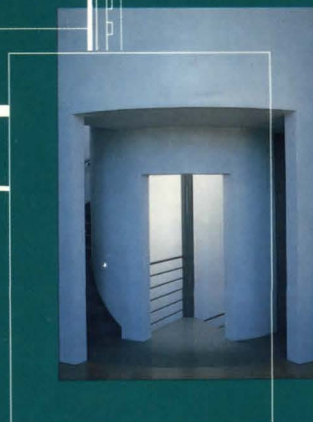
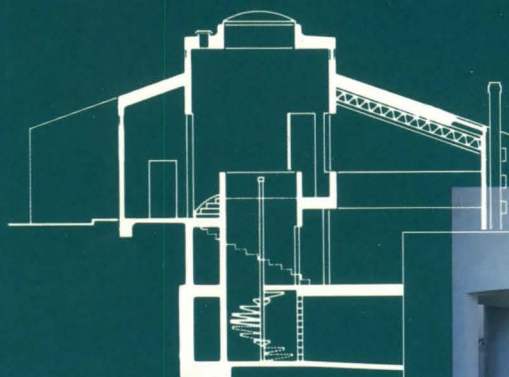
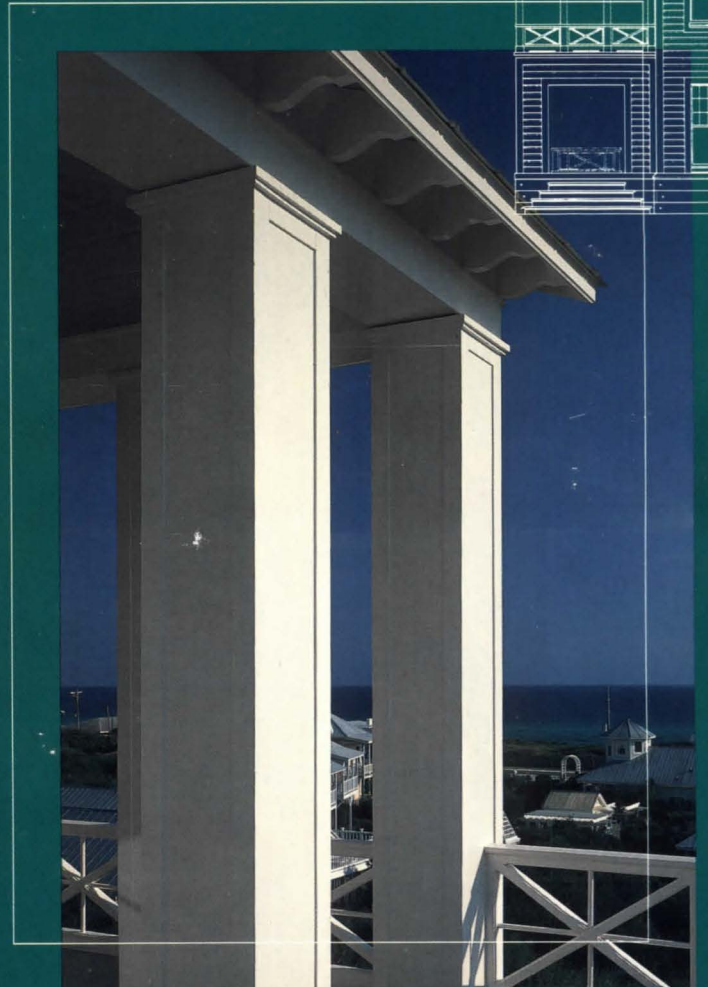
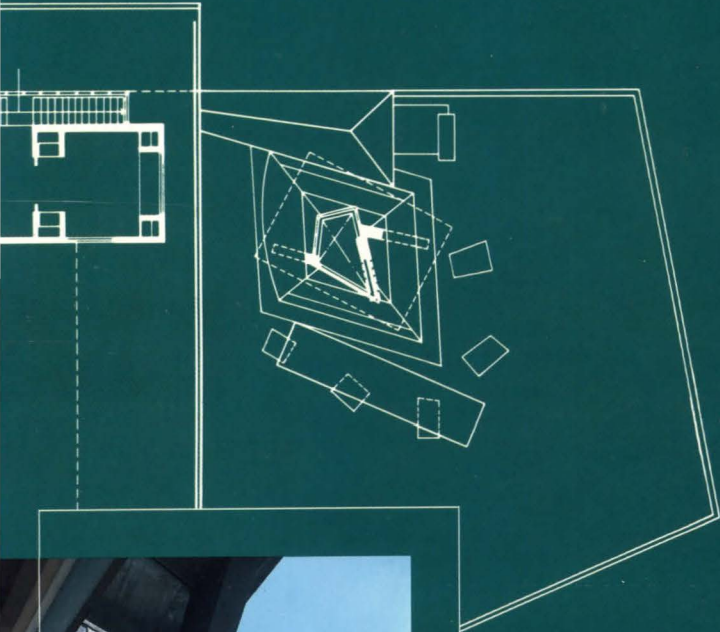


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The McDonald's facility management team (left to right): Bonnie Kos, Dorine Marshall, John Reinert.

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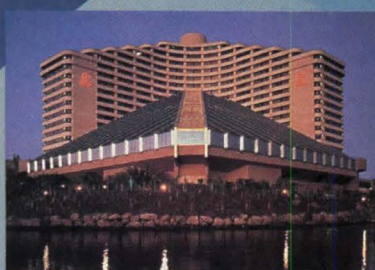
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ARCHITECTURAL DESIGN*Editor in charge: Thomas Fisher***65 The Conflict of Custom Houses**

Each of the custom houses in the issue explores, in various ways, the tension between individual expression and contextual response.

*Thomas Fisher***66 A Gate to Seaside**For his first built work, Leon Krier creates his own house as a series of events, using a palette of materials common to its location in the planned community of Seaside, Florida. *Jim Murphy***74 House(s) on the Lake**Frank O. Gehry & Associates divides a family home in Los Angeles into a compound of pools and buildings, flouting suburban conventions. *Pilar Viladas***82 American Export**A house by Adele Naude Santos brings American sensibilities to a wooded site in exurban Tokyo. *Thomas Vonier***86 In the Dutch Modernist Tradition**Rem Koolhaas and the Office of Metropolitan Architecture comment, wittily, upon the Modern tradition in this double house in Rotterdam. *Thomas Fisher***90 Bay Region Individualism**In a transitional neighborhood of San Francisco, architect Daniel Solomon has adjusted his customary approach to context in a house for two people in the performing arts. *Sally Woodbridge***96 Outside, Inside**Interior courtyards and patios enable a house in Mexico City by Albin Vasconcelos Elizondo Arquitectos to ignore its less-than-beautiful surroundings. *Andrea E. Monfried***98 Tin Type**A small house in Bryan, Texas, is the workshop for some of Gerald Maffei's big ideas. *Joel Warren Barna***100 Depth in Venice**

A house and studio by David Hertz and Michael Rendler engages in a seductive dialogue with its Venice, California, neighbors.

Morris Newman

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This month's fascinating lineup includes: vintage car collecting and why these high-powered investments deliver fun, too; new "Dollars & Sense" column to boost your personal finance savvy; our executive calendar of events; plus helpful travel hints.

Cover:

Montage of the Krier House in Seaside, Florida, by Leon Krier (p. 66); the Schnabel House in Los Angeles by Frank O. Gehry & Associates (p. 74); and the Gleeson/Jeanrenaud House in San Francisco by Solomon, Inc. (p. 90). Photos: Steven Brooke (top), Grant Mudford (middle), Christopher Irion (bottom).

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This issue of P/A and its cover were designed by Associate Art Director Lisa Mangano.

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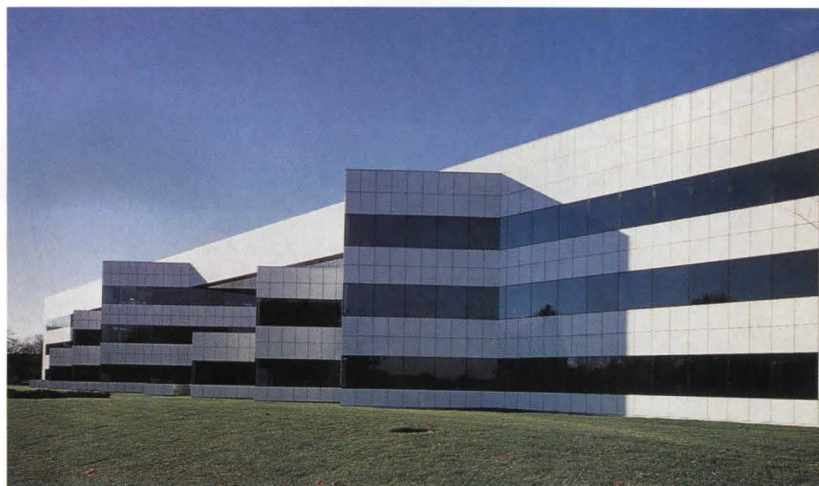
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The Princely Vision

Prince Charles criticizes Modern architecture without fully understanding the implications of his attack or even of what he is saying.

IF there ever was a case of a little knowledge being a dangerous thing, it is Prince Charles's naïve crusade against Modern architecture. The Prince might be excused his simplistic view of the field were he not so vocal about it, first in a BBC television production and now in a book published by Doubleday and an exhibit recently held at the Victoria and Albert Museum in London (see p. 19). And, lest the American architectural profession think that it is immune to his criticism, *Architectural Digest* recently published a long opinion piece by the Prince that is bound to make an impression on the public.

As the British profession has realized, the best response to the Prince's critical barrage is not to be defensive, but to challenge his arguments—in which there are many holes. He claims, for example, to want to improve the quality of architecture. But as his comments about buildings show, he seems unable to distinguish between the good and the mediocre, whatever its style. He equates Cesar Pelli's refined tower at Canary Wharf with the dreadful towers built in London in the 1960s, and lumps James Stirling's forceful Mansion House Square project with Colin St. John Wilson's truly banal British Library. Even the Classically inspired work that the Prince admires varies greatly in quality. Is the Prince, then, really interested in architectural quality or rather in promoting a cultural conservatism through architecture?

The Prince also claims to speak for ordinary citizens and, to his credit, he has been involved in a few participatory projects with the encouragement of activists such as Alice Coleman. But where do ordinary citizens fit into his vision? The plan for a new town in Dorchester, produced by Leon Krier for the Prince, is a powerful essay in traditional urban design, but it also has an unreal quality about it. Where, in the fine grain of low-rise buildings and narrow streets, is there room for truck access, automobile storage, or shops bigger than a boutique? The Prince (or is it Krier by way of the Prince?) seems unwilling to accommodate or even accept aspects of modern life upon which most ordinary citizens depend.

The Prince blames Modern architecture for the dreariness of some of Britain's larger cities, and he is partly right, although for the wrong reasons. Modern architecture—or more precisely, Modern urbanism—has been applied with too heavy a hand in many places. But the solution to the problem lies not, as the Prince suggests, in eschewing tall buildings or unornamented façades, but in finding ways of gracefully integrating modern structures into cities. Modernism failed because it sought to wipe away what preceded it. The Prince falls into the same trap when he suggests that we now wipe away Modernism.

The Prince presents his vision in the form of ten principles, which he calls his own “personal code of good design.” Some, such as “signs and lights,” are really more preoccupations than principles, and others, such as “harmony,” “scale,” and “hierarchy,” are goals with which virtually everyone would agree. Where the lapse in logic occurs is the Prince's assumption that Classical architecture is the necessary and sufficient result of these ten “commandments.” Others have made a subtle and fairly convincing argument for the value of Classical architecture in our time. But that argument is hardly self-evident, as the Prince seems to believe.

Nor is it self-evident, as the Prince assumes, that architects are primarily to blame for large-scale housing estates or high-rise office buildings that he so despises. He seems not to realize that those aspects of buildings that appear to bother him the most—the height and size of structures, for example—are often beyond the control of architects, and frequently in the hands of owners or zoning boards. Is the Prince simply misinformed or is it that architects are just easier to push around than those with more money or power?

A recent poll of British architects showed that, while many disagreed with the Prince's ideas, a sizable majority thought that the profession would be better off in the long run because of the public attention he brought to the field. Similar sentiments have begun to be expressed in the U.S. Not all publicity, however, is beneficial. The Prince's message is not just that architecture is worth discussing, but that architects have not been worthy of the task and that ordinary people often know better. He thus uses a popular distrust of professionals to advance his own elitist vision. Architects should resist becoming his pawns. *Thomas Fisher* ■



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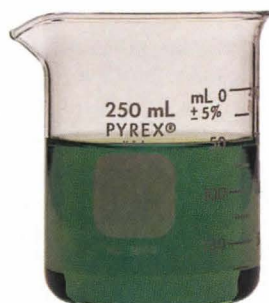
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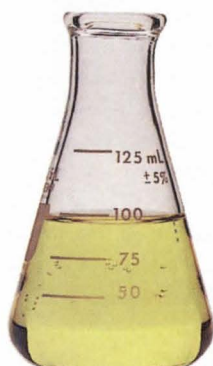
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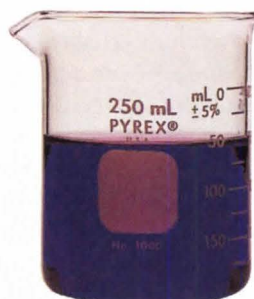
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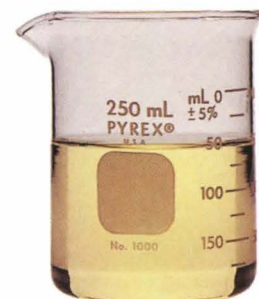
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Symbols in the Desert

The commentary regarding Perkins & Wills Capital High School (P/A, Aug. 1989, pp. 78–81) is absolutely farcical. This is not historic, and you are fools to call it so. The towers are entirely reminiscent of prison towers, and you don't have the guts to tell these architects the truth. Try the test on an unsuspecting person, and ask them what this reminds them of. Setting standards should be your business and commitment.

Peter Sachs
Architect
New York

[Such stepped towers are found on several Santa Fe landmarks and are hallmarks of the local territorial style. They are not necessarily recommended for New York.—Editors]

Wexner Center: An Ohio View

When I read the accolades for Eisenman's Wexner Center (P/A, Oct. 1989) I didn't know whether to laugh or cry. I do, however, know which of these the Ohio State University and my fellow taxpayers will be doing when the steel rusts and the paint peels.

Philosophical gymnastics aside, is this really good architecture?

Richard Lee Hawksley
Architect
Kent, Ohio

Wexner Center: a Skeptic

Is there anybody besides me whose bullshit meter goes off the scale when considering the work of Peter Eisenman (P/A, Oct. 1989, pp. 67–89)? And does that person also think of the Emperor's new clothes when reading the words of those who con-tort themselves to make sense of the man's work?

What a mean-spirited, dark, cold building the Wexner Center is, full of un-funny in-jokes told to God-knows-whom.

I heard Eisenman present this project when I was a student at Pratt Institute several years ago. In his presentation he described the built-in "scaffolding" as relevant to the fact that various important edifices around the

world were regularly under scaffolding. Then he admitted he was making that idea up as he spoke. To me, that kind of blithe, cynical arrogance—seen in the man's personality and architecture—is disgusting. Eisenman, of course, lives in a cute little Victorian house. Not for him to inhabit one of his own creations.

What possessed O.S.U. to pass up Pelli or the other contenders for the project? And what possessed you to give such coverage to such a miserable building?

Stephen Lesser
Intern
Westport, Connecticut

[OSU's choice was made by a jury headed by Henry Cobb. P/A featured the building prominently for the lessons it embodies, and it is certainly not dark, cold, or mean-spirited.—Editors]

Wexner Center: Psychology

Eisenman is indeed (as rarely admitted by the profession) possessed by genius. It is only genius that shows the way to a higher level of thought, consciousness, and culture. The single failure that I am aware of—in all this architectural/philosophical verbiage—is probably the most important: the psychological dimension. What do these ideas and images mean to us, individually and collectively as participants in this time/timeless milieu?

Eisenman's cerebral progress epitomizes the technical brilliance of our modern work. By giving form to the techné side of the techné/psyche syzygy and the dilemma which it represents, Eisenman (with too few others) crystalizes the images most needed for understanding our zeitgeist, the "place" where we are as a collective.

Mark Taylor verbalizes these images, Eisenman builds them: incompleteness, fragmentation, and dismemberment, places which are no place, a time between times, the diffuse "center" which is no center, characterizing a sense of irrevocable loss and death (God and ourselves), exile and "ends"—the end of

philosophy, the end of literature, writing, art, and architecture.

"Ends" imply "beginnings" but on a higher plane of consciousness. T.S. Eliot (Four Quartets): "... and the end of all our exploring will be to arrive where we started, and know the place for the first time." Clearly, we are living in a *kairos*—a time of transformation when the old gods die and the new paradigm has not yet appeared or, having appeared, has not yet reached conscious awareness.

Is Eisenman like Mozart, whose genius heralded the romantic period, or Bach, whose genius summarized forever the Baroque? If we are to be true to the psychology of human development (Jung's individuation process), we must know that creative individuals are a lens for focusing the light of the collective unconscious—the "place which is no place." If this is true, then what is Eisenman, through his architecture (perhaps unconsciously) saying about zeitgeist?

The rational Newtonian/Cartesian, the masculine, the patriarchy has been the governing ego principle of our civilized world for many centuries. We know today that this constitutes a one-sided attitude which must invariably be compensated and balanced. If the feminine archetype—a man's creative muse, representing feeling, relationship, nurturing, wife, mother, sister, long repressed—is not brought into our conscious calculations, she will continue to make herself felt in other negative ways: our addictive society typified by drugs, sex, alcohol, money; pathologies like the Puer/Puella complex (the eternal youth), broken relationships and physical disease.

It is most interesting that your editorial pertaining to women in architecture appears in the same issue in which the architecture of Peter Eisenman is monographed. What a juxtaposition of opposites: the presentation of the Wexner Center and repressed femininity! The vital, thrusting (phallic), great axis, springing from the old, estab-

lished (patriarchal) grid into a Time/time, no-place place cul-de-sac. What will be born from this union?

Charles Wright
Architect
Lake Worth, Florida

Wexner Center: Future Role

It was with great interest that I just finished reading about Eisenman's Wexner Center. While many things struck me as good, I wonder if the building's incessant angles and grids impose themselves too much on the user (how useful will the odd-shaped choral hall on the first floor be, for example?). Will this building become the Yale Art and Architecture building of the 1980s? I hope your magazine comes back in 10 or 15 years and does a post-occupancy analysis, so we can all find out.

Peter Borgemeister
Architectural Preservation
Providence, Rhode Island

Women's Place

Thank you for your compelling editorial in *Progressive Architecture* (October issue, p. 7) that arrived today. The accompanying Reader Poll was also valuable. Both should help jolt the profession and promote what is a valuable little book that otherwise might attract only a sprinkling of women readers.

Last summer at the University of California at Santa Cruz I taught a course with that book's title [*Architecture: A Place for Women*], and have lectured on the topic in Berkeley, Washington state, and Idaho. I propose to do the same at Williams College in Massachusetts for their winter session in January 1990. It is clear, however, that this sort of effort reaches only a few, while your editorial will be widely read and discussed by people in power in the profession. For this we are all very much in your debt.

Sara Holmes Boutelle
Julia Morgan Association
Santa Cruz, California



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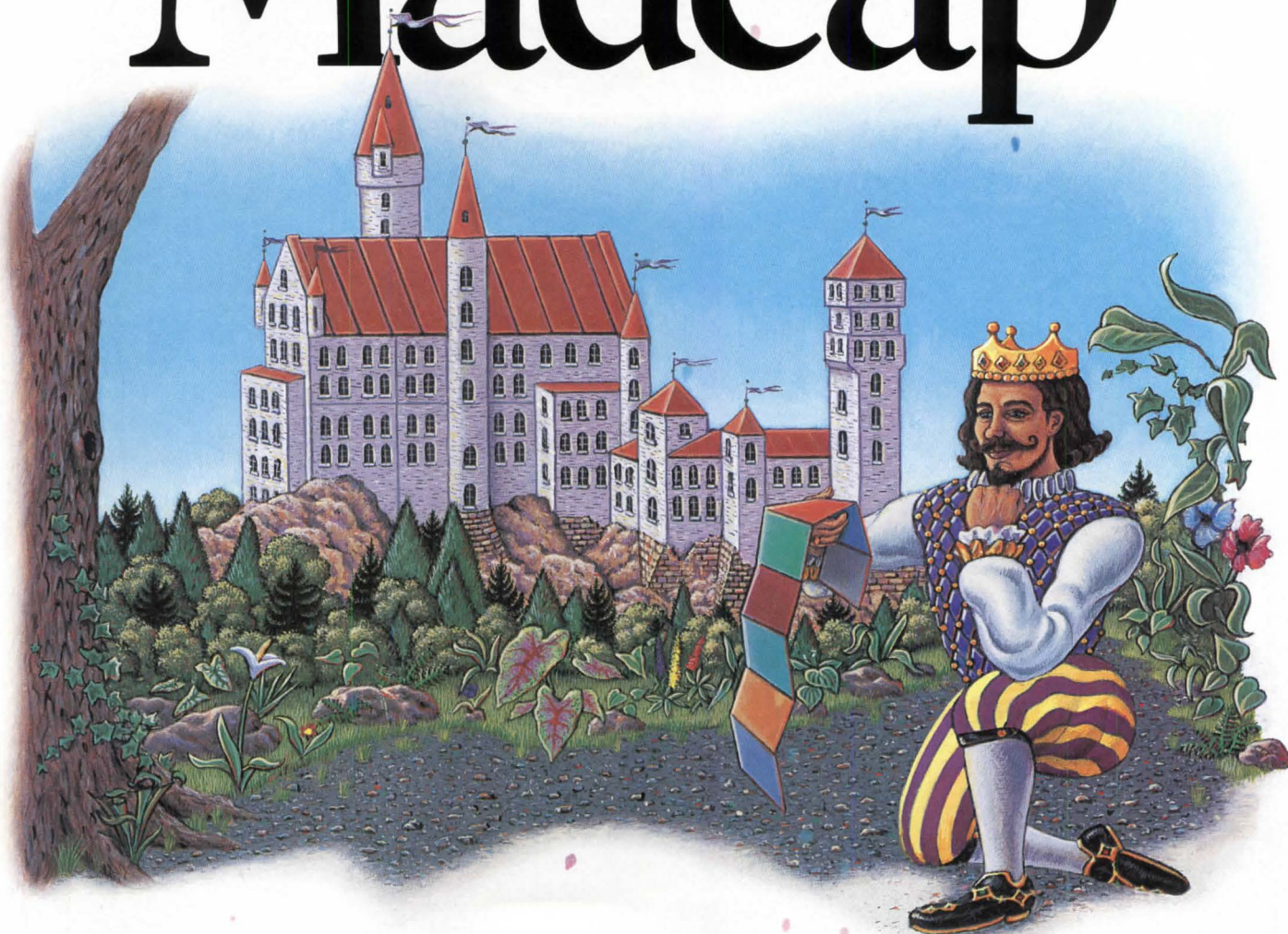
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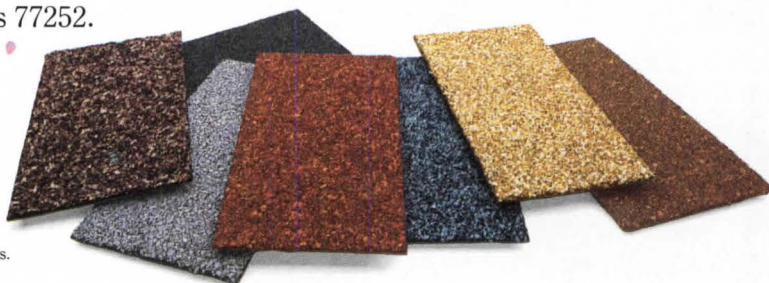
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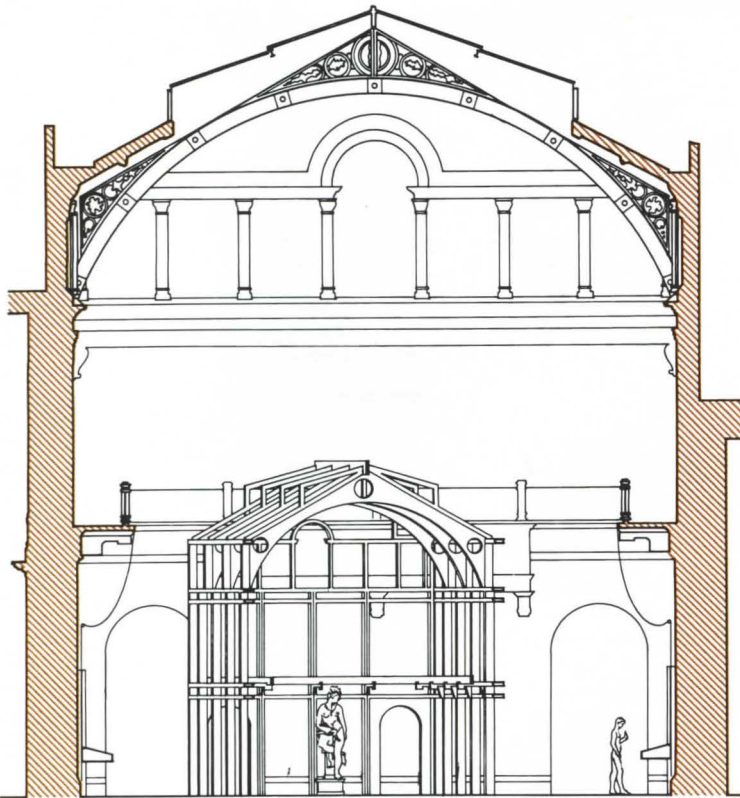
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Prince Charles's "Vision of Britain" exhibit at Victoria & Albert Museum.

The Prince Plays Curator

It had to be a first: royalty staging a polemical exhibit on architecture. Prince Charles's "A Vision of Britain" show, held this autumn at London's Victoria and Albert Museum, gave new meaning to the idea of architecture as a tool of the powerful. Here, Charles used his position to change architecture, which in the end may be a much more dangerous thing than using buildings to enhance power (see *continued on page 20*)



"30 under 30" show at Steelcase from Designer's Saturday.

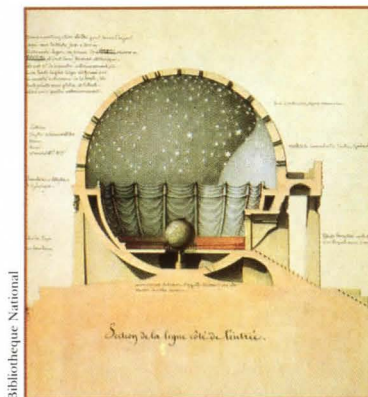
Designer's Saturday '89

Visitors to New York's annual Designer's Saturday in October were rewarded with an eventful program, noteworthy exhibitions, and the opportunity to see some of the designs that had debuted the month before at Milan's Salone del Mobile (this issue, p. 39).

One exhibition was itself an import—a display devoted to Italian Rationalist furniture that had been mounted in Milan in

1988. The exhibit (designed by Vignelli Associates) comprised 33 seminal modern pieces such as writing desks, chairs, and lamps—some reproduced expressly for the show and some still in production—that were created in northern Italy between 1927 and the outbreak of World War II by such 20th-Century design luminaries as Giuseppe Terragni, Franco Albini, and Gabriele Mucchi.

Another exhibition, entitled "30 under 30," revealed facets of (*continued on page 24*)



Lequeu's "Temple of the Earth" from "Architects of Liberty."

Architects of Liberty in Paris

French architects, during monarchies and democracies alike, have primarily served the state. For a few years during the revolution, though, architects were free as never before or since to create new building typologies, urban plans, and architectural forms to embody the new society of reason and progress. Public money was scarce, so most of these projects (*continued on page 26*)



An exhibition at MoCA in Los Angeles re-creates post-war Case Study Houses like this one by Eames and Saarinen. Perspectives, p. 33.

Pencil Points

The Tokyo Metropolitan Government has announced that Rafael Viñoly Architects has won the Tokyo International Forum Design Competition. The 1.4 million-square-foot complex will house four theaters, a conference center, exhibition areas, and two cultural "information" centers.

Not only are the Japanese importing American architecture, they're acquiring some classics over here. The Mitsubishi Estate Company of Japan has paid a hefty \$846 million for controlling interest in New York's Rockefeller Center complex.

The international competition for a new library at Alexandria, Egypt, has been won by Snohetta Arkitektur Landskap & Associates, a team of Norwegian, Austrian, and American architects. Participating teams were asked to "design an architectural work destined to incarnate the quintessence of the cultural ideas of tomorrow" on the site of the ancient Alexandria library.

Ecology-conscious architect William McDonough has been commissioned to design the proposed Warsaw Trade Center in Poland. A 50-story tower made of recycled aluminum, steel, and glass will, if all goes as planned, be topped with a glowing, 20-story, solar-powered mesh spire. The catch, for Polish American developer Sasha Muniak of Balag Ltd., is his agreement, on McDonough's request, to allocate funds for a 10-square-mile forest.

America's grain elevators, rendered nearly obsolete by changes in shipping practices, may be the answer to overcrowded prisons according to The Eggers Group, a New York architectural firm. They found that the thick walls and circular configurations of these structures would make retrofit more cost-efficient than new construction.

The Chicago chapter of Architects/Designers/Planners for Social Responsibility transformed its city's subway and elevated train system into a venue for anti-nuclear protest in October. ADPSR posted 750 anti-nuclear ads each with a message that compared federal weapons expenditures to social and educational needs. One poster read: "For the equivalent of one week's national nuclear arms spending, 14,000 Americans could receive lifetime health care. Examine your priorities. Write your senator."

Prince (continued from page 19) Editorial, p. 9).

The exhibit, designed by David Lloyd Jones of RMJM, featured a central, skewed pavilion (a skeletal version of the gallery space at one third the size) within which hung panels explaining and illustrating the Prince's ten motley principles of good design: community involvement, signs and lights, art, decoration, materials, enclosure, harmony, scale, hierarchy, and place. These have all the daring or specificity of an introductory lecture on architecture to secondary students. The rest of the exhibit, arranged along the gallery's perimeter, is equally heterogeneous. The Prince mixed in some slap-dash criticism, likening the new British Library reading room to "a hall for secret police" and James Stirling's Mansion House Square project to "a 1930s wireless." He threw together some breathless history, covering British Classicism along a back wall and Modern architecture in a few glass cases. And he served up some blatant promotion, prominently displaying a large model for a new town that he commissioned in Dorchester.

