster, thereby increasing abrasion resistance.

Level 1	Attics, hidden spaces
Level 2	Substrates for tile
Level 3	Heavy textures or wall covering
Level 4	Flat paints or light textures
Level 5	Critical light conditions

Figure 4. Gypsum wallboard finish levels.

Some new products have recently been released that combine a Level 5 finish with a priming application. This is accomplished with a spray application of a specially formulated primer/surfacer to increase abrasion resistance.

For this example, we have decided on a Level 4 finish. This requires three coats of joint compound over the initial coat and tape, plus a primer prior to final decoration.

As an alternate, use the spray-applied primer/surfacer. This will achieve a Level 5 finish, eliminate the need for a primer and increase abrasion resistance.

Design Solution

Based on our examples, here is the final design solution:

A double layer of a moisture- and mold-resistant enhanced paper-faced gypsum panel or gypsum fiber panel that is 5/8-inch thick. The stud should be a 4-inch-deep, non-load-bearing stud 54 mils thick (16 gauge). Following the requirements based on limiting heights, we select 24 inches on center. However, we have decided to use 16 inches on center for increased abuse resistance.

To obtain the sound rating, we have placed a 2-inch sound attenuating fire blanket in the stud cavity. We can finish the joints with a standard ready-mixed joint compound. As an alternative, we added a primer/surfacer. This not only gives us added abrasion resistance, but also achieves a Level 5 (the highest) finish. ■

Click for Additional Required Reading

As part of this CES learning activity, you are required to read some additional material. Some of the test questions below will relate to the additional reading material. Go to archrecord.construction.com/resources/conteduc/ to access the material online. To obtain a faxed or emailed copy, call (800) USG-4YOU or email usg4you@usg.com.

LEARNING OBJECTIVES

- Analyze key design considerations for partitions
- Compare product attributes that affect partition designs
- Know six primary factors to consider in designing partitions

INSTRUCTIONS

Refer to the learning objectives above. Complete the questions below. Go to the self report form on page 232. Follow the reporting instructions, answer the test questions and submit the form. Or use the Continuing Education self report form on *Record's* website—archrecord.construction.com—to receive one AIA/CES Learning Unit including one hour of health safety welfare credit.

QUESTIONS

Q: 1. Fire endurance performance and ratings are based on:

- A:** a. The partition system as a whole
b. Total ratings of individual products

Q: 2. When calculating deflection, if you take a 12-foot high partition and limit it to L/240, you are not allowing the wall to move _____ inches at mid-span.

- A:** a. .05
b. .50
c. .60

Q: 3. End reaction shear is a:

- A:** a. Function of the relative stiffness of the system
b. Build-up of stress where the stud terminates into the runner
c. Measure of the stud's capacity to handle the bending stresses within the flanges of the stud

Q: 4. For drywall, a deflection limit of which is recommended:

- A:** a. L/120
b. L/240
c. L/360

Q: 5. If abuse resistance is a concern, spacing of studs should be:

- A:** a. 16 inches on center
b. 20 inches on center
c. 24 inches on center

Q: 6. With regards to STC (Sound Transmission Classification), a 50 STC wall is considered better than a 45 STC wall.

- A:** a. True
b. False

Q: 7. A partition's STC rating is based on:

- A:** a. The individual STC value for each sheet of gypsum board
b. The total components of the system

Q: 8. Of the three elements that need to be present for mold to grow, which can be most easily controlled?

- A:** a. Spores
b. Nutrients
c. Water

Q: 9. Ridging is the:

- A:** a. Delamination of the finished materials
b. Rotting of the gypsum minerals in the material
c. Buckling of the joints between panels

Q: 10. Based on the hospital example used in this section, the design solution chosen for partitions was:

- A:** a. 5/8-inch-thick Type X gypsum board, 4-inch deep stud 54 mils thick, 16 inches on center, with a 2-inch sound attenuation fire blanket and a Level 5 finish
b. 5/8-inch-thick Type X gypsum board, 4-inch deep stud 54 mils thick, 24 inches on center, with a 2-inch sound attenuation fire blanket and a Level 5 finish
c. 5/8-inch-thick Type X gypsum board, 4-inch deep stud 54 mils thick, 16 inches on center, with a 2-inch sound attenuation fire blanket and a Level 1 finish.

About USG

USG Corporation is a Fortune 500 company with subsidiaries that are market leaders in their key product groups: gypsum wallboard, joint compound and related gypsum products; cement board; gypsum fiber panels; ceiling panels and grid; and building products distribution.

United States Gypsum Company, a subsidiary of USG Corporation, manufactures SHEETROCK® Brand Gypsum Panels, the leading and best-known brand of drywall in the United States, as well as FIBEROCK® Brand Gypsum Fiber Panels and a variety of plaster and veneer plaster products. U.S. Gypsum's SHEETROCK™ Brand Paper Faced Metal Drywall Bead effectively minimizes drywall corner edge

cracking resulting from structural movement and expansion and contraction. The company also offers SHEETROCK Brand control joints for use in drywall and plaster partitions, and RC-1 resilient channels for use in drywall partitions.

USG Interiors, another subsidiary of USG Corporation, is a leading manufacturer of acoustical ceiling panels and suspension systems.

For technical advice relating to partition systems, contact USG at P.O. Box 806278, Chicago, IL 60680-4124, call USG's Customer Service Department at 800-USG-4YOU or visit the company's Web site at www.usg.com.



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Home is where the office is: Four families discover the joys of live/work residences

BRIEFS

Dodge predicts housing starts

Single-family home sales are expected to decline 3 percent overall for the year 2003, as mortgage rates start to rise. Ironically, as the economy begins to pull out of its long droop, sales of single-family houses eased to 1.215 million units in 2003 from 1.255 million units in 2002.

Young students show talent at competitions to design houses

All 96 second-year students at the New Jersey School of Architecture at New Jersey Institute of Technology, Newark, participated in a design competition for a beach house and an urban penthouse. Notable architects Winka Dubbledam, Gisue Hariri, and Henry Smith-Miller, among others, deliberated on May 12, selecting winners who received a total of \$20,000 in prizes, donated by sponsor Hunter-Douglas. Meanwhile, in Boston, a similar exercise was underway. The Lyceum Fellowship, in its 18th year, held a themed design competition entitled "Reinventing the House on Wheels." Carol Burns, who wrote

the program, was joined on the jury by Allison Arieff, Jennifer Siegal, and others, who selected winners on April 26. Cash prizes of \$17,000 were awarded for educational travel. With these competitions, a new generation of architects begins to get smart about distinctly different challenges in housing.

Stores experiment with off-the-shelf houses

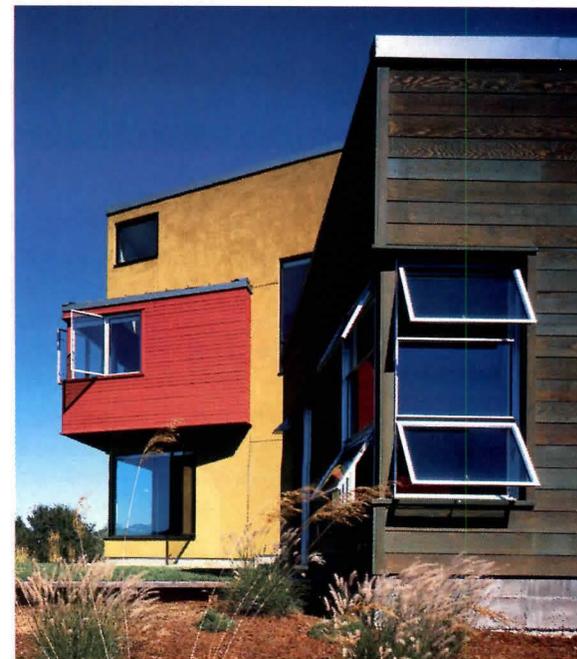
On behalf of his client Target, Michael Graves is designing a house for a pair of newlyweds as a promotion for the company's Club Wedd bridal registry. A series of prefab pavilion home additions, priced from \$8,000 to \$30,000, also will be available (see photo, page 92). If successful, Target may proceed with more affordable prefab Graves houses. Meantime, across the Atlantic, the U.K.'s leading retailer, Marks and Spencer, has hired John Pawson to design both furnishings and a full-size house, to be featured in its new "Lifestore," to open in Gateshead next February. Customers can purchase the house and have it built at the location of their choice.

Lebanese billionaire plans to build 103,667-square-foot house

Rafik Hariri, one of the world's richest men, filed an application this spring for a permit to build a single-family residence in Northwest Washington, D.C. While it's not the largest house in the world—that would be a sprawling palace owned by the Sultan of Brunei, at 2.1 million square feet with 257 bathrooms (per the *Guinness Book of World Records*)—nor for that matter the biggest house in the U.S.—which is Biltmore, the 19th-century Vanderbilt mansion in Asheville, N.C., at about 170,000 square feet—nevertheless, its size puts the basic MacMansion to shame.

Forget the lap-pool, the workout room, the wine cellar, or the home theater. The hot new amenity for homes of today is the office. Live/work residences epitomize both our country's work ethic and, since the advent of the Internet, our increasing reliance on e-communication. According to a recent survey by the National Association of Home Builders, more than half the people in the home-buying market want to live and work at home.

Herein we find four families doing just that in unique ways, and in utterly diverse environments. While Kevin MacCarthy designs and answers e-mail from his hilltop office in his Los Angeles home, gazing out at the panorama of Hollywood, Mark Wedell photographs furniture in his home studio in the woods of Massachusetts. The Manns' art studios provide stunning distant views from two work spaces, and the Aligs' lake retreat doubles as a laboratory for creative art. Ho hum. Somehow this just doesn't sound like work to me. *Jane F. Kolleeny*



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Fernau and Hartman's Mann Residence rests atop a hill with commanding views and defining courtyards

By Lisa Findley

The term *live/work* is usually associated with lofts in urban settings. However, the idea that one can live and work in the same place is compelling for those who live in rural areas, as well. When the Manns approached Fernau and Hartman to design a new house for them 2 hours north of San Francisco, they wanted space to work as well as live with their teenage son. They were awarded with a house that exceeded their expectations.

Fernau and Hartman's Von Stein House [RECORD, April 1994, page 86] was a key factor in the Mann's selection of architects. The firm is known for its sensitive treatment of houses carefully tuned to topography, views, and the landscape. The architects find small variations in rural sites and skillfully use them to elicit a delightful range of experiences within a single home. Sited at the top of a knoll, the house features both stunning views and a sumptuous landscape setting, but topography was all but eliminated when the developer scraped the knoll flat before sale. Building took place on an artificial plateau: "We thought of the site as an Acropolis," says Fernau. "This required a different strategy for us," Hartman agreed.

With topography removed, what differentiated one part of the site from another was orientation to the sun, views, the placement of the access road, and a few trees that survived at the edge of the building perimeter. The views are breathtaking: To the west, layers of ridges stack up to form the coastal range, while to the east, the steep oak-covered foothills give way to rolling vineyards. To the north and south, other wooded knolls of the same ridge snake away.

Fernau and Hartman proceeded with the bold strategy of using the entire plateau as the site for the house. The modest residence and its

Contributing editor Lisa Findley practices architecture in Oakland and teaches at the California College of Arts and Crafts. She is currently writing a book, Constructing Culture: Architecture, Memory, Politics, and Hope.

Project: Mann Residence

Location: Sonoma County, Calif.

Owner: Frederic and Kitty Mann

Architect: Fernau and Hartman Architects—Richard Fernau, Laura Hartman, partners in charge; Jeff Day, Randy Hellstern, Aaron Thornton, project architects;

Alexis Masnik, team

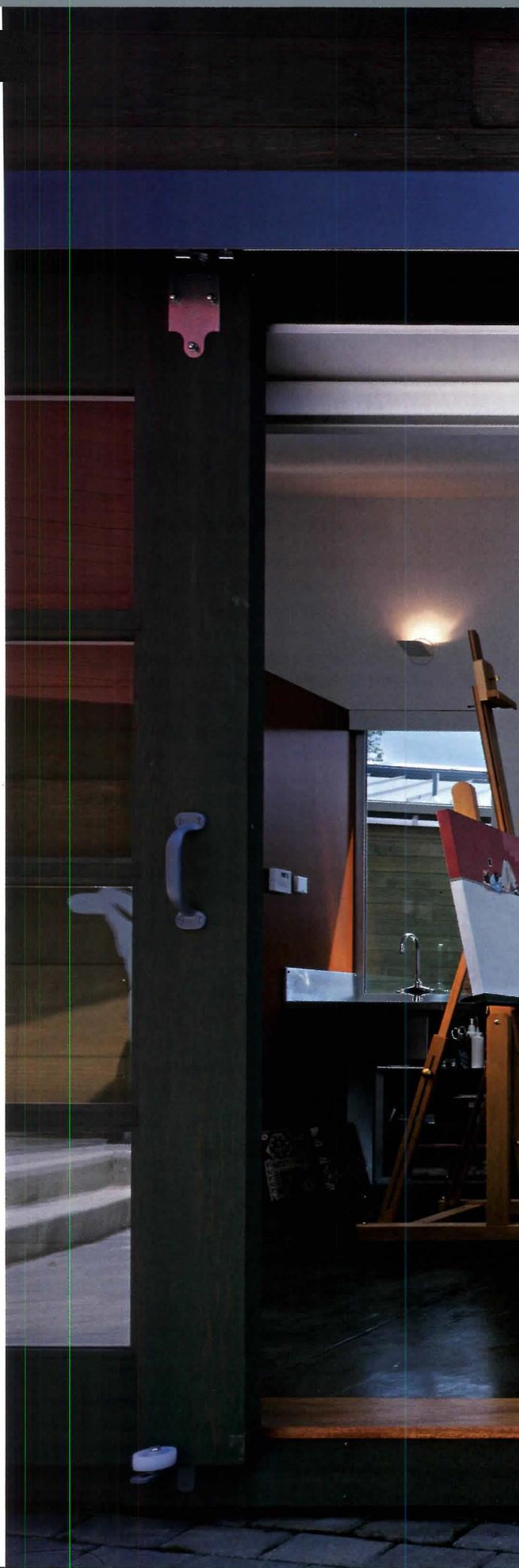
Landscape architect: Bauer Associates

Lighting: Peters & Myer

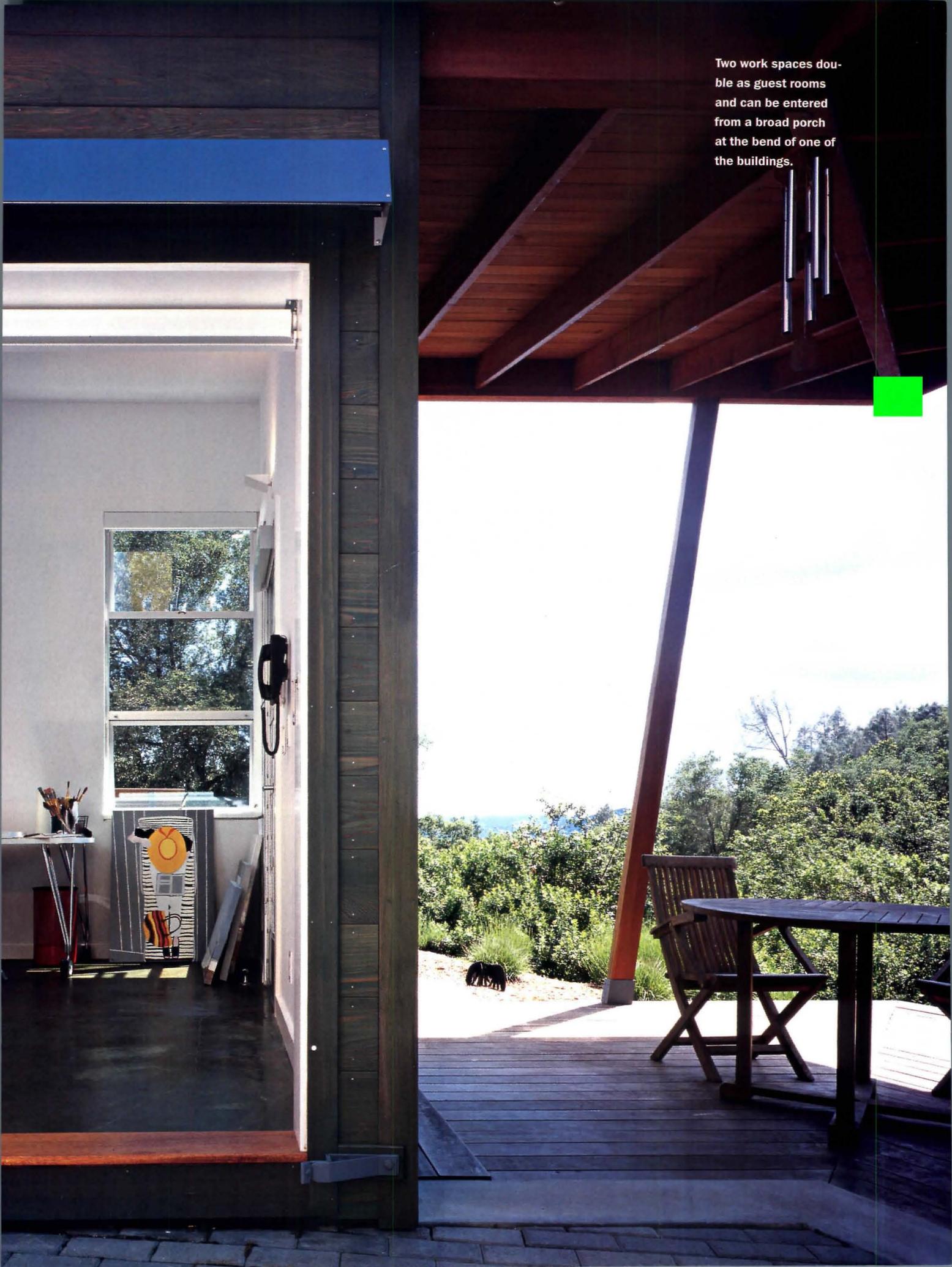
Structural: The Hartwell Group

General contractor: Jeff F. Nimmo

Pool contractor: Jess Janssen



Two work spaces double as guest rooms and can be entered from a broad porch at the bend of one of the buildings.



outbuildings are broken into parts and used, along with a winding courtyard and landscape elements, to create a series of indoor and outdoor rooms. Each of these rooms contains a unique composition of light, temperature, enclosure, and view tied to its function. An eastern porch is perfect for cool spring mornings. Breezes funneling through the courtyard make it a cool retreat on summer afternoons. The living room provides a fireplace-lit retreat from winter storms.

The site is organized by the straight line of a decomposed granite walkway that connects a pool and observation platform at the southern extreme, crossing the carport to the house at the northern end. A pergola serves as a unifying element for these two sides of the site. The straightness of the north-south axis ends at the kitchen. From here the private courtyard continues in a zigzag path. This path is defined by two long buildings,

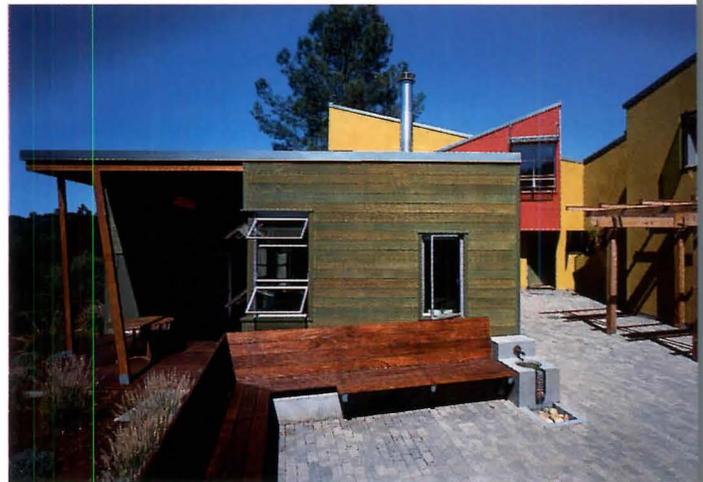
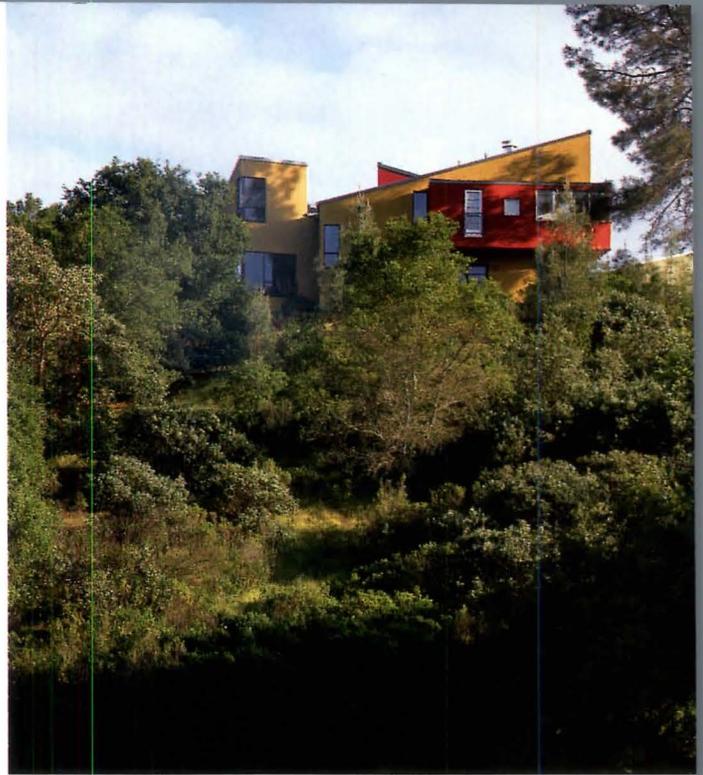
JUST AS THE VIEWS ARE CONTROLLED IN THE COURTYARD, THEY ARE CAPTURED AND FRAMED IN THE BUILDINGS.

each with a bend at midpoint. One building contains the main functions of the house—living, dining, and kitchen on the main floor, with bedrooms above. The other consists of two work spaces that double as guest rooms and are entered from a broad porch at the bend. The courtyard ends in a small manicured lawn that opens out to the north. Here, the closely clipped grass, as foreign to the site as pavers or decomposed granite, is another built surface distinct from the wild landscape.

The courtyard recalls the streets of an Italian hill town and defies its usual definition. Instead of a singular space with the rooms of the house opening onto it, it is a long winding space of varying width with rooms that are quite closed to it. This enclosed quality makes the few viewing places in the courtyard special and increases the sense of release when emerging onto the northern lawn.

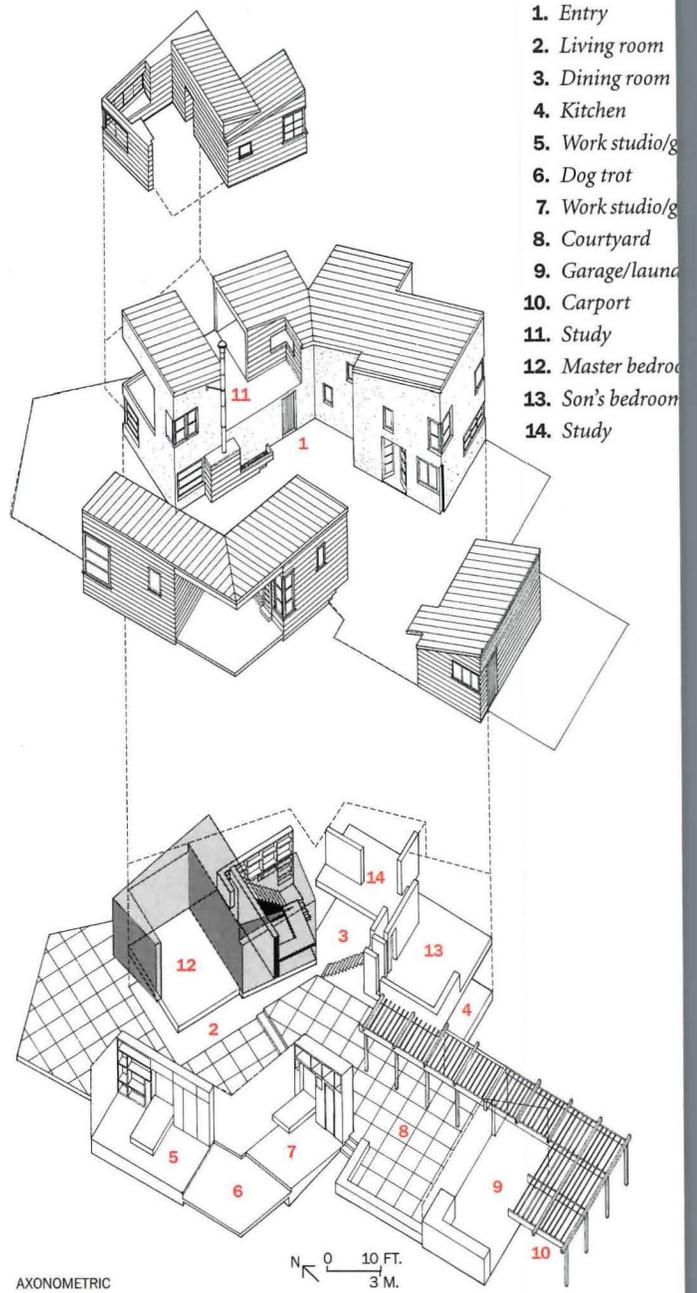
A pergola creates a place of relaxation and shade within the courtyard surrounding the house

(below). The meandering courtyard defines a series of indoor and outdoor rooms (middle right).



ed at the top of a
oll, the house fea-
as both stunning
ws and a sumptuous
dscape setting (this
ge and opposite, top).







Each space has a particular character defined by the degree of enclosure, solar

orientation, and view. The size and height of windows is fine-tuned to the viewer,

whether standing or sitting. Some rooms provide near and far vistas.

Just as the views of the vast landscape are controlled in the courtyard, they are consciously captured and framed within the buildings. Each well-detailed space has a particular character defined by its degree of enclosure, solar orientation, and distinctive view. The size and height of windows are fine-tuned to the viewer, whether standing or sitting. Some places have near views, others distant, some have both. Every major space has a large window that wraps around a corner, setting up dynamic landscape views that break up the rectilinear feeling of the room.

The first floor of the main building uses diagonal views to connect spaces vertically, as well. A double-height volume at the bend in the building serves as both entry and stair hall. There are two flights of stairs to the upper story, one leading to the master suite, another to the teenage son's hideout. While the exterior surfaces and massing of the buildings use the simple, stripped-down vernacular palette Fernau and Hartman have perfected, the interior is Modernist in its open spaces, built-in storage, and cleanly detailed elegant finishes. This ideal place to both live and work features a generous collection of indoor and outdoor areas that invite habitation at different times of the day. ■

Sources

Skylights: *Wasco Products*

Flooring: *Mintec/Bamtex Bamboo or Plyboo*

Locksets: *Baldwin*

Stains/paints: *ICI Dulux; Benjamin Moore; Cabots*

Floor/wall tile: *Dal-Tile*

Metal roofing: *BHP Steel Building Products*

Aluminum roofing: *Bonelli Enterprises*

For more information about this project, go to Projects at

www.architecturalrecord.com.





Sited at the edge of a meadow, around an ancient sugar maple (above), the house has three sections—shown here are the detached



garage/studio and main living area with children's bedrooms and work study upstairs (below).

Betsy Williams and the Aligs experiment with country elegance at the lakeshore Onominese Retreat

Kathryn Bishop Eckert

In a collaborative creative experiment with her Indianapolis clients—Cornelius Alig, an architect-developer, and Dorothy Stites Alig, a textile conservator—artist—Betsy Williams, who holds an M.Arch. from Harvard and teaches studio at the University of Michigan, devised a simple design for a vacation house. Onominese Retreat is a personal expression of casual aesthetics set amid a rural lakeshore landscape in the Leelanau Peninsula of northwestern Lower Michigan.

For 10 summers the Aligs rented cottages in Leland. An exhaustive search for their vacation house site was eventually rewarded. Their preference for lakeshore, “where the kids could go down to the beach,” over village, “where the kids could walk to the candy store,” says Cornelius, brought them to Onominese. In 1999, on a private trail near the site of an historic Ottawa village, the family bought a lot overlooking the Manitou Shipping Passage of Lake Michigan and the North Manitou and South Fox islands.

The four-tiered, 130-foot-wide site rises 200 feet above Lake Michigan. From the edge of a meadow, the land descends first to a cedar and birch plateau and then to the sandy beach. Williams ingeniously sited the house parallel to the lake but below the road and meadow, worked around an ancient sugar maple, and joined an old path that winds down to the shore.

Departing from the current trend in the Leelanau of basing second homes on northwestern log lodges and white-trimmed, gray-trimmed Nantucket cottages appointed with central air-conditioning, marble bathrooms, and gourmet kitchens, Williams and her clients drew inspiration from the county’s farm structures and early-20th-century cottages with unfinished interiors.

Three sections appear as a complex: the main living area, with bedrooms for children ages 10 and 13 and work space above; the slightly offset tower that steps down to the path to the beach, with master and guest bedrooms stacked over the basement recreation room; and the detached garage/studio. The 3,000-square-foot plan is arranged so that all sleeping and living areas overlook Lake Michigan to the west. These and the screened porch, deck, loggia, and outdoor shower surround occupants with nature.

The Aligs complemented each other in building the house. Cornelius is interested in structure, massing, and technical issues. Dorothy is comfortable experimenting with materials, textures, and colors. Williams integrated their ideas in design development, finding the

Kathryn Bishop Eckert is an architectural historian and historic preservationist who has studied buildings and cultural landscapes throughout Michigan.

Project: Onominese Retreat

Location: Leelanau Peninsula, Mich.

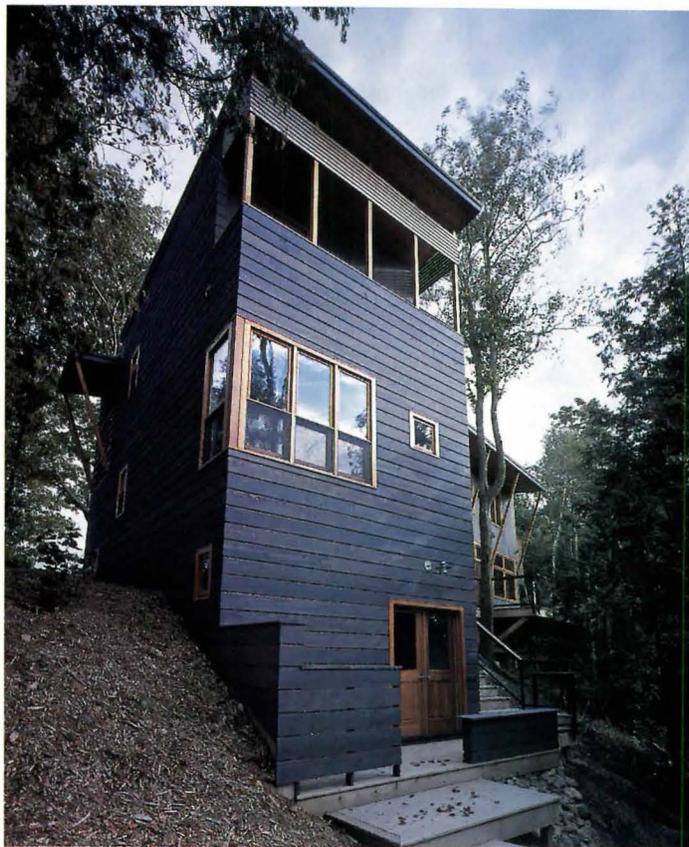
Owner: Cornelius and Dorothy Alig

Architect: Betsy Williams, with

Cornelius Alig

Structural engineer: SDI

General contractor: David Webster Construction



An offset tower comprises the third section of the house and

includes bedrooms over the rec room (above). A porch

extends the length of the main living room area (below).

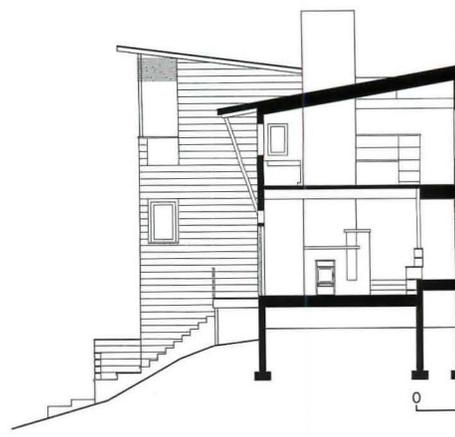


- 1. Porch
- 2. Kitchen
- 3. Living room
- 4. Deck
- 5. Master bedroom
- 6. Entry
- 7. Laundry
- 8. Garage
- 9. Bedroom
- 10. Study
- 11. Loggia
- 12. Storage
- 13. Studio

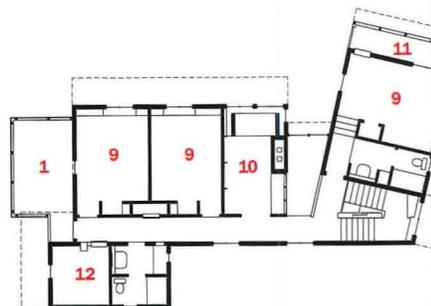
Departing from the local trend of log lodges and gray-shingled Nantucket cottages

appointed with modern amenities, Williams and her clients drew inspira-

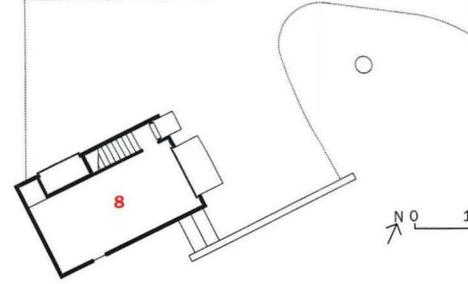
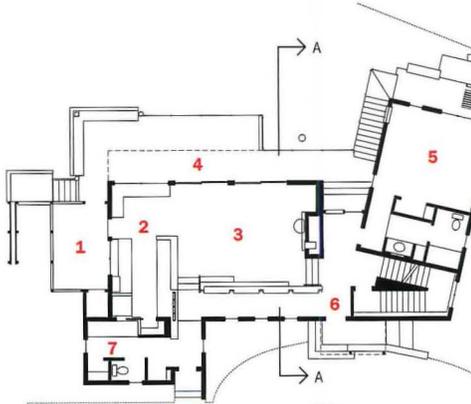
farm structures and early-20th-century cottages with unfinished interiors.