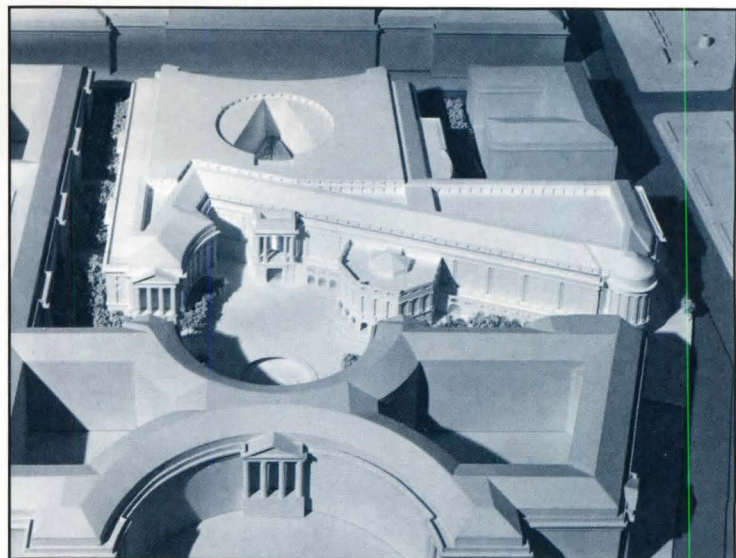
Most memorable, though, were the video monitors playing segments of the Prince's television program over and over again, like the voice of Big Brother left ringing in your ears. All in all, the exhibit was hardly of the caliber one would expect in a place of scholarship such as the Victoria and Albert Museum. Architecture, it appears, is not alone in its vulnerability to the abuse of power. **Thomas Fisher** ■

Pei Firm Wins Federal Triangle

New York architects Pei Cobb Freed & Partners, with associate Washington architects Ellerbe Becket and the Delta Partnership development team, have won the competition for the \$655 million, 3.1-million-square-foot federal building and International Cultural and Trade Center in Washington, D.C.

The building, designed by partner James Ingo Freed, will fill what has long been an L-shaped 11-acre commuter parking lot at the heart of Washington's federal enclave. It will complete the Federal Triangle, a wedge of land between Pennsylvania and Constitution Avenues, where construction was halted by the Depression.

When complete in about four years, the complex will become the nation's second largest gov-



Pei Cobb Freed's Federal Triangle Plan. Pennsylvania Avenue is at lower right.

ernment building, following the Pentagon. It is to serve as a federal office building, a retail center, and a home for the International Cultural and Trade Center, serving a wide range of public and private organizations.

Responding to competition guidelines, the Freed scheme echoes the scale, color, and general feel of its neighbors. Seven of the nine buildings now in the Triangle are in the Classic Revival style and constitute what is perhaps the city's clearest physical image of the faceless federal establishment.

The scheme's pronounced diagonal is a direct response to Pennsylvania Avenue, which it meets at right angles. This move is designed to turn the Avenue into the site, providing a way to draw people into its center, a principal entrance to the ICTC off of the to-be-completed Hemicycle Court. The Freed design also creates a large glazed interior court and draws back from 14th Street to create a curved entrance to the offices.

Freed hopes that the complex will serve to link the increasingly commercial Pennsylvania Avenue area to the north with the Mall's monuments and museums to the south. If used by strolling tourists and workers as anticipated, this will be a very welcome replacement for a parking area that interrupted the city fabric.

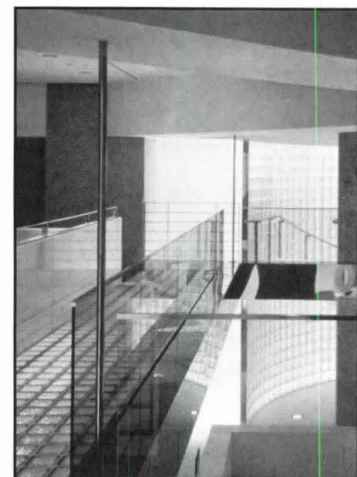
The Pennsylvania Avenue Development Corporation, which conducted and judged the competition, cited the architectural and urban design aspects of Freed's proposal as important factors in their choice.

The six other contending development teams, each offering remarkably different design proposals, included Kohn Pedersen Fox, Skidmore, Owings & Merrill, Hardy Holzman Pfeiffer

Associates, Hellmuth, Obata & Kassabaum, Michael Graves, and Harry Weese.

The project is the first to be developed under a law introduced several years ago by New York Senator Daniel Patrick Moynihan. Under the scheme, the federal government will sign a 30-year master lease for the facility. After that time, ownership of the privately-developed property will be conveyed to the federal government.

Thomas Vonier ■



Capital Bank by Gensler & Associates, GlassBlock Award winner.

PC GlassBlock Award Winners

Pittsburgh Corning has announced the winners of its second annual PC GlassBlock Architectural Design Awards competition. A jury of five architects selected the winners.

In the category of completed or existing buildings, Gensler & Associates, Houston, was awarded first place for its Capital Bank in Miami. Second places were awarded to Walter Chatham, New York, for an office/retail renovation in

Winston/Salem, North Carolina, and to Hoover Berg Desmond, Denver, for the North Classroom Building at the Auraria Higher Education Center in Denver. Honorable mentions went to Jack L. Gordon Architects, New York, for the New York State Psychiatric Institute in New York, and William McDonough Architects, New York, for the Triangle Artists' Workshop Collaborative Architecture Project, White Plains, New York.

A first place in the category of planned/pending/in-works projects went to Douglas E. Oliver, Houston, for the Clemson University Performing Arts Center.

Among conceptual projects, the University of Colorado School of Architecture and Planning, Denver, won first place for an entry entitled "Five Projects: Glass Block in the City." Second place went to Eric Ibsen of Ohio State University for a "Modern Church." Honorable mentions were awarded to Thelean Shu, Parsippany, New Jersey, for "An American Film Institute"; Yi-Shio Margaret Kuo, University of Houston, for "Dedication to Glass Block," and Mark S. Klaniac, Chicago, for "Viewpoint to the Universe."

Lights, Steel, and the Stones

The dream of a mobile city, envisioned by architects of the 1960s, is coming to life in football stadiums across the country. When an estimated three million concertgoers hear the Rolling Stones on their Steel Wheels tour, they'll see a 350-foot-long performance set descended from the drawings of Archigram, the British architects who romanticized technology a generation ago.

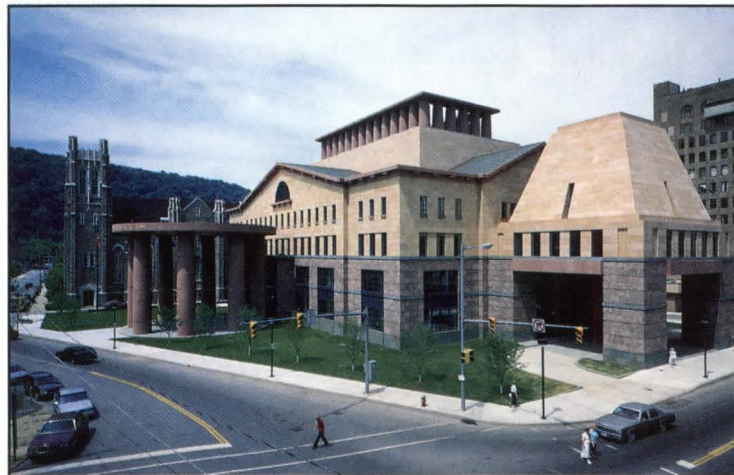
A 200-foot-high skeleton of scaffolding, this industrial stage set for Mick Jagger and his cohorts can be assembled in 68

hours and later dismantled and moved to sports stadiums across the continent. When installed, the assemblage of steel, fabric, video screens, amplifiers, and computer-controlled lights looms over the stadium grandstands like an abandoned factory or a city emptied by neutron bombs. But once smoke starts to billow from a pair of dangling exhaust pipes and colored lights pulse across the set's towers, the micro-city bursts to life with music as the Stones begin a 2½-hour set with video images, a computerized light show, and a finale that is literally pyrotechnic.

Mark Fisher and Jonathan Park, the architects of this ephemeral city, have extended the centuries-old tradition of the architectural folly to the post-industrial present. As contemporary rock and roll patricians, the Stones have commissioned a fabricated ruin that evokes a vanished culture. However, instead of referencing antiquity, the Stones augur the demise of our own civilization.

Although their set is a display of technological prowess, Fisher and Park (and the Stones, who were collaborators) do not celebrate industry as the emancipator of Western culture. Instead, they have built a tattered machine that alludes to an exhausted industrial economy.

Perhaps the Stones see themselves as survivors, their machinery worn by time, but still wired with enough voltage to ignite their musical circuitry once again. Their stature among rock musicians is analogous to the stage set: Some finishes have cracked, but the structure remains intact. When it is turned on, it reanimates a counter-culture that we once believed would change the world. **Philip Arcidi** ■



Newly opened Crown American Building, Johnstown, by Michael Graves.

Graves in Johnstown

Crown American Corporation, the nation's fifth largest developer of shopping malls, recently opened a spectacular new headquarters building by Michael Graves in downtown Johnstown, Pennsylvania. Built by Crown American's own construction firm, the \$27-million office building is a curious mix, effectively blending design elements of a 19th-Century factory with those of an ancient temple.

The building, which fills a city block, comprises three main features: the solid, factory-like block crowned with a magnificent 36-column colonnade; a free-standing, Doric-columned rotunda, and a porte cochère with four massive pillars supporting a truncated pyramid.

The three-story rotunda, composed of eight columns precast in resinous concrete, is a surprisingly grand employee entrance, opening onto a lobby with barrel-vaulted ceilings and a brass balcony supported by square pillars. The porte cochère, the public entry, opens into a small reception area supported by archaic Doric columns like those found throughout the building. The splendid pyramid above, which houses executive offices, has an atrium with Doric columns and a spiral staircase leading to a balconied library. Both entrances lead to a five-story central atrium illuminated by both natural and artificial light.

Graves's unique mix of textures and materials for the exterior has created a dramatic two-tone effect. He uses brown agate granite from south Dakota on the first two stories; golden buff Kasota limestone from Minnesota on the top three levels, and bluestone from the Pennsylvania/New York border as banding and at the bases. Interestingly, no mortar was used to

anchor the stone to the concrete block understructure; instead Graves used an old but seldom-used strap anchor system, in which each stone was hung onto a stainless steel strut.

Graves was also responsible for the interiors of the building, including wall murals, furniture, stemware and china, cutlery, table linens, carpeting, and even the company flag, which flies outside the rotunda. He uses a grid pattern throughout, on stone floors, walls, desks, chairs, tables, railings, in skylights, and in most of the building's 140 windows.

Crown American's chairman and CEO, Frank J. Pasquerilla, who built up the \$1-billion company from a small masonry contracting firm, selected Graves to design this hometown monument after visiting the architect's Humana Building in Louisville, Kentucky. Their shared affection for Classical and Venetian architecture is evident throughout the building, especially in Graves's mural in the executive dining room and in the \$800,000 art collection housed in the new building.

City fathers hope the Crown American building, which has already attracted several thousand visitors, will become a tourist attraction for this economically depressed industrial community. **Judy Donohue** ■

The author is a freelance writer in McMurray, Pennsylvania.

Ziva Freiman's Report from Milan (p. 39) covers the old and the new in Italian furniture design.

(News Report continued on page 22)



Archigram revisited: The Rolling Stones stage set by Fisher and Park.

The New Elephant of the Bastille

Ever since the Bastille was razed, presidents and kings have searched for a monument to fill and order the vast void of that emotionally charged space. In 1813, a huge elephant symbolizing "Glory" was temporarily erected there but jettisoned in 1847. Even Victor Hugo mourned the vacuum left by the Elephant de la Bastille, but Haussmann himself couldn't come up with a scheme to organize the formless sprawl of the Place de la Bastille.

The new Opéra de la Bastille also carries the burden of replacing Charles Garnier's opulent, magnificently sited 19th-Century Opéra not just as a High-Tech update, but an aesthetic counterpoint, creating a non-elitist cultural architecture for a "new, young, mass opera public." Small wonder that when Canadian Carlos Ott's scheme was chosen by a "blind" jury (who reportedly mistook it for Richard Meier's), it instantly became a focus for the endless French class war, involving world-famous artists, construction workers, and the President alike.

For the elephantine 1½-million-square-foot Bastille Opéra is another of Mitterrand's imperial *grands projets*, meant to become, in Ott's modest words, "a monument to mark the Bicentennial . . . as did the Eiffel Tower for the Centennial." To such great expectations, the low, smooth-skinned, pale-gray composition of intersecting cylinders and cubes that faces the immense amorphous surface of the Place de la Bastille, with its lonely central column, is a disappointing response. It certainly does not gather up and dominate the empty directionless space before it.

The principal façade is weak and awkward: The granite, stainless steel, and glass building mass is linked by a skinny, trabeated arch spanning a ceremonial stairway to a 17th-Century stucco house left stranded at the corner. Ott's polemic of



"Proscenium arch" of the Opéra de la Bastille facing the Place de la Bastille.

"total respect for the site without peremptory intervention in the urban historical context" cannot obscure the composition's Disneyland quality of design miscegenation.

But the monumental stair going essentially nowhere (the major entrance is below and behind it) is already teeming with tourists and street artists, who treat the arch as a proscenium. It is a minor urbanistic success, and a good thing too, since a Greek amphitheater below the main opera hall, originally designated for street musicians, has been commandeered by management.

Behind the lumbering façade is a multi-level, semi-circular lobby which wraps around the main 2700-seat opera hall at the apex of the deep wedge of a building. Here one enters another world—one of serene, sophisticated volume and refined surface, where curves and grids have been gracefully integrated, and the palette has been expanded through shades of gray to black and white, with touches of warm reddish-brown wood. Unlike the rather crude exterior, the interiors (largely the work of associated architects Saubot-Jullien who were less constrained by the competition *parti*) are beautifully detailed and built. Lighting is provided by luminous architectural forms merged with structure. The opera hall, with its complex-

curved, acoustic ceiling and billowing white balconies, set against gray granite, severe black and pearwood grids, black upholstery, and bleached oak and granite floors, might have been designed by a Japanese Aalto.

Most dramatic of all are the Piranesian backstage spaces, engineered to allow nine complete 4000-square-foot sets to be changed in minutes. An extravagant full-scale rehearsal space and an experimental theater, meant to "modulate" into almost anything, share the scenographic arrangements.

As an icon, the Opéra de la Bastille fails dismally. Never will it replace either the Eiffel Tower or Garnier's Opéra in the hearts of Parisians or tourists or architects, and Pei's pyramid is front runner for a lasting Bicentennial image. But with its fine interiors, technical capacities, and promising acoustics, the Bastille may nevertheless become one of the world's great opera houses.

Barbara Shortt

The author is a New York architect who writes frequently on French architecture.

Modern Landscape at Berkeley

A symposium titled "Modern Landscape Architecture (Re)Evaluated," sponsored by the College of Environmental Design and the University Art Museum of UC Berkeley, took place in the museum auditorium October 28 and 29. The purpose of the symposium as stated by its organizer, Mark Treib, faculty member of the Department of Architecture, was "to review and assess the tenets, accomplishments, and limits of Modernism in landscape architecture and to formulate ideas about the possible direction in which the discipline can proceed."

Although a diverse group of practitioners (Peter Walker,

Martha Schwartz, Warren Byrd, Alexandre Chemetoff) and historians (Peirce Lewis, John Dixon Hunt, Catherine Howett) were invited to address various aspects of Modernism, attention focused on presentations by three giants of the Modern movement in landscape architecture, Garrett Eckbo, Dan Kiley, and James Rose, authors of articles for *Pencil Points* (now *Progressive Architecture*) in the late 1930s and early 1940s that laid out a program for modern landscape architecture.

To everyone's consternation, Eckbo, Kiley, and Rose stressed learning by doing and refused to supply the kind of biographical clues about influences and reactions to events that would have helped explain what had made them tick so well for so long. Although a denial of the past is a familiar tenet of Modernism, the audience had difficulty accepting it and tried various ways of wrestling answers from the reluctant speakers, to not much avail. However, Treib anticipates a publication of symposium papers, which may help history's cause. All in all, the interchange was most valuable in providing the kind of sincere confrontation woefully lacking in most such occasions and in calling attention to the perils of making history, whether in words or works.

Sally Woodbridge

Chicago's Parks: Paradise Regained

One of Chicago's greatest legacies is its parks. This may surprise many, including—unfortunately—most Chicagoans. Some of the loveliest ones, designed by Frederick Law Olmsted, the Olmsted Brothers, William Le Baron Jenney, Jens Jensen, and Alfred Caldwell, have been obscured by decades of neglect, and by the introduction of roads, baseball diamonds, and basketball courts into carefully composed Prairie landscapes.

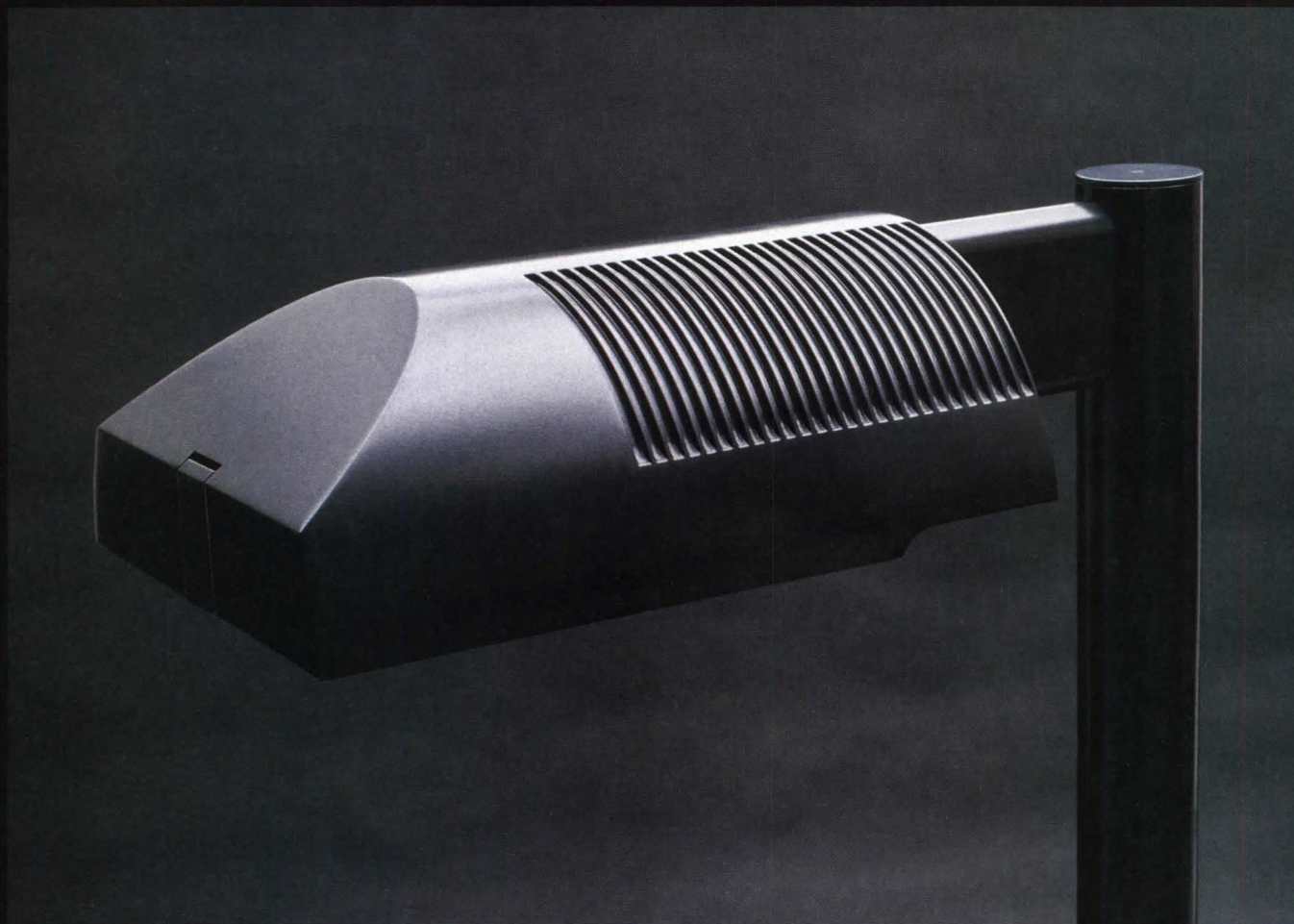
But some forgotten archives and a new Chicago Park District administration—one more sensitive to design than the politicians previously in charge—are prompting change. In 1987 Assistant Superintendent Edward Uhler found a cache of approximately 7500 drawings—some are rare turn-of-the-century originals—as well as period photographs of picturesque park scenes. In the publicity surrounding the discovery, many realized what had been lost when the parks were allowed to de-

(continued on page 24)



Side view of the Opéra de la Bastille.

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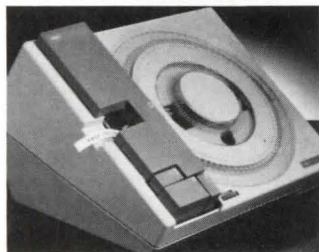
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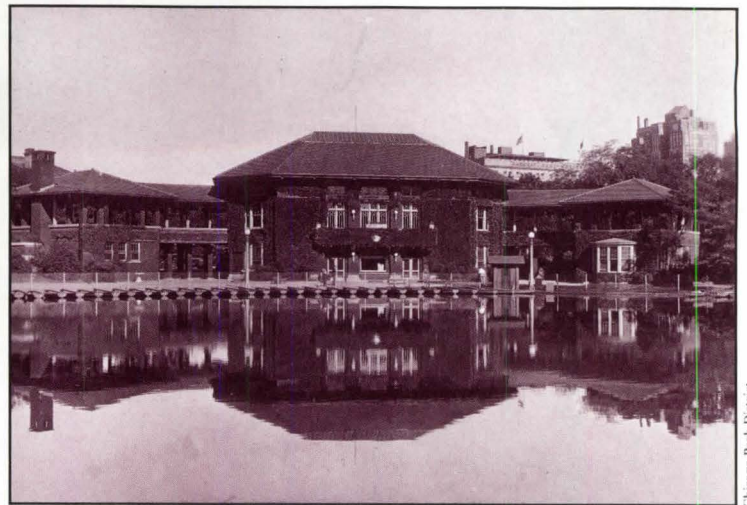
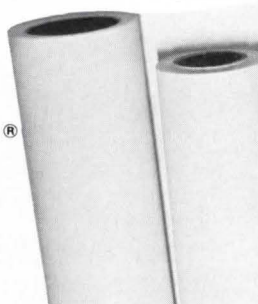
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Under restoration: Cafe Brauer, Lincoln Park, Chicago, by Dwight Perkins (1908).

Parks (continued from page 22)

teriorate. Early this year the Park District created a new department of Research and Planning and put Uhler in charge. The department includes a Preservation Planning division whose staff is surveying historic parks. The first inventory includes four parks that have been nominated to the National Register.

Selective restoration is already underway. Alfred Caldwell, who is now 87 and was an assistant to Jensen, helped with the restoration of his own 1935 design for Promontory Point in Burnham Park. In Lincoln Park, restoration of Dwight Perkins's 1908 Café Brauer is well along. Uhler hopes to make a model restoration out of Sherman Park, designed by the Olmsted Brothers and lately nominated to the National Register, by moving the park's sports facilities elsewhere and recreating the park's original pastoral quality. There is even talk of rebuilding some long-demolished park structures, one a conservatory by Daniel Burnham.

All this raises delicate questions about balancing contemporary needs with history. Uhler acknowledges that demands on urban parks have changed enormously, and admits, "We can't restore everything," but clearly there is excitement about giving back a piece of Chicago history. *Cheryl Kent*

Saturday (continued from page 19)

the future—in the work of talented young designers culled from a competition held by *Interiors* magazine. Sponsored by the Steelcase Design Partnership and curated by former P/A Senior Editor Darallice Boles, the international exhibition ran the gamut from spoons to houses. The works' disparate scales were well handled by asymmetric cruciform metal frames, hung

with laser-printed screens, which accommodated images, drawings, and text. These were augmented by models, prototypes, and even a full-scale motorcycle built of resin-coated foam.

Boles was also responsible for a well-attended symposium on the affordable housing crisis, an event that set the stage for frank exchange between key representatives of the political, public, and private interests involved. The event was sponsored by P/A, *Interiors*, and *Architecture* magazines, and by the Formica Corporation. (See P/A editorial, Nov. 1989, p. 9.)

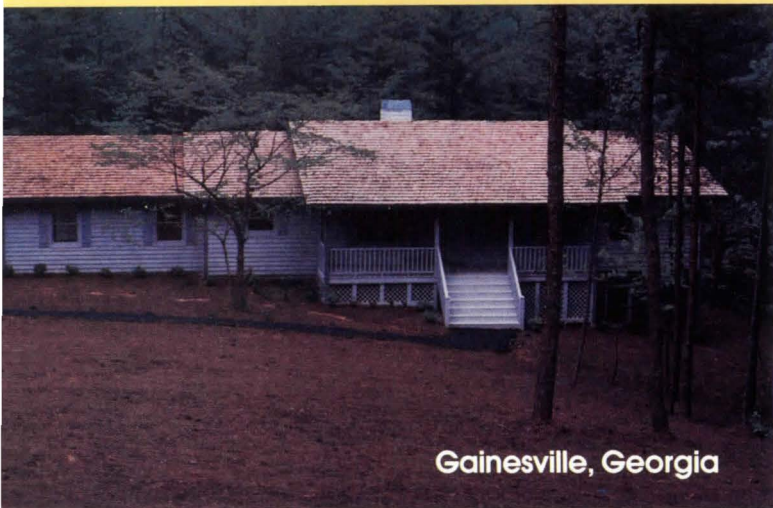
Among the design debuts, Aldo Rossi's Parigi chair for Unifor (recently introduced in Milan and making its first stateside appearance at Designer's Saturday) was one of the most beguiling. Its crisp, hardened-foam seat (available also in belting leather) is supported by a heavy, flat extruded-aluminum frame. The exaggerated cant of the chair's rear legs, and the slender metal arches that swoop up from the floor to form its front legs and arms, impart an illusion of movement to the inanimate object.

At the other end of the engineering spectrum, the Harter Group's new Allegro chair is a clear standout in the crowded field of ergonomic, "responsive" office chairs. Its designers, Babcock and Schmid Associates of Bath, Ohio, drew on extant automotive technology to create the seat's compact spring-tilt mechanism. In addition to its array of backward- and forward-tilt movements, the Allegro offers adjustable tension control to modulate the "resistance" that the chair offers the user—making it as comfortable for the 97-pound executive as for the erstwhile linebacker.

Ziva Freiman

(News Report continued on page 26)

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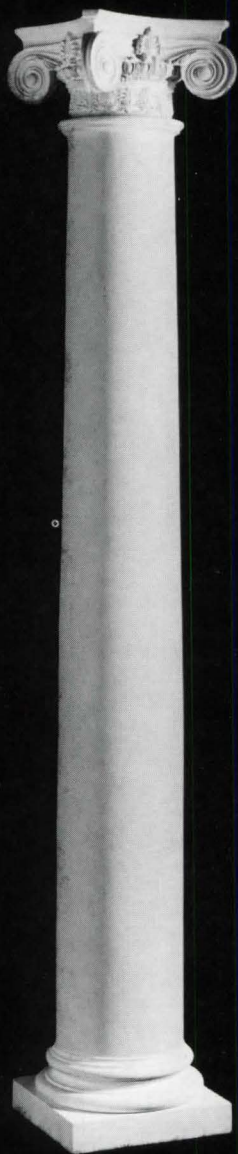
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Ralph Lieberman

Hoepfner house by Burr & McCallum, Palladio Prize winner.

Palladio Prize Winners Announced

The 1989 Andrea Palladio prize, worth \$55,000, was announced on October 7; it will be divided among three first place winners: Ann McCallum of Burr & McCallum, Williamstown, Massachusetts, for the Hoepfner House in Williamstown, Massachusetts; Ryoku Itaya and Hidemi Ihara for the reconstruction of a building in Tokyo; and Hiroshi Miyakawa for a vacation house in Tateshina, Japan.

Little known in the United States, the Palladio prize was awarded for the first time in 1988, and is underwritten by Caoduro SpA, a plastics manufacturer headquartered in Vicenza, Italy. The competition, open to architects under 40 who have executed a building, drew 156 entries this year, including 86 from Italy, 5 from Japan, and 4 from the United States; they were reviewed by James Stirling, Rafael Moneo, Francesco Dal Co, and Manfredo Tafuri. The jury selected 20 finalists for an exhibit in the Basilica at Vicenza.

An austere rationalism typified the finalists' work; classical references, if any, were abstracted into simple geometric volumes. Spiky armatures, splintered floor plans, or other signs of Deconstructivist sympathies were nowhere to be seen. These results were predictable; Moneo's buildings show his links to Neorationalism, and Dal Co and Tafuri come from Venice, where the movement began.

Young Americans would be wise to enter the next two competitions, scheduled for 1991 and 1993. The jury (which won't change over the next four years) seems to take the prize's international scope seriously; more work from this side of the Atlantic would be welcome.

Philip Arcidi

Liberty (continued from page 19)

for the common weal were only imagined. But this was unimportant for these sons of the Enlightenment, like the brilliant, influential Etienne-Louis Boullée, for whom architecture was idea, not technique. A rich sampling of these projects is now on view through January 7 in "les Architectes de la Liberté" at the Ecole des Beaux Arts in Paris.

Almost 300 magnificent ink-wash drawings, paintings, and engravings, including Boullée's immense originals and the 1804 folio of Ledoux's utopian town of Chaux, are supported by scale models of unbuilt schemes (such as one transforming the Madeleine into a National Palace), and a slide show of existing Revolutionary buildings.

The show displays how Egyptian forms, already in use under the monarchy in sometimes droll conjunction with classic Greek and Roman motifs, were stripped down and purified by the architects of the Revolution. In addition, the search for a new religious, mortuary, and heroic architectural vocabulary—obelisks, pyramids, and spheres abound—is splendidly documented.