SECTION A-A



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In her secluded laboratory studio above the garage, Dorothy Alig tests ideas. Ample northern light illumi-

nates her long worktable supported by sawhorses, and a utility sink supplies water for work and cleanup.

collage of disparate approaches a rewarding challenge to work with. "As a framework for the clients' ongoing and future design experiments, the house needed to be conceptually clear but not controlling, inspiring but not overwhelming, resolved but not finite," Williams states.

Williams uses indigenous materials imaginatively. The subtle linear motif of channel rustic cedar siding board becomes a design element. Light and shadow play on the exterior walls, stained dark bluish gray to Dorothy's formula. The walls are pierced by standard double-hung and casement windows—all relatively small to meet Cornelius's energy conservation specifications. The warm sienna of the fir windows and doors echoes in the corncribble slats that screen the north entry, loggia, and porch. Low-pitched shed roofs cover the house, rising to the west in the main section and to the east in the tower section to form awnings lined with knotty pine over the deck and loggia. The roof lifts to the north over the garage/studio. Cut granite fieldstone laid with mortar spread like butter rises in the retaining wall. Both the channel board and stone are brought inside. Bands of small, lake-washed black stones seated by Dorothy decorate the chimney wall.

In his tinkering, Cornelius devised a single door that swings forward to close the utility room and back to close the lavatory. He boldly hooks nylon sailcloth to cedar posts to shade the deck corner and hangs hammocks from nautical hardware. Stainless-steel cable woven vertically and attached to conductor posts rails the porch. His transoms in the children's rooms allow cross breezes with the lakeside windows. Dorothy established the dominant palette for the house of slate gray blue, greenish

blue, bottle green, oxblood, rust red, and ocher.

To serve the Aligs' desire for simplicity connected to the spirit cottage life, Williams omitted closet doors, bathroom built-ins, and kitchen cupboards, but built open shelves and installed many easy-to-sweep linoleum floors. Ordinary plumbing fixtures furnish bathroom and lavatories. Fabric curtain panels made by Dorothy using cutout synthetic suede conceal closets. A Danish wood stove holds the fire in the living area. There is no air-conditioning, no television, no mail delivery.

Dorothy paints for hours in seclusion, testing ideas about northern Michigan's strong light, ribbons of farmland and orchard and patterns of rocks and grasses in her laboratory studio above the garage. Ample northern light illuminates her long worktable supported by sawhorses, and a utility sink supplies water for work and cleanup. "The meditative sound of breaking waves, starry nights, and fragrant cedar foster contemplation and creativity," she says of life at Onominesse Retreat. ■

Sources

Windows, entrances, sliding doors: Kolbe & Kolbe

Glazing: LUMAsite

Hardware pulls: Hoppe

Cabinet and custom woodwork: David Webster Construction

Flooring: Armstrong

Lighting: Artemide; Juno; Louis Poulsen

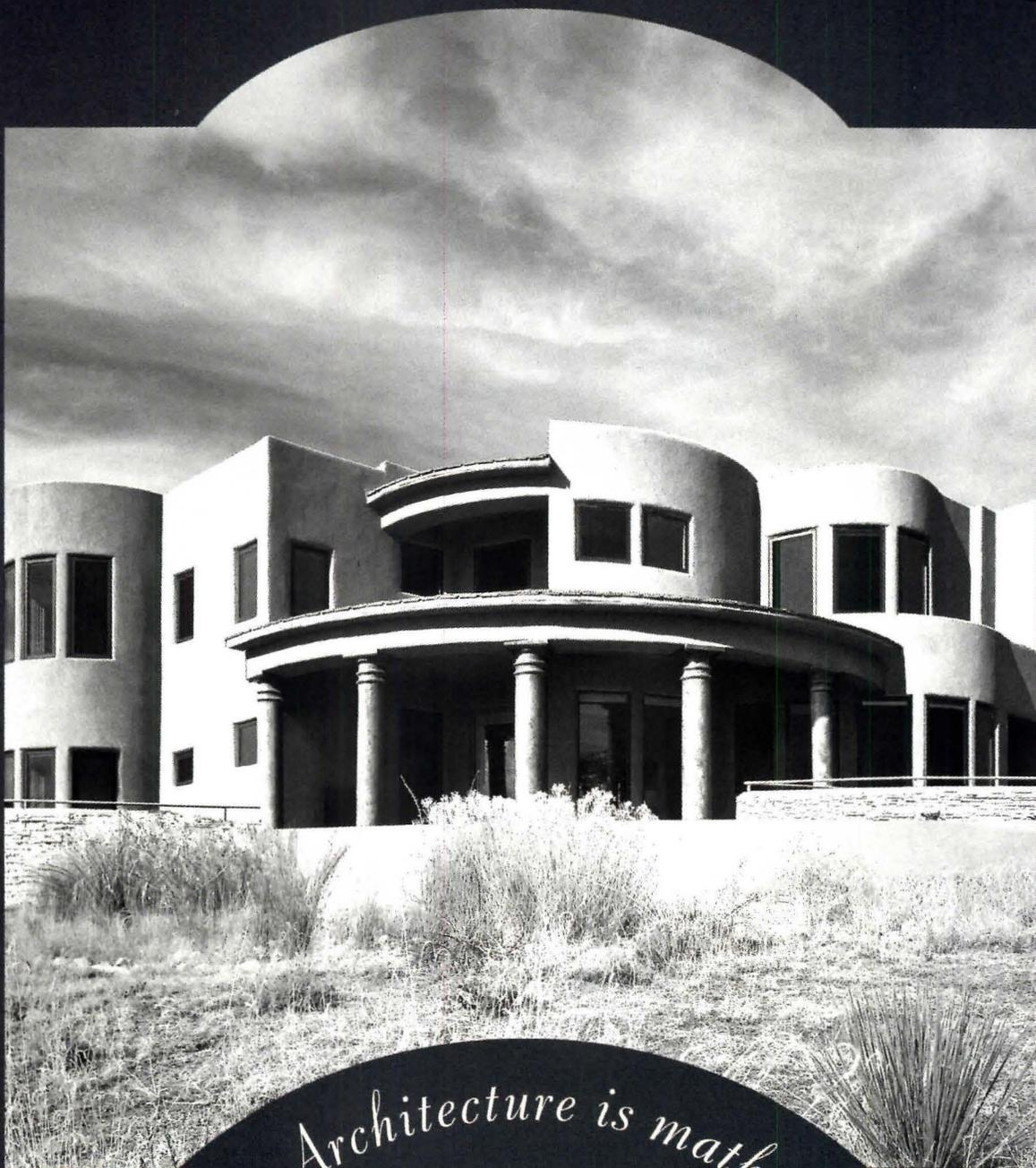
Paints: Cabot; Benjamin Moore

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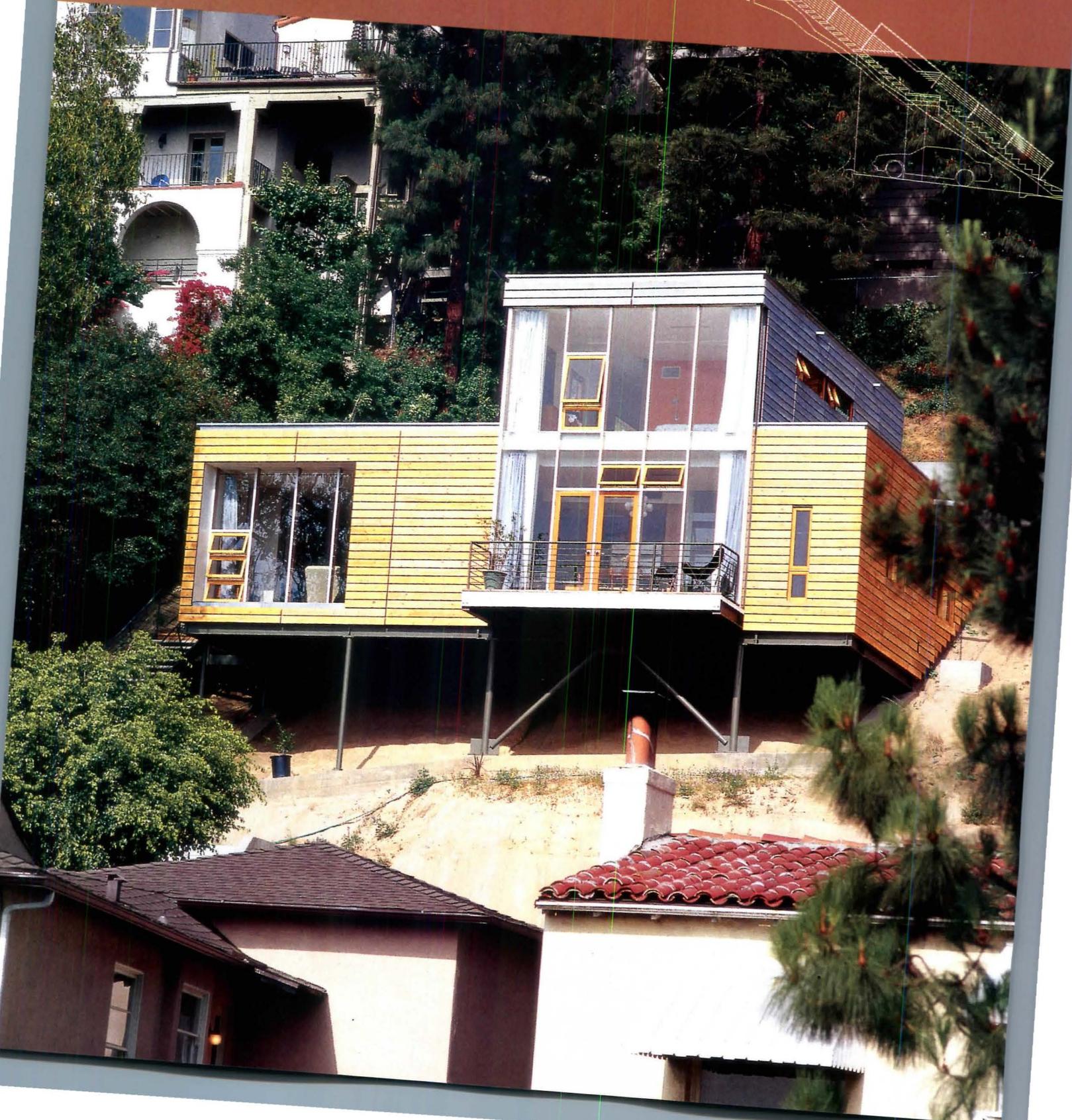
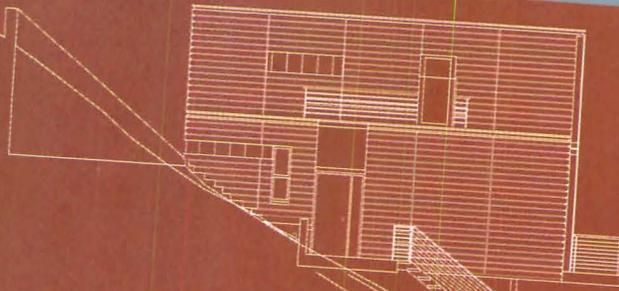
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Sited on a steeply sloped lot in Silverlake, Calif., the house establishes a horizontal foundation on the primary floor with a narrower, vertical volume at the second floor (below).



alanced on a hillside, rooted in the ground, Lorcan O'Herlihy's **Lexton MacCarthy home** opens to the sky

Allison Milionis

There are approximately 80 steps from the street to the home/office of Lauren Lexton and Kevin MacCarthy. Though a tough climb, the payoff is a spectacular view and the thrill of being perched on a precipitous slope. The site is not unusual in this Silverlake neighborhood, an area of Los Angeles with a history of adventurous architecture on atypical sites. Here, houses by R.M. Schindler and Richard Neutra, among other midcentury trailblazers, dot the steep hillsides, inspiring generations of architects and their daring clients to create something more interesting than the traditional saltboxes in the flatlands.

Although architect Lorcan O'Herlihy was born in Ireland and raised in London, and his clients Lexton and MacCarthy are originally from the East Coast, they are the 21st-century versions of those legendary aggressives. Sharing the same design sensibility and a willingness to experiment, the three formed a unique team to make the exceptional happen on a fairly rigid budget. And that was a challenge, considering the exorbitant costs of building on a hillside. In addition, both Lexton and MacCarthy are freelance professionals—Lexton is a documentary filmmaker and MacCarthy a writer, director, and illustrator—which meant they needed individualized work spaces included in the program. A stepped plan would provide more square footage, but the complexity and cost of that endeavor was out of the question. "We decided innovation would be in the details, not the site," said O'Herlihy.

The house is comprised of two articulated volumes, which look as though they could lift off of the hill at any moment. Both are clad in wood siding that is floated on the exterior walls, rather than directly attached, to allow for airflow and to enhance the sense of lightness. The upper level is clad in boards stained blue in reference to the perpetually blue sky, and the lower-level volumes are lightly varnished to match the surrounding trees. Devoid of superfluous details, the natural simplicity of forms and materials is stylistically akin to a European aesthetic, less influenced by the L.A. school. But that makes sense, considering O'Herlihy's European tastes and sensibilities and the East Coast roots of Lexton and MacCarthy.

Though only 2,000 square feet, the openness of the plan is deceptive. The primary level is public domain, comprised of a living room, kitchen, and dining space, guest bathroom and bedroom, and two very different work spaces. There are few walls, and most of those are operable and/or translucent. The plan is a composition of flexible spaces, uniquely disparate but complementary as a whole. The absence of absolute definition creates a less restrictive architecture that allows for several different plans depending on the needs, or moods, of the occupants.

O'Herlihy devised interesting ways to define the studio and

Allison Milionis is a Los Angeles-based writer. She contributes to several national and international architecture and design magazines.

Accessible from the second story (top), a rooftop deck of AstroTurf and stones offers spectacular views of the Hollywood Hills (right).



office, which can easily be integrated into the larger plan. Adjacent to the front entrance, a billowy silver curtain cordons off MacCarthy's space, which consists of a single desk and rows of bookshelves. Like casual attire, the curtain suggests a more relaxed and open area. When pulled aside, MacCarthy is completely exposed to the main room, but the trade-off is an abundance of natural light and a great Hollywood Hills view. He prefers to do his art here, in the open, but will sometimes go to Lexton's office to write. "Sometimes I need to be more cocooned," said MacCarthy, "and I have to minimize the distractions to write."

Project: Lexton MacCarthy Residence

Location: Silver Lake, Calif.

Owner: Kevin MacCarthy and Lauren Lexton

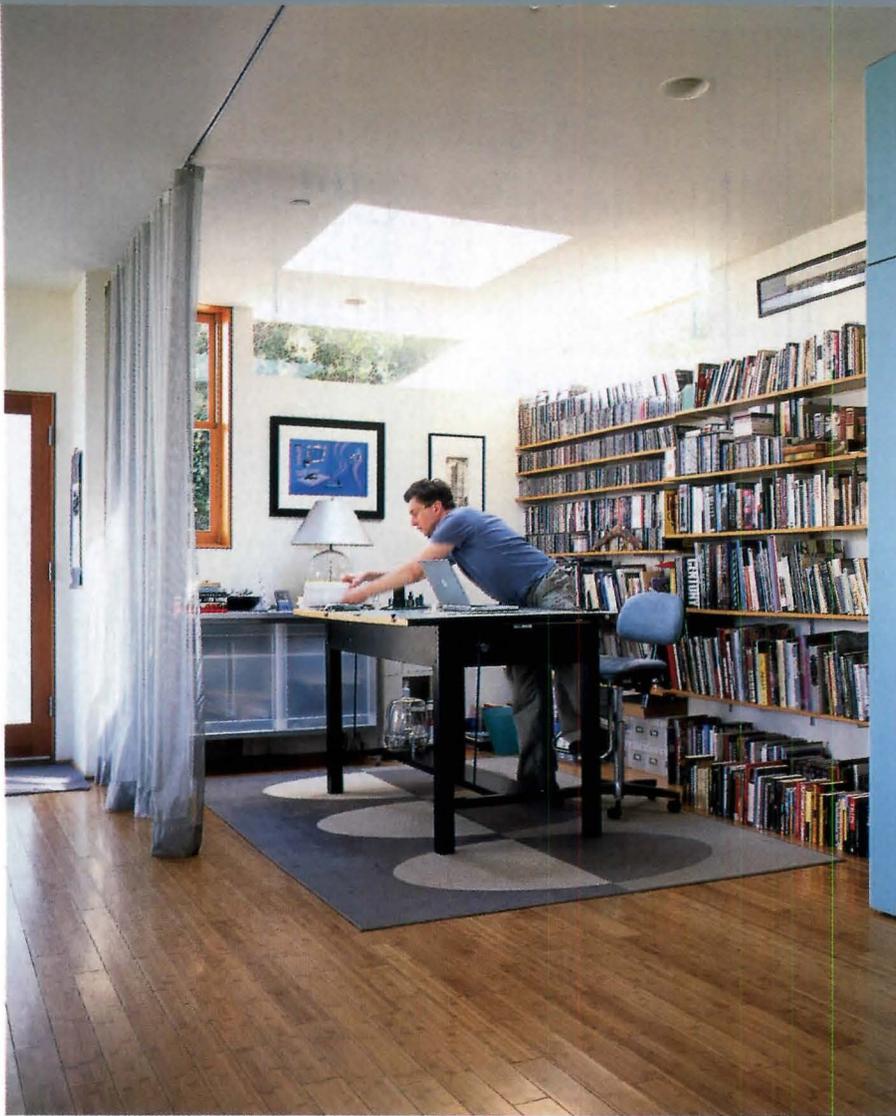
Architect: Lorcan O'Herlihy Architects—Lorcan O'Herlihy, principal in charge; Michael Poirier, project

manager; Danika Baldwin, Juan Diego Gerscovich, Kevin Tsai, Mariana Boctor, team

Engineer: Paul Franceschi Engineers

Landscape architect: Chuck Carr

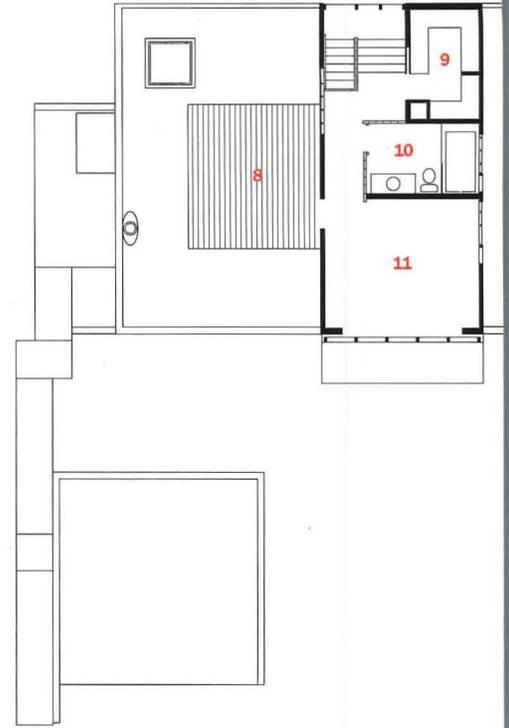
General contractor: A+B Construction



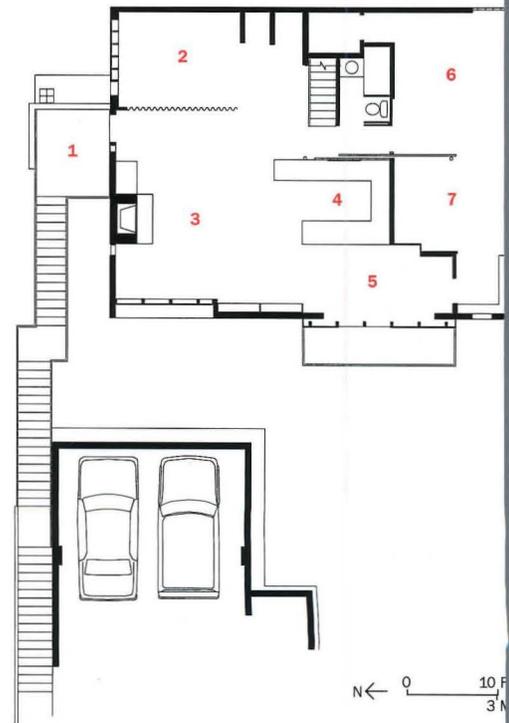
MacCarthy's work space is casually separated from the main living room with a billowy curtain. When the curtain is pulled aside, the office is exposed to an abundance of light (above and right).



- 1. Entry
- 2. Work space
- 3. Living room
- 4. Kitchen
- 5. Dining room
- 6. Guest room
- 7. Work space
- 8. Deck/terrace
- 9. Master closet
- 10. Master bathroom
- 11. Master bedroom



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Lexton's work space gains definition from a translucent sliding wall (above). The primary level of the house, which includes all public areas and a guest room, is flexible and open (left and below).



Lexton's office is semiprivate, receives less light, and is considerably smaller in scale. Located behind the kitchen, her desk and environment seem to be created for quiet contemplation. There are no spectacular views to compete for attention and less opportunity for distractions. Unlike MacCarthy's space, Lexton's can change with the mere push of a slider. Though not as light and airy as the curtain, the translucent wall provides the opportunity for adaptation. Left open, the office becomes part of a larger room, which has been designated a guest bedroom.

The 600-square-foot second floor is completely private and provides no space for work. Rarely does anyone but Lexton or MacCarthy enter this zone. Comprised of the master bedroom, bathroom, and access to a roof deck covered with blue AstroTurf and white glass pebbles, this level is the area of rest, the respite from the primary level, where it may be more difficult to leave work in its place. And with no opportunity for architectural shape-shifting, there is nothing to do but take in the view of the Hollywood Hills through the floor-to-ceiling window wall, or from the roof deck. This distinct physical separation of private and working areas is essential to making the psychological transition between task-oriented and leisure mode much easier for the residents. ■

Sources

Exterior cladding: Mel Brown Construction (masonry and concrete); Marvin Windows, A+B Construction (metal/glass curtain wall)

Roofing: Dex-O-Tex

Wood windows/doors: Pine by Marvin

Glass: Westcrowns; Bristolite Skylights; Solter Plastics (plastic glazing)

Hardware: Omnianos (locksets)

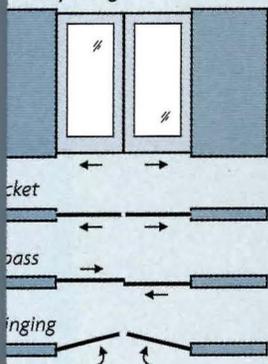
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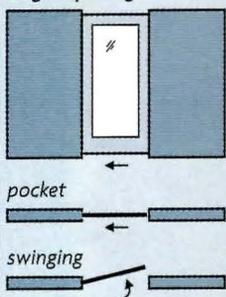
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Mark Hutker and Jon McKee's **Skolos/Wedell Residence** stands in the woods like a Zen oasis



Anodized and copper-painted aluminum siding punctuated with translucent panels characterizes the Zen-like exterior. The house meanders like a snake through the lovely sloped site, commingling with the landscape.

By Jane F. Kolleeny

I itinerant city dwellers Tom Wedell and Nancy Skolos decided to build a home on a 2-acre sunlit meadow in Canton, Massachusetts, moving from their Boston loft to this bucolic country site. Not your typical rural folk, this husband and wife team of commercial artists love modern design. One neighbor refers to them as the people who live in the Shell Station. Coming from a conservative New Englander, it's not far from the truth. Their "loft landed in the woods," as Skolos calls it, is a reflection of a Minimalist design vernacular that is evident in everything the couple undertake.

A three-pronged team of longtime friends appear to have had little problem collaborating on the design of this project: the artist, interior designer, and resident Tom Wedell; architect Mark Hutker, AIA, with offices on Martha's Vineyard and a strong portfolio of residential design; and Jon McKee, AIA, a founding partner of Symmes Maini & McKee, a large architectural firm in Cambridge, Massachusetts. The slow, steady pace of country life served as a backdrop for the design of this live/work home that features both graphics and photography studios.

The architects oriented the 3,850-square-foot house with a central north/south axis so that the sun moves through the rooms in the same sequence in which they are occupied. Oriented by topography, view, and privacy, the house's clear geometry was driven by the materials and the simplicity of the program. There are four quadrants—the bedroom, work, living, and outdoor areas—that come off the spine and are defined by two perpendicular cuts.

The exterior materials include anodized and copper-painted aluminum siding, matching the copper of the beech trees and of the iron in the large rocks unearthed during excavation, which stand in a rock garden near the entry. The siding activates the light by transmitting it off its reflective surfaces, and the painted copper is as durable as an automobile finish. The siding is complemented by insulated translucent fiberglass panels. "Prefabricated at the plant, the steel-framed, wind-resistant panels alternate with the siding, acting as mediators between the ambient and outside light," says Hutker. The glowing panels appear like high-tech shoji screens, adding luminosity to the architecture. Like a Japanese teahouse, the garage is fully clothed in the panels and backlit, illuminating the walkway to the main entrance of the house.

Upon entering the long, welcoming hall and client waiting area, one is surprised to encounter the dining room first. This is the one transitional space with a mixed live/work personality—it is used both for private dining as well as for meetings, and it harbors a design library behind cupboarded walls. Indeed, it does not take long to discover that Tom, a not-so-closet neatnick, has found a behind-the-scenes place for just about everything. Nary a book, CD, newspaper, or bag of groceries is within view. The house is like a display case meticulously composed for its audience. Beyond the dining area and behind a movable screen appear the ample offices and photo studio. A client and delivery entrance at the back end of the office further segregates public from private areas. These sleekly designed offices benefit from abundant light.

Project: Skolos/Wedell Residence

Location: Canton, Mass.

Owner: Nancy Skolos and Tom Wedell

Architect: Mark Hutker and Associates Architects, with Jon McKee, AIA

Interior designers: Nancy Skolos and

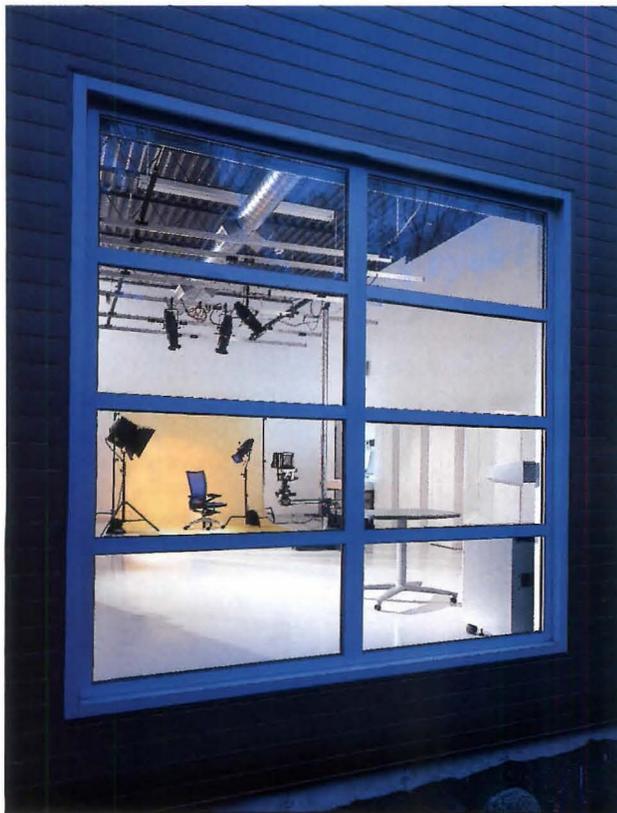
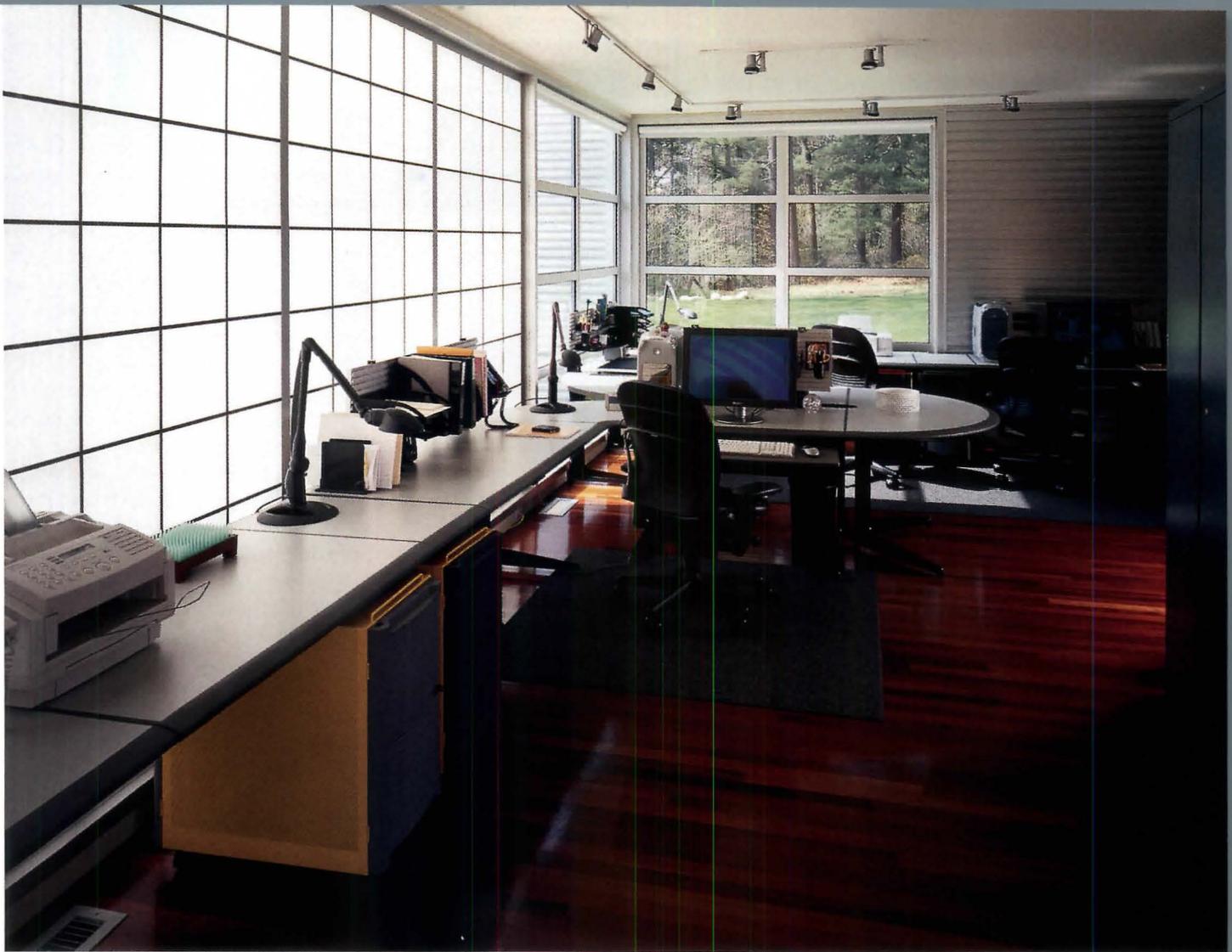
Tom Wedell

Engineer: Siegall Associates

Landscape architect: James O'Day/Garden Arts

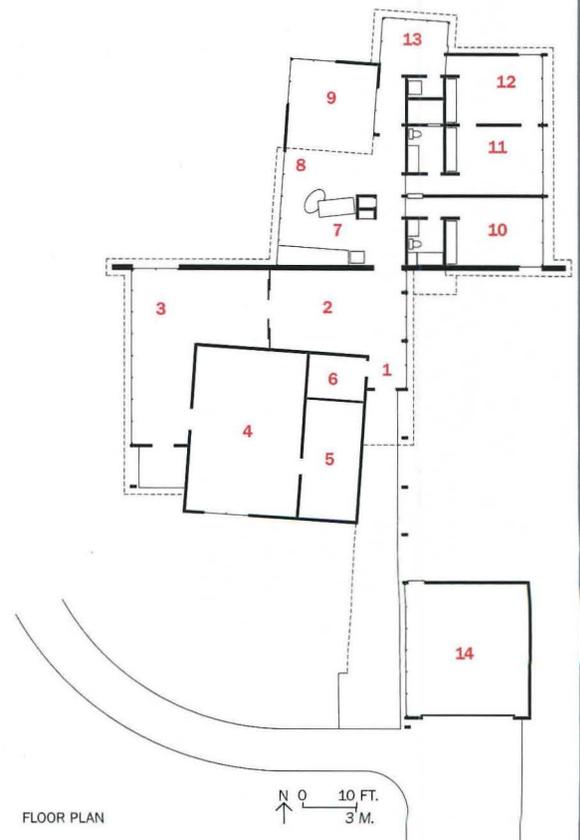
General contractor: Brownlow Associates

PHOTOGRAPHY: © TOM WEDELL



Ample office space receives abundant light from outside (above). A high-tech photography studio lies beyond the graphics office (left). A client entrance serves both studio areas, separating business from leisure activities.

1. Entry
2. Library/studio vestibule
3. Graphics studio
4. Photo studio
5. Studio storage
6. Mechanical room
7. Kitchen
8. Dining room
9. Living room
10. Guest bedroom
11. Master bedroom
12. Sitting room
13. Private entry
14. Garage



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Küppersbusch

THE FUTURE OF COOKING SINCE 1875

A combination living room, dining room, and kitchen occupies one quadrant of the house (right). A space comprising a library, studio vestibule, and secondary dining area is just outside the offices, partitioned off by the shoji-screenlike panels (below).



Seen from both outside and inside the house, the panel system serves several purposes. It blocks uninspiring views, so one's attention is directed to the peek-a-boo, full-windowed areas where compositions of garden and sky are staged. This creates a wonderful feeling of being cocooned while exposed to the outdoor realm. Hutker notes, "Open windows release into the landscape, but the translucent panels balance the space to bind you inside." According to Skolos, "The house glows all the time, and the walls snap, crackle, and pop as the temperature warms and cools." McKee adds, "The light constantly changes, making you feel motion as it moves the tree shadows."