The human hero of the show is Jean-Jacques Lequeu, a frustrated draftsman for Soufflot under Louis XVI, who proudly called himself Architect in 1789. His phantasmagoric designs of temples to equality and the earth, monuments to the sovereignty of the people, combine nature, geometry, and naïve allegorical decoration to capture the passionate ethos of the times. His ink rendering for a "People's Arch," bears a scribbled notation on the back: "design to save me from the guillotine." **Barbara Shortt**

The author is a New York architect who writes frequently on French architecture. (News Report continued on page 28)

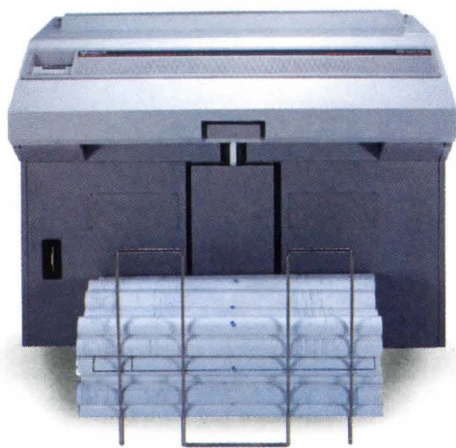
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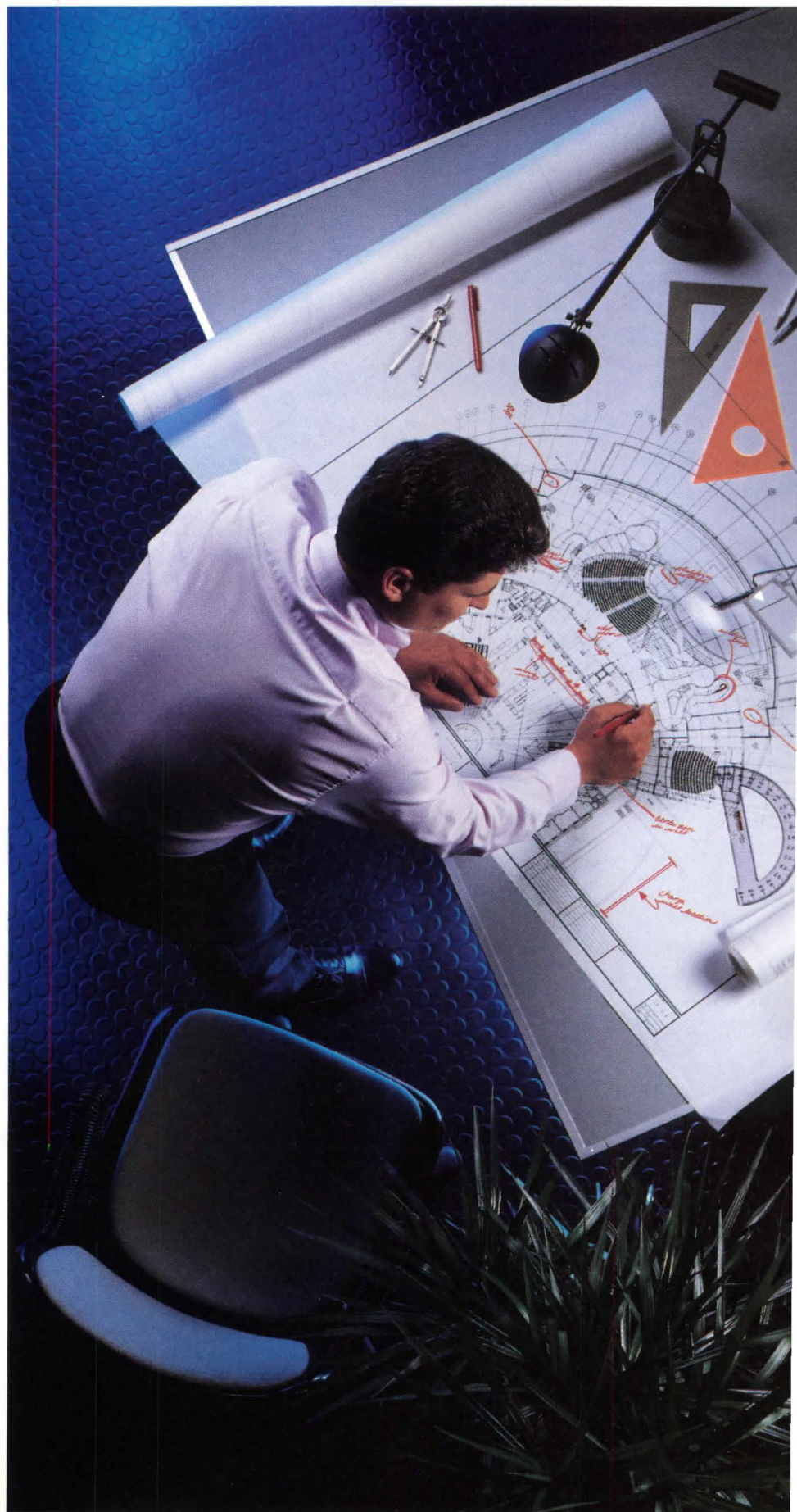
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Registration Opens:

Thursday, November 9, 1989

Registration Closes:

Wednesday, January 31, 1990

Programme Mailed:

Thursday, February 1, 1990

Question Period Closes:

Monday, March 26, 1990

Submissions Received By:

Tuesday, June 12, 1990

Jury Deliberations Begin:

Sunday, June 24, 1990

Awards and Public Forum:

Wednesday, June 27, 1990

This competition is organized by the City of Toronto and funded by the Ontario Ministry of Housing, the City of Toronto and the Municipality of Metropolitan Toronto.

COMPETITION

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Richard Gilbert, Councillor

Municipality of Metropolitan Toronto

Ken Greenberg, Architect, Toronto

Jane Jacobs, Author, Toronto

Daniel Soloman, Architect and Professor

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Native Perspective on Design

The symposium "Cosmos, Man and Nature: Native American Perspectives on Architecture"—held October 20–22 at the Wheelwright Museum of the American Indian—gathered tribal perspectives on how traditional values can be expressed in contemporary architectural structures and spaces.

The 14 participants included Native American artists, designers, social scientists, community planners, and educators from all over the United States, in addition to well-known architects such as Blackfeet Indian Douglas Cardinal, architect of the Canadian Museum of Civilization in Ottawa (P/A, Sept. 1989, p. 21), and the Northern Arapahoe Indian Dennis Sun Rhodes, designer (with Hodne Stageberg Partners) of the Native American Center for the Living Arts in Niagara Falls, New York.

Panel moderator Dave Warren, former director of the Cultural Center of the Institute of American Indian Art, summed up the proceedings by saying that the transformation of ancient cultural knowledge into a museum or other new structure is a matter that is "delicate, difficult, and complex."

Even so, tribes thousands of miles apart hold many beliefs in common. The consensus was that structures that conform to the Native American world view are not glass-cased mausoleums but living, breathing entities that grow and flow from the inside out, often through curvilinear forms (like Cardinal's) that evoke the cycles of the seasons and the continuity of life itself. Although the pueblo, wickiup, teepee, hoga, bark lodge, and long house obviously represent different looks and construction methods, all spring from an intuitive understanding of creation and its re-creation in built space.

A key point was the necessity of community participation, especially from tribal elders. "It is only on the local level that the needs of each unique Indian community can be perceived," Warren said. Summing up for all the panelists, he said that federally conceived and directed programs have crushed the Indian spirit by showing insensitivity to traditional, indigenous values. "In the process of forcing the Indian to become Everyman he became a No Man," Warren said. A frequently cited exception and model of successful community participation was the Makah Cultural Center in

Neah Bay, Washington, a building designed by Fred Bassetti Co., Seattle, around a tribe-designed interior.

The need for the symposium—which is said to be the first of its kind—became apparent to trustees of the Wheelwright Museum during discussions of its long-range plans to expand its facilities. Further impetus came from the Smithsonian Institution's need for input as it plans the proposed national Indian museum in Washington, D.C. Representatives of the Smithsonian, including Richard Siegle, who will oversee the design and construction of the new museum, attended. The Smithsonian will publish and circulate a text and a video of the three-day conference. **Sally Eauclaire** ■

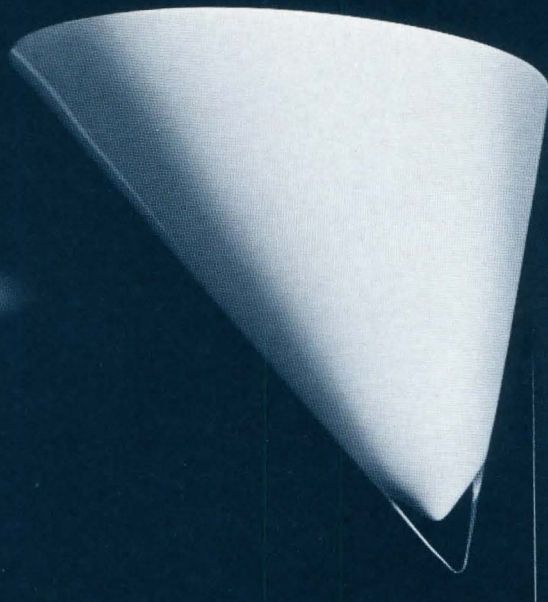
The author is a freelance writer and curator who lives in Santa Fe.

AIA Urban Design Citation Winners

The annual AIA Citations for Excellence in Urban Design have been awarded to seven projects. The citations honor "distinguished achievements that involve architects' expanding role in urban design, city planning, and community development." The winners were chosen from among 48 projects/programs and were cited for "contributing positively to the quality of the urban environment."

Citations were awarded to: Armenian Earthquake Urban Design Assistance Task Force, Spitak, Soviet Armenia, sponsored by the California Council/AIA; Kenwood/Oakland Neighborhood Conservation Plan, Chicago, by Skidmore, Owings & Merrill, Chicago, for the Illinois Housing Development Authority; Highway 111 Corridor Master Plan, Indian Wells, California, by Johnson Fain and Pereira Associates; Pennsylvania Avenue Development Plan, Washington, D.C., by the Pennsylvania Avenue Development Corporation; Atlanta Underground project, Atlanta, Georgia, a joint venture by Cooper Carey/Turner and Rouse-Atlanta for Underground Festival Development Corporation; Westside Waterfront proposal, New York City, by Bruce Aaron, Architect and Howard Silver, Arts into Production, for the Municipal Art Society of New York; and Massachusetts Heritage State Parks program, Boston, by the CityDesign Collaborative for the Massachusetts Department of Environmental Management. ■

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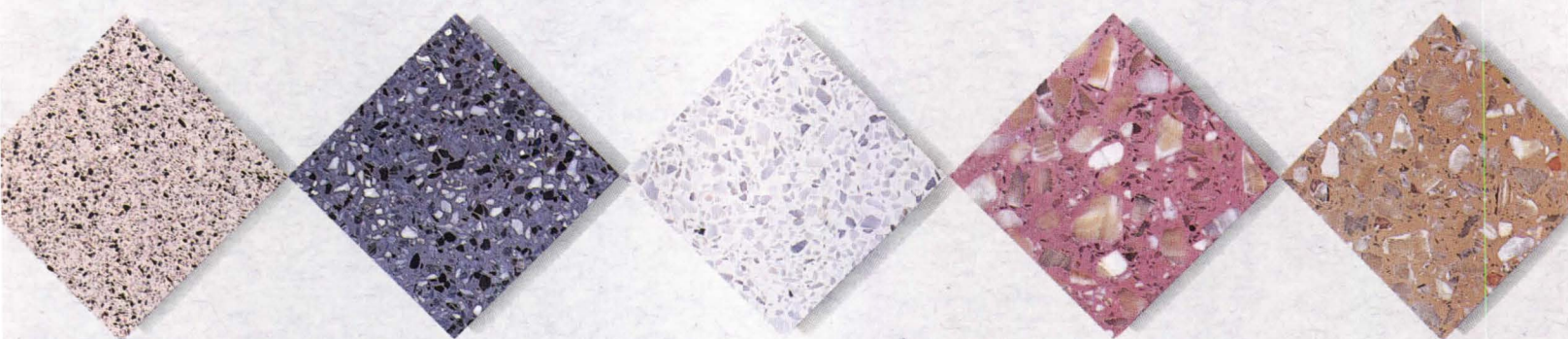
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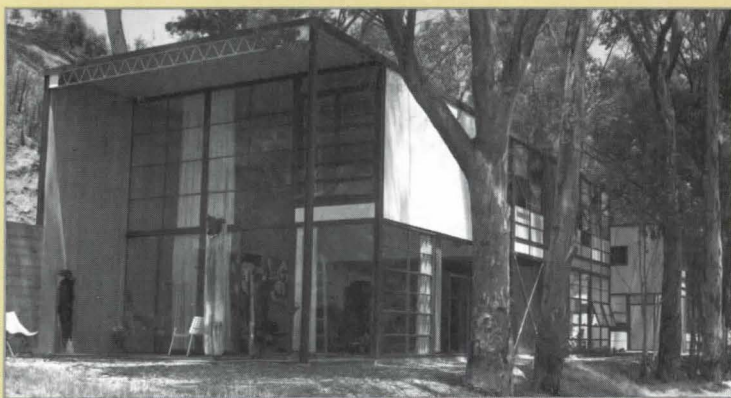
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Perspectives

A MoCA exhibition re-examines the Case Study Houses, the postwar generation's exploration of the problem of providing affordable housing.

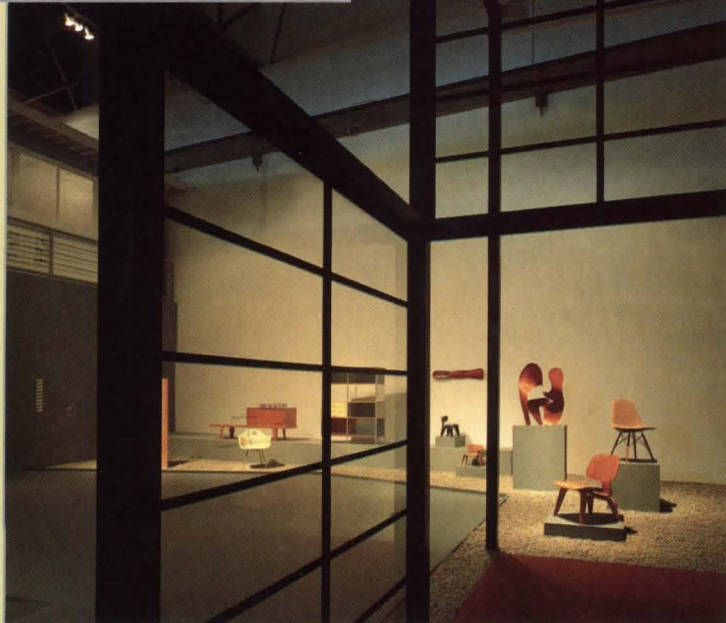


Marvin Rand



Julius Shulman

Pierre Koenig's Case Study number 22 (center right) is one of two houses built in their entirety under MoCA's roof (top). The show also features a mock-up (right) of the off-the-shelf structural system Charles and Ray Eames developed with Eero Saarinen for their 1949 house (above).



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Case Study Houses Remembered at MoCA

While the architectural community struggles to find answers to the need for affordable housing, Los Angeles' Museum of Contemporary Art (MoCA) is taking a cue from the past in its exhibition "Blueprints for Modern Living: History and Legacy of the Case Study Houses." The "history" in the title is the exhibition itself (designed by architects Hodgetts & Fung and running through February 18 at the Temporary Contemporary), which includes full or partial re-creations of three of the influential Case Study Houses of the postwar period. The "legacy" is a 40-unit housing complex in Los Angeles whose architect, Adele Naude Santos, was chosen in a MoCA-sponsored competition (PIA, Oct. 1988, p. 96). Esther McCoy, PIA's Los Angeles correspondent and the author of a book on the Case Study Houses, offers this report.

To construct two full-scale houses and a section of a third under a museum roof is an inspiration. The idea for the Case Study Houses show was that of MoCA director Richard Koshalek, who had pledged to the museum's Architecture and Design Council that he would give architecture a fair shake. And what a shake it is!

The Case Study Houses program was initiated at the end of World War II by John Entenza, then editor of *Arts & Architecture* magazine, to push house designs away from traditional styles toward Modernism. The program emphasized the potential for mass production, prefabrication, and experimental planning and materials. The small houses were aimed to fill the need of returning veterans and war workers. As a group, the houses reflect the Rooseveltian idealism and cooperation of the war years.

The Case Study Houses differed from their Modernist predecessors in California (works by Gill, Neutra, Schindler, Wright, and others) in that they were for the most part set on concrete slabs and were mod-

ular, rectilinear, and flat-roofed. In most of them, outdoor living spaces were at the rear with sliding glass doors to terraces. By the 1950s, the houses became larger and more luxurious; many were steel-framed. By the 1960s the program was extended to include community planning.

The exhibition, organized by associate curator Elizabeth Smith and designed by Craig Hodgetts and Ming Fung, includes scale models, photographs, and plans of all 26 Case Study Houses built between 1945 and 1966, plus the full-scale re-creations of houses by Ralph Rapson and Pierre Koenig, and a structural mock-up of Eames and Saarinen's well-known house.

The most nostalgic of the re-creations is Rapson's Greenbelt House, an unbuilt project for an urban neighborhood. The house is bisected by a wire-glass-roofed garden accessible from the house's public and private sides via folding doors. The house's fabrics, colors, and foam rubber beds all seem to jump from the pages of a period magazine. The interiors have for the most part been carried out with such conscience that the researchers may be forgiven for mixing Art Deco accessories with Modern ones.

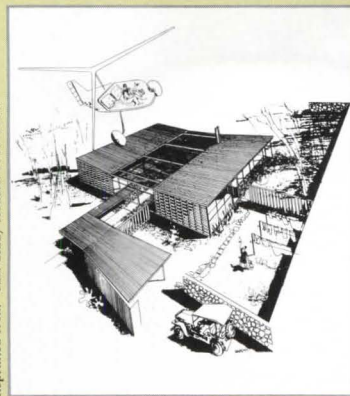
The second reconstruction—this one of a house that was actually built—is the 1960 House 22 by Pierre Koenig, with a living room cantilevered and glazed on three sides for a panoramic view of Hollywood. Adding to the drama is a swimming pool that extends almost to the living room doors and along the bedroom wing of the L-shaped plan.

The house by Charles and Ray Eames and Eero Saarinen is presented in structural mock-up to show the process of assembly from modular industrial parts, which include steel framing, factory sashes, open-web steel joists, and panels of Cemesto board, stucco, and plywood. The message is that the entire house can be ordered from Sweet's.

Also in the show are photographs and plans from a competition organized by MoCA and the Community Redevelopment Agency of Los Angeles for 40 units of multifamily housing on a site provided by CRA at the corner of Franklin and LaBrea Avenues in Hollywood. Adele Naude Santos's winning design is expected to be complete by the end of 1990. *Esther McCoy*



Marvin Rand




Reprinted from "Case Study Houses: 1945-1962."



Ralph Rapson's Greenbelt House (above), unbuilt except in its MoCA incarnation (top) features a linear garden separating public from private spaces. The show also features period furniture and industrial design (right), and—contrasting postwar economic situation and goals with today's—documents a recent competition for 40 units of affordable housing won by Adele Naude Santos (model, center right).



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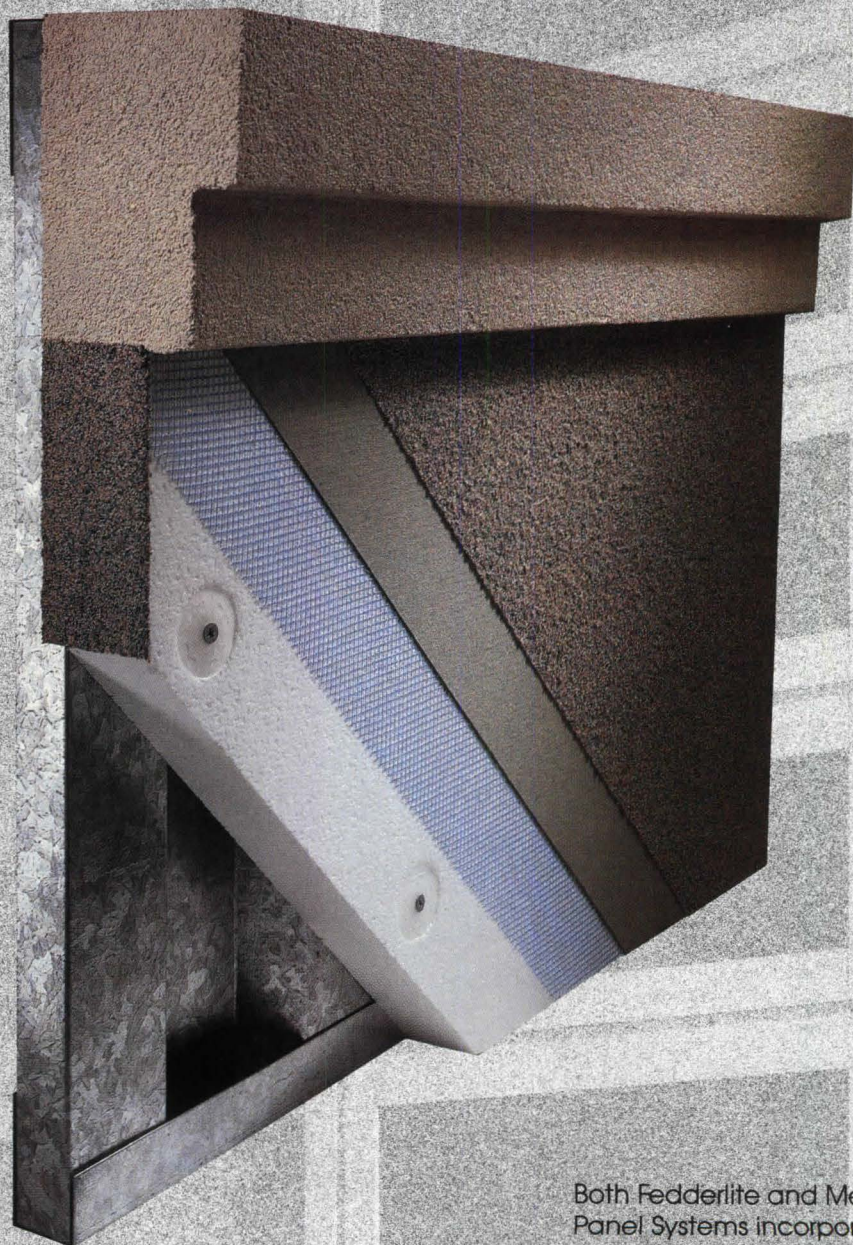
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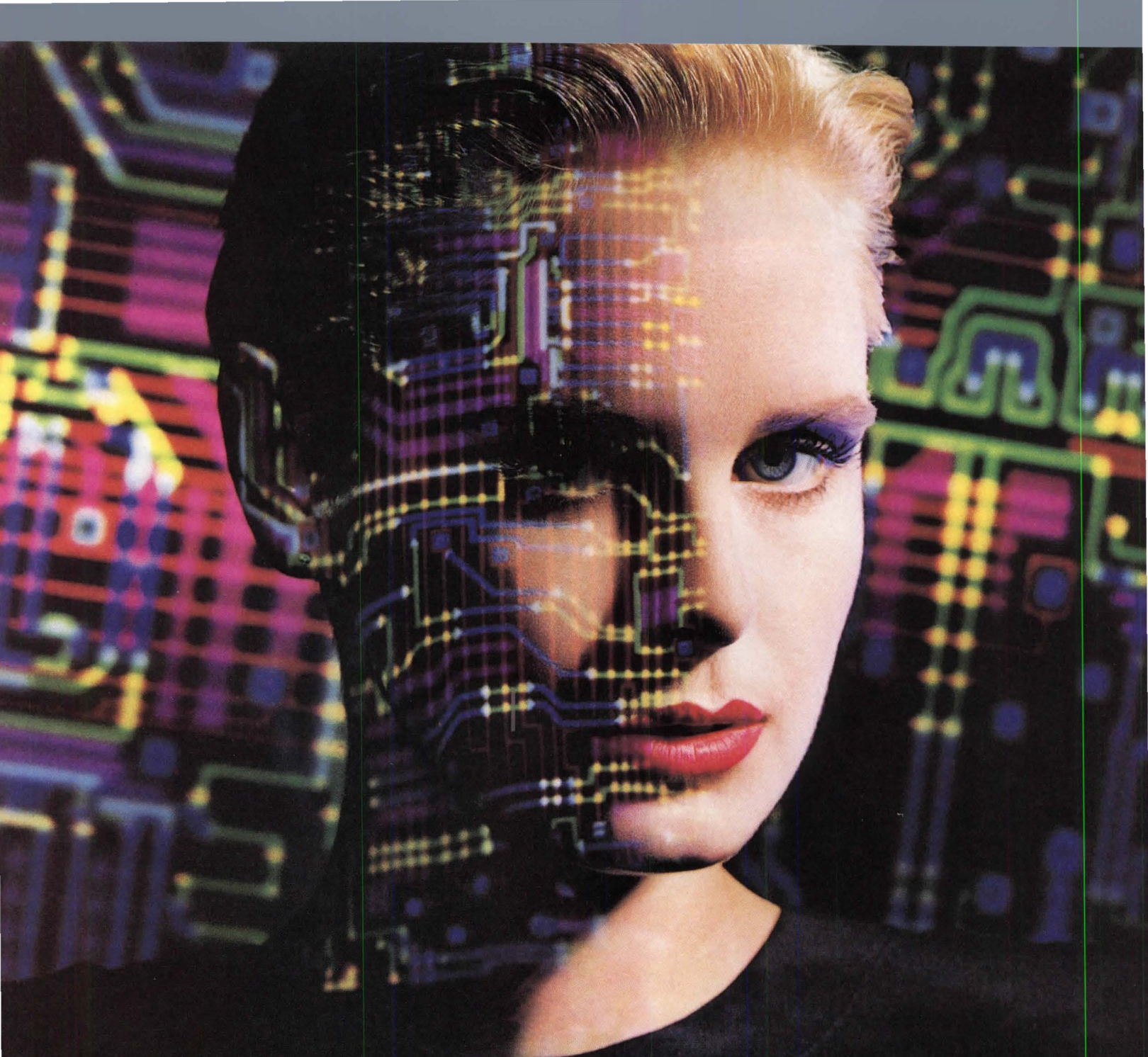


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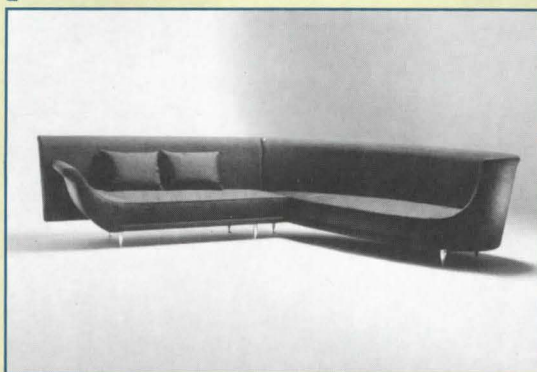
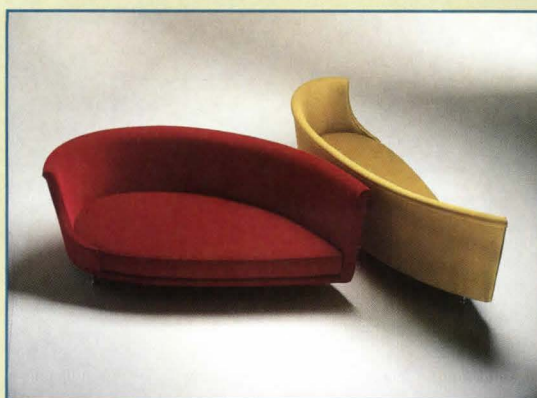
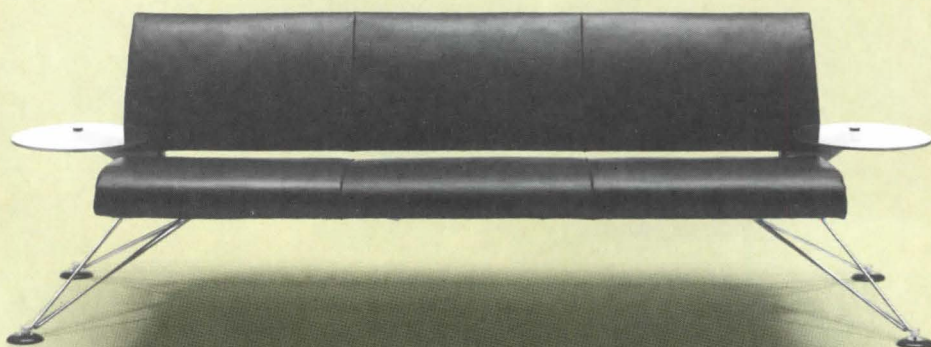
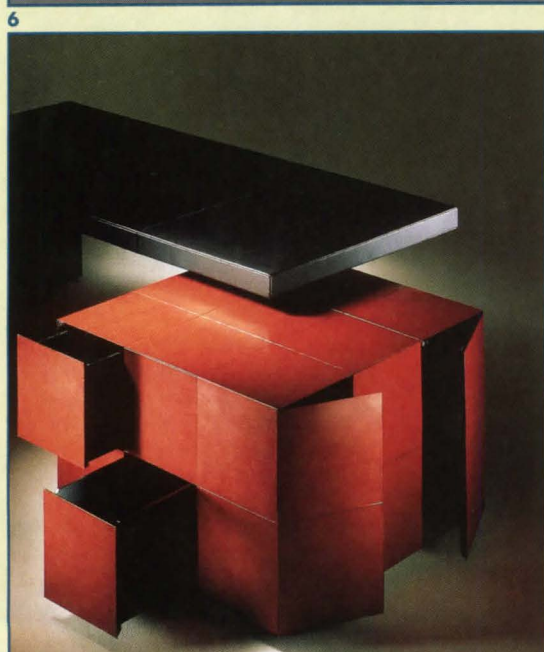
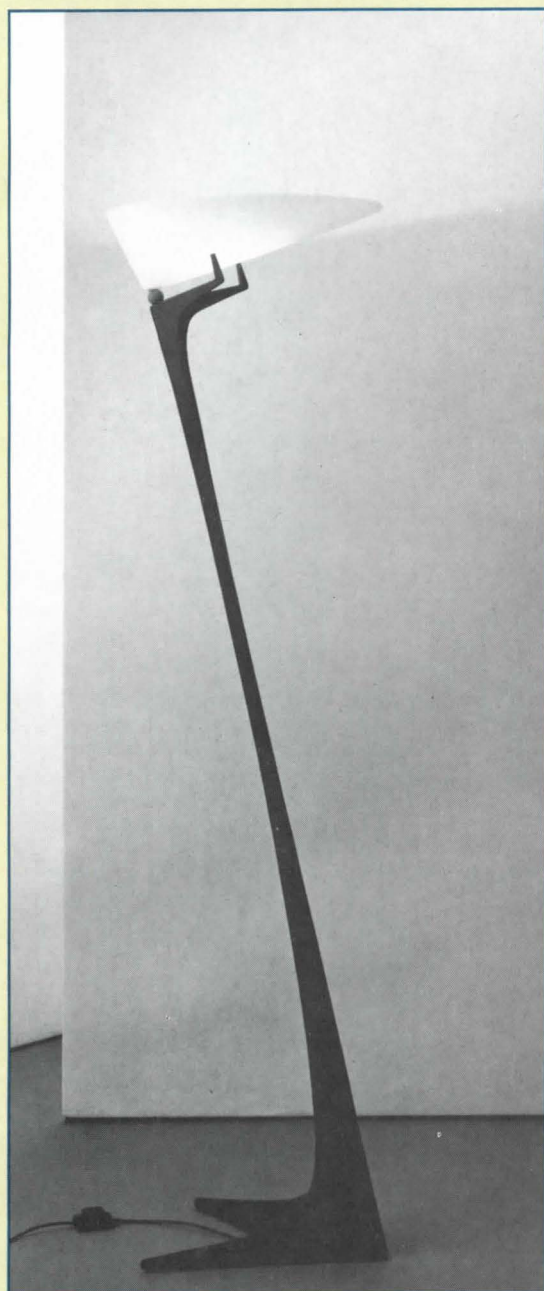


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Report from Milan

Through a slew of new work, this year's furniture exposition provided glimpses of seminal modern precursors.