The residents are furniture lovers. "Our personal history began at Cranbrook Academy of Art. Since Cranbrook, we have collected a number of affordable Postmodern pieces like lighting fixtures by Ron Rezek and Philippe Starck and a carpet with a pattern designed by Zaha Hadid. We enjoy watching the old and new intermingle, and seeing the new eventually become the classic," says Wedell.

The neighbors have found this modern addition to the countryside a little vexing. Wedell tells the story of how one neighbor pulled up in her car, asking about the style of the house before it was actually built. He replied, "It's turn of the century"—he was smart not to mention which century. ■

Sources

Insulated panels: *Kalwall*

Aluminum siding: *Atas*

Cabinet hardware and pulls:
Hafele

Security: *ADT*

Lighting: *Artemide; Juno; Litolier; Flos; IOS Lighting*

Plumbing: *Porcher; Dornbracht; KWC*

Flooring: *Tuflexis Partus*

Paint: *Benjamin Moore*

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

Kitchen & Bath Portfolio

Situated in landscapes ranging from the forests of Washington to the Virginia Beach coastline, these **well-designed kitchens and baths** reflect their surrounding environments and a variety of client tastes—from keeping a **kosher kitchen** to a **passion for airplanes**. *Rita F. Catinella*

Wooden box floats in a house on a ridge in Washington State

When a professional couple and their two young children moved to 40 acres of Ponderosa Pine forest in eastern Washington State, they turned to Seattle-based Olson Sundberg Kundig Allen Architects to design an ideal home to revolve around their casual lifestyle. An active, outdoor-oriented couple, the clients requested that the home be closely connected to the natural landscape while maintaining an open feeling between rooms to enhance a sense of family.

The “fort,” a home office that is connected to the main house by means of a footbridge, was recommended by principal designer Tom Kundig, AIA, to keep the couple’s business and family lives separate. Built across a ridge, and aptly named the Ridge House, the entire home feels as if it’s sitting in the treetops.

Intended to be a functional, well-loved room used every day by the family, the Ridge House kitchen allows a 280-degree view of the landscape through the surrounding rooms. Featuring custom mahogany-veneer cabinets, ceilings, and walls, and a Brazilian cherry floor, the room, conceived as a wood box inserted into the larger wood-box structure of the house, connects to the adjacent volume of the living/dining space. In addition to the bird-head drawer pulls, the owner selected striking Brazilian marble countertops that contrast with the wood and glass theme while remaining connected to the natural landscape. A powder room that pokes out of the wall directly across from the kitchen was intentionally designed to enhance the feeling of a kitchen cabi-

net, by way of matching exterior mahogany paneling.

While the kitchen is open to the home’s living/dining space, the architect did not aim for a seamless connection but rather a distinct sense of separation between the two areas. According to Kundig, the final effect of the design did just that, giving the illusion that the kitchen is a boat cabin floating within the home. *R.F.C.*

Architect: Olson Sundberg Kundig Allen Architects—Tom Kundig, AIA, project designer/principal; Ellen Cecil, Steven Rainville, project managers

General contractor: Gutman Construction

Sources: JE Cabinets (custom cabinets); Thermador (range); Vent-A-Hood (range hood interior); Brazilian blue marble (counters)



Blue and white Brazilian marble brings an element of earth-bound sky within the Ridge House’s wood-clad kitchen. The room’s rich materials were chosen for their connection to the surrounding forest landscape.

Kitchen & Bath Portfolio



Architect David Coleman, AIA, uses materials that attempt sustainability and convey the influence of the surrounding landscape. In both the Chee resi-

dence (top left right) and the residence (bottom left), the kitchen is a space that allows interaction with outdoors.



A pair of kitchens reflect their inspiring locations through materials

In designing the Buchter residence, a vacation retreat for two sisters and their spouses, architect David Coleman, AIA, drew inspiration from late-19th-century national park lodges and platform tents. The resulting house plays with a “summer camp” theme while connecting the space to the environment through its design and materials.

The interior of the house is influenced by its location on Orcas Island, Washington, and more specifically, on a rock outcropping there. While concrete, used throughout the house, suggests the heaviness of the rock, custom-made fir cabinetry references the surrounding forest. Barn doors, custom made of fir and blackened steel, can be closed to separate the space and create privacy.

Like the Buchter kitchen, the kitchen in the Chee house incorporates the themes present throughout the rest of the interior. The clients

wanted to preserve the exterior of the house, a 1910s Colonial, but chose to gut the old interior in favor of a modern one.

Large pivot windows and rolling doors blur the lines between the inside and out, creating one space. However, to separate the kitchen and dining-room areas, the architect raised the kitchen floor so that it appears to be floating above the main floor.

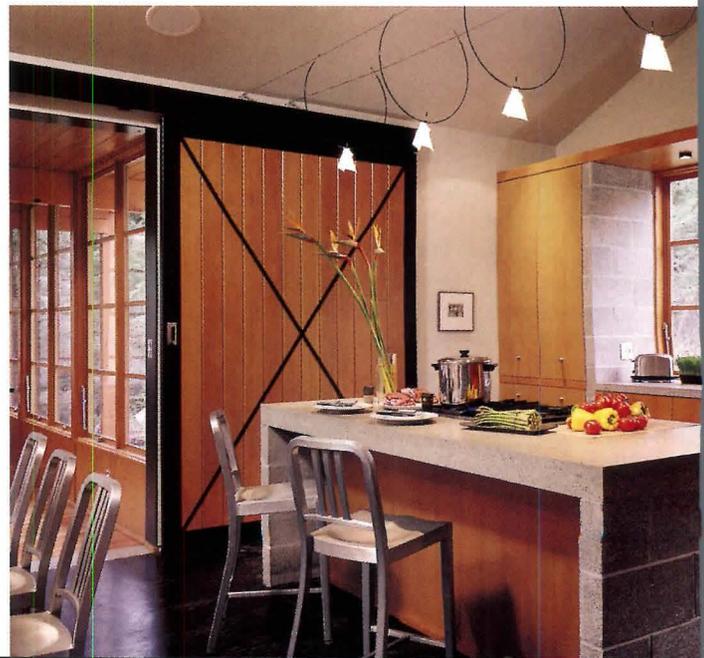
The use of fossilized French limestone and plantation mahogany, in particular, give a warm, elemental quality to the space and soften the building’s strong, modern lines. Used throughout, the streamlined materials further the home’s dialectic between the natural and man-made, old and modern. *Diana Lind*

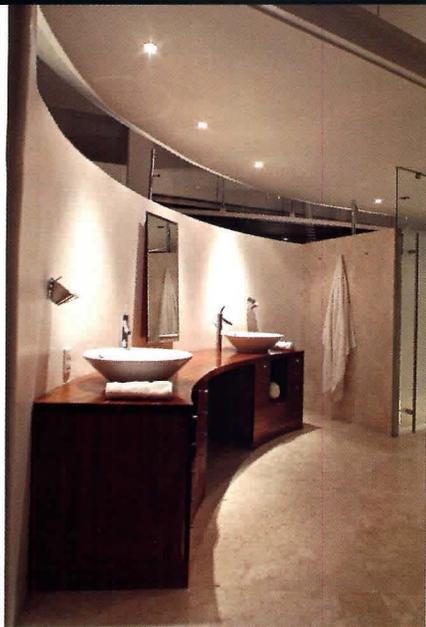
Architect: David Coleman
Architecture

Sources: Buchter residence—Dog

Paw Design (countertops, concrete); Baldwin (hardware); L.M. Scofield (concrete floors); Mutual Materials (concrete-block island); Tech Lighting, Lightolier (lighting); Two Rivers Window (windows); Sub-Zero (refrigerator); Jennaire (range); Gaggenau (dishwasher); Sharp (microwave); Dornbracht (plumbing fixtures)

Chee residence—Baldwin (hardware); Vermont Structural Slate (Norwegian quartzite); Eureka Lighting, Hydrel, Artemide (lighting); Quantum (pivot windows, rolling doors); Sub-Zero (refrigerator); Viking (cooktop, downdraft); Gaggenau (oven); Miele (dishwasher); Sharp (microwave); Dornbracht (plumbing fixtures)





Technology combines with vanguard design in a Mexico City home

When Mexico City-based Dangil Architects designed a home for a family of four, the clients, an architect and an interior designer, knew what they wanted. Lovers of technology and vanguard design, the couple requested that the firm focus on functionality, Modernism, and open spaces. Because the home is located in the capital's Jardines del Pedregal, focusing on the view was vital, as well.

For the kitchen, the client requested a space that could be either isolated from or integrated into the dining room, depending on the position of a wooden screen: If it is left open, a tabletop *tepanyaki* grill is accessible to diners. The kitchen's materials, including stainless steel, maple wood, and acid-treated marble, harmonize with those throughout the rest of the home.

Located over the home's temperature-controlled central yard is a huge glass dome. Since the bathroom's interior wall crowns the yard, the architects were able to satisfy the client's request to "never miss the great view." The bathroom, graced by a curved outer wall, features both custom and standard elements, such as Philippe Starck basins on a tsalam wood base. *R.F.C.*

Architect: Dangil Architects—Daniel Pérez Gil, principal; Sergio Reinoso, Ricardo Zepèda, design collaborators
Engineer: Vázquez Engineers—Ismael Vázquez
Interior design: Nuria Rodríguez
General contractor: Dangil Architects; Pablo Rodríguez
Sources: BVC (windows); Nuria Rodríguez (dining-room table/chairs); Targetti, Artemide, Simes (lighting); Alno (kitchen system); Lutron (controls); Hansgrohe (plumbing)



Modern Los Altos Hills residence transformed to meet the needs of a growing family

Designed by John Funk in the mid-1950s for a childless couple, the Los Altos Hills house had fallen into disrepair when Johnson Fain set out remodeling and expanding it to suit the needs of a family of five. Preserving the original thermal con-

crete floors and steel frame, the firm transformed the single-story structure into an open, communal residence. Aiming to create a kitchen that would also serve as family room, design partner Scott Johnson, FAIA, says the firm utilized warm, natural materials

and skylights to combine airiness with durability. The walls and cabinets are constructed of dark macassar ebony and light, quartersawn North American maple for contrast, while cork tiles on the pantry door provide a utilitarian surface for tacking up report cards and art projects.

In contrast to the open flow of the 6,800-square-foot home, the master bath is an intimate, sophisticated space. Enclosed within the master bedroom's private suite, it receives warm, diffuse light from a maple-lined skylight. Like the kitchen, it is rich in materials, including Italian glass mosaic tile on the walls and floor, a calacatta marble countertop, and an ebony millwork cabinet cantilevered from the wall. The slate floor tiles complement the concrete floors in the rest of the house that, in addition to the visual warmth they provide, contain the residence's only heating system. *Claudia La Rocco*

Architect: Johnson Fain
General contractor: Redhorse Construction
Sources: Kitchen—American Slate (island countertop); Wavell Huber (cabinets, skylight box liner); Viking (stove); Sub-Zero (refrigerator); Fisher & Paykel (dishwasher); Knoll (chairs); Bathroom—Bisazza (mosaic tiles); American Slate (tile floor); Wavell Huber (cabinet); Dornbracht (faucets); Kohler (lavs, tub); Belfer, Fontana Arte (lighting)



Kitchen & Bath Portfolio

The ideal “green” kosher kitchen

When William McDonough + Partners designed the kitchen for their client's Virginia Beach residence, they faced a central challenge: build two kitchens in one for the kosher couple and their four children. The client needed separate stovetops, ovens, sinks, and two sets of pots and dishes but did not want a split kitchen. To create unity, says design partner Allison Ewing, AIA, the firm concentrated on materials and accessibility, allowing for ease of movement into and throughout the space. Balancing the client's interest in diversity with the need for harmony, the kitchen is limited to three main materials: Italian slate, stainless steel, and cherry.

Partner William McDonough's attention to environmental issues manifests itself throughout the residence, from the use of sustainably harvested Spanish cedar for the exterior paneling to the reclaimed blue limestone in the sunroom and kitchen. Working with Nelson-Byrd

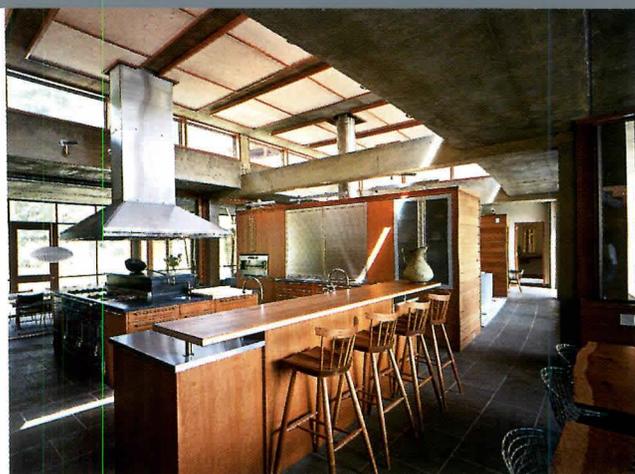
Landscape Architects, the architect integrated the residence and pool house and their marine setting. The kitchen and family rooms mimic a pier, while the two adjoining wings are loosely articulated as boats. A reflecting pool outside the kitchen forms a miniature of the bay beyond. C.L.R.

Architect: William McDonough + Partners

General contractor: James M. Sykes Construction

Interior design: Studio Soffield

Sources: Miele (dishwasher); Duratherm (entry doors, windows, patio doors); Paris Ceramic, Ann Sacks (tile); Sub-Zero (freezer, refrigerator); Trane (HVAC); Bulthaup (cabinets, plumbing fittings); Franke (plumbing fixtures, garbage disposer); Poulson, Alcko, Bega, Speciality Lighting, LSI, Bruck, Starfire, Exterieur Vert (lighting); La Cornue, Gaggenau (oven, range); Cabot, Sikkens, Benjamin Moore (paints/stains); Lutron (lighting system)



Like the rest of the loft, the kitchen features an open design. Its colorful cabinetry lightens the space beneath the lofted bedroom and provides a contrast to the residence's industrial accents.



A playful twist on a loft's industrial style

The Zeff loft's light-industrial motif reflects the aesthetic of the 1907 Clocktower Building, a former lithography plant in San Francisco, where it is located. The kitchen, in turn, suitably sports some standard industrial products—a Sub-Zero fridge and Viking range—but the architect's custom-made details distinguish it from similar designs.

For one of those distinctions, the architect created an exposed-metal system attached to the kitchen that functions as a bar. Extending the boundary of the kitchen, the bar invites the client, a bachelor, to use the kitchen from the dining area and adds to the openness of the space.

In keeping with the playful

aspect of the kitchen, the architect incorporated his client's passion for airplanes into the design of the attached eating area. While not obvious to the uninformed eye, the cantilevered metal counter subtly suggests a plane's wing.

Offsetting the loft's industrial accents, the kitchen features stained wood cabinetry and recessed lighting. The resulting effect is an apparent mix of contrasting colors. D.L.