Milan '89: What's Old is New

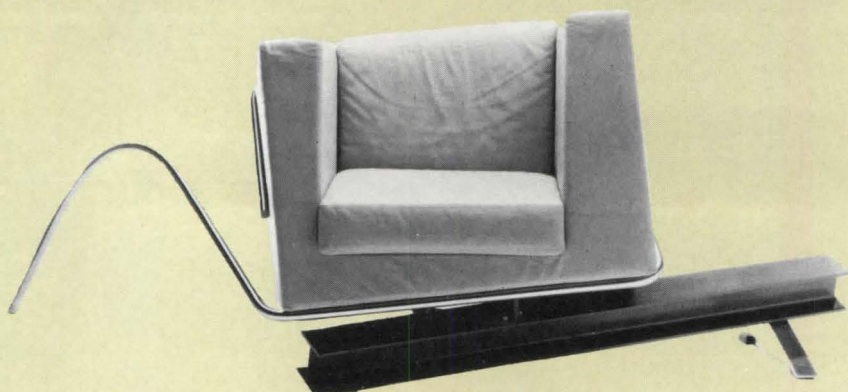
As always, the hordes (some 148,000 strong) descended on Milan's Salone del Mobile in September with an unquenchable thirst for novelty. This year, the furniture fair met them with a healthy dose of history: an exhibit of Italian classics from the late 1950s and early 1960s, entitled "Neoliberty in Context." It was an eye-opener: 36 pieces in wood, steel, wicker, and leather by the likes of the Castiglione brothers, Franco Albini, and Carlo Mollino that revealed the roots of many a trendy piece debuting next door.

The Neoliberty movement reacted against the rigidities of the International Style with a strain of organic modernism that grew out of the postwar Milan School—and that is reemerging today. Its descendants can be found in the work of such fantasists as Philippe Starck and Massimo Iosa Ghini.

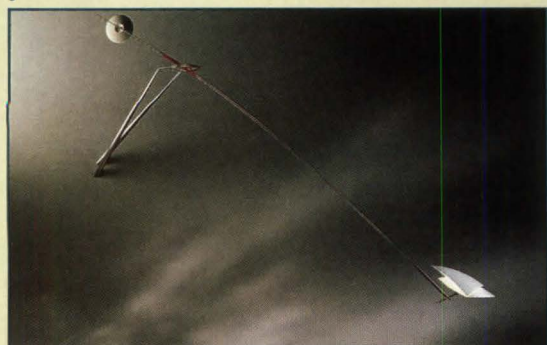
The latter introduced impressive designs both on and off the fairgrounds. His "New Tone" collection for Moroso comprises fluid-line upholstered seating (2, 3). Offsite, the Design Gallery Milano and Moroso presented a more precious collection of Iosa Ghini's silverware, wood, and upholstered pieces. The towering, hourglass-shaped pearwood cabinets (14) recalled the intricate carving by Neoliberty's Ico and Luisa Parisi.

At Sawaya & Moroni's show-
(continued on page 40)

Fleetwood sofa by Roy Fleetwood for Vitra Contract (1); New Tone seating by Massimo Iosa Ghini, Moroso (2, 3); Intervista armchair (4), C.E.O desk (5), by Lella and Massimo Vignelli for Poltrona Frau; Montjuic torchère by Santiago Calatrava (6) for Artemide.



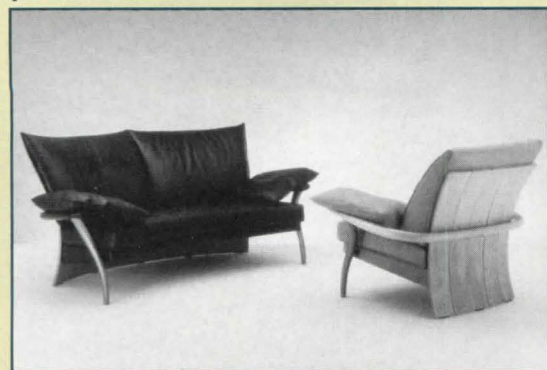
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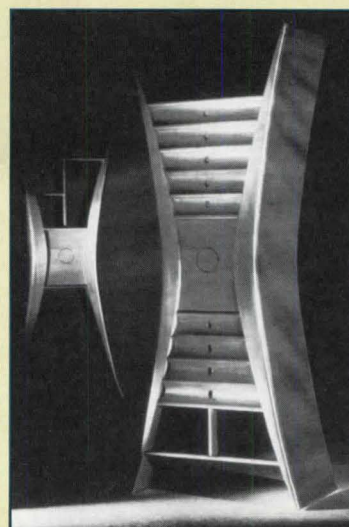
12



13



11



14

(continued from page 39)

room in town, a new leather-and-steel armchair by William Sawaya (9) boasted discrete "shoulder-blades," evoking Carlo Mollino's split-back seats.

Bernini's fairground showroom presented Paolo Nava's "Perpaolo" leather seating (10). Concave wooden slats support the backs; broad, wooden arms lean on horn-like metal legs.

Biomorphism was evident also in the lighting displayed at the EuroLuce show, most notably in a torchère by Santiago Calatrava for Artemide (6). Ingo Maurer of Germany weighed in with the wall-mounted Tijuca (8), an exquisitely balanced bird-like lamp first introduced as a wire-suspended fixture last year.

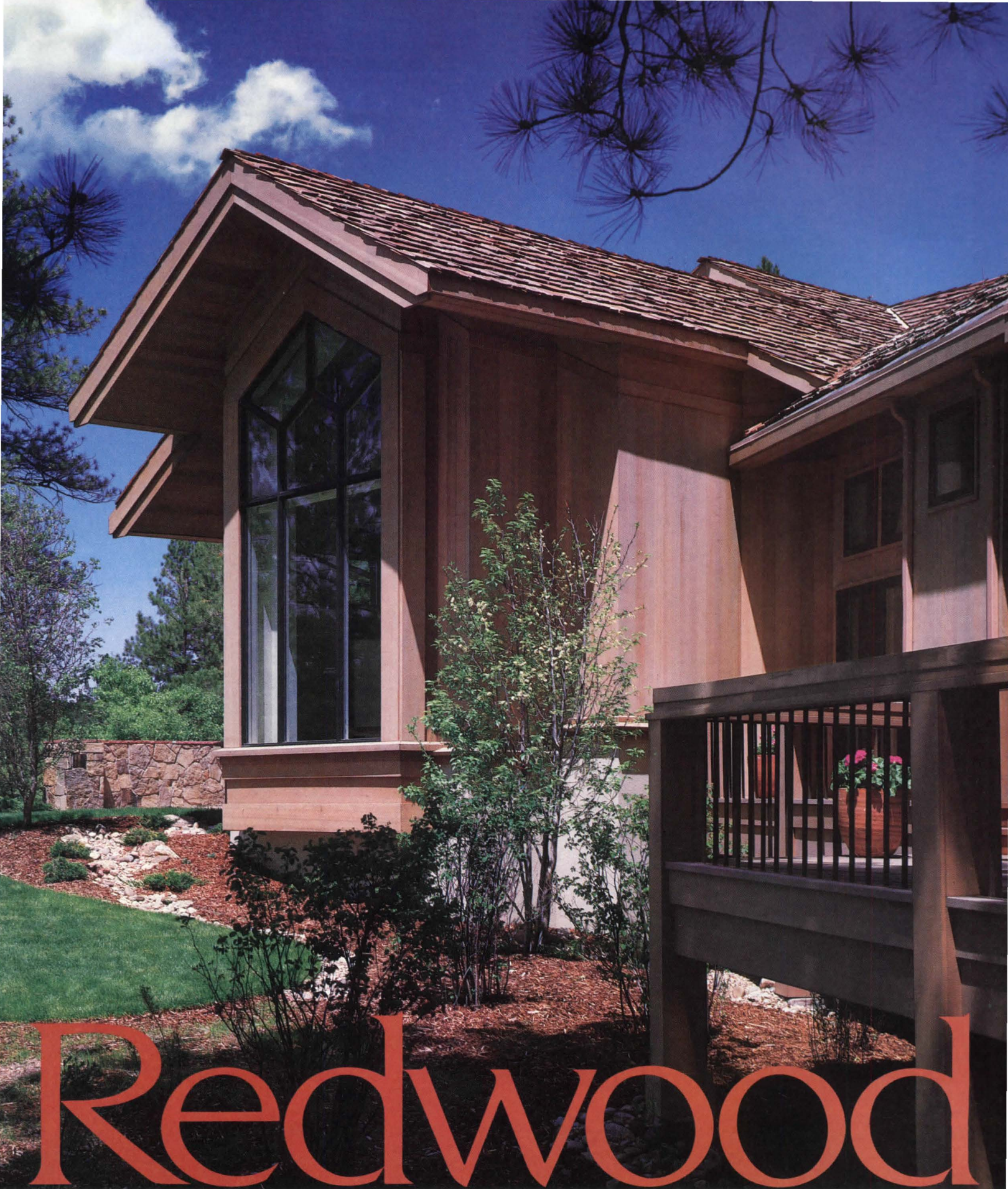
By far one of the most polished debuts was Antonio Citterio's "Baisity" leather seating for B&B Italia, including armchairs with round, perforated seats, canted padded-frame backs, and cylindrical arms (12), which couldn't be beat for comfort and freshness.

Citterio excelled also within EIMU, the international office furniture fair, with long-backed office chairs (13) for Vitra. Roy Fleetwood's leather, steel, and glass sofa (1) was another outstanding Vitra introduction.

Back in town, Poltrona Frau introduced C.E.O., an elegant line of leather covered desks, pop-panel cabinets (5) and wall units by Lella and Massimo Vignelli. "Intervista," also by the Vignellis, included a compact leather armchair (4) that is among the best of its class for well-considered scale and finish.


Vitra Edition had a stimulating surprise in store at Gallery Facsimile. The company displayed art furniture including the ingenious wood-slat "Schizo" chairs by Ron Arad (11), which can simply blend into each other. The outrageous "Vodol" armchair (7) by Coop Himmelblau is a wry allusion to Le Corbusier's iconic "Grand Comfort" chairs, where the classic cube has broken out of its rigid frame. *Ziva Freiman*

Vodol armchair by Coop Himmelblau for Vitra Edition (7); Tijuca wall mount lamp designed and produced by Ingo Maurer (8); Armchair and ottoman by William Sawaya of Sawaya & Moroni (9); Perpaolo seating by Paolo Nava for Bernini (10); Schizo chairs by Ron Arad, Vitra Edition (11); Baisity armchair by Antonio Citterio for B&B Italia (12); AC2 office chair by Citterio, Vitra Contract (13); Pearwood cabinets, Massimo Iosa Ghini, Design Gallery Milano (14).



Architects: Richard Jessup & Associates

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Progressive Architecture 12:89 43

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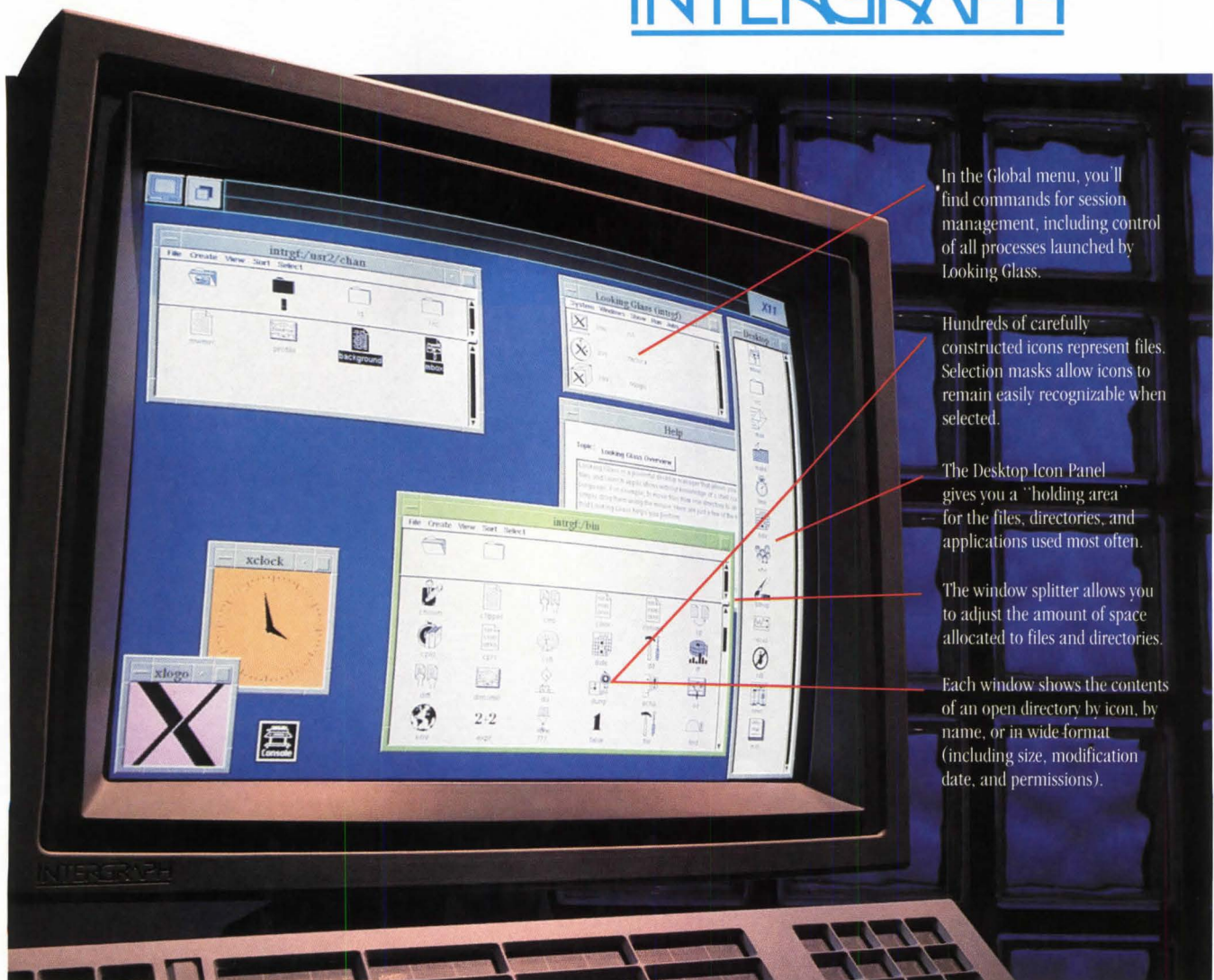
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Hot Blast Stoves, Germany, 1987, photograph from "Bernd and Hilla Becher" at the Dia Art Foundation, December 14–June 18, 1990.

EXHIBITIONS

Luis Barragán

The late Mexican architect's serene synthesis of landscape and architectural design is portrayed through a selection of projects. Harvard Graduate School of Design, Cambridge, Massachusetts.
Through December 22.

Neil Denari

"Too Close: Cosmos Mechanicool" is the esoteric title of an exhibition of recent works by the Los Angeles architect. Storefront, New York.
Through December 23.

Kahn's Museums

Louis Kahn's legacy of influential museum designs—Yale University Art Gallery, Kimbell Art Museum, Yale Center for British Art, and the unrealized Menil Museum—are studied through a series of sketches, ground plans, elevations, sections, and presentation drawings. Duke University Museum of Art, Durham, North Carolina.
Through December 31

Constructing Light

"Minimal Lighting Design 1900–1988" is a presentation of designs by the likes of Eileen Gray, Gerrit Rietveld, Achille Castiglioni, Perry King, Santiago Miranda and others who

"employ a minimum of means to achieve poetic construction." Parsons School of Design Exhibition Center, New York.
Through January 12, 1990.

Cervin Robinson

Cleveland's Museum of Art commissioned the architectural photographer to document the city through seasonal changes over a two-year period. One hundred gelatin silver prints are on exhibition. Museum of Art, Cleveland.
Through January 28, 1990.

Tod Williams/Billie Tsien

The architects use the "Architecture Tomorrow" exhibition as a laboratory for "practical and visionary propositions regarding the utilitarian, interpretive, and constructive possibilities of the home." Full-scale building components have been assembled and public interaction encouraged. Walker Art Center, Minneapolis.
Through February 11, 1990.

Case Study Houses

"Blueprints for Modern Living: History and Legacy of the Case Study Houses" (see p. 33) documents and celebrates the highly influential case study program initiated by *Arts & Architecture* magazine in 1945. Full-sized reconstructions, drawings,

photos, and models of the experimental prototype houses are on exhibition. Museum of Contemporary Art, Los Angeles.
Through February 18, 1990.

Frank Lloyd Wright

"Preserving an Architectural Heritage, Decorative Designs from The Domino's Pizza Collection," is a traveling exhibition of Wright's work including windows from the Avery Coonley Playhouse, furniture designed for his Prairie style and Usonian houses, and other objects. Seattle Art Museum.
December 14–February 25, 1990.

Bernd and Hilla Becher

The couple's photographic interpretations of industrial structures as objects of art and architecture are on view. Dia Art Foundation, 548 West 22nd Street, New York.
December 14–June 18, 1990.

COMPETITIONS

Quaternario 90

The Quaternario Foundation has announced Quaternario 90, the second biennial International Award for Innovative Technology in Architecture. Projects completed no later than December 1989 are eligible. Contact Simonetta D'Italia, 110 First Place, Brooklyn, New York 11231 (718) 852-6197.
Submission deadline January 13, 1990.

Toronto Ideas Competition

The City of Toronto is sponsoring an international ideas competition calling for residential/commercial building prototypes on the city's main streets. Architects, students of architecture,

and architect-led teams are eligible for \$50,000 in prizes. Winning entries will be showcased in an exhibition and catalog in 1990. Contact Housing on Main Streets Competition, City of Toronto Planning and Development Department, 20th Floor East Tower, City Hall, Toronto, Ontario, Canada M5H 2N2.
Registration deadline January 31, 1990, Submission deadline June 12, 1990.

ACSA Design Award

The Association of Collegiate Schools of Architecture is holding its first annual design competition for "theoretical work which advances the reflective nature of practice and teaching." The competition is open to ACSA member faculty working in the United States; projects must have been "directed and substantially executed in U.S. and/or Canadian offices." Contact ACSA Design Awards Program, 1735 New York Avenue, N.W., Washington, D.C. 20006 (202) 785-2324.
Entry deadline February 1, 1990.

Innovations in Housing

The annual residential design competition, sponsored by the American Plywood Association, American Wood Council, P/A, Builder, and Better Homes & Gardens, calls for entries that "use wood in an innovative way." Winners receive a \$10,000 prize. Contact Innovations in Housing, Dept. 200-089-B, P.O. Box 11700, Tacoma, Washington 98411 (206) 565-6600.
Entry deadline February 7, 1990.



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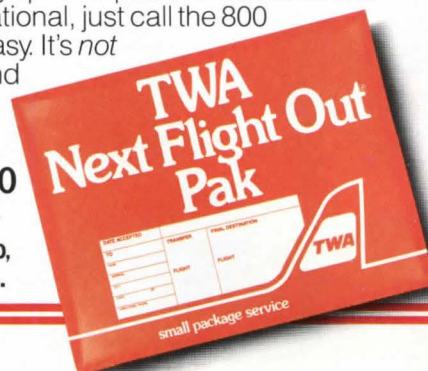
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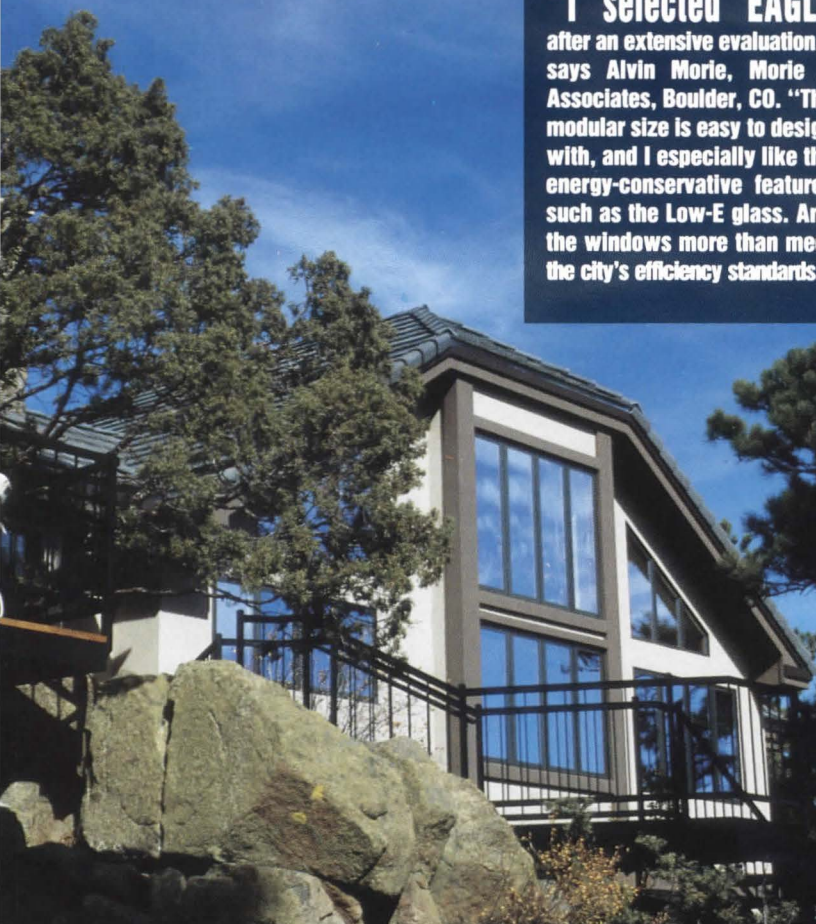
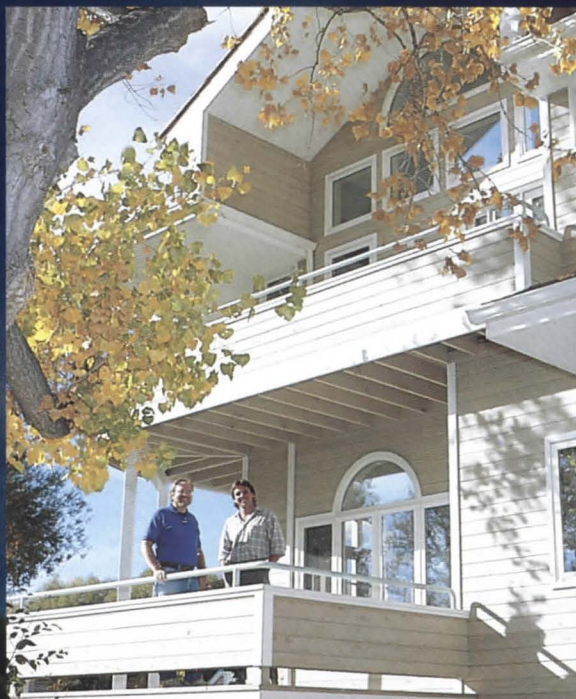


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"I selected EAGLE after an extensive evaluation," says Alvin Morie, Morie & Associates, Boulder, CO. "The modular size is easy to design with, and I especially like the energy-conservative features such as the Low-E glass. And the windows more than meet the city's efficiency standards."



"The mountain sun distorts vinyl, the seams separate, and the finish gets chalky on some windows I've used before," says Jerry Palmer, contractor, Estes Park, CO. "So I appreciate the durability of EAGLE's baked-on enamel exterior finish. I also like the ability to reglaze without replacing the entire sash. And I think EAGLE's air infiltration ratings are super!"

"I'm an ex-machinist, so I appreciate the strength of the exterior extrusions," says David Habecker, Habecker Design, Estes Park, CO. "From a design standpoint, I like the clad custom trapezoids and the clad full circle windows. I recommend EAGLE as a top of the line window to my customers."

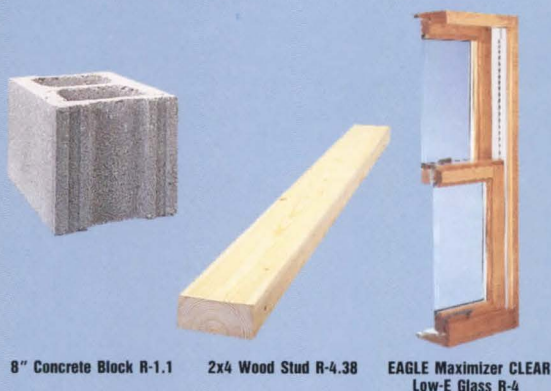


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"Design follows function," says Arnie Gilbert, Hauser & Baun Custom Builder, Inc., Harland, MI. "I used clad products before, but I like the way the different extrusions allow us to do creative window designs. And I was impressed with the air infiltration statistics. We also get positive response from our customers."



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"I recommend EAGLE to my customers," says Richard Russell, contractor, Ann Arbor, MI. "They're a better value. I compared them to other clad products I had used and I like the performance and efficiency. Plus the service from the distributor is good."



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Drawings: William Lohmann discusses the standardizing of working drawings.

Economics: William Voelker lists the economic signals to watch in the 1990s.

Law: Robert Greenstreet examines the legal pitfalls in contractor selection.



A200
A201
A202

Drawings: Toward a Standard Format

It is time for serious consideration of a standard format for construction drawings. Recognizing that it took many years for broad acceptance of the CSI Masterformat for construction specifications, we cannot start too soon.

Widespread adoption of the CSI Masterformat was due largely to the benefits of standardization—ease of preparation and use, time (and therefore financial) savings, improved quality and consistency of the documents, and reduced professional liability. The same benefits could accrue from the other half of the documents used for construction—the drawings. As with specifications, drawings based on a standard format would not be restricted in content, creativity, or applicability to a project. Instead, drawing preparation would be simplified by an established standard for organizing and numbering sheets within a drawing set, since the sequence and numbering would be uniform for projects produced within an office and for similar projects issued by all offices. Such is the case now for at least 90 percent of all specifications.

Contractors would welcome such uniformity in the documents with which they work. The additional step of creating a standard layout for typical sheets (plans, elevations, sections, or details) would speed office production and coax the drawings into a more readable format. A standard format also would lend itself to computerization, which easily accommodates the idea of a similar drawing structure from project to project. And a standard format would lead to better quality control in the drawings.

The Role of the AIA and CSI

The American Institute of Architects and the Construction Specifications Institute are the logical organizations to take the lead in developing and promoting such a standard. CSI is cur-

(continued on page 51)

Economics: Practice in the 1990s

What is the economic outlook for construction in the coming decade? To answer that question, we must first realize that the macro-economic models of the 1960s and 1970s are largely irrelevant to what is going to happen economically in the 1990s. To cite just one example: Prior to this decade, inflation never declined substantially without a recession, yet inflationary pressures actually declined during the buoyant 1980s.

This is especially important for architects to understand because interest rates (including their inflation component) affect construction levels more than any other single factor. The main issue becomes, "Are we in for a cyclical reversal in construction in the 1990s, or the begin-

(continued on page 52)

Law: Bidding and Selection

Although much attention has been paid to the liability problems architects face during the design and construction phases, little consideration has been given to the interface between these phases: the selection of the contractor. Perhaps this is appropriate; after all, the architect receives only 5 percent of the fee for the bidding and negotiation phase, and research suggests that comparatively few cases involving architects originate from errors in this area. Still there are a few safeguards that architects can take to protect themselves from claims by clients, contractors, or subcontractors, and also to vouchsafe the owner's interests during the construction phase.

Complete Documentation

The more complete and accurate the drawings and specifications, the more precise the bids are likely to be. While some factors may make this difficult—a shortage of preparation time or uncertain owner requirements, for

(continued on page 54)

Practice Points

Construction costs in the U.S. have remained relatively steady in 1989, after last year's dramatic surges in the price of materials, according to ENR in its third quarterly cost report. Stable labor and energy costs, as well as price reductions in products such as gypsum wallboard and plastic piping helped maintain cost levels.

Confused about which software is right for your office? PSMJ has recently released a software directory specifically for design professionals. The *PSMJ 1989 A/E/P Software Directory* is a compilation of information on 500 programs, including CAD, financial management, specifications, and word processing software. Each listing provides a software description, system requirements, and the name of a contact person for further information. The report costs \$60 and is available from Joi Keddy by calling (800) 537-PSMJ.

The AIA has simplified finding up-to-date information on Elderly Design and Building Security. Call (202) 626-7493 for the Design for the Aging and the Design for Security databases. Searches are free for AIA members and \$10 for non-members.

Where are the hottest construction markets in the U.S.? A new guide, *America's Boom Towns*, lists public officials and corporate executives responsible for construction and engineering projects in 89 of the most economically vital cities in the U.S. In addition, the report names the "echoes" of each boom town—the nearby cities that are most likely to expand as the boom towns prosper. For more information contact Donna McCourt at the Brendan Partners, (800) 727-5478.



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Drawings (continued from page 49) recently working on a standard for CAD drawings, and the AIA has, in fact, already promoted drawing standards in several forms. For years, *Architectural Graphic Standards* has published symbols, material designations, and dimensioning standards for architectural drawings. An article in the January 1974 issue of the *AIA Journal* proposed standard abbreviations, schedule formats, drawing sheet sizes, graphic symbols, and material indication conventions.

In 1980, the San Francisco chapter (formerly Northern California chapter) of the AIA published "Recommended Standards on Production Procedures," in which it proposed sequence and numbering systems for small projects and for average to large projects. Portions of the San Francisco formats are illustrated in the current edition of Chapter 2.6: Construction Documents of *The Architect's Handbook of Professional Practice*, published by the AIA. The two systems were similar in their use of the same major headings of Architectural, Structural, Mechanical, Plumbing, and Electrical Drawings and related number prefixes of A, S, M, P, and E. For small projects, single sequential numbers were added after each prefix (A1, A2, etc.). The system for large projects suggested groups of drawings, such as A1 for demolition and site plans, A2 for floor plans, A3 for sections and exterior elevations, etc., followed by a decimal and sequential numbers within each group. But neither system assigned standard numbers to specific drawing types.

ConDoc

Now the AIA has introduced ConDoc, which is described as a new system for formatting and integrating construction documents. It is being presented at professional development workshops and seminars across the country, although, unfortunately, the system is not available in a published form (as yet). ConDoc proposes standards for drawing sequence and numbering, sheet layout, and keynoting that not only parallel but interface with specification organization. Therefore, it is one of the first systems to actually address the formatting requirements necessary for computer integration of drawings and specifications. As such, its potential for widespread application is worth careful consideration.

In its simplest form, ConDoc presents a logical and consistent

sequence of information within a set of working drawings and an alpha-numeric numbering system for the sheets making up the set. It expands the San Francisco headings to include drawings from all basic disciplines: Civil, Landscaping, Architectural, Structural, Plumbing, Fire Protection, Mechanical, and Electrical. The proposed alpha-numeric code consists of the discipline prefix (C, L, A, S, etc.),

a single numeral for the drawing group designation, and two subsequent numerals for the drawing (e.g. A200, A201, A202, etc.). ConDoc encourages the use of the standard group numerals, if they are applicable, on all projects without change. The standard group numerals (apart from the cover sheet, including the project title, location, client name, architect, design team information, and date) are:

0 General, including the drawing index, graphic and material symbols, abbreviations, surveys, location maps, door schedule, room finish schedule, etc.

1 Plans, including floor plans, roof plan, plan details, and (presumably) site plan

2 Exterior elevations and building sections

3 Interior detailed plans, elevations, and sections, including

(continued on page 52)

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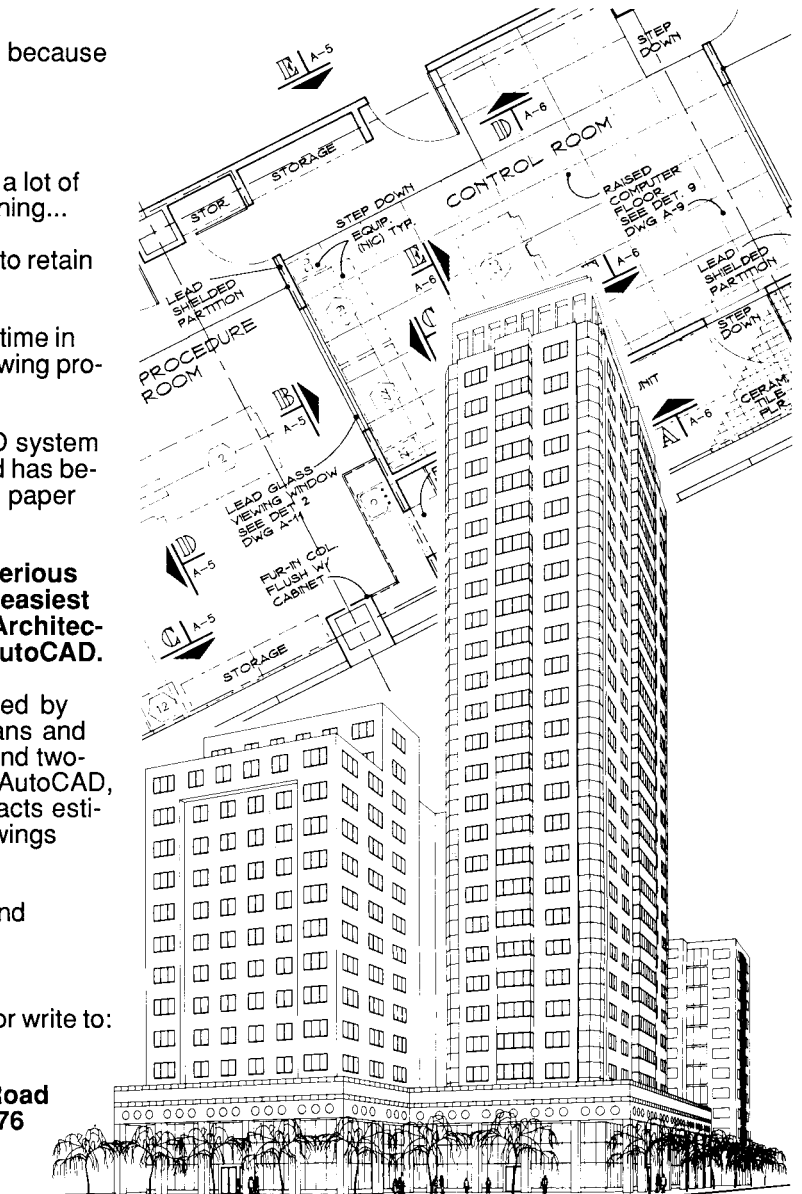
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Drawings (continued from page 51)

- core plans and toilet plans
- 4 Reflected ceiling plans and details
- 5 Vertical circulation, including stair and elevator shaft sections and details
- 6 Exterior wall sections
- 7 Exterior wall plans and details
- 8 Etc.

The ConDoc groups are only a good start toward a format standard, however. The "cover" is not numbered and Group 8 is defined as "Etc.," leaving one to wonder if the groups between them are comprehensive and universal enough in their application to actually function as

standards. More work needs to be done.

The ConDoc system also outlines a standard drawing format and notation scheme for individual drawings. On each sheet, space at the right margin is reserved for title block information, general notes, and material keys. The remaining space is subdivided into a modular grid with an alpha-numeric, vertical-horizontal identification system for referencing locations. Modules are assigned for plans, elevations, sections, and large details, with module grid lines around each block. Title, reference number, and scale are always indicated in the lower left corner

of the block. Dimensioning is conventional, but material designations are not, and therein lies perhaps the most important aspect of the ConDoc system.

By proposing a material notation system incorporating 5-digit Masterformat section numbers, ConDoc has created the potential for linking CAD drawings with computer specifications. The 5-digit number is common to both elements of the construction documents and can be used as a link to create an automated checklist; eventually it may actually generate a specification for the referenced number. For now, ConDoc proposes that the 5-digit number should be fol-

lowed by a decimal point and a suffix letter (A, B, C, etc.) for each material as it appears in the details. These codes would be repeated on applicable sheets. If the codes (or similar designations) are locked in the master specification text, the electronic connection would be complete.

Not all aspects of the ConDoc system need to be established as standards simultaneously. The sheet sequence and numbering format is not integrally tied to the modular sheet layout. And perhaps the idea of any standard format for drawings would be more palatable to practitioners in small bites.

There will be a great deal of opposition to the idea of standard formatting for construction drawings, as there was initially for specifications. But ultimately the basic rationality of a common format will prevail. The sooner, the better. **William Lohmann** ■

The author is Vice President, Specifications for Murphy/Jahn in Chicago.

Economics (continued from page 49)
ning of a new era of expansion?" Before we address the issue, we need to take a brief look back.

Back to the Future

Reaganomics has produced tangible results but not without costs. President Bush now faces the prospect of economic growth being circumscribed by the combined effect of: a) internal debt levels, and b) the topping out of consumer demand following the 1983–1989 consumption boom.

On the bright side, the improving U.S. fiscal deficit over the past three years—primarily due to the growing Social Security Trust Fund surplus—has made current economic pressures less stringent than might otherwise be the case. Still, attention must be given throughout the 1990s to not spending this surplus on operating deficits related to other government business.

With regard to building: From 1972–1974 and 1977–1979, improving U.S. government current accounts, shrinking federal deficits, and increased domestic savings set the stage for very powerful accelerations in national and international construction levels. The resultant explosions in construction contracting took place between 1975–1980 and 1982–1987.

How does an architectural firm evaluate complex economic events as they unfold during the 1990s? There is no absolute litmus test, but the onset of serious

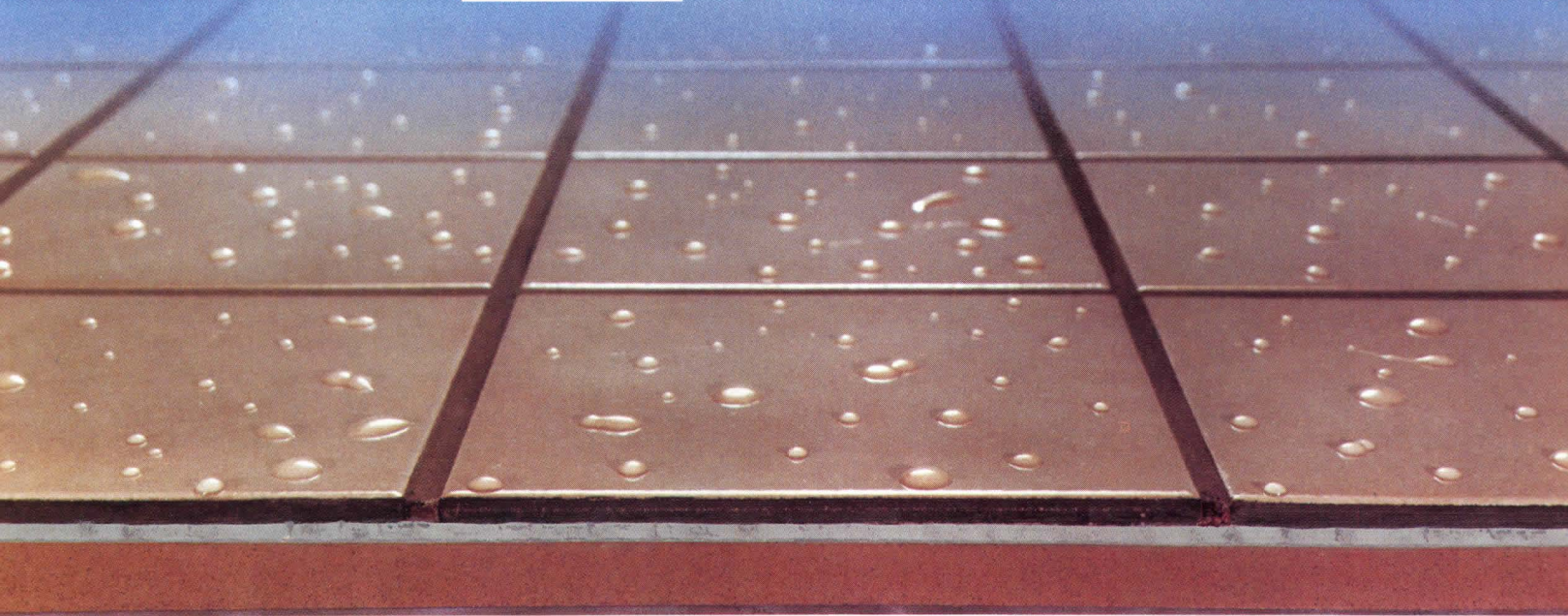
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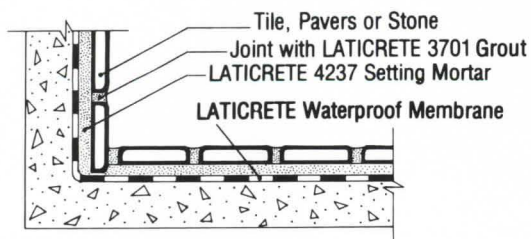
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Economics (continued from page 52)
economic problems would be preceded by certain signals.

The list below is by no means exhaustive, but it can be used as a reference. While even a healthy economy might display one or two negative signals, several occurring simultaneously would likely lead to major economic dislocations. If the positive signals dominate, we are very likely to get another upswing in building construction.

Signal No. 1: Interest rates.

Positive signal: Inflation indicators and long-term interest rates head down slowly.
Negative signal: Both inflation and long-term interest rates rise persistently.

Signal No. 2: Financial confidence.

Positive: The dollar, commodities, and gold prices all remain stable.
Negative: The dollar sinks, and gold and commodity prices rise.

Signal No. 3: Deflation.

Positive: Inflation remains very slight throughout the decade.
Negative: Disinflation turns into actual deflation, where purchases are increasingly below list prices. (The problem here is that the Federal Reserve Board could

find itself, in trying to remove the country from the grip of deflation, to be pushing on a string.)

Signal No. 4: Debt levels.

Positive: Economic expansion rates exceed debt expansion rates for the entire decade.
Negative: U.S. interest rate costs begin to compound at a faster rate than does actual U.S. productive output.

Signal No. 5: Federal deficits and taxes.

Positive: Today's deficits continue to decline and taxes are relatively low and stable.
Negative: Deficits and taxes begin to increase in tandem.

Signal No. 6: Equities.

Positive: The recovery of post-crash stock market prices, worldwide, to new all-time highs continues.
Negative: Persistent weakness in stock prices or, worse, another crash occurs. Any substantial break below 1650 on the Dow Jones Industrial Average carries especially negative implications.

Signal No. 7: Savings

Positive: Increasing personal savings among U.S. consumers during the last three years of the 1980s continues.

Negative: The personal savings rate begins to slip back down into the 2 to 3 percent range.

Signal No. 8: International conditions.

Positive: Russia initiates a chain of positive economic policy moves in 1990, starting with a gold-convertible ruble, heading off the hyperinflationary potential in the USSR.

Negative: Perestroika fails, endangering the Soviet Union's citizens and the rest of the world.

The cyclical nature of the architectural business means that firms cannot automatically depend on a steady cash flow, year after year, as can the drugstore or food industry. For this very reason, a conservative balance sheet may be an architectural firm's most valuable asset during the 1990s, because it will act as a buffer against any economic slowdowns that might occur.

In fact, it could well be that the architectural firms that have taken on the least debt in relation to equity throughout the 1970s and 1980s will emerge from the 1990s stronger than ever, no matter the economic scenario.

William Voelker

The author is an Associate Professor of Architecture at the University of Illinois at Champaign/Urbana.

Law (continued from page 49)

example—it is important to strive for unambiguous, accurate documentation, with a minimum of alternates or unit prices. In claims brought by contractors on the grounds of misinterpretation of the contract documents, the courts tend to find against the drafter (in this case the architect acting as the owner's agent) in matters of unclear contractual information. Alternatively, hazy documentation may lead a contractor to build a substantial contingency into the calculations, creating a base bid that far exceeds the architect's original projections. There has been a noticeable increase in claims against architects for inadequate prediction of construction costs. While cases vary, courts have found against architects where bids exceed the architect's estimates by 15 percent or less, a particularly worrying phenomenon since most malpractice insurance policies do not cover errors in cost estimating.

The Selection Process

Federal procurement procedures are remarkably specific, and state and local governmental rules are similarly designed to ensure fair and open competition. While such procedures are not required in the private sec-

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tor, adherence to clearly articulated rules is still advisable, both to ensure a successful selection of a capable contractor at a fair price and to minimize the possibility of legal problems raised by the irregular performance of one or more of the parties.

While some owners will insist upon their own procedures, the American Institute of Architects has developed widely accepted guidelines that should, whenever possible, be used. The procedures provide a series of orderly steps and safeguards that protect the owner and, by implication, the architect from unsuitable or unqualified contractors, while at the same time providing all bidders with an equitable basis for submitting their bids. Clear communication of all rules is very important at this stage. In instances where owners have not fully communicated their intentions and actions to bidders, legal action has ensued. For example, when an owner rejected all bids for a public project in Louisiana—a right established in the bid solicitation—one of the bidders filed suit when the former refused to provide reasons for the decision. The court ruled that the owner had not acted in good faith by failing to provide an explanation of the arbitrary action, contrary to the

bidders' expectations. Similarly, where an owner gave the contract to the second lowest bidder because, unlike the lowest, it was a local corporation, the court ruled that this was an invalid decision as the criteria for the final selection was not included in the information to bidders.

Selection Procedures

Most bidding procedures establish specific rules with regard to the bid opening. Strict adherence to these procedures is advisable, and care should be taken to avoid any collusion or conspiracy between the owner or architect and one of the bidders. Exactly the same data should be sent to all bidders, including any clarification requested by one of the bidders prior to bid opening. Valid bids should, if possible, be opened in public and late bids should be returned unopened. The question of what constitutes a late bid has been the focus of a number of court cases instigated by disgruntled bidders who felt that a late bid gave a competitor an unfair edge. In one case involving a Federal project, acceptance of a bid thirty seconds beyond the time of bid opening established in the bid solicitation was held to be invalid. While some public projects and certainly all privately bid work are

likely to be less rigid on this point, it is advisable to reject late bids after the opening of the first one to prevent even the appearance of unfairness or competitive advantage.¹ While some flexibility may be considered acceptable under special circumstances—mail delivery problems, perhaps—the architect should advise the owner of potential problems that can occur whenever there is a departure from the established procedures.

The architect should also exercise great care in the advice given to the client about selection of the contractor. If it is believed that the contractor with the lowest bid should not be hired, the architect should articulate the reasons for a rejection with great care. Several suits have recently been brought against design professionals where they counseled against a particular contractor. In one case, an engineer advised against hiring the lowest bidder whom he felt did not possess enough experience to adequately complete the work. The bidder sued him for slander and interfering with a business relationship. The suit, however, was not successful, as it was held that the opinion was rendered in good faith.²

In another instance, the consultant, who was hired by a city

to prepare specifications and help review the bids, was discovered to have "an unlawful relationship" with the contractor he recommended. The lowest bidder successfully sued the city, and the persons responsible pleaded guilty to criminal violations.³ These and similar cases demonstrate the need to give advice on hiring only on an objective, factual basis, free of any conflict of interest and to record the process in writing. Documentation should be clear, concise, and well-reasoned, avoiding any sweeping personal statements or colorful adjectives. In the absence of inaccuracy or perceived malice, slander will be very difficult to prove.

There is technically nothing to stop an owner from rejecting the lowest bid and hiring a pre-selected contractor who was encouraged to go through the competitive bidding process merely to keep the base bid down. However, architects should discourage this practice. Apart from the ethical implications of ignoring the rules, some outraged low bidders have sought legal relief to prevent the owner from proceeding with a project.

The selection of any other than the lowest responsible bidder is very difficult in publicly
(continued on page 57)

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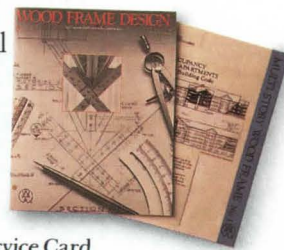
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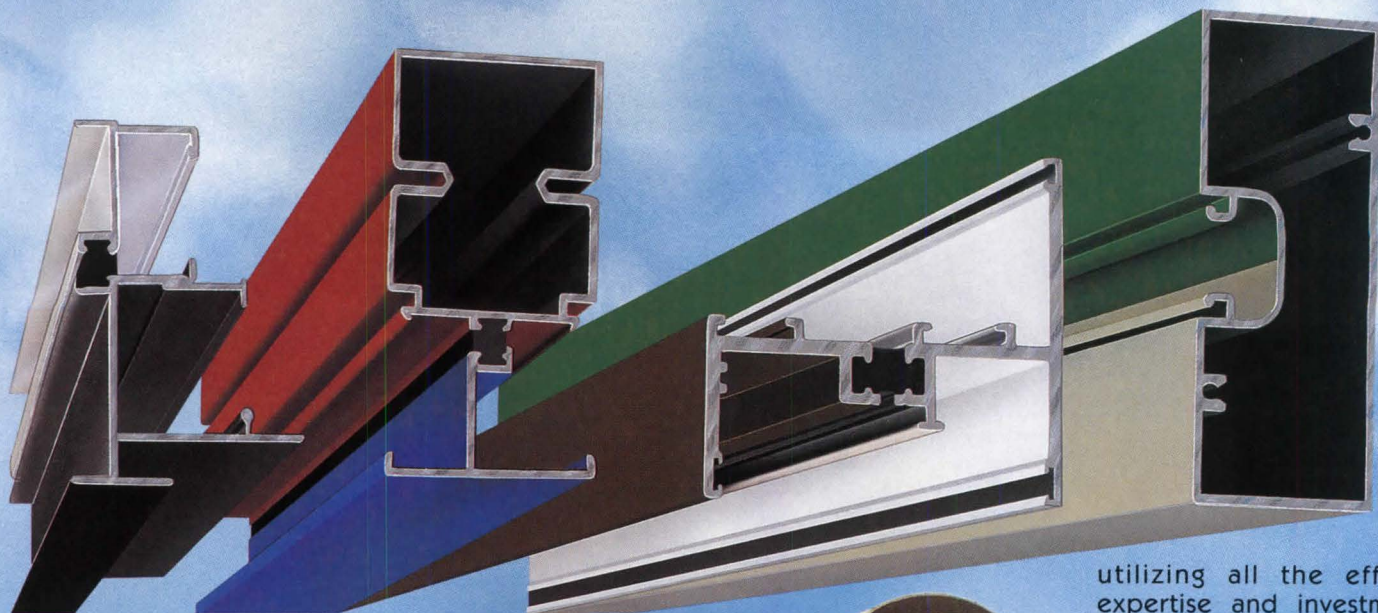
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Law (continued from page 55)

bid work, and great care should be taken in such cases to ensure that complete documentation can substantiate why a contractor was not considered "responsible" or the bid "responsive." The rationale should be based solely upon the criteria that were established in the bidding information. In fact, some states insist upon open hearings to let disappointed bidders discuss the selection of anyone other than the lowest bidder in public projects.

Where the lowest bidder was considered insufficiently responsible based solely on rumors of poor performance, or where the owner had solicited insufficient data on a hitherto unknown contractor, courts have found against the owner for insubstantial reasoning. Owners are expected to consider a contractor's recent performance to verify if former problems have been eradicated.⁴

Summary

While contractor selection is a relatively minor duty by comparison to those in the design and construction phases, there are still ample opportunities for problems in what is, after all, a sensitive and highly competitive area. In the role of adviser to the owner, the architect should strive to ensure that the procedures adopted are initially sound and rigidly and fairly adhered to, particularly in publicly bid work, and that the owner is kept informed of the possible implications of straying from the established rules. This helps to protect the architect from claims by the owner for poor advice and from the contractor for collusion or slander. It furthermore helps to shield the owner from unforeseen problems and allows a smooth transition from the design to the construction phase, optimizing the chances for the successful completion of each project. *Robert Greenstreet* ■

The author is chair of the School of Architecture at the University of Wisconsin, Milwaukee.

1. Jervis, B.M., Levin, P. *Construction Law: Principles & Practice* (McGraw-Hill 1988), p. 43.

2. Riblet Tramway Co., Inc. v. Ericksen Associates, Inc. 665F Supp. 81 (P.N.H. 1987).

3. F. Buddie Contracting, Inc. v. Seawright, 595 F. Supp. 422 (N.D. Ohio 1984).

4. Ibid Jervis p. 45.



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Solving the problem.

Street & Lundgren, an Aberdeen, Washington architectural firm, was hired to design a fire station for a nearby town. The project was completed, there was a grand opening celebration, and Street & Lundgren received the "keys to the city."

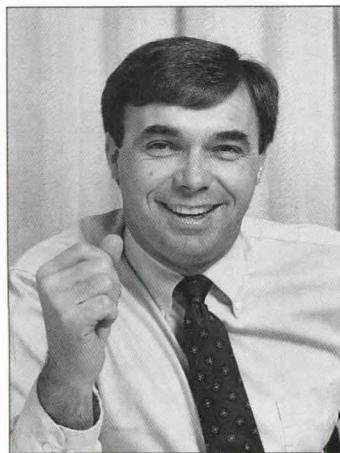
Almost six years later, the town filed a suit against Street & Lundgren. There was water leakage into the fire house and some hairline cracking of exterior masonry. The town was afraid the building might not be structurally sound.

Roy Lundgren called Dale Currie, DPIC's regional claims manager in San Francisco, and described the situation. The leakage appeared to be due to the town's failure to waterproof the structure on a regular basis. The cracking was almost certainly cosmetic, due to expansion during freezing.

Dale believed the problem was solvable.

He made two trips to Washington during the next few months; first, to meet with the town and hear its grievances and second, to conduct a roundtable discussion to mediate the dispute. It was a delicate situation. The town's building inspector was convinced the structure had serious problems. Street & Lundgren and the project's structural engineer were confident the building had been well-designed.

Dale managed to keep the dialogue open. Ultimately, the town hired a consulting structural engineer to assess the situation. This engineer's opinion fully supported Street & Lundgren, and convinced the town its fire station *was* structurally sound. Now, all that was left to be done was help the town resolve the



existing problems. In the conciliatory environment established by Dale, Street & Lundgren provided maintenance guidelines for the fire station as well as advice on how to repair the cracked masonry.

Dale continued to work with the town's attorney. A year and a half after the initial action, the town agreed to a *dismissal with prejudice*, meaning it was satisfied no further litigation was necessary.

R. Dale Currie

Richard Dale Currie is an assistant vice president and manager of DPIC's regional claims office in San Francisco. He is a graduate of the University of California at Berkeley and the John F. Kennedy University School of Law and a member of the California bar. He has over a dozen years of experience in construction-related claims management.

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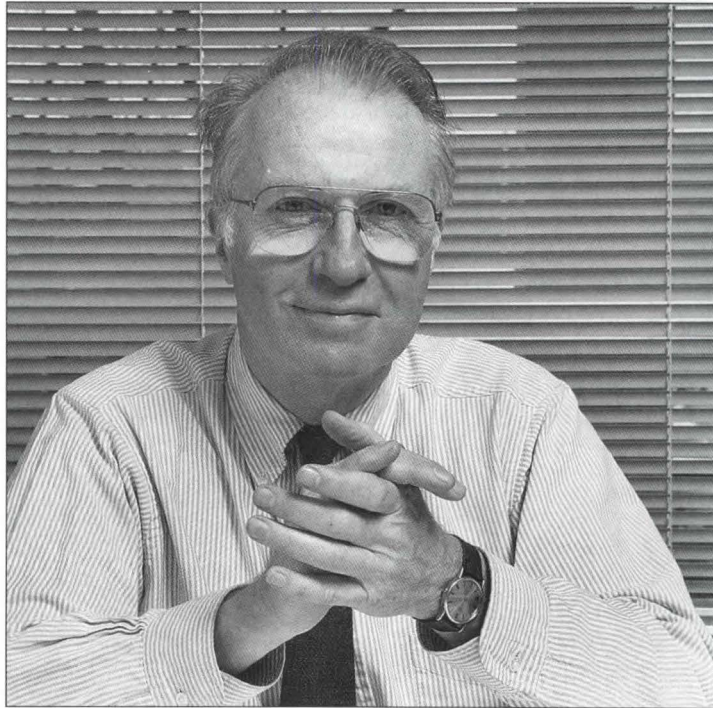
“I liked Dale Currie immediately for his grasp of the situation, his concern about our welfare, his willingness to come up promptly and talk the situation over.

Dale was very skillful in seeking a solution to the city's doubts about the building—a difficult job based on the evidence that had been presented by their home-grown people, whom they know and trust. He showed a willingness to understand their problems, and to come to a resolution that satisfied them. He showed his concern for them in a way that made them very comfortable. And they responded very positively to him.

The idea of the roundtable was his. And he mediated and orchestrated it. He suggested what we should do to allay the fears of the city and we did it. And everything worked.

In essence, what Dale Currie and DPIC did was put out a fire before it really got started.

And you realize, from a business standpoint, all this cost us was our time.”



Roy E. Lundgren

Roy Lundgren is a principal in the firm of Street, Lundgren & Foster, a 39-year-old architectural firm based in Aberdeen, Washington. He is a past director of the Southwest Washington chapter of the AIA and former building code commissioner for the city of Aberdeen. We value our relationship with his firm and thank him for his generosity in talking about an important subject for design professionals.

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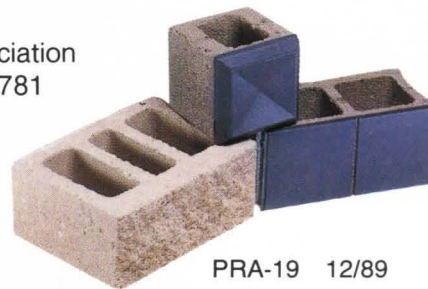
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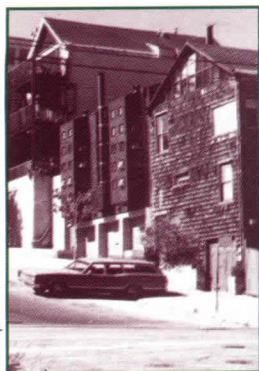


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The Conflict of Custom Houses

In this, our third annual houses issue, we look at how various residences relate to their context while managing to express the individuality of their owners and architects.



Tom Bonner

Venable House & Studio

EVERY custom-designed house plays two roles. It must express the individuality of its owner and architect and yet respond, in some way, to its physical, social, and historical context. The best custom houses do not just manage that conflict, but make it a source of their strength and sometimes the very basis of their design.

One way to resolve the issue is to create a context of one's own. Frank Gehry's Schnabel house (p. 74–81), for example, forms a compound of idiosyncratic buildings that refer not to the immediate neighborhood but to the fragmented, futuristic character of Los Angeles itself. And the Gomez-Biagi house by Albin Vasconcelos Elizondo (p. 96–97) turns inward, away from its dusty surroundings toward clusters of towers and courtyards reminiscent of an older, lush Mexico City.

The historic context need not always be so close in time or space. Leon Krier's tower at Seaside, Florida (p. 66–73) recalls such Classical icons as the Erechtheion or the Tower of the Winds. Adele Santos looks to our own century in her Ninomiya beach house (p. 82–85): referring to the architecture of Frank Lloyd Wright who, like her, was an American with work in Japan. Similarly, Rem Koolhaas, in his Villa Kralingen in Rotterdam (p. 86–89), plays a witty game alluding to the architecture of Dutch Modernists such as Mart Stam and Gerrit Rietveld.

Where architects make direct physical ties to a place, the best work is rarely literal. Daniel Solomon's Gleeson/Jeanrenaud house in San Francisco (p. 90–95) repeats the rhythm of the surrounding streetscape but inverts its color, materials, and entry sequence. David Hertz and Michael Rendler, in their Venable Studio (p. 101–103) turn the stuccoed forms of its surrounding Venice, California, neighborhood into Minimalist sculpture. And Gerald Maffei, in his Tin house (p. 98–99), reassembles the corrugated metal buildings of rural Texas based upon phenomenological ideas.

The houses in this issue may look different, but they all address, to varying degrees, the same problem: how to balance community and privacy and be both a part of and apart from a context. This is not an isolated problem. It is one that every architect encounters and must somehow resolve. **Thomas Fisher**

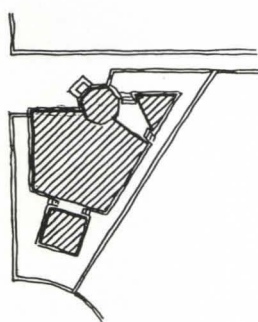


Steven Brooke

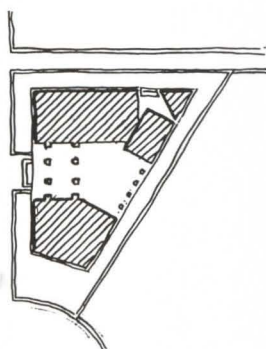
Krier House



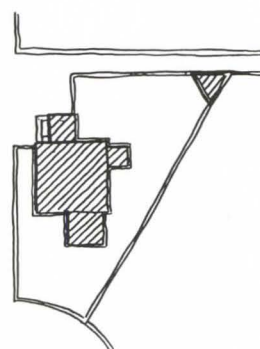
A Gate at Seaside



HOUSE A
1983



HOUSE B
1984



HOUSE C
1985

For his first built work, Leon Krier creates his own house as a series of events, using a palette of materials common to its location in the planned community of Seaside.