Architect: Mark Horton Architecture
Sources: Bosch (dishwasher); GE (microwave); Franke (sink); Grohe (faucet); Zephyr (vent hood); Absolute Black (countertop); OnSpa Welding and Design (metalwork); Chris Chaput Cabinet Maker (cabinets, pulls)

Residential Products

/BIS Review

Sculptural bath furnishings, cooking appliances that adapt to their environment, and the latest in kitchen and bathroom design and technology was on display at this year's Kitchen & Bath Show held in April. *Rita F. Catinella*

► Sculptural bath furnishings and fittings

The initial U.S. launch of Australian-born designer Marc Newson's collection for Porcher includes a pedestal lavatory, bidet, and a freestanding 6' bathtub. The polished chrome fixtures, including an 8" widespread faucet, monoblock faucet, and tub filler, are influenced by Newson's early training as a silversmith and jewelry designer. The collection will be available in October. 800/524-9797. Porcher, Phoenix. **CIRCLE 213**



► Door-free privacy

Lucides, the new shower concept from Clarke Products on display in the Lucite booth during the show, features a curved, translucent, glass-free wall designed to be a sculptural retreat. The 56" x 72" footprint leaves room for a choice of wall, ceiling, and handheld showerheads and body sprays. The Lucite surfaces, available in four translucent shades, coordinate with Clarke's range of slip-resistant acrylic shower floors. The high-gloss, nonporous surface softly diffuses light while providing ample privacy. 800/426-8964. Clarke Products, Dallas. **CIRCLE 214**



◀ Communications center

While several "interactive" fridges at the show utilized the latest in technology, Frigo Design takes a different approach to home communication with the Chalkboard Frame and Panel set. Easily attachable to any make or model of refrigerator (back to 1942), the magnetic chalkboard surface is available in either green or black. Frigo Design manufactures frame and panel sets for all makes and models of refrigerators, dishwashers, and compactors, in custom-finish materials including stainless steel, laminates, woods, and metals. 800/836-8746. Frigo Design, Brewerton, N.Y. **CIRCLE 215**



▼ If money isn't an object

While British designer Christo Lefroy Brooks is known for classic luxury bathroom furnishings and fittings inspired by the Edwardian era, his new XO collection offers a distinctly more Modernist option for a select clientele that includes movie stars and the Prince of Wales. A costly manufacturing process results in jewel-like, stainless-steel plumbing fixtures with a price point to match—basic taps start at \$1,400. 212/226-2242. Lefroy Brooks USA, New York City. **CIRCLE 216**

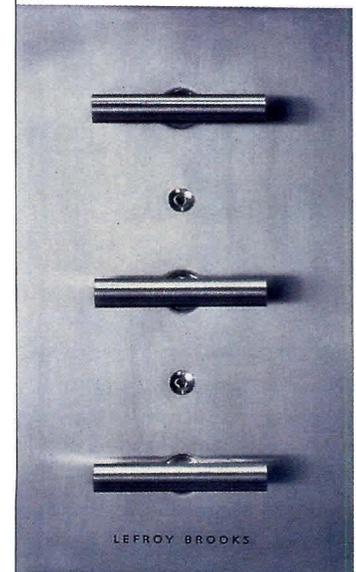
Chilling and chilling by the pool

Whirlpool is entering the outdoor kitchen market with a complete line of KitchenAid professional-quality stainless-steel appliances. These include freestanding and built-in door gas grills, slide-in refrigerators, freestanding and built-in outdoor bars, food serving carts, and high-capacity outdoor ice makers. An extension of the KitchenAid Architect Series kitchen appliances, the line also includes premium accessories such as a stainless-steel griddle, wok ring grates, and glass doors. 800/253-3977. Whirlpool Corporation, Benton Harbor, Mich. **CIRCLE 217**



▲ Pint-size professional

FiveStar claims that its 24" range offers the same professional cooking capabilities as its larger counterparts, along with a smaller footprint for urban living and small spaces. This new all-gas model includes two Vari-Flame burners (which allow for a constant-flame simmer as low as 400 BTUs), FiveStar's Airflow convection oven, and all of FiveStar's standard features. 800/553-7704. FiveStar, Cleveland, Tenn. **CIRCLE 218**



Residential Products

K/BIS Review

► Series of firsts

Axor Citterio, the newest addition to the Axor collection, will include a complete assortment of lavatory, bidet, and tub faucets, and shower equipment, controls, and accessories. Designed by Antonio Citterio, who considers himself "first and foremost an architect," the new line is the first time Hansgrohe is unveiling an Axor bath collection in both Europe and the U.S. The option of an electroplated platinum finish and plumbing fixtures (a freestanding basin and bathtub) are also firsts. 770/360-9880. Hansgrohe, Alpharetta, Ga. **CIRCLE 219**



▲ Tempered glass shelf

Ginger presented its Art Deco-influenced Empire lighting and bathroom accessories in oil-rubbed bronze at the show. This new collection includes sconce lighting, mirrors, and decorative cabinet hardware, as well as standard, specialty, and hospitality bathroom accessories. The tempered-glass toiletry shelf with gallery rail (shown) in oil-rubbed bronze is offered in 18" and 24" long versions and is 5½" deep. 888/469-6511. Ginger, Fort Mill, S.C. **CIRCLE 221**



▲ No more battery replacements

EcoPower is the first self-generating hydropower sensor faucet that puts water to work by harnessing the electrical power generated by its own water flow. EcoPower produces its own electricity each time water flows over its internal turbine; the electrical energy is then stored in EcoPower's patented rechargeable battery housed within the faucet. Operating in conjunction with the internal turbine, the rechargeable battery has a 10-year life span. 888/295-8134. Toto USA, Morrow, Ga. **CIRCLE 223**



▼ Serene bathing

The Neo-Metro collection is a compilation of hand-sculpted and hand-finished stainless-steel bathroom fixtures. The Cerine Series, the newest offering in the line, combines a choice of three different wood veneers—bamboo, cherry, and mahogany—with a stainless-steel toilet, vanity, tabletop vessel, and soaking tub. In addition to veneer, specifiers can clad the products with their own choice of materials. 800/488-8999. Acorn Engineering Company, City of Industry, Calif. **CIRCLE 220**



▼ Customizable cooktop

The Matrix personalized cooking system is made up of cooking surfaces that vary in size and function and include gas, electric, and induction elements. Each individual component of the collection was created as an independent element that can stand alone or interact with the complete collection. A universal connecting strip allows for various combinations; for example, a pair of 12", two-burner gas elements can be mixed with a 12" contact grill, or a 32", 5-zone, sensor-touch cooktop can be matched with an induction wok element. 800/459-0844. Küppersbusch, Tampa. **CIRCLE 222**



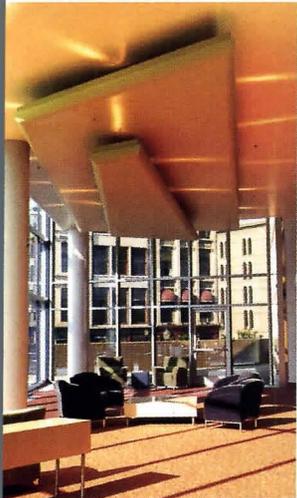
▲ Lime-fighting rain showerhead

Grohe's new 8" Rainshower all-brass showerhead features 120 spray nozzles designed to bend when gently wiped with a cloth, forcing the limescale to gently crumble away. To accommodate the larger diameter Rainshower, Grohe has also introduced two new 12" shower arms: one for ceiling-mount installations and one for wall mount. Both the Rainshower and shower arms are available in polished chrome; in sterling polished brass, and satin nickel InfinityFinishes; and in a "Velour chrome" finish. 630/582-7711. Grohe, Bloomington, Ill. **CIRCLE 224**

New Products

Among the many issues to consider when specifying **renovation and restoration** products are sustainability, codes and regulations, and how to keep the building operational during the work. To see some of the latest products for **historic buildings, houses, interiors, landscapes, and streetscapes**, specifiers can attend the Restoration & Renovation Exhibition and Conference held 9/18–20 in Chicago. *Rita F. Catinella*

Multiple systems collaborate in Kentucky Center for the Arts' award-winning renovation



Recent renovation expanded the Center's lobby by 3,500 feet (left) and added a green-tinted "glass box" entrance (right).

Harmon's contribution involved designing and installing the entire glass exterior addition. (W&W Glass Systems engineered, fabricated, and shipped the system.) This included the "connective tissue" between the newly renovated facility and the newly constructed expansion, plus sloped skylights, a suspended "glass box" entry system, aluminum entry doors, aluminum panels and trim, as well as three different custom curtain-wall systems.

Three years ago, the Kentucky Center for the Arts—host of the 84 Presidential Debates between Ronald Reagan and Walter Mondale—began a \$4.1 million renovation that resulted in a 2002 Merit Award from the AIA's Kentucky chap-

ter. Glazing contractor Harmon Inc. worked with architect Bravura Corporation, Louisville, to renovate and expand the Center's glass exterior while keeping it open to visitors. After the Harmon team completed a forensic exam of the building, a four-

person reglaze team began to replace each lite with a new insulated or spandrel lite. The second phase of the Center's renovation project expanded the lobby by 3,500 square feet and reconfigured its primary entrance to align with Main Street.

The project's myriad systems relied on eight types of Viracon's insulated glass that coordinated with the six aluminum finish colors used on the framing units. 763/287-4900. Harmon Renovation, Golden Valley, Minn. **CIRCLE 225**

Historic home's restored "green roof" blends with nature again

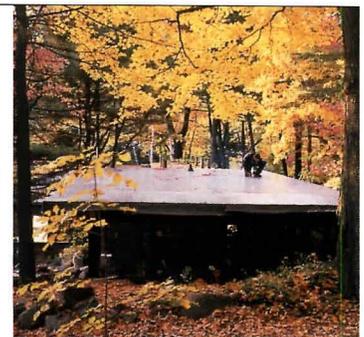
The Johns Manville Roofing Systems Group and Hayden Building Maintenance, West Nyack, New York, teamed up to donate a new roofing system to the Russel Wright Design Center in Garrison, New York. The design center is the former home of studio of Russel Wright (1904–76), the designer credited with bringing affordable modern design to the American home during the 1930s to '50s. Manitoga, a nonprofit trust that owns the home, is currently storing it to serve as a museum and educational institution dedicated to advancing Wright's legacy.

Wright's home, which he named Manitoga and considered his greatest design achievement, provided

him with a palate on which he could experiment with design and materials. To help blend it into the environment, Wright planted a garden on the roof. However, since the roof was never intended to be a "green roof," the system developed leaks that eventually led to structural damage. To restore the original outward appearance of the roof, Hayden installed ½"-thick insulation to the 1,100-square-foot deck and then fully adhered Manville's UltraGard SR80 PVC membrane. The new



membrane utilizes a PVC-clad flashing that achieves restoration requirements while still providing a continuous PVC roofing system. The new roof also allows for a slight



Native plantings will provide a green roof for Russell Wright's Manitoga.

increase in slope to provide adequate drainage, a missing component in the original design. A compost pea-gravel mixture and native plants were added to replicate Wright's original design intent. 800/654-3103. Johns Manville, Denver. **CIRCLE 226**

New Products

▼ Sustainable renovated roofing

The Cleveland Environmental Center Building, located in a renovated historic bank in Cleveland's Ohio City, showcases a variety of sustainable roofing solutions designed by The Garland Company. Among the numerous sustainable roofing systems provided by Garland are a GreenShield "green roof" that has been planted with native vegetation; SolarGrid PV rooftop panels (shown); and a highly reflective White Knight urethane coating. 800/741-3157. The Garland Company, Cleveland. **CIRCLE 227**



► Makeover for antebellum home

Burbash, a historic antebellum home in Troy, Alabama, received a facelift from Tendura and HB&G.

TenduraPlank 7/8" x 3 1/2" tongue-and-groove composite plank was used in 8', 10', and 12' lengths on the home's porch. HB&G

Corinthian columns, balustrades, pediments, and other exterior elements grace the entrance. Both composite systems resist termites and fungus and can withstand Alabama's humid climate without warping, splitting, or rotting. 800/TENDURA. Tendura, Troy, Alabama; **CIRCLE 230** 800/264-4HBG. HB&G, Troy, Alabama. **CIRCLE 231**



▲ Bronze bracing

Dedicated in 1963, the Sheldon Memorial Art Gallery on the University of Nebraska-Lincoln campus was designed by Philip Johnson. Two expansive bronze-clad window walls (detail, above right) were in need of reengineering to correct sagging in the single horizontal supports.

Degginger's Foundry, which was contracted to fabricate and install all of the replaced bronze work (detail, above left), added an additional horizontal member to break the window expanse, tripled the lower horizontal in size, and specified thicker glass. 785/232-4788. DFI Restoration, Topeka. **CIRCLE 232**



▲ Facelift for a 130-year-old

Conservators at Integrated Conservation Resources in New York City turned to Prosoco's Conservare HCT (Hydroxylating Conversion Treatment) to stop the decaying marble Mexican War Monument in Harrisburg, Pennsylvania, from crumbling during a 2002 restoration. The waterborne treatment strengthens limestone, marble, and other "carbonate" stones without affecting appearance or breathability. 800/255-4255. Prosoco, Lawrence, Kansas. **CIRCLE 229**

▼ Traditional siding panels

The Restoration Classic collection includes siding, soffit, trim, and accessories in a range of profiles, colors, and finishes. Specifiers can choose from two low-gloss Classic finishes, the original Restoration Smooth and the contemporary Select Cedar grain, both in 13 colors. Four siding profiles are offered with a Class A fire rating, the .088" StormRoll Hem for increased wind resistance, and GripLock for a smooth installation. 888/838-8100. CertainTeed, Valley Forge, Pa. **CIRCLE 228**



▼ Engineering school reclad while in session

The University of Louisiana at Lafayette selected Metl-Span panels for a major retrofit of Madison Hall, the University's School of Engineering building. More than 26,000 square feet of Metl-Span's CF-42 Striated polyurethane foam-insulated wall panels



were installed on the exterior of the building, an effort completed mostly during the school year while classes were in session. Metl-Span's Classic Zinc Metallic finish was selected to complement remaining brick and masonry portions. The existing steel-frame window/wall system was cut from the building in stages. Installation of the Metl-Span panels was completed within just a few days as each portion of wall was exposed. The new panels also eliminated troublesome leaks that caused a serious HVAC issue in the aging building. 877/585-9969. Metl-Span, Lewisville, Texas. **CIRCLE 233**

Product Briefs

Take it Outside

This April, Milan again welcomed throngs of visitors to the Salone del Mobile. The following pages showcase furniture and lighting highlights, including pieces from an international array of architects. *Josephine Minutillo*

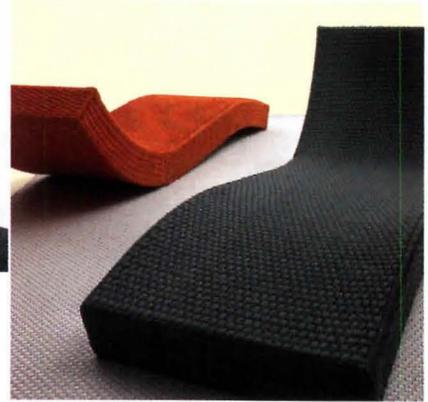
Lawn lights

Included at this year's fair was *Euroluce*, a triennial lighting exhibition. Artemide's production was vast and included several intriguing outdoor fixtures. Focus, a bollard fixture designed by Foster and Partners, features a wide range of accessories, including new colored filters. The Focus system can be used to accentuate architecture and as a guiding light to illuminate routes. The system is made of aluminum, stainless steel, and borosilicate glass. 631/694-9292. Artemide, Farmingdale, N.Y. **CIRCLE 234**



▲ Resort ready

At first glance, Paola Lenti's new introductions merely seem like more beautiful pieces to complement her already strong collection, until you realize they have been designed for use outdoors. The new collection is made of Rope 04—an innovative new synthetic material developed by Lenti that combines shine and softness with excellent colorfastness to UV rays, chlorine, and seawater—and includes outdoor rugs as well as seating components designed by Francesco Rota that employ a satin-finished steel structure with galvanized steel detailing. 915/545-5073. Counterpoint, El Paso, Texas. **CIRCLE 235**



◀ Provocative plastics

With last year's introduction of planters and vases, Serralunga made a name for itself as a leader in producing handsome, large-scale, rotation-molded plastics, and for attracting top designers to focus on outdoor objects. This year's presentation includes a range of basic seating that is both easy to maintain and attractive enough for use indoors, as well. The Weekend collection by Rodolfo Dordoni includes a chaise, seat, and stool in neutral colors. 212/966-0669. Outdoor/Indoor at Modern Age, New York City. **CIRCLE 236**

Picnic tables

Picnik, a new table from the Belgian outdoor furniture company Extremis, is like anything else in the company's mostly wood collection. A collaboration between Extremis and designer Dirk Wynants and designer Xavier Lust, Picnik's simple design incorporates table and seating into a single, stackable object. Made from a standard, massive plate of 10-millimeter-thick aluminum, Picnik comes in two sizes, one for adults and Picnik Junior for children. Available in a variety of colors, including white, apple green, sky blue, khaki,

and earth, the table was specially created for small terraces and public spaces. 505/266-5245. Ideas for Living, Albuquerque. **CIRCLE 237**



▲ Terra-cotta for the new millennium

Teracrea is a new company whose aim is to create products designed to set greenery in architecture. Using terra-cotta as the material of choice, the firm enlisted top designers, including Ronan and Erwan Bouroullec, whose *Treille* cylindrical vase is pictured here along with *Balconcino* by Sebastian Bergne. According to Bergne, "the opportunity to reinterpret a traditional material in a contemporary way was what drew me to this project." 39/0445539080. Teracrea, Schio, Italy. **CIRCLE 238**

Product Briefs

The Comforts of Home



▲ New showroom full of introductions

For the first time in almost 40 years, B&B Italia was a no-show at the furniture fair. Following on the heels of the opening of a new London store, designed by Antonio Citterio and John Pawson, B&B abandoned its stand at the fairgrounds this year to present at its sprawling new showroom, also by Citterio, on Milan's fashionable Via Durini. The Andy sofa collection (top) by Paolo Piva was expanded this year and is now available in a corner version. It also features a new roll cushion. Also designed by Citterio, Mart (right) is the result of new technology for producing heat-shaped leather, which is applied to a frame molded of cold-foamed polyurethane and plastic. The chair's final form was arrived at after many trials aiming to reconcile ergonomics with the need for executing the smallest number of stitches. 800/872-1697. B&B Italia USA, New York City. **CIRCLE 239**



▼ Curvy cutouts

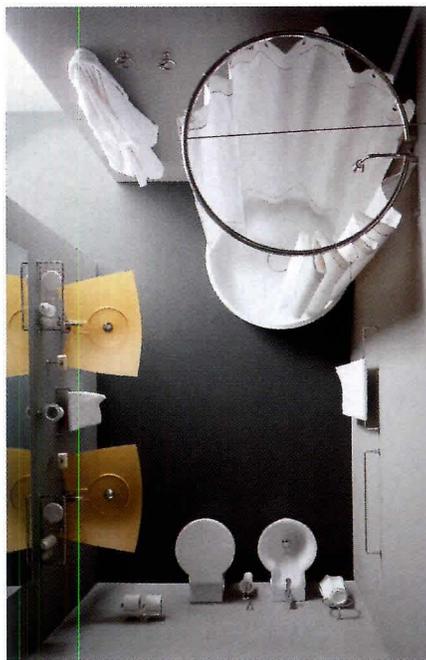
Cappellini's extensive exhibition at SuperStudioPiù in Milan's Canal district consists mostly of refined versions of last year's prototypes. Piero Lissoni's sinuous new seating collection, however, was an unexpected treat. Coupé and Gran Coupé feature armchairs, sofas in either a two- or three-seat version, and a chaise longue with right or left arm. Upholstered in the fabrics and leathers from Cappellini's collection, the seating elements are supported by a chromium-plated steel structure. 212/96

0669. Cappellini Modern Age, New York City. **CIRCLE 240**



▲ Landscape furniture

Spanish designer Patricia Urquiola has had her hands full designing several new pieces for Moroso as well as its new, expanded stand left vacant by B&B this year. Urquiola's new Highlands sofa is a modular seating system with an emphasis on movement and verticality. Armrests and backs have two positions resulting in a variety of configurations. An upholstered ottoman with metal top can be integrated into the configurations or left freestanding. 305/640-1991. Europrojects, Miami, Fla. **CIRCLE 241**



◀ The best room in the house

For the past 30 years, the Italian bathroom line Agape has made it its mission to transform the bathroom from a utilitarian room filled with boring fixtures into a well-designed domestic space. Through research into new technology and materials and collaboration with top designers, including Bened Associati, Konstantin Grcic, Enzo Mari, and Angelo Mangiarotti, the company has amassed a collection of innovative sinks, tubs, showers, mirrors, and accessories. 212/204-7100. Moss, New York City. **CIRCLE 242**

► Add a spring to your step

The Dutch furniture line Montis introduced several new pieces in Milan this year, including a dining table that was added to a growing line of tables first presented last year. Nika is a new seating collection by Gijs Papavoine, head of Montis's design team. The collection, which was designed as a "lounging suite," includes two-seater or three-seater sofas and an easy chair. The spring base adds comfort and lightness to the seat and is available in matte chrome or a lacquer finish. 888/8MONTIS. Montis America, Carrboro, N.C. **CIRCLE 243**



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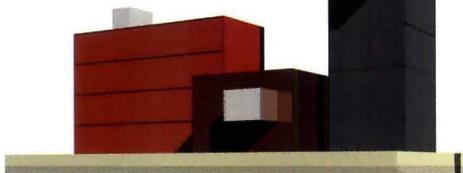
Product Briefs

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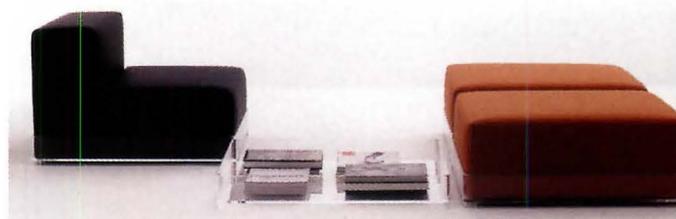
▼ Scaled-down architecture

Introduced last year, Moooi's City System was designed by Marcel Wanders, creative director of the pioneering Dutch collection. The simple storage unit is made from 13.5-mm, powder-coated steel and is available in white, aluminum, brown, and red. In an ongoing project, Wanders will recruit architects to add a design of their own to the system. The first creation in this collaborative effort was presented at Milan this year and produced by fellow Dutch designers MVRDV. Called CanCan, the small containers are made from steel and sheet magnet and can be randomly adhered to the system, creating various compositions reflective of MVRDV's own built work. 505/266-5245. Ideas for Living, Albuquerque. **CIRCLE 244**



▼ As you like it

Always a show highlight, Kartell delivered once again this year with several captivating new pieces set amid a groovy rainbow display by Ferruccio Laviani. Plastics, by Piero Lissoni, allows for the creation of a variety of compositions. The transparent base is a coffee table and a container for the cushions, which can be arranged as armchair or ottoman. 866/854-8823. Kartell US, New York City. **CIRCLE 245**



► Emporio Armani

Monica Armani's extensive architectural background is evident in her rigorously designed and meticulously detailed collection. Her rational approach combines basic units into countless configurations of seating, tables, storage, desks, and a kitchen system. Units are composed of a powder-coated steel structure with surfaces in steel, wood, glass and laminates. 314/454-0111. Centro Modern Furnishings, St. Louis. **CIRCLE 246**



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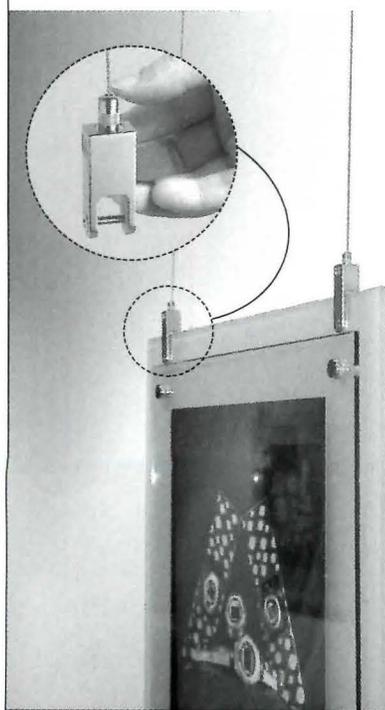
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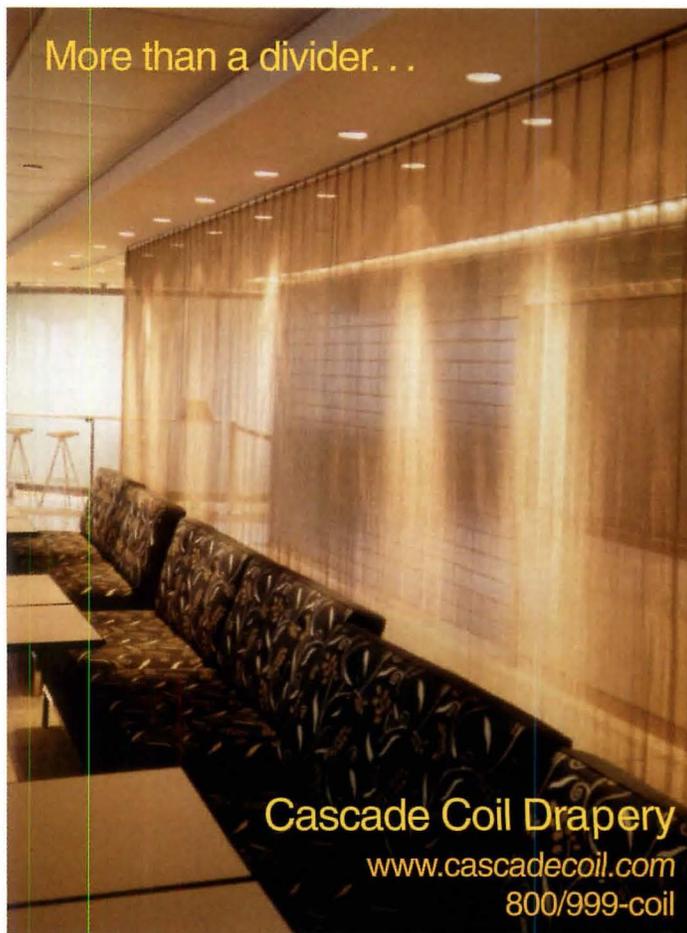
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Product Briefs

Tables and Chairs



▲ Taking design lightly

Italian furniture makers Alias strove for lightness this year, relying on longtime Alias collaborators Alberto Meda and Alfredo Häberli to deliver two impressive new pieces. Frametable by Meda is a highly flexible aluminum folding table. The Segesta chair by Häberli is a comfortable, stacking armchair made of composite, multilayer technopolymer with a steel structure. 631/549-1302. Alias USA, Huntington Station, N.Y.

CIRCLE 247



▼ It's a wrap

The latest furniture design by French architect Jean Nouvel includes a simple table and chair with a very unusual look. Named MM, a reference to the word *mummy*, the chair's steel frame is completely wrapped with belts of coach hide. 4SPR is the matching table whose cone-shaped legs are also completely covered in coach hide belts. The pieces are produced by the Italian furniture line Matteo Grassi, a specialist in leather furniture. 212/334-2363. Vivendum by Arredo, New York City. CIRCLE 248



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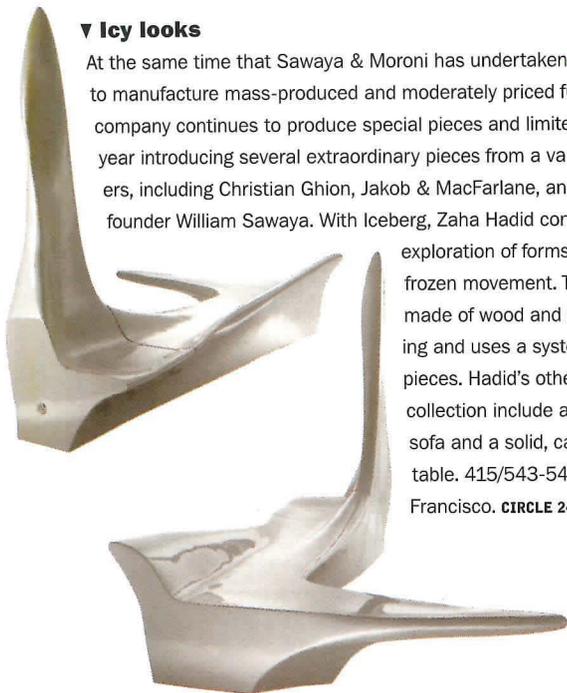
Product Briefs

Out of the Ordinary

▼ Icy looks

At the same time that Sawaya & Moroni has undertaken a new challenge to manufacture mass-produced and moderately priced furniture, the company continues to produce special pieces and limited editions, this year introducing several extraordinary pieces from a variety of designers, including Christian Ghion, Jakob & MacFarlane, and company founder William Sawaya. With Iceberg, Zaha Hadid continues her

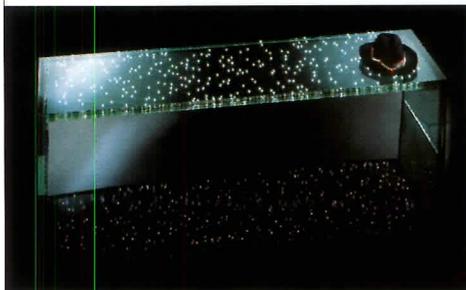
exploration of forms that represent frozen movement. The bench is made of wood and aluminum sheeting and uses a system of jointed pieces. Hadid's other designs for the collection include an upholstered sofa and a solid, carved wood table. 415/543-5466. Limn, San Francisco. **CIRCLE 249**



▼ A new constellation

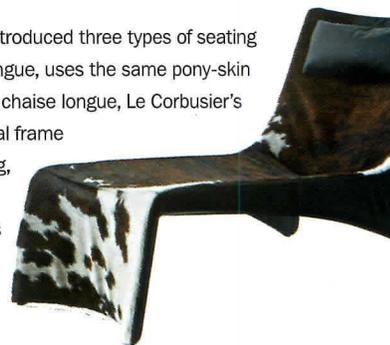
German lighting designer Ingo Maurer and the company that bears his name continue to astonish with imaginative and sometimes fantastical designs. These include a chandelier made of Campari soda bottles and a table lamp with a Campbell's Tomato Soup can as a shade, as well as a limited-production LED

Bench, seen here. The molded-glass bench contains 288 white LEDs emitting light on both sides. 212/965-8817. Ingo Maurer, New York City. **CIRCLE 250**



► Mythical inspiration

Swiss designer Hannes Wettstein introduced three types of seating for Cassina. Thor, his new chaise longue, uses the same pony-skin covering as Cassina's most famous chaise longue, Le Corbusier's LC4. In Wettstein's version, the metal frame is completely hidden by the covering, giving the greatest emphasis to the fabric. A mechanism by the feet lifts the end part of the seat for reclining. 631/423-4560. Cassina USA, Huntington Station, N.Y. **CIRCLE 251**



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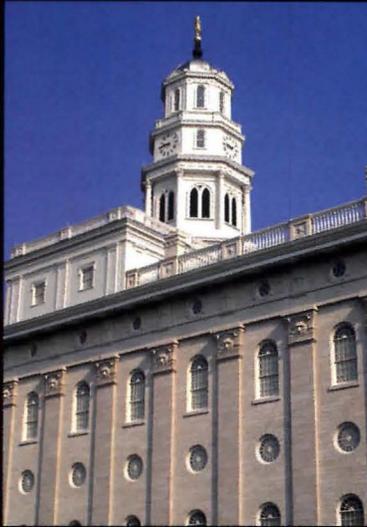
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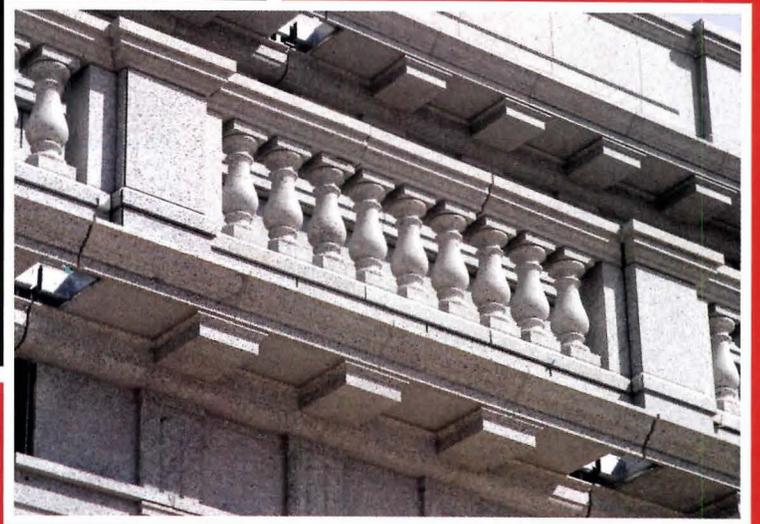
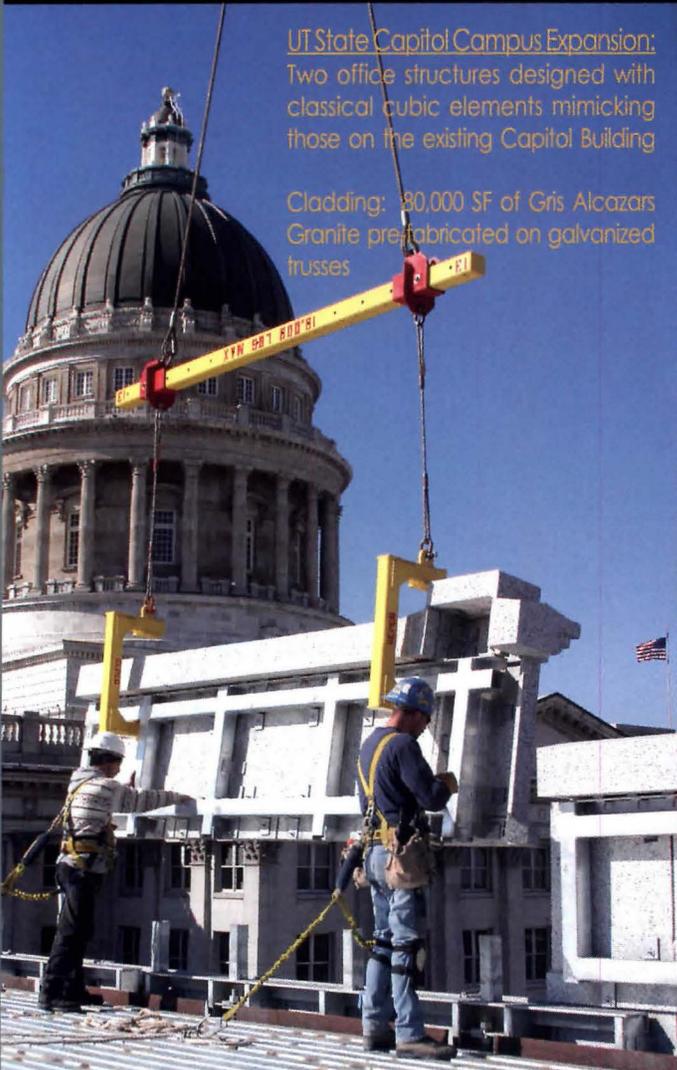
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Product Briefs

Déjà Vu

► Modern once more

Dezza was designed by Gio Ponti as a modern and light armchair that would be able to be shipped unassembled. Though the reintroduction comes fully assembled, it is available in the four versions from 1965: a low backrest armchair, a two-seat sofa, a large armchair, and a high-back armchair. Dezza is available in pony skin and a variety of leathers. 212/777-7592. Poltrona Frau USA, New York City. **CIRCLE 252**



▲ Art of this century

Austrian-born architect Friedrich Kiesler spent most of his life in New York City. It was there in 1942 that Peggy Guggenheim commissioned him to conceptualize a gallery for her art collection. The Correalistic Furniture he produced for the gallery has been reintroduced by Austrian furniture makers Wittmann. Correalism is a term Kiesler used to express the continual interaction between man and his natural and technological environments. 617/451-2212. Adesso, Boston. **CIRCLE 253**