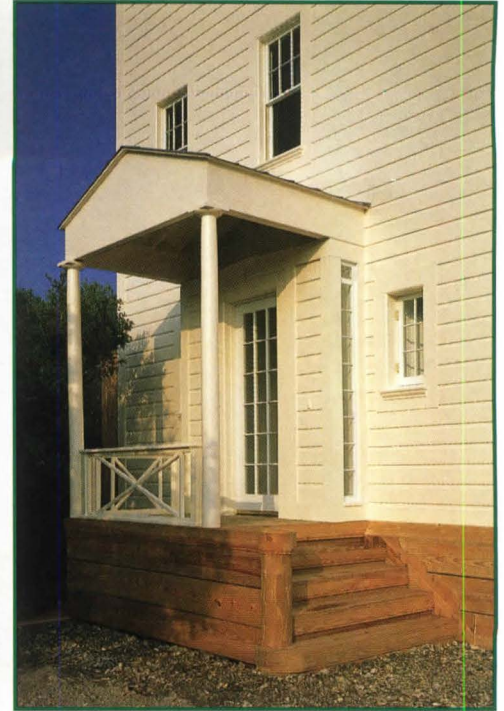
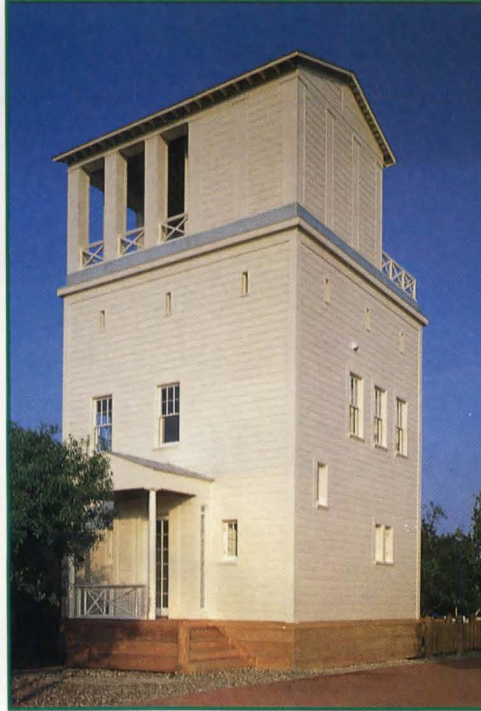
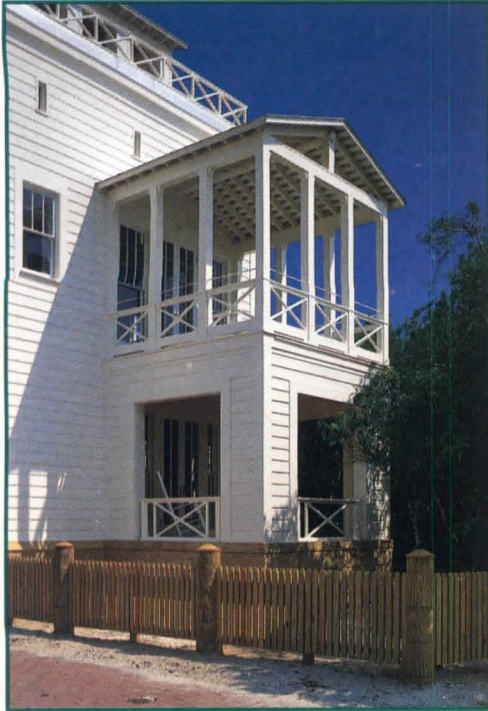
POLEMICS are in large measure what Leon Krier is known for in the architectural world; building is not—yet. The London architect's first completed building is a house for himself in the planned community of Seaside, Florida (a winner in the P/A Awards program in 1984). A clear demonstration of some of Krier's thoughts, this is a serious house, albeit reflective of a certain ethos created in and by Seaside—through some of its other recent construction. This is, after all, a deliberately picturesque oasis along Florida's sometimes gaudy, sometimes tacky, Gulf of Mexico coast. While the town plan and philosophy have received well-deserved attention, some of its buildings are follies, whether intended to be (as some are) or not. Done with the U.S. assistance of Don Cooper of Cooper/Johnson Architects of Tampa, the house is intellectually and visibly more rigorous, more intense, and more nearly institutional than its neighbors.

Envisioned as a "gate," or symbol of eastern entry to Seaside, the house is sited on the highest point in town, although that is not more than 15 feet above the level of the Gulf. Seen from the road along the coast, the little temple atop the house is clearly a landmark projecting, at least for now, above the live oak trees around it.

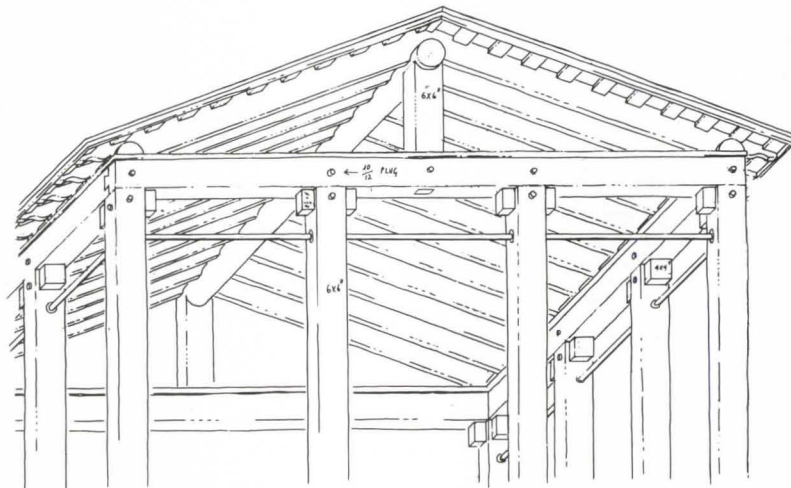


Krier's earliest scheme (1983) and the one following that (1984) showed a polygonal configuration that was abandoned (1985) for a right angle solution (sketches, facing page). Tupelo Circle, where the house is located (facing page), provides it with the highest site in Seaside and views to the sea to the south. The rooftop studio temple (above) is oriented in that direction, as are three windows in the second floor living room and the side of its loggia.

Krier House



Krier's sketch of the loggia (below) is typical of how most details were conveyed to the contractor. Each porch or loggia is different, as seen in the west sitting and living room decks (above left), north entry (above right), and rooftop temple (center).



As an architect/planner/theorist, Krier has completed exhaustive studies of numerous European cities or parts thereof, and his body of work includes a proposal for redefining the symbolic heart of Washington, D.C., commissioned by New York's Museum of Modern Art. However, until now he has preferred not to build, citing the overwhelming pressures leveled at, and eventually diluting, inspired visions of most kinds. "I've had many opportunities to build," he says, "but the trouble is, we are being bossed around so badly now that I don't think it's worth the trouble." He feels that, with all the outside influences legislating (sometimes literally) against a good scheme, architects constantly are put in a position of having to apologize for what finally gets built.

Seaside, however, is quite another matter. Krier was a consultant on the planning of the town, joining the process when Andres Duany and Elizabeth Plater-Zyberk (who acknowledge Krier's influence on them previously) were well along with the plan. He found the planning sound, made a "few suggestions," and developed a scheme for a tower on the square in the town center, a space now partly defined by Steven Holl's Dreamland Heights building (P/A, August 1989, p.

59). For his work, Seaside developer Robert Davis gave Krier the site for his house.

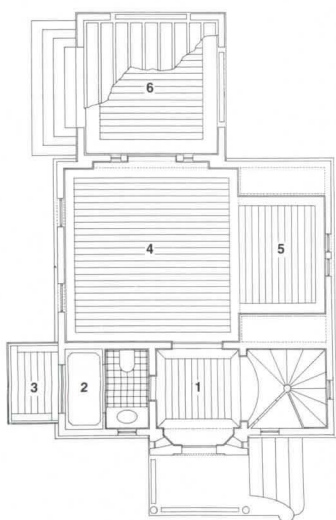
As a private estate, Seaside is overseen by the Seaside Development group, virtually replacing common forms of government. Having built its design guidelines into the original planning, it has placed general limits on factors such as height, setbacks, and the types of materials used in the town's houses, to assure some form of unity.

Still, there is astounding variety now showing up in the buildings themselves. Krier notes, "For my own taste, I would be a bit more, shall we say, disciplinarian; but these [houses] are not supposed to be exactly normal, and this [existing construction] is the result. In some ways, they are slightly wacky, but you feel quite all right about them. Seaside is almost the first of its kind." He points out that cities are always designed with built-in guidelines, and he did not feel overwhelmingly constrained by those here.

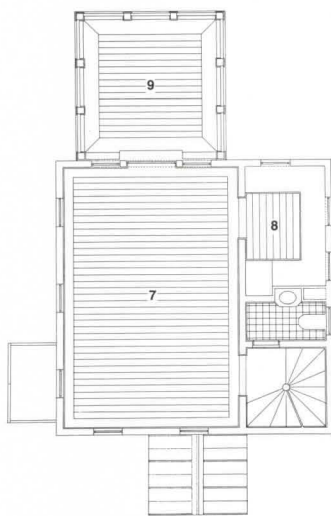
Starting out to achieve maximum allowable coverage on the site, he first worked out a scheme which fit within the setbacks, creating a polygonal plan. "This worked quite nicely as a plan," he says, "but it also turned out to be quite expensive, because it meant that all of



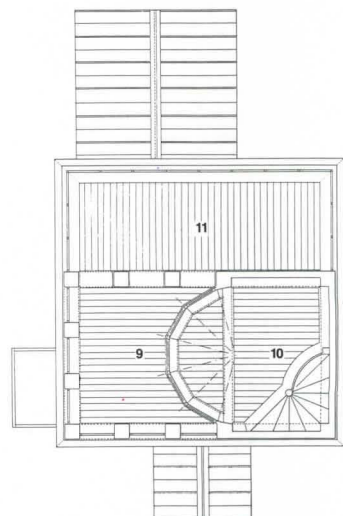
Although a small building, the Krier house has spacious rooms such as the double-height living room (above) and the first floor sitting room (below right). The bedroom (below left) is a large niche near the entry, flanked on two sides by storage closets.



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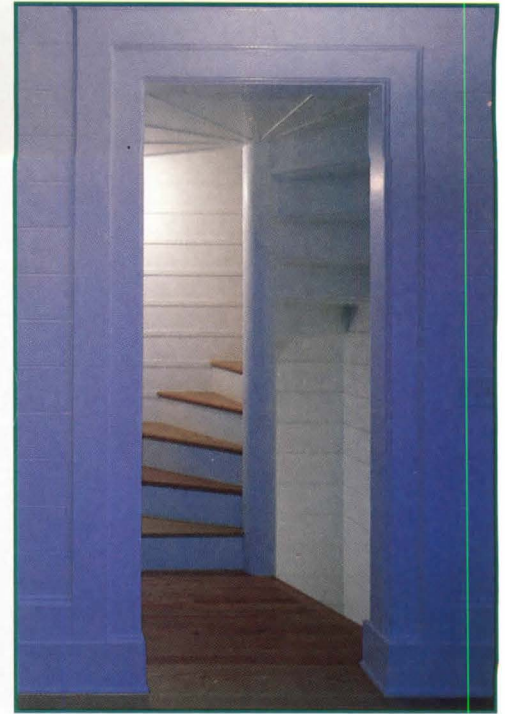
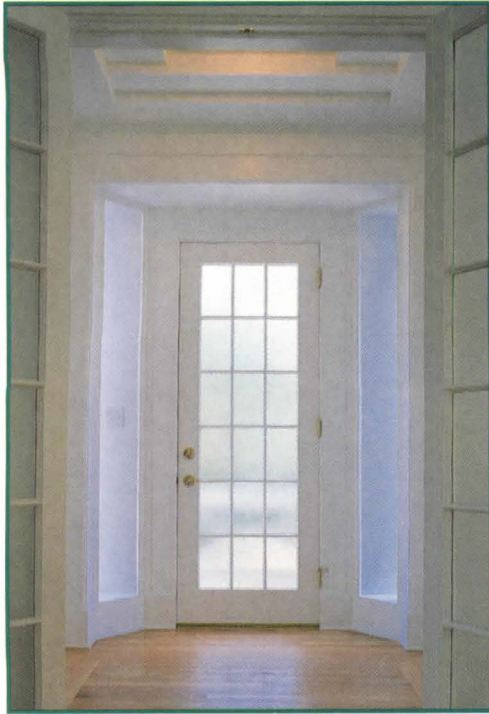
THIRD FLOOR PLAN

- 1 ENTRY
- 2 BATH
- 3 OUTDOOR SHOWER
- 4 SITTING ROOM
- 5 BEDROOM
- 6 PORCH
- 7 LIVING ROOM
- 8 KITCHEN
- 9 LOGGIA
- 10 STUDIO
- 11 DECK

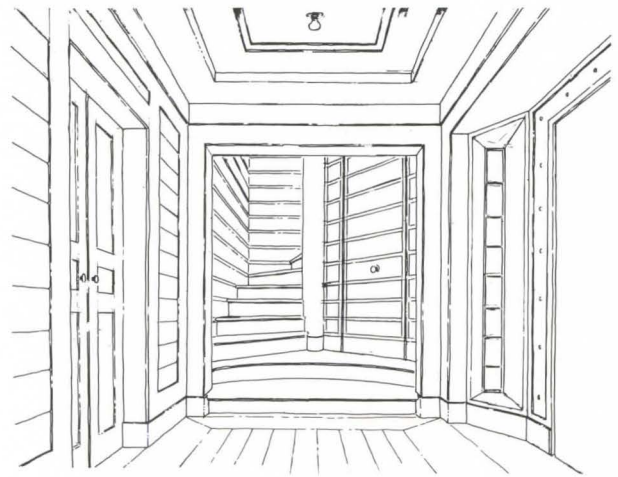
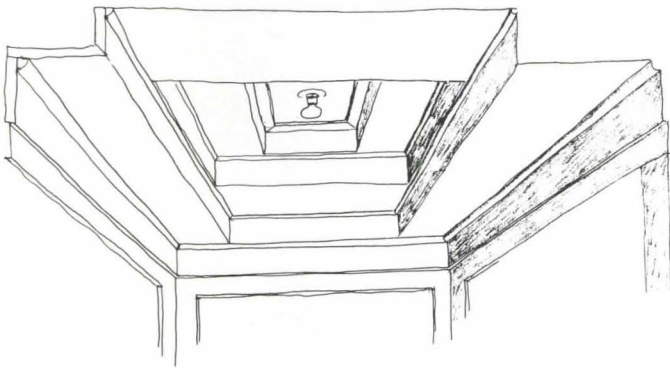
N → 10/3m



Krier House



The entry (above left) has a coffered ceiling in the spirit of Krier's sketch (below) and hidden sidelites at right angles to the door. A small closet borrows light from outside just at the beginning of the semi-continuous spiral stair (right and center).



those pieces of wood would have to take the shape of those odd angles, and the right angles are much cheaper." Krier came to Seaside and spent five days in a house in which the bedroom was on the lowest floor, the living space above on the next level, for a better view of the sea. Recognizing the worth of that concept, he redesigned his plans to embrace both that and the right angles.

Located on Tupelo Circle, a feature on the easternmost road in Seaside leading in from the coast, the house overlooks the type of development (across the line in Seagrove) Seaside was designed to avoid: small residences that could be found in the suburbs of almost any city or town in the U.S. Built in a style that Krier feels many Americans view as "traditional," he observes: "But they're not; the proportions are wrong, and they have details like the shutters that are nailed to the wall." He feels that his house, and others in the town, *are* traditional. He designed his house in sketches, with most of the construction drawings shown in axonometric. All required working drawings were completed by architect Cooper.

Robert Davis located a contractor Krier describes as "extraordinary," originally from Louisiana and with considerable experience

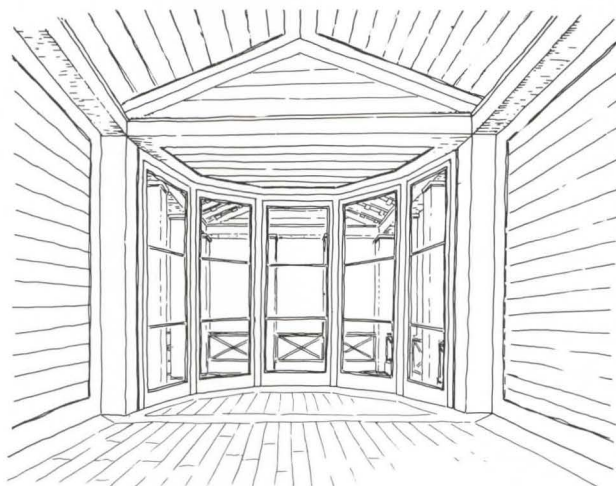
in quality restoration projects, who built the house without Krier's supervision. Krier remembers only 12 telephone conversations with the builder during the process.

On the outside, the house has consistent clapboard detailing which is unarguably traditional, but each of the loggias and porches is handled in a different manner. The basic body of the house is very thoroughly considered and tightly controlled. Most of the windows are six-over-one, while the taller ones in the lower level sitting room are nine-over-one. Small rectangular lights are introduced into the upper level of the second floor living room, making an encircling punctuation on the façades. In the rooftop studio, a grand bow window points to the sea view through the loggia.

Krier humorously describes his special concentration on the side toward the sea, the south elevation. It was the most carefully composed, he says, then points to the live oaks growing there. Although they were less than six feet in height when they were planted, they now cover much of that careful composition, and threaten views from the second floor loggia. The trees will be trimmed up from the bottom periodically to restore the original view to each floor.



True to the sketch, the small studio in the rooftop temple features a generous bow window (above and below) facing south to the sea beyond. The carefully detailed loggia here provides access to a spacious deck with a view over the circle.



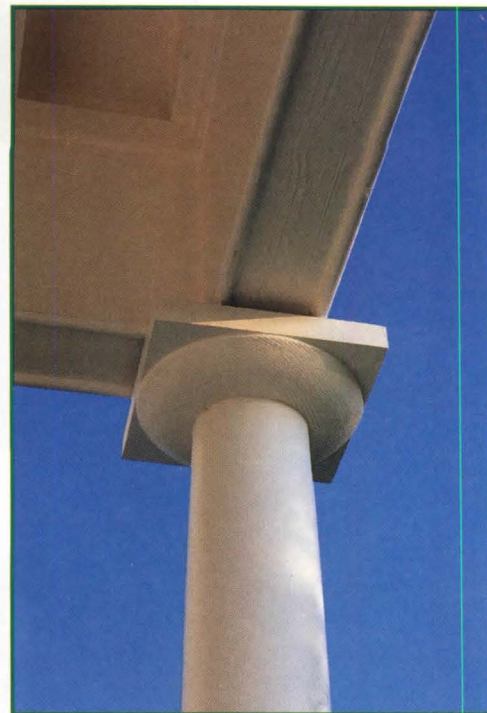
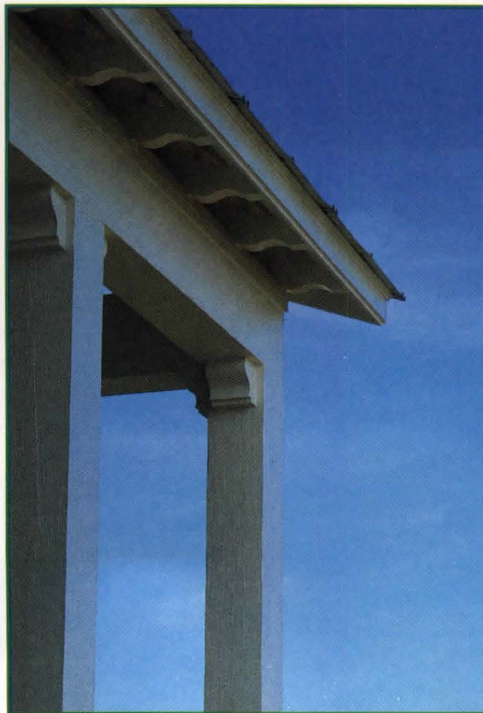
The loggia off the first floor sitting room is actually a framed porch, continuing the clapboard siding on its surrounds. It has access directly out to the grounds by a short stair. The walls of the outdoor shower enclosure are of vertical boards. Each of the other loggia/porches has a roof supported by columns of three different orders, modified from the Greek or Classical, or purely hypothetical to suit Krier's vision of the house. The entry porch roof on the north depends on a rough approximation of the Doric order, their small capitals almost lost on their extremely long shafts. The balcony loggia on the west side of the living room adopts an order that only in distant elevation view resembles Ionic, while the studio balcony employs columns, both engaged and freestanding, that are of some more vague Classical derivation. Some of the loggia roof/ceiling and overhang details seem rooted in Hellenistic history.

Based on a small rectangle, the house comprises an entry, bath, sitting room with an adjacent loggia, and bedroom on the ground floor; a living room opening onto a balcony loggia; a water closet, and a small kitchen on the second floor; and a minuscule temple containing a studio and its own loggia and deck on the roof. A spiral

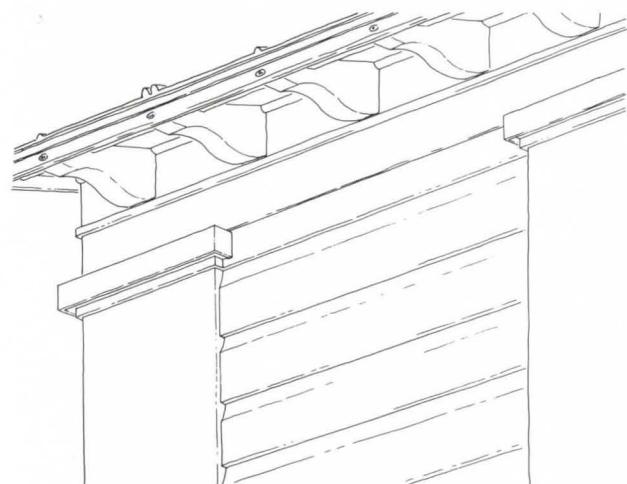
stair of considerable charm with a minimal bar handrail joins the three levels, beginning with a sculptural landing at the entry.

There were, Krier points out, "a few small details which didn't turn out the way I drew them, but what basically matters is that the system works." The window surrounds were done the way the builder normally accomplished that detail, for instance, and some of the trim and other detailing changed slightly. The concentric coffers in the entry ceiling were achieved in a different way from what Krier envisioned, although he approves, as he does of the ceiling detail under the stair, the contractor's idea. One other matter, that of the color of the house, went awry; Krier admits that his original color choice, barn red, was made while considering the gray skies of London. When applied, he says, "it turned out a big colored fire station." It is now a very refined creamy white which can have a yellow cast or appear to be gleaming white, depending on the light.

However, there were many details that did get faithfully transformed from drawing to built form. The wood planking that makes up a "rusticated" base for the house is a strong visual element, as are the repetitious brackets under the eaves. The detailing of the



Examples of the meticulous, yet sketched, detailing Krier provided include the finely-crafted windows, sills, and surrounds (above and below, left), the various column capitals (below right, above center and right, and facing page), and the roof brackets.



loggia roofs and ceilings, sketched so carefully by Krier, have been impeccably and accurately accomplished in the final version. Also skillfully achieved are the various moldings at the windows, although Krier feels he should have made them more prominent. He would also like to change the window screens, which have a tendency to eliminate the mullions as a part of the composition. But of these afterthoughts and the details that were changed during construction for whatever reason, Krier says "they are small details, and I think the overall effect is all right."

Quality is obvious when a visitor first sees the building. Because it is very carefully detailed and finely crafted, the cost of the house was high in comparison with other houses in Seaside. In a letter published in the Spanish magazine *Composicion Arquitectonica*, Art & Architecture, Krier has written to colleagues that this is "the tower of an eccentric, . . . a folly in the true sense of the word, with a temple-library-folly on the roof." But since he fully expects that the house will come into some public use later, he feels that the "sin committed in full daylight" will be forgiven. **Jim Murphy** ■

Project: Krier House, Seaside, Florida.

Architect: Leon Krier, London, with Don Cooper of Cooper/Johnson Architects, Tampa, Florida.

Site: a wedge-shaped lot fronting on Tupelo Circle, the easternmost street in Seaside.

Program: small one-bedroom beach community house, 1032 sq ft of heated area, 700 square feet of porch and deck.

Structural system: wood frame construction on a wood piling foundation.

Major materials: Southern yellow pine framing, Arkansas soft pine siding and paneling, oak floors, fiberglass insulation, and galvalume roofing and flashing (see *Building Materials*, p. 129).

Mechanical system: high efficiency heat pump.

Consultants: Tyrone McCarthy, landscape; Daryl Davis, Erica Meyers, and Pam Watkins, interiors.

Contractor: Benoit Laurent, O.B. Laurent Construction.

Costs: \$170/sq ft.

Photos: Steven Brooke.

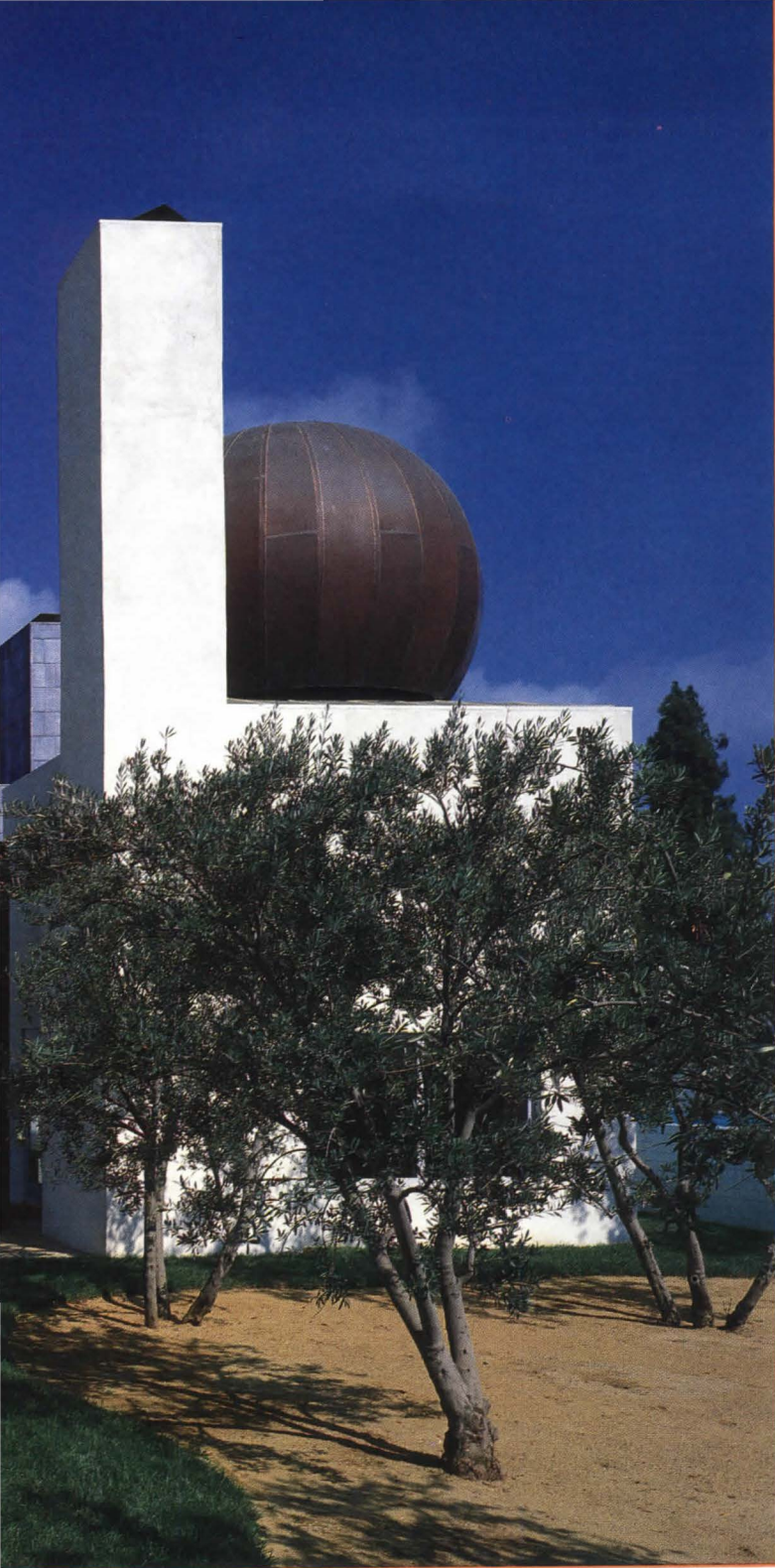


Schnabel House
Los Angeles

House(s) on the Lakeside



Inside the front courtyard of the Schnabel house (above), a village-like arrangement includes the central living/dining pavilion, covered in lead-coated copper; the adjacent stucco-clad kitchen/family room wing, at left background; the copper-domed guest house; and the garage, at left, with maid's room above. Their forms are strong and block-like, with a few twists, such as the angled chimney of the living room, visible in the night view of the house (right).



Within a perimeter of walls and water, Frank Gehry assembles a family's home from an enclave of eccentric structures.

THE objects-in-a-landscape approach to architecture has been a recurring theme in Frank O. Gehry & Associates' recent work. But nowhere has it found fuller expression than in the firm's latest residential project, a house for Rockwell and Marna Schnabel. Behind a cream-colored, copper-grated stucco wall on a well-groomed street in the Brentwood section of Los Angeles, fragments of a mini-cityscape tantalize the eye: block-like forms stacked casually atop one another; an angled chimney here; the top of a copper-clad dome there. Inside the gates, past a flower garden and a grove of olive trees, is a walled compound of little buildings.

A cruciform pavilion, covered in lead-coated copper and topped by a central tower, contains the living and dining rooms. The north arm of the cross connects to a two-story stucco building that houses the kitchen, family room, and two bedrooms. A copper-clad colonnade connects it to the garage at the front of the site, with a maid's room set, slightly rotated, atop the garage. On the south side of the front yard, a small stucco building is crowned by a copper dome and marked by copper columns at the entrance; it is the guest room, currently used as an office. Behind it, a blue-tiled lap pool, raised partially above ground, extends to the rear courtyard, where another stucco building, with a sawtoothed roof, contains a third bedroom.

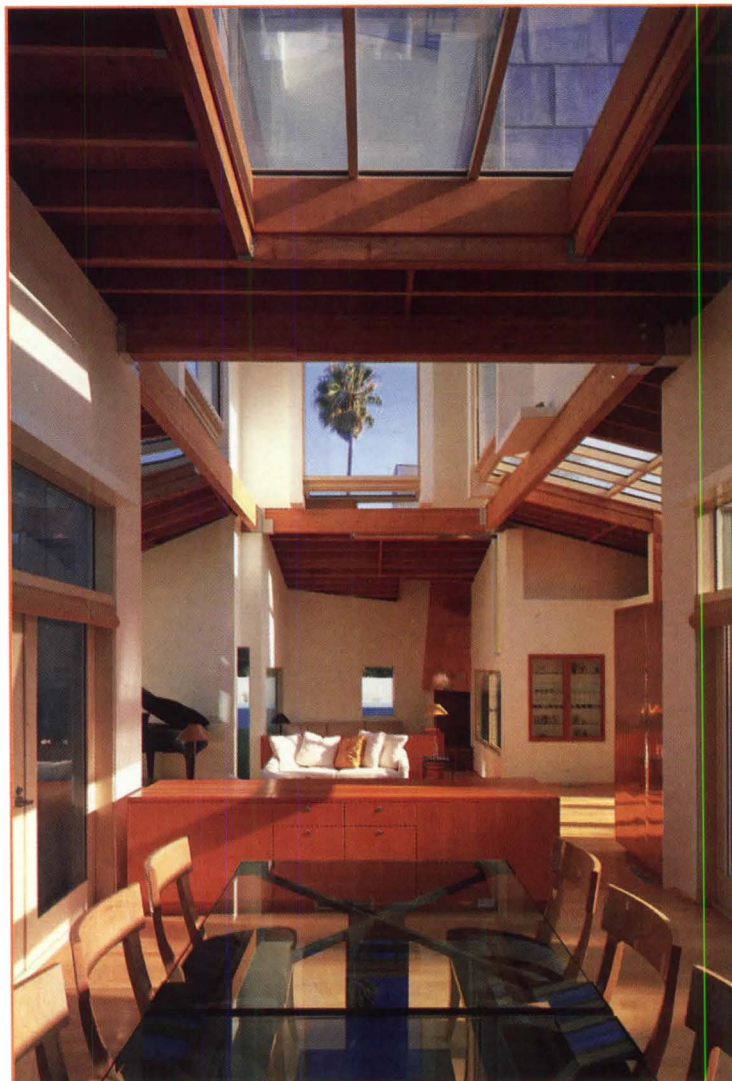
But the greatest surprise of all awaits the visitor at the end of the tour: One level below, the master bedroom pavilion, with its sculptural skylight and quintet of copper-clad columns, appears to float in a spacious, shallow reflecting pool. One day, when the landscaping is mature, this pavilion, like the rest of the house, will be nearly surrounded by greenery.

One of the hallmarks of Gehry's architecture has been a generous eye toward a given context, no matter how unsympathetic it may be. Here, however, his reasoning is that in this suburban enclave of mini-mansions of disparate and dubious stylistic provenance, there was, as Gerturde Stein said, no there there. Thus, the house became an enclave of its own.

The clients gave Gehry no argument. Marna Schnabel, who had worked for the architect after graduating from the architecture school at the University of Southern California, complained that too many houses in the area looked "overbuilt" and artificially "quaint." Her vision of the house was that of "a little village with a courtyard," which Gehry proceeded to flesh out while the clients spent three



The cruciform living/dining pavilion offers both warmth and openness with a well-placed array of windows, skylights, and French doors. The view west (below left) shows a sunken seating area and copper-hooded fireplace at far left. From the dining room (below right), the view south looks over steel and glass tables by artist Charles Arnoldi and Gehry-designed cabinets to a framed palm tree view above. A detail of the front doorway (facing page) illustrates the transition from the exterior lead-coated copper to the interior's natural version.



years in Finland. An initial scheme to make each room a separate building was scrapped when the site became too crowded. Instead, bedrooms were added to the kitchen/family room building, and the master suite was carved out of the hillside at the east end of the site.

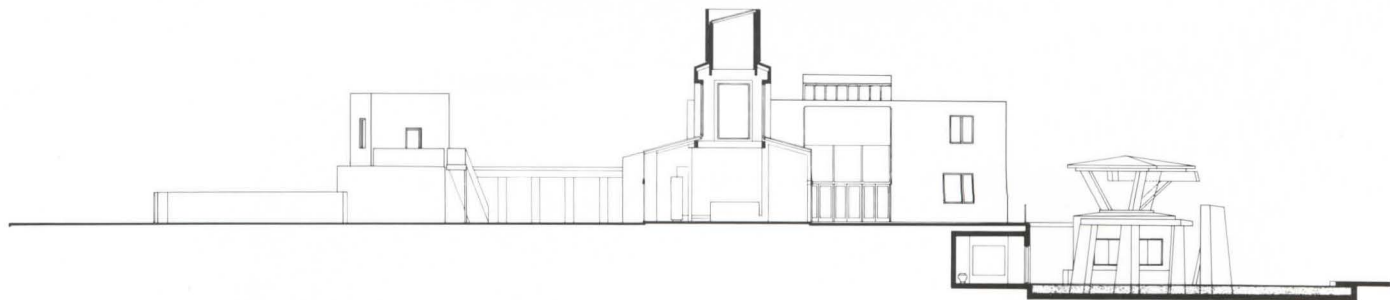
At one point in their long-distance collaboration, Gehry went to Finland to meet with the Schnabels. They met on the shore of a lake—an occasion that made an impression on all three of them. The notion of placing buildings in a water garden is not new to Gehry's work; it appears in his unbuilt projects for the Jung Institute and the Santa Monica Airport. But in the Schnabel house, the water element took on an added significance. Standing in the master bedroom, Gehry noted that "looking over the water to the trees reminded me of that lake in Finland."

The Schnabel house is the latest and largest iteration of a scheme that first took shape in the Sirmai-Peterson house in Thousand Oaks, California (1982–86), and was later distilled into elegantly sculptural form in the Winton guest house in Wayzata, Minnesota (P/A, Dec. 1987, p. 60). In this house, however, the individual pieces are, for the most part, more expansive and more complex than in the first

two, and not merely because of the larger program. The living/dining pavilion, with its assertive silhouette and generous glazing, is light and airy by day, yet glows warmly at night. The details—a glazed corner, for example, or the transition of the lead-coated copper "siding" to an uncoated surface inside the front door—trace Gehry's structural logic, and give the building an unforced liveliness.

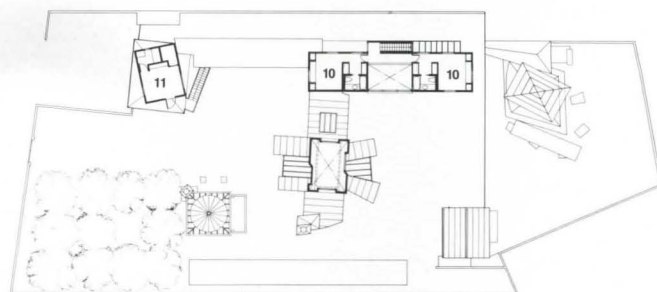
The kitchen and family room building is appropriately plain and simple, although its courtyard elevation would have benefited from the copper-lattice sunshade, designed for the double-height window in the family room; it was an unfortunate casualty of the budget. The guest house, the most whimsical of the lot, owes its copper dome to Marna Schnabel's fond recollection of childhood visits to the Griffith Park Observatory. The "sunken" bedroom contrasts with the public areas of the house; clad with lead-coated-copper on the outside, but almost blindingly white inside, it could be set in another world. Its galvanized sheet-metal skylight looks like a cross between a tree house and an airport control tower.

And, as is so often the case in Gehry's work, one of the best things about the house is the visual diversity that results from its varied

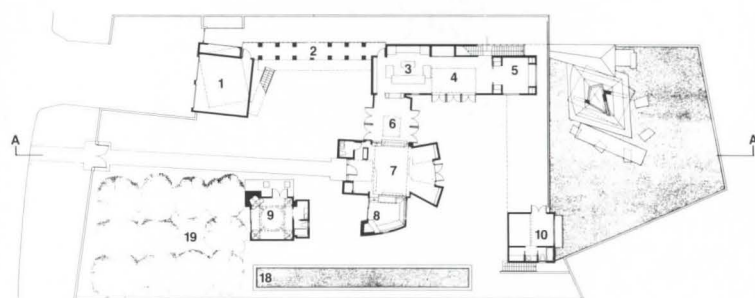


SECTION A-A

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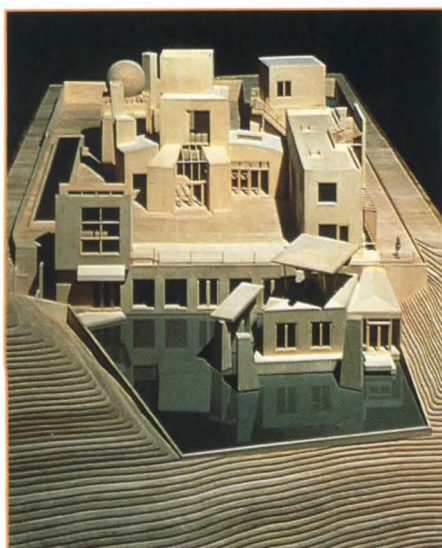


SECOND FLOOR PLAN



FIRST FLOOR PLAN

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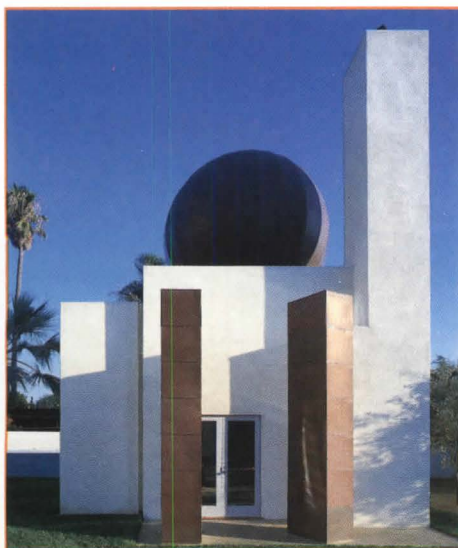
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|-------------------|---------------|-------------------|--------------------|
| 1 GARAGE | 6 DINING ROOM | 11 MAID'S ROOM | 16 WORKOUT |
| 2 COVERED WALKWAY | 7 LIVING ROOM | 12 LIBRARY | 17 REFLECTING POOL |
| 3 KITCHEN | 8 FIREPLACE | 13 MASTER BEDROOM | 18 LAP POOL |
| 4 FAMILY ROOM | 9 GUEST ROOM | 14 DRESSING | 19 GROVE |
| 5 STUDY | 10 BEDROOM | 15 SAUNA | |



GROUND FLOOR PLAN

Schnabel House

From the southeast, the view of the house from the lap pool (below) reveals the varied sizes and placement of the windows to take maximum advantage of the light and view. At right, the large window of the family room can be covered by a motorized sliding sunshade, painted to match the color of the stucco. At left, the copper-domed guest house can be seen behind a palm tree. Its entrance (bottom left) is framed by a pair of copper-clad columns.

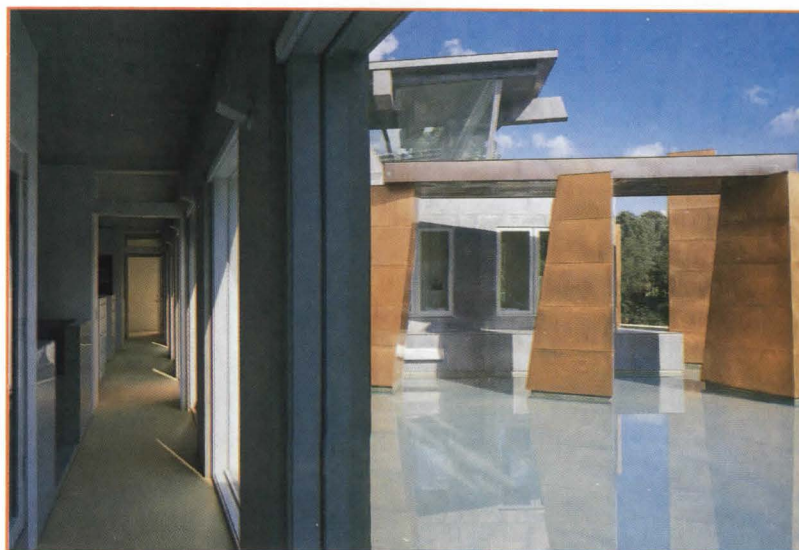


components: Look out the window of any of the buildings, and you see at least one of the others. "So many houses have a kind of sameness throughout," says Marna Schnabel. "In this house, the rooms have personalities. The kitchen and family room are 'messy.' The living and dining room pavilion is more formal than the others. And the master bedroom is a private retreat, serene and filled with light."

It isn't every architect who has a former employee (and therefore, an informed and sympathetic supporter) for a client. But one doesn't need a background in architecture to appreciate the elegant simplicity of Gehry's approach. In a residential context, this "little village" of discrete buildings seems to enhance the sense of ritual that we associate with the various rooms of any house; each room acquires a "personality," as Mrs. Schnabel puts it, that makes the sum of the parts greater than the whole. The Schnabel house, peeking out mysteriously from behind its walls, is a world unto itself—which, for many people, is the definition of "home sweet home." **Pilar Viladas** ■

The author, formerly Senior Editor with P/A, is Los Angeles Editor for HG magazine.

Carved into the site, one level down from the rest of the house, the master bath/dressing room and exercise room (bottom right, corridor view) look out to the shallow pool into which the master bedroom is set. The bedroom structure (below) is also covered in lead-coated copper, with a steel-framed skylight tower above, and is sheltered by five freestanding copper-clad columns. The bedroom's secluded siting and its abundance of daylight (interior, bottom left) make it a quiet, sunny haven.







The ensemble's jagged silhouette is reflected at twilight; overscaled structures, variegated surfaces, and an aqueous backyard veer sharply from the norms of the suburban house.

Project: Schnabel Residence, Los Angeles.

Architects: Frank O. Gehry & Associates, Santa Monica, Calif. (Frank O. Gehry, principal; David Denton, project manager; C. Gregory Walsh, Kevin Daly, Carroll Stockard, Sergio Zeballos, Rene Ilustre, Tom Buresh, Adolph Ortega, Leo Gomez, Bruce Toman, and Robin Meierding, project team).

Client: Mr. and Mrs. Rockwell Schnabel.

Site: sloping suburban lot, approximately 22,000 sq ft.

Program: 5700-sq-ft, four-bedroom house divided into six distinct buildings; common areas terraced above reflecting pool and master suite to rear of site.

Structural system: standard frame construction throughout freestanding buildings, with exposed joists and roof rafters; heavy timber roof framing for guest room; steel frame for tower in main building and clerestory in master bedroom; poured-in-place concrete for spaces below grade.

Major materials: lead-coated copper panels on exterior of living area and master bedroom; stucco exterior on other buildings (see Building Materials, p. 129).

Mechanical system: gas-fired furnace with "DX" cooling system in family room and master suite; remote heat pump with fan coil units for other living spaces.

Consultants: Nancy Goslee Power & Associates, landscape; Marna Schnabel, interiors; Kurily & Szymanski, structural; Storms & Lowe, mechanical; Athans Enterprises, electrical.

General contractor: Jim Davis, Blackoak Development (Tom Nyczaj, site supervisor).

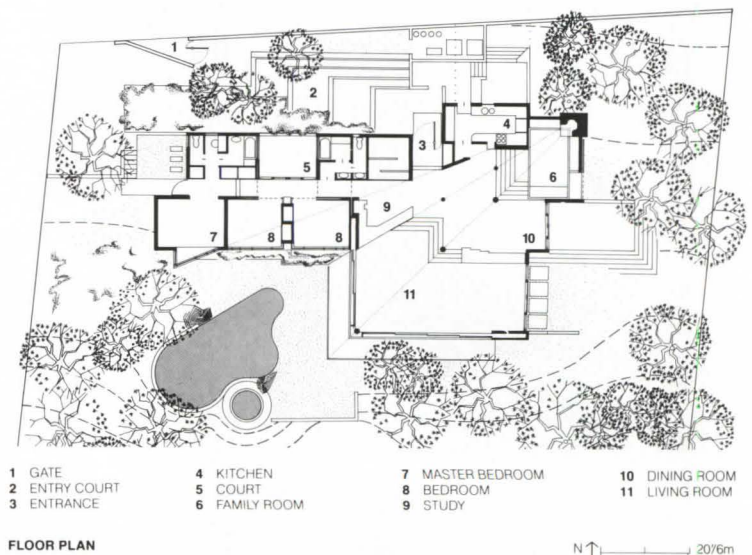
Cost: not available.

Photos: Grant Mudford; model, Tom Bonner.

American Export



The house functions as a place to entertain corporate guests; the living room (left, above) is thus the heart of the house. A skylight runs along the axis that symbolizes movement from the hearth (left) to the pool. The interior clearly refers to Japanese traditions in some places but is more reminiscent of Wright or Aalto.





A house by Adele Naude Santos brings American sensibilities to a wooded site in exurban Tokyo.

ADELE Naude Santos designed the Ohgimi beach house for a site sloping down to the Pacific Ocean at Ninomiya, a small, quiet community situated more than an hour's ride by fast train from central Tokyo. Intended to serve as quarters for the business guests and clients of its owner, the house commands what is, even by exurban Tokyo standards, a site of splendid dimensions, part of a natural preserve abundant with native pine trees.

An American visitor walking the ocean beaches that stretch outside of Tokyo is struck immediately by how little reverence the Japanese display toward their ubiquitous seashore. In contrast to the mostly clean (and mostly treeless) streets of Tokyo, or the manicured public and private gardens found almost everywhere in the land, this shoreline is littered with refuse. Crude, foul-smelling fishing shanties sit astride populated (but dirty) public beaches. Modern Japan seems to regard the near-urban oceanfront as little other than industrial wasteland. Even in the most beautiful of areas, as at Ninomiya, a noisy and heavily used road segregates the oceanfront from adjacent residential and commercial districts.

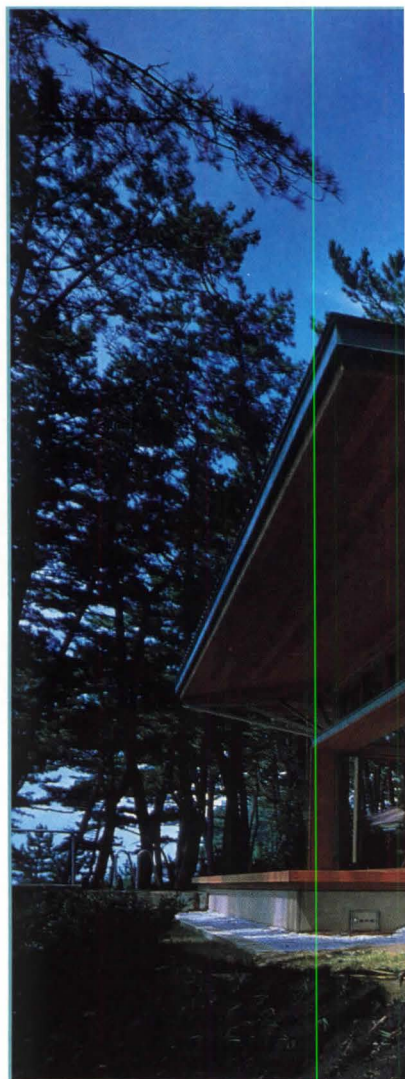
But the Ohgimi house displays reverence for the presence of the

ocean and the pine forest; the two together shape the place. (If the Japanese attitude toward beaches strikes the American sensibility as cavalier, the same cannot be said about trees. Santos says that she was required to preserve the existing sylvan setting; the house does that and more.) This house has many other things that Japanese houses typically do not: an open, generously proportioned central gathering and living space that steps downward with the land; a vast, lowslung roofline, reminiscent in both form and color of the tree canopy overhead; large expanses of glass and generous views of a natural setting; a fireplace; and an outdoor swimming pool.

The house spans in plan between the pool and an indoor hearth. These features, Santos says, echo the polar opposites of the seasons, as reflected in the changing aspects of sky, forest, and water. In summer, houseguests move poolside; adaptations of traditional *shoji* permit exterior walls to disappear, bringing the indoors out and the outdoors in. Wintertime users of the house gravitate inward and upward, toward the opposite pole of the hearth. Sky and trees remain visible through glazing strips in the roof. Three interior columns, symbolic extensions of the surrounding tree trunks, punctuate the



The glass doors of the lower living room slide into the wall, turning the area into a porch in summer (left). The sea (but not the unsightly beach) is visible from the house. The choice of materials (pine siding, Indian sandstone) and the stepping of the house in plan and elevation (below) reflect a sensitivity to the site.



The house is entered through a stepped courtyard (below left). The distinctive roof (facing page, bottom), hipped inside the "L" of the plan but not on the outside, reinforces the importance of the fireplace, from which the rooflines originate.



center of the main gathering area. An open truss overhead recalls the tree branches.

Sleeping areas and private bathrooms are arranged in a manner that is common (though usually less spacious, and rarely with a corridor) in traditional Japanese housing. Rooms are defined and closed off by means of sliding interior *shoji*.

While the house is clearly fitted to its site, which is surely Japanese, an American hand is unmistakable. By the standards of, say, coastal Northern California, it seems to derive from an almost conventional sensibility. But somewhat surprisingly, given Japan's prosperity and apparent appetite today for things American, it is not at all the sort of place one finds normally in Japan.

In the Ohgimi house, Santos displays a willingness to employ overtly American architectural ideas and values, in a context that is not always hospitable to foreign influence and where at least some of those values seem far from native. The Santos office has additional commissions in Japan underway that should continue to reveal interesting contrasts between these two closely linked but very distant cultures. *Thomas Vonier*



Project: Ohgimi Beach House, Ninomiya, Japan.

Architects: Adele Naude Santos Architect, Philadelphia (Adele Naude Santos, Robert de Jager, Libby Marsh); T & T Architects, Tokyo (Masami Tanaka).

Client: Kaoro Ohgimi, Social Development Center Co., Ltd., Tokyo.

Site: wooded 19,490-sq-ft tract sloping toward the ocean but separated from the beach by a highway. The trees form part of a nature preserve and were to be preserved as far as possible.

Program: A 2750-sq-ft, three-bedroom corporate guesthouse with generous living spaces for entertaining.

Structural system: rigid steel frame, laminated wood roof structure.

Major materials: Oregon pine siding, Indian sandstone chimney and paving, plaster board interior wall finish, Oregon pine ceiling in living spaces, copper standing seam roof.

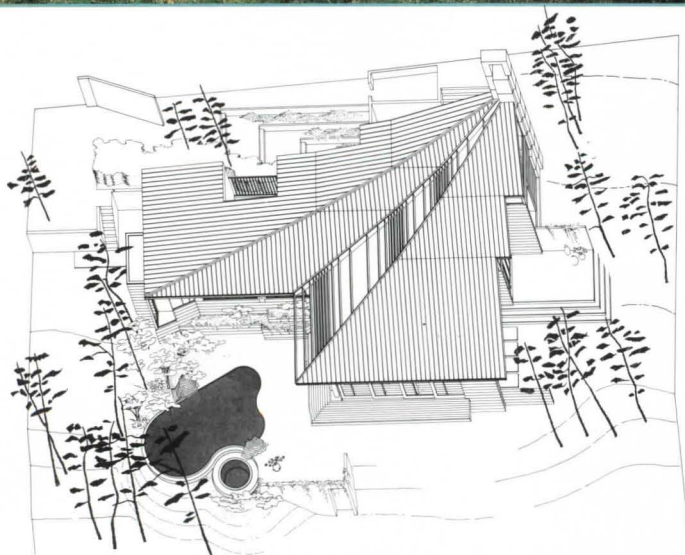
Mechanical system: electric heat pump.

Consultants: Hironori Maki, Tama Green Service, landscape architects; Norihide Imagawa, TIS & Partners, Tokyo, structural engineers; Osamu Katagiri, Sogosetsu Consultants, Tokyo, mechanical engineers; Yasuo Ohdera, Social Development Center Co., Ltd., architectural coordinator.

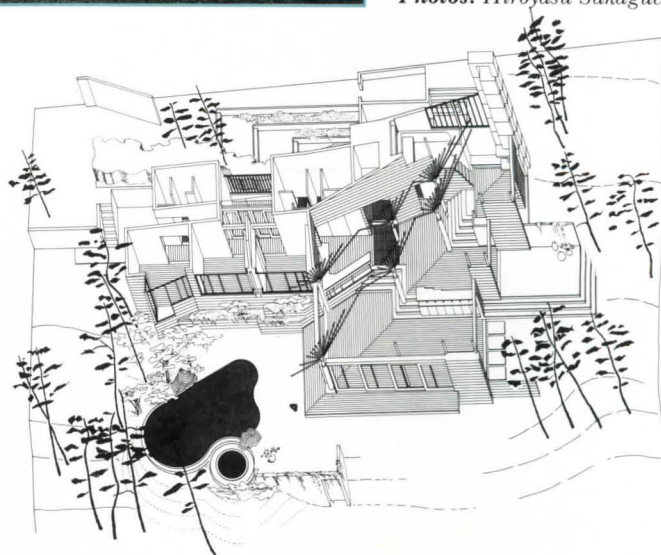
General contractor: Ohbayashi Construction.

Costs: withheld at owner's request.

Photos: Hiroyasu Sakaguchi.



BIRD'S EYE AXONOMETRIC



BIRD'S EYE AXONOMETRIC, ROOF REMOVED

**Villa in Kralingen
Rotterdam, Holland**

**This Rotterdam house by
Rem Koolhaas and the Office of
Metropolitan Architecture shows
how rich the Dutch tendency toward
reduction and abstraction can be.**



In the Dutch Modernist Tradition





The facade (above) shows Koolhaas's wittiness. The house—which stands next to a canal—has a roof that appears to float. And the angled walls, shifting planes, and billboard-like façade refer to the house's location next to a high-speed road, at the end of a residential street, and within the embankment of a highway that was never built. The rear wall (below) is a more subtle composition of wired, etched, tinted, and clear glass that changes color as the doors slide past each other. The walkway in the rear yard continues the circulation zone in the house.



IN Holland—a land of luminous skies and distant views—there is an artistic tradition that favors simplicity over elaboration, articulated objects over unified spaces, subtle moves over grandiose gestures. That tradition, extending from Vermeer to Van Doesburg, has been ably continued by Rem Koolhaas and his Office of Metropolitan Architecture in projects such as this double house in Rotterdam.

The arrangement and siting of the house are extremely clear and simple. It consists of two adjacent units, one of which has a bedroom, exercise room, and garage on the lower level and essentially one large room on the upper floor containing an open living-dining-kitchen space, plus a bedroom, study, and bathroom behind a free-standing wall. (The other unit, also designed by Koolhaas, has a very conventional plan.) Although two stories in height, the house appears much lower by being partly buried into the side of an embankment for a highway that was never built at the entrance to a suburban residential street.

Behind such simplicity and modesty, though, lies considerable subtlety. Consider its façade. The lower portion, with its deeply punched openings, expresses the house's role as a retaining wall, while the angled end walls and hovering roof refer to the movement along the adjacent high-speed road and the canal at the rear of the lot. The broad swaths of color on the façade disguise the division between the two dwelling units and create an illusion when traveling down the adjacent residential street that the roadway continues right up the front wall. Similar unexpected turns occur on the rear face. Rather than emphasizing the transparency of the glass wall, Koolhaas has used tinted, wired, etched, and clear glass in various sliding and pivoting doors to create a De Stijl-like play of surface colors and rectilinear lines.

The house is redolent with historical—and specifically Dutch—references. It recalls the traditional Dutch farmhouse in being buried into an embankment. And it refers to the work of Dutch Modernists such as Mart Stam, whose Weissenhof housing (P/A, Oct. 1988, p. 103) had a similar façade of strip windows above a painted base, and Gerrit Rietveld, whose 1958 villa in IJpendam had a similar all-glass rear wall beneath a floating roof. But Koolhaas is no historicist. He uses precedent as a starting point for his own, often witty inventions.

Villa in Kralingen



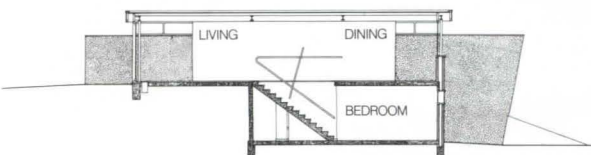
That is most apparent on the inside of the house, where Koolhaas takes on the legacy of Mies van der Rohe. The upper floor, as in Mies's courtyard houses, is essentially one large, glass-walled room, with circulation along the perimeter and utilitarian functions—closets, bathroom, kitchen—treated as objects within the space. But Koolhaas's references to Mies are far from reverent. The glass-floored court in the center of the house, for example, has one wall of etched glass and another of corrugated metal, so that the space offers an equivocal (and very un-Miesian) reading as both a void and an object within the room.

Koolhaas also comments upon Mies's liking of Classical architecture and luxurious materials (while professing a concern for housing

the masses). In place of Mies's freestanding marble walls, Koolhaas creates one of variegated chipboard, which has all the pattern of stone with little of its cost or preciousness. In lieu of Mies's rather static railings, Koolhaas provides one that seems to spring up the stairs, down the hall, and away from the angled support post. And instead of the bronze columns so favored by Mies, Koolhaas uses round columns spray painted with bronze automobile paint.

As in Mies's buildings, there is little room for clutter here, or for the frenetic vitality that Koolhaas himself exudes. This is a quiet, meditative house, carefully detailed and squarely within the Dutch Modernist tradition, recalling the calmness of Mondrian and the orderliness of Oud. *Thomas Fisher*





SECTION A-A



UPPER FLOOR PLAN



LOWER FLOOR PLAN

N ↑ 20/6m

A court at the center of the house (facing page) brings light to the lower level through a glass floor and to the upper living spaces through glass walls and doors. The upper floor is Miesian in its flow of space, with the metal-clad kitchen and the chipboard-clad wall treated as freestanding elements. Sliding doors extend from the wall (below) to separate the bedroom and study from the main living areas. One of the more expressive parts of the house is the steel rail (above), which seems to personify the movement of people up and down the stair.



Project: Villa in Kralingen, Rotterdam, Holland.

Architects: Office for Metropolitan Architecture, Rotterdam (Design team: Rem Koolhaas, Georges Heinz, Goetz Keller, Jeroen Thomas, Jo Schippers, Thijs de Haan).

Client: Name withheld.

Site: A 5000-sq-ft residential lot at the side of an elevated canal at the entrance to a residential street.

Program: A 2500-sq-ft double house in which the owner's unit has living spaces plus a bedroom, study, and guest room. The other unit has a conventional plan, with several bedrooms and a living room, dining room, and kitchen.

Structural system: reinforced concrete.

Major materials: aluminum, glass, wood, stucco, concrete.

Mechanical system: forced hot air.

Consultants: Petra Blaisse, Yves Brunier, landscape; Petra Blaisse, Hans Werlemann, interiors.

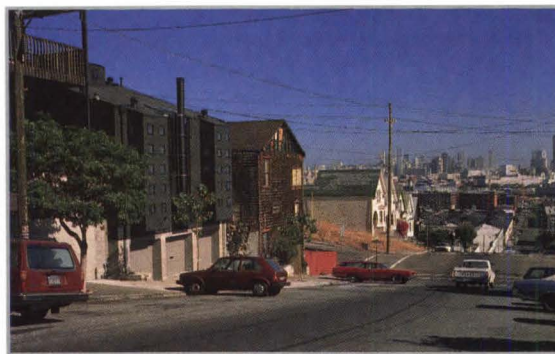
Costs: Withheld.

Photography: Peter Aaron/Esto.

Bay Region Individualism



In a city house for a couple in the performing arts, architect Daniel Solomon reinterprets his established position on context.