◀ Decadent design

After years of near obscurity, the work of the extravagant Italian architect Carlo Mollino has gained newfound interest. Designed in 1949 and introduced by Zanotta this year on the 13th anniversary of Mollino's death, Cavour is an example of the designer's ability to merge architecture, art, and experimentation in a single object. The bleached oak frame is topped by a 12-mm-thick plate-glass writing surface, allowing the frame's tensile design to be visible from all angles. 314/454-0111. Centro Modern Furnishings, St. Louis. **CIRCLE 254**

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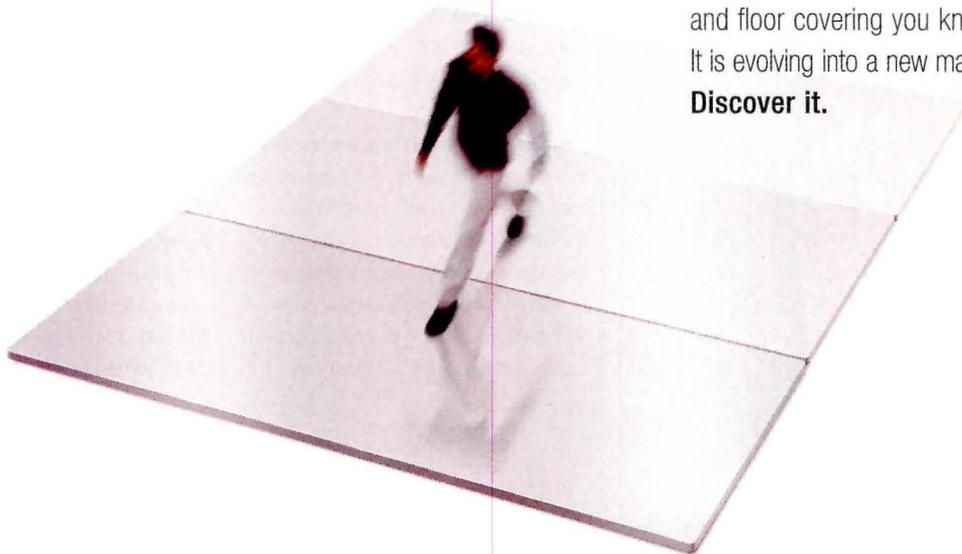
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Product Literature

Samples of hospitality

Hunter Douglas has developed its first comprehensive multiproduct sample collection for the hospitality trade. A sample book and coordinating reference guide feature tabs for each individual product, room setting photography, size specifications, features and benefits of each product, and information on operating systems. The company's new Web site is pictured at the right. 800/327-2030. Hunter Douglas, Fort Lauderdale, Fla.

CIRCLE 255

Green flooring efforts

Domco Tarkett Commercial's environmental practices and green products are detailed in *Respecting the Environment*, a new brochure designed to communicate the company's ongoing "green" effort. 800/USSTILE. Domco Tarkett Commercial, Houston. **CIRCLE 256**

Landscape lighting brochure

Starfire offers a new brochure describing the company's Treelite indoor/outdoor, low-voltage, linear-accent lighting system. Treelite's wiring allows a single lamp to fail without disrupting service to the rest of the run. 800/443-8823. Starfire Lighting, Wood-Ridge, N.J. **CIRCLE 257**

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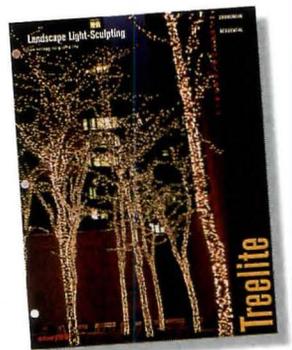
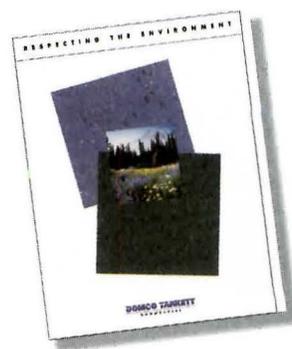
New green design Web resource from the ASID www.asid.org/green.asp

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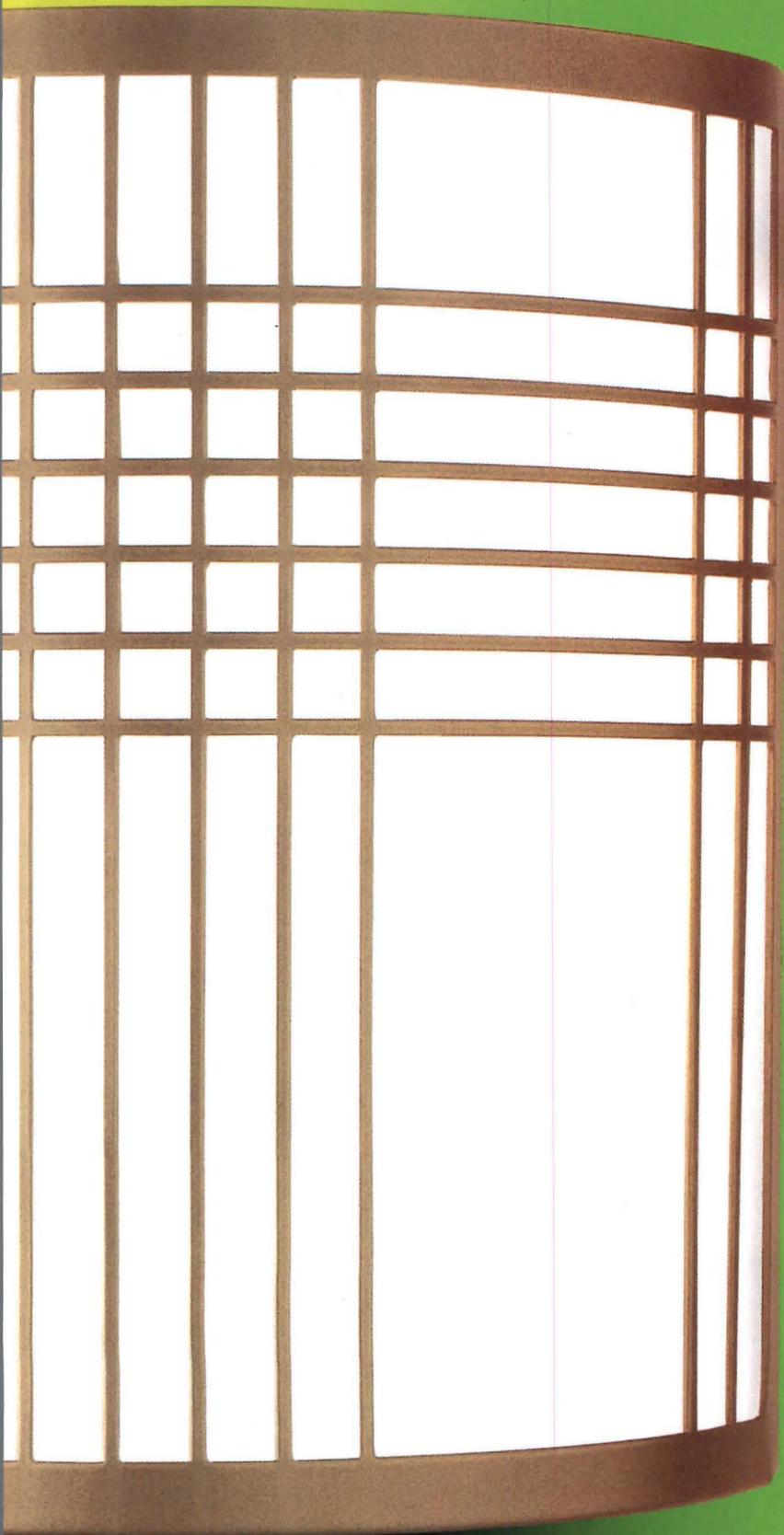
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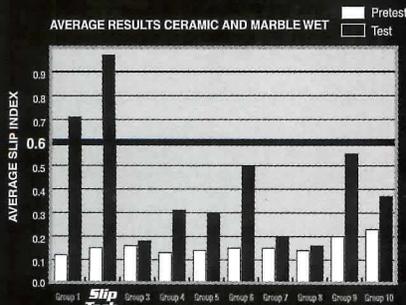


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Product Literature

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Stone source

Georgia Marble Company's new brochure features the company's Marblstal hardware items, colors, and specifications. Marblstal is ideal for applications including washrooms, shower stalls, and dressing-room partitions. 800/334-0122. Georgia Marble Company, Tate, Ga. **CIRCLE 260**

Bronze hardware brochure

The new 40-page brochure from Sun Valley Bronze covers the latest information on the company's line of handmade solid bronze architectural hardware. The literature includes full-color product photos, examples of the six patina choices for either silicon or white bronze, and a thorough explanation of the design and production processes. The Sun Valley

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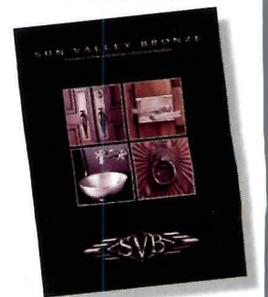
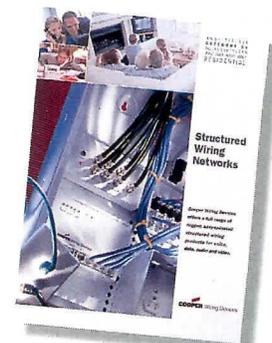
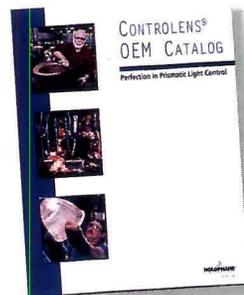
Prismatic glass products

Holophane offers a new *Controlens* catalog detailing the company's line of prismatic glass *Controlens* products, including flat lenses, refractors, and polycarbonate and acrylic lenses. The publication also describes Holophane's glass-making and custom-product capabilities. 740/345-9631. Holophane, Newark, N.J. **CIRCLE 262**

Rolling door catalog

Cornell Iron Works' 24-page *Rolling Door & Grille* catalog is a guide to rolling service doors, fire doors, count doors, and grilles, and a selection of operators and control devices. Included in the catalog are technical details, construction features and specifications, and information on available materials and finish options. 800/233-8366. Cornell Iron Works, Mountaintop, Pa.

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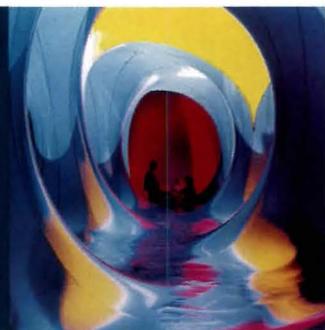


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Gwendolyn Wright brings everyday architecture to the public

Interviewed by Suzanne Stephens

On July 14, a new PBS television series, *History Detectives*, will air, with Gwendolyn Wright, an architectural historian and professor at Columbia University, as one of its four hosts. The 10, 1-hour segments explore the histories, myths, and mysteries behind intriguing everyday objects and places in America. The “detectives” uncover clues, test hypotheses, and research dusty archives to get to the truth. In addition to Wright, the hosts are Wes Cowan, an independent appraiser and auctioneer; Elyse Luray, an art historian and independent appraiser; and Tukufu Zuberi, a professor of sociology at the University of Pennsylvania and director of its African Studies Center.

Q: *The name of your show is catchy, but it's not easy to make architectural history sexy to a general audience. How do you propose to do it?* First, I should explain that we aren't necessarily looking at famous examples of architecture. We are searching for buildings, places, and objects that have a story, but not one that is totally known. For example, we visit a Japanese pavilion built for the World's Fair of 1939 in Gilroy, California. After the Fair, a Japanese family in the town bought a part of the pavilion and built a home around it. We were curious why the Japanese government spent so much money to erect this structure—the original Fair pavilion cost \$1 million, which was a lot in 1939. We found archival documents that showed that it was built primarily for propagandistic reasons. The Japanese foreign minister at the time felt it was needed to bolster Japan's image in the world as a supporter of beauty and culture, after its brutal war with China. Here architecture was used for political purposes. This is what the show is about: We want to look at the complex issues behind these buildings, and see how character operates. We hope to demonstrate to the public the way architectural history can be learned and understood, and especially the manner in which it intersects with broader issues of culture, nationalism, race, and ethnicity.

How did you find the topics for the show? Interesting. The executive producer, Nick Catliff, of Lion Television in London, wanted to do something on American houses using investigative techniques—sort of a cross between *Antiques Road Show* and *CSI*. So PBS [the coproducer, Oregon Public Broadcasting with David Davis as its executive producer] sent out solicitations for ideas and examples of material culture in the U.S. The staff screened the responses for us to choose from.

And how were you “discovered”? When Catliff was researching American houses, my books and writings, such as *Moralism and the Model Home: Domestic Architecture and Cultural Conflict in Chicago (1873–1913)*, published in 1980, and *Building the American Dream*, published in 1981, came to his attention. Then the producers made a film clip of me.

What have you learned from this experience? First, being on television made me aware of methods for animating a university class. In terms of content, the sort of analysis makes you think about such things that historians don't treat seriously—such as the Art Deco style—and why. It is necessary to question our attitudes, and for students to learn why they don't look at something, and why they do. This comprehensive view is needed to understand the complexity and ambiguity of history.

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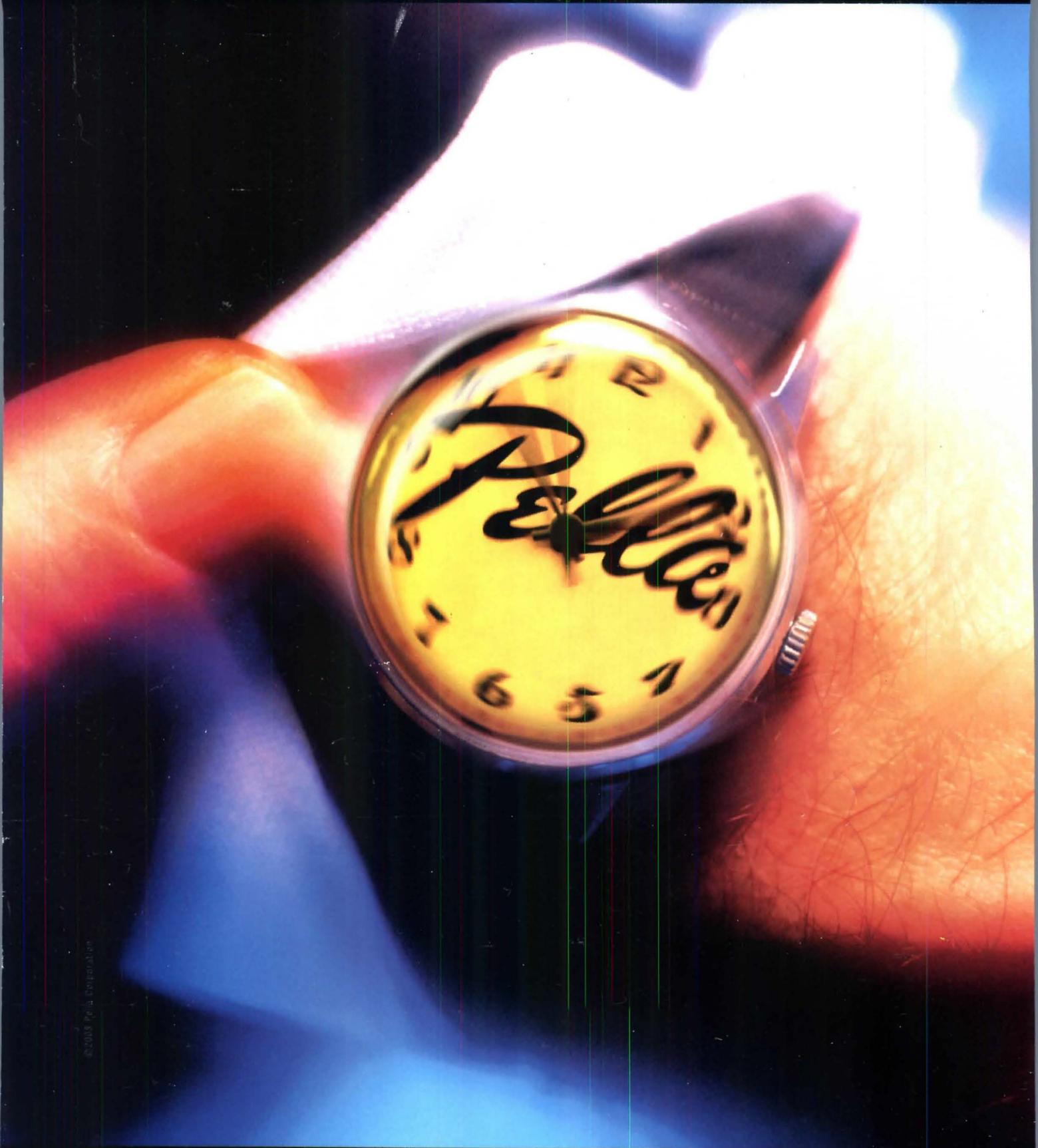
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