WHEN people picture the architecture of San Francisco, they see rows of late 19th-Century houses with bay windows and festive color schemes. Daniel Solomon, the architect who designed the house shown here, has advocated contextual design for San Francisco and has practiced it in his housing there (P/A, July 1986, pp. 109–111). Although it appears that he departed from his text in this project, Solomon asserts that this house *does* belong here. “Responding to context,” he says, “doesn’t always mean building what is next door.”

Potrero Hill, where Solomon’s clients chose to live, began as a borderland residential/industrial district. Its blue-collar population has recently been joined by artists, designers, and performers, who place privacy above decorum and want or need the kinds of spaces that do not come in traditional domestic packages. Professional musicians Pat Gleeson and Joan Jeanrenaud were not drawn there so much by the idea of living in San Fran-

The height and width of the house were determined by scenic easements imposed on the property to retain views of the bay for neighbors further uphill (top). The main entrance on the rear—or uphill—side is reached by a stair rising along the property line from the street (above and facing page). The owners usually enter through the garage. After dark (facing page, bottom) the stairway core can be seen glowing through the perforated metal garage doors.

cisco’s equivalent of TriBeCa as they were by the fine views of the Bay, at lower cost than Telegraph or Russian Hill.

Gleeson, who composes music for film and television with electronic equipment, owned a recording studio in the nearby Mission district for many years. He became so comfortable with the concrete and metal interior of his made-over warehouse space that it seemed natural to use industrial materials in the house he was dreaming up. The program for the house included two studios, a recording studio for himself and a rehearsal studio for his wife, Joan Jeanrenaud, who is the cellist with the Kronos Quartet.

At first sight, this seems to be a textbook example of how not to design contextually. With an almost aggressive air of self-containment, the house shuns the rest of the block’s job lot of casually composed structures. The traditional projecting bays that define the floors of houses have been robbed of their scale-giving quality by being punctured with



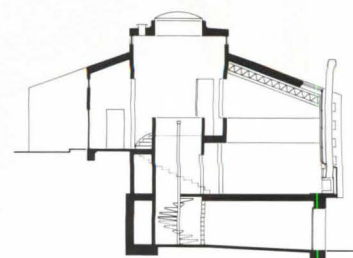
small casement windows that send a confusing message about the division of the interior space.

Happily, the interior reveals the rationality of the exterior as well as the architect's rigorous approach to making the design consistent throughout. The part of the house visible from the street is one 24-foot-high living space. Balconies on either side furnish ample space for the bedroom, bathroom, storage, and dressing room. The small casement windows guarantee privacy and intimacy and frame charming picture-postcard views of the outside world. The axis set by the central fireplace and large window above it focuses on the central stairway rotunda. A hallway runs from the back entrance past the studios to meet the rotunda at a point midway between the balconies above and the living spaces below.

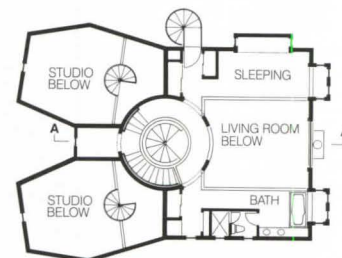
According to Solomon, the symmetrical plan of the house was worked out in a meeting with Gleeson and his acoustical consultant, John Storyk, about the design of the recording studio. One for-

mat for a high-fidelity recording studio is a room 16 feet long with no parallel surfaces. The speakers are placed in the "live" half of the room behind the performer's central seat. The opposite half, which receives the sound coming from the speakers, is given projections and stiff surfaces so that the sound that the performer hears on the return trip is as faithful to the original as possible. Since Jeanrenaud's studio is used for rehearsing, not recording, it has a wood floor, which is responsive to the sound of her cello and the other instruments in the quartet.

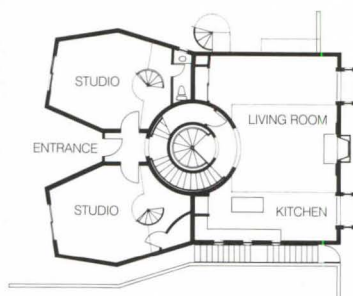
It is a rare client who is eager to experiment with unconventional materials in the design of a personal space. But if black asphalt shingles seem adventurous, consider that Gleeson's first idea was to have the exterior wrapped with a black latex sheeting mainly used on decks. He and Solomon pursued the idea until they found that the manufacturer would not guarantee the material to cover the whole house.



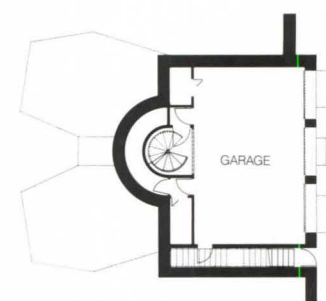
SECTION A-A



SECOND FLOOR PLAN

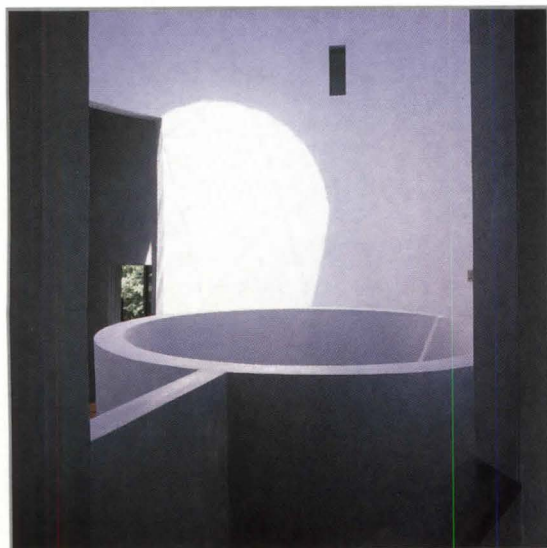


FIRST FLOOR PLAN

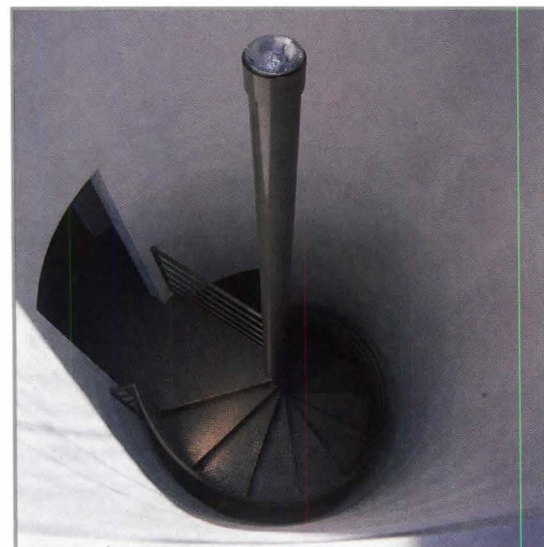


GARAGE LEVEL PLAN

N ↑ 10'/3m



At the core of the house is a stairwell (this page) with two concentric flights serving several levels. Surfaces of *stucco lustro* (hand-finished, integrally colored plaster), tinted slightly gray-blue, emphasize the luminous quality of this sky-domed cylinder. At the top of the central pole (right) is an automobile headlight to illuminate the dome by night. The instrumental rehearsal studio (facing page) is spatially similar to the composing studio on the other side of the axis, except that the latter is full of electronic equipment.







Project: Gleeson/Jeanrenaud house, San Francisco.

Architects: Solomon, Inc., San Francisco (Daniel Solomon, design principal; Stuart Wright and Vladimir Frank, project architects).

Clients: Pat Gleeson and Joan Jeanrenaud.

Site: infill lot, 50' x 75', on Potrero Hill, sloping up steeply from street.

Program: one-bedroom house; composer studio with office loft; rehearsal studio for Kronos Quartet; three-car garage. Total area: 2560 sq ft.

Structural system: concrete block lower floors, wood frame above, exposed truss joists at roof.

Major materials: Composition shingles, walls and roof; perforated metal garage doors; interiors stucco lustro, galvanized perforated steel, zinc cabinet doors and bathroom (see Building Materials, p. 129).

Consultants: Terry Hunziker, interiors; Shapiro, Okino, Hom & Associates, structural; F.W. Associates, mechanical systems; John Storyk, acoustics.

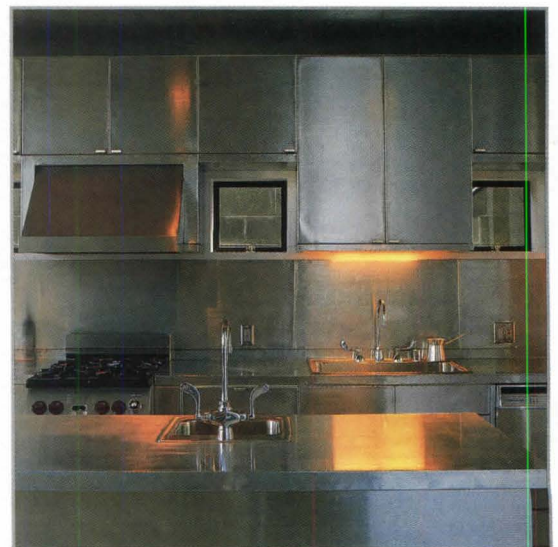
General contractor: Praxis Construction.

Costs: not available.

Photos: Christopher Irion.



The couple's living accommodations are all encompassed in a single loftlike space at the front of the house. A U-shaped balcony includes a sleeping alcove on one side (above) and an open, zinc-lined bathroom—with a tub overlooking the bay—on the other side (left). On the main level are a zinc-clad kitchen (right) and the living area (facing page). Surfaces of perforated galvanized steel reflect light and absorb sound. Small square windows in the side bays offer framed swatches of view and preserve privacy. The flue of the axial fireplace (not shown) rises outside the large central window.





Not only did the owners want a shiny black exterior for their house, they also wanted a reflective lining for the interior. They considered white corrugated plastic, but when samples were tried it looked a bit tacky. The final choice was perforated, galvanized steel sheets attached to acoustical boards, which were laid over the wood frame. Because of the sound-absorbing qualities of the balconies, walls, and ceiling, the living room does not echo or become noisy when full of people.

The combination of many sources of light with reflective surface materials ensures an even distribution of daylight in the main space. The interior designer, Terry Hunziker, who designed furniture and lighting for the house, liked the hard surfaces and balanced the cool tone of the metal and plaster with some warm accents. The many metallic tones in zinc, galvanized steel, silvery gray stained and painted wood play off each other without project-

ing a heavy metal look. Perhaps the most seductive material is the *stucco lustro* used on all the non-metallic surfaces but particularly effective on the rotunda. Tinted with blue and gray, the final coats of white plaster were hand-troweled to the lustrous finish implied by the name.

For all its high-tech, industrial aura, this house is far more hand-crafted than its late 19th-Century counterparts. Even the asphalt shingles that appear so economical had to be tacked down by hand when they were used on vertical walls for which they were never intended. (On slopes, they bond under for effects of sunlight and gravity.)

Certainly this house is eccentric to its surroundings, but it had no chance of being built anywhere else in the city. Perhaps Potrero Hill comes as close to being a free zone for innovative design as exists in tightly controlled San Francisco. And that is a context worth preserving. *Sally Woodbridge* ■

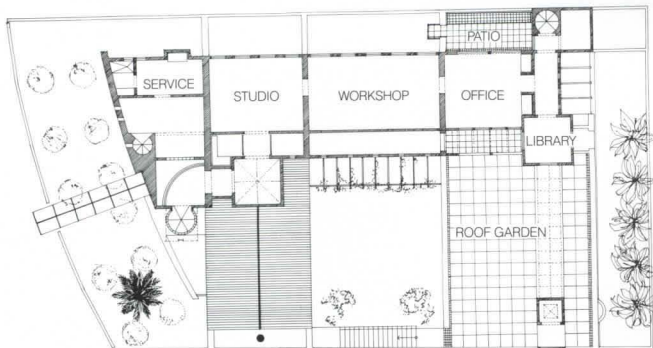
Outside, Inside



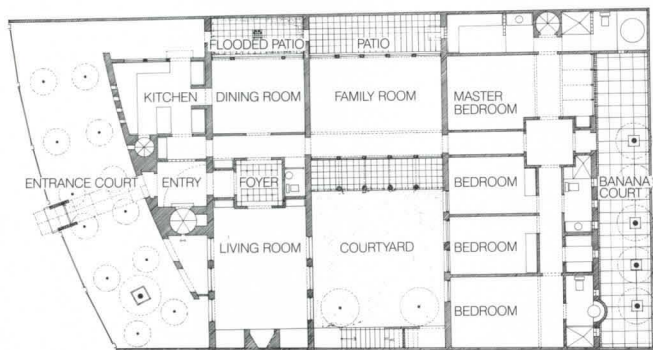
BOSQUE DE LAS LOMAS is a wealthy Mexican development of custom houses. Zoning laws, calling for setbacks on all sides, tend to make these satellite-dish-topped houses islands within small grass plots surrounded by high walls (security and tradition mandate that Mexico's houses be walled). The desire for a garden on these steep highlands has led to permanent concrete scaffolds supporting small areas of flat land. The Mexico City firm of Albin Vasconcelos Elizondo Arquitectos has turned this typical house inside out, working with the land rather than against it, and using the setback laws to create a variety of small courts which bring the outside in.

The partners, who have practiced together for eight years, worked to develop a scheme "so clear it can be defined in less than a paragraph." Four brick bearing walls define five layers of space: the front courtyard, the living-dining area, the family room-courtyard space, the bedroom wing, and the rear banana courtyard. Pristine white walls used in the opposite direction define each room; the same grid extends into the studio/office space on the second floor. The required setbacks became courtyards: an entrance courtyard of inset river pebbles; a flooded court, which reflects ripples of daylight into the dining room, adjoining a patio on the northwest side of the house; a banana courtyard filling the rear setback; and the main courtyard at the southeast. (The architects did receive variances to bring the bedroom and living room wings, surrounding the central court, di-

By exploiting zoning laws, Albin Vasconcelos Elizondo Arquitectos creates a house that inverts the typical custom house of Mexico City.

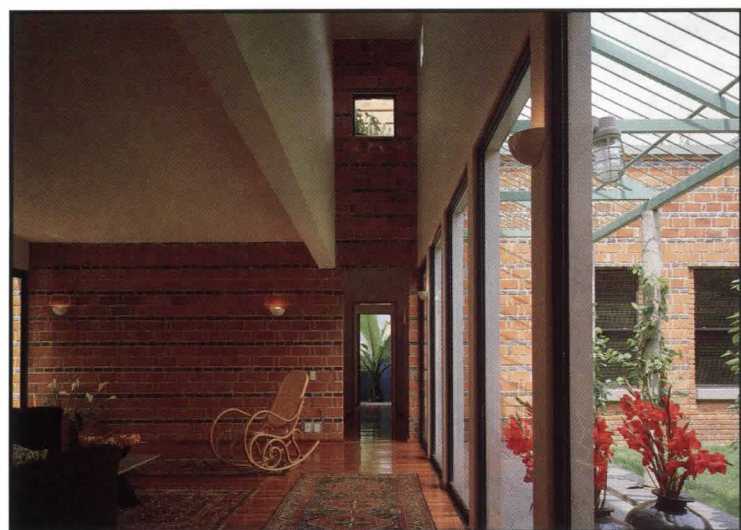


SECOND FLOOR PLAN



FIRST FLOOR PLAN

N 20'6m



rectly to the lot lines.) Smaller patios were created on the flat roofs of the bedrooms.

The use of a design-build approach, very common in Mexico, gave the three architects freedom—and time on the site—to continue design development. When the brick was delivered, for instance, it was burnt on one edge, and they decided to use the burnt sides to create a horizontal masonry pattern. The clients wanted a more modern statement than they felt the rough brick and plaster would deliver; the architects selected a metal perimeter wall and trussed metal canopies over the entrance and the two towers. Other changes, made as a result of the budget, were not so fortuitous: The long axis through the house, meant to culminate in a bench for viewing the banana courtyard, was instead finished with an unclimatic closet, and the space under the southern tower, intended to be an airy double-height entrance, was enclosed to make room for a secretary for the second-floor office space.

The empiricism of Albin Vasconcelos Elizondo Arquitectos is, they think, typical of Mexico, where a very planned, too-slick style is both uncharacteristic and fairly unobtainable. Yet they stress that while they practice Mexican architecture and recognize local mentors (citing Luis Barragán's "monastic spirit and solitude"), they are also intellectual architects searching for an international idiom that reaches beyond national boundaries. **Andrea E. Monfried** ■

Project: Gomez-Biagi House, Mexico City.

Architects: Albin Vasconcelos Elizondo Arquitectos, Mexico City (Enrique Albin, Fernando Vasconcelos, Alejandro Elizondo, partners; Leo P. Franz, Sergio Lira, collaborators).

Client: Rodolfo Gomez.

Site: 4860 sq ft suburban lot.

Program: first-floor house for six and second-floor office space for industrial design studio.

Structural system: brick bearing walls, stone and concrete foundation, concrete slabs, pine framing and roof (living room).

Major materials: cement plaster, stucco, paint, tzalam wood.

Consultants: Gabino Mota, master mason; José Creixell, structural; Abraham Albarran, electrical.

General contractor: Albin Vasconcelos Elizondo Arquitectos.

Costs: withheld.

Photos: Alfonso Merchand.

Above the blue metal encircling wall rises the clients' second-floor office and studio space (facing page). A metal-and-glass canopy leads from the wall to the entrance space, marked by another metal canopy and the round, glass-block element. The front tower marks the foyer, the rear one holds a water tank. The inner courtyard (top), with stairs leading to one of the roof patios, is enclosed by the bedroom wing, the family room (above left), and the living room (above right).

Tin Type



In his own backyard, Gerald Maffei is exploring some big ideas in a small Texas house.

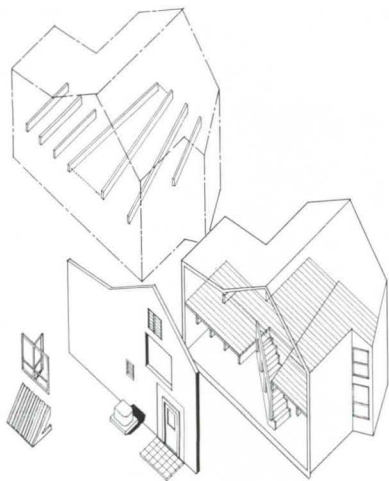


The Tin House takes its metal skin from the aesthetic of a nearby railroad and its gabled form (left) from neighboring houses. The rear of the house (above) opens to views of a yard with mature trees. Window placement was decided onsite instead of in drawings.

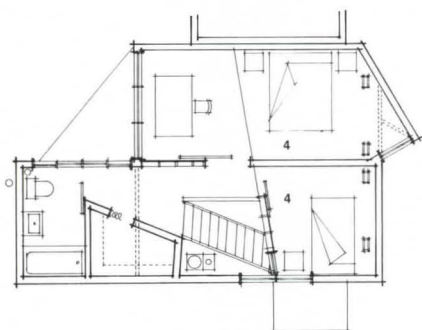
WITH his Tin House in Bryan, Texas, architect Gerald Maffei set out to create a building that honored its context. But while the definition of contextuality often depends more on what is left out than what is included, Maffei has created a building that, by including more than expected and through utter frankness of method, subjects its context to radical redefinition.

Bryan is one of dozens of late-19th-Century towns that sprang up in central and east Texas as the railroads reached inland from the coastal ports. Often laid out by railroad engineers, these towns were typically arranged with their major public spaces and even housing aligned to face the bisecting railroad tracks. Maffei's Tin House is actually an addition to a one-story Victorian frame house that faces the tracks near the center of Bryan. Maffei shaped his addition, with its tall gable, to match the houses in the neighborhood; like them, too, it has a strongly marked entrance. The decision to sheath the entire building in corrugated metal, however, came in response to the tracks. Industrial and residential imagery form the poles of Maffei's design; the Tin House exists in an uneasy territory in between.

Maffei teaches architecture at Texas A&M University in nearby College Station, where Joe Mashburn, his former partner and colleague, built another well-known tin house (P/A, June 1987, p. 72). Maffei describes his design intentions, academically, citing sources ranging from Heidegger to Baudrillard to Christopher Alexander.

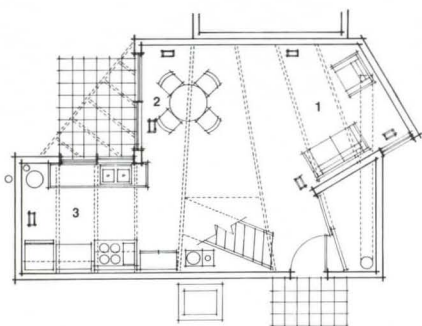


EXPLODED AXONOMETRIC AND FRAMING DIAGRAM



SECOND FLOOR PLAN

- | | |
|---------------|-----------|
| 1 LIVING ROOM | 3 KITCHEN |
| 2 DINING ROOM | 4 BEDROOM |



FIRST FLOOR PLAN

N ↓ 10'3m

He says that he wanted, by making the house “a clear constructional diagram,” to avoid the loss of contact between the dwelling and the occupant that results when essential building elements are covered or padded. By using “tangibly authentic materials,” he hoped to avoid “the suppression of the actual” that comes from excessive reliance on visual expression at the expense of other senses. His method would create a house, he said, that would “confirm the occupant’s place within the universe,” modeling the psychological boundary between public and private life to enable “the resident’s personal self to develop freely.”

“I wanted to take some chances,” says Maffei, who owns both the Victorian house and the Tin House addition, which he rents out. “It was built to try out some ideas that I didn’t want to lay on a client.” Maffei also says he wanted to see if it was possible “to build something beautiful, something emotionally satisfying with low-cost materials as they came straight from the lumberyard.”

It is the rigorous deployment of these low-cost materials that sets Maffei’s Tin House apart from the suave little villas attempted over the last decade by most Texan adherents of the Alexander technique. From the untopped concrete slab to the metal roof, Maffei piles up his raw materials like a fearless sushi chef. Plumbing, wiring, and air-handling equipment are left exposed, as are the rough edges of the wooden members. Maffei has created a remarkable sense of spacious-



Maffei stuck rigorously with a palette of straight-from-the-lumberyard, low-cost materials, exposing joints and edges wherever possible (above). Walls are plywood, painted white on some outer surfaces but left unfilled and unsanded.

ness in a little over 1000 square feet of house by skewing walls to play tricks of perspective and by combining window placement with sliding doors to open rooms into each other. But Maffei’s relentlessly blunt materials and structure seem to enclose the space tightly.

Maffei’s experiment clearly works on the exterior of the Tin House, which exudes a pinging solidity. And on the interior, certain details—particularly the way the stairs lean against the second-floor landing—convey the surprising strength, even nobility, that the architect wanted to reveal in his low-cost materials. But it’s hard to accept the house as the psychologically sustaining environment that Maffei says he intended to secure; the house insists on being read, but withholds the key to its vocabulary. Do we see a Zen-like detached honesty, or a shrug of indifference—even, perhaps, an echo of the engineers who once laid out towns as servant spaces to their railroads? A single answer may be unavailable. Certainly Maffei has created an architectural experiment that transcends its scale and transforms its setting. *Joel Warren Barna*



Maffei's approach is shown most bluntly in the kitchen (above), where the sink counter rests on 4" x 4" supports bolted directly to the framing members of the aluminum-frame windows, and the exposed water heater sits directly on the raw concrete floor. The bedrooms (below) use plywood doors hung barn-style.



Project: Tin House, Bryan, Texas.

Architect: Gerald Maffei, College Station, Texas.

Client: Gerald Maffei.

Site: rear of a 100' x 100' corner lot behind an existing Victorian house, with direct access to a gravel alley, in a neighborhood of single-family houses.

Program: two-bedroom, two-story single-family rental unit containing 1000 sq ft.

Structural system: wood frame.

Major materials: corrugated galvanized sheet metal roof and exterior walls, plywood interior walls,

polished concrete floor slab, aluminum frame windows, corrugated translucent porch roofs (see *Building Materials*, p. 129).

Mechanical system: downflow air unit with small ducts cast into a high mass slab with perimeter registers. Freestanding galvanized sheet metal return air duct, whole house attic fan.

Consultants: L. Degelman, P.E., College Station, Texas, mechanical.

General contractors: Gerald Maffei and Ronald Rogers.

Costs: \$35/sq ft.

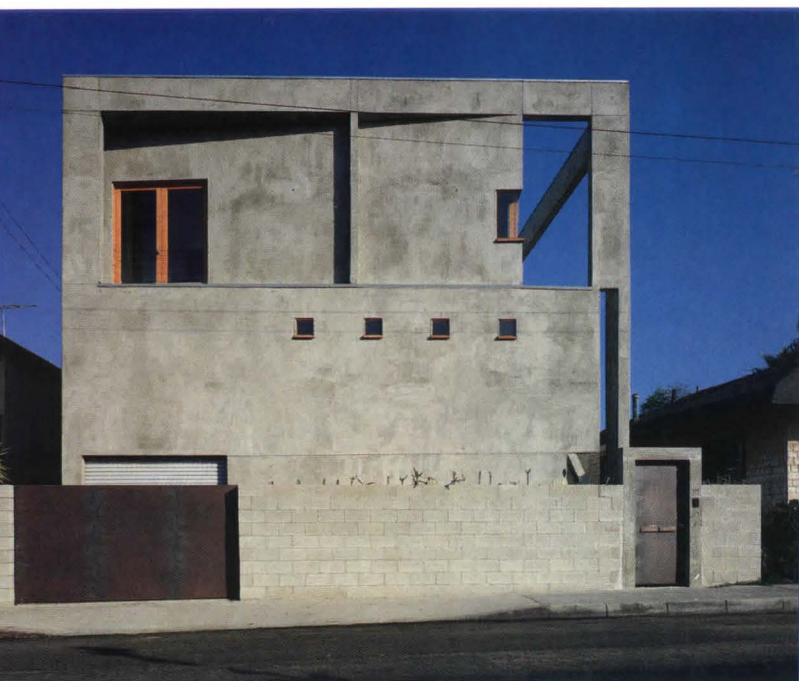
Photos: Elsie Kersten.

Hertz and Rendler describe their house as a block cut open to the light. Those cuts also diagram the interior functions of the house: The diagonal cut on the west wall, for example (right), indicates a stairway leading to the rental apartment on the third floor. The vertical notch in the same wall marks the main entrance. Another indicator of the interior is the 15-degree skew of the rental unit, as seen on the narrow street-side elevation (below). The skew indicates the unit's separation from the rest of the house.



Depth in Venice

A house and studio by David Hertz and Michael Rendler engages in a seductive dialogue with its Venice, California neighbors.



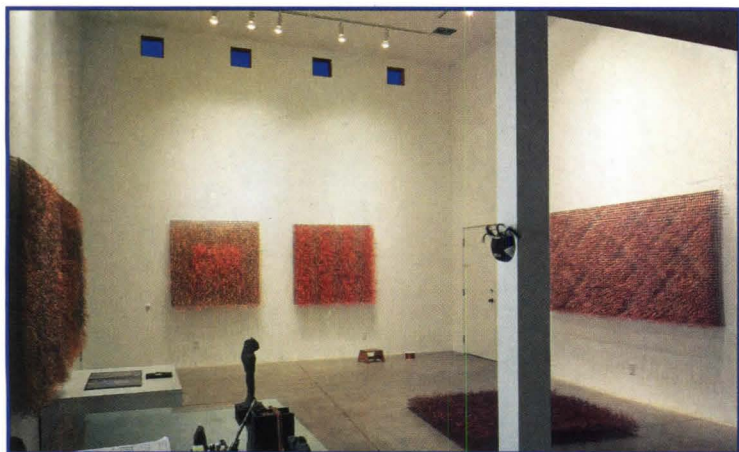
FOR the Venable house and studio in Venice, California, architects David Hertz and Michael Rendler have designed a structure that closes itself off from its urban setting while finding ways to acknowledge the environment at large. The house is at once inward looking and open to the elements, particularly natural light.

The client, a sculptor and collector of Native American artifacts, called for a home of 4300 square feet containing a studio, bedroom, bath, and a separate rental apartment. The architects were instructed to make a clear separation between living and working areas and to ensure the mutual privacy of homeowner and tenant.

If the program was simple, the site was complex. The setting is an urban location close to Los Angeles and a few blocks from the Pacific coastline. Located in a gentrifying area, the building sits between luxury houses to the south and graffiti-splashed urban blight to the north. A patch of ocean is visible from second-story windows.

The house is an infill project on a block originally developed with single-family bungalows and later redeveloped with apartment houses in clashing commercial styles. A three-story apartment building is planned to the immediate west of the Venable site. The long, narrow slope of the site challenged the architects (who attended Southern California Institute of Architecture and who maintain separate practices) to introduce light and air into a project hemmed in on both sides by projects built to the property line. The solution, in

The house is entered through a narrow courtyard and a glass door in a curtain wall (right). Inside is the living room and, through a set of double doors, the two-story studio (below). The studio is featureless except for four punched openings in the north wall and a wedge-shaped skylight. A set of stairs leads to a mezzanine that offers a viewing platform for Venable's large wall-hung sculptures. The plan (below right) shows the tripartite division between the public living area, the semi-public studio, and the private master suite and terrace. The rental unit has its own roof deck, walled off for privacy from the deck of the main house.

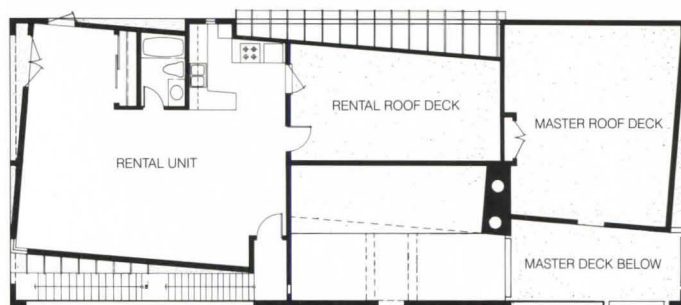


Rendler's words, is a "box that has been cut open" to provide light and selected views of a landscape of mixed pleasures.

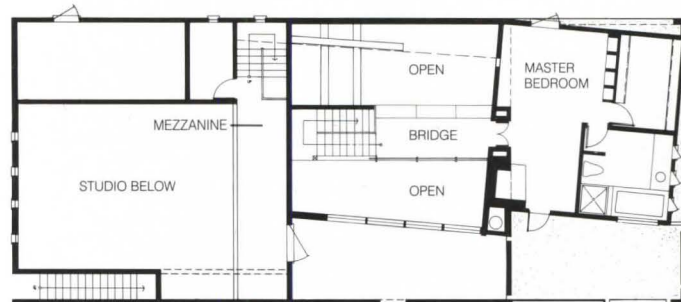
Inside, the composition is fundamentally a tripartite scheme, with studio and living quarters pushed to opposite ends. At the center are the entrance, living room, kitchen, and stairs. From the street, the front elevation is fortress-like and forbidding. The visitor is confronted with a barren wall with three tiny windows. The only eccentric feature is a concrete box at the third story—the rental unit—that has been twisted 15 degrees off axis. A narrow courtyard that leads to the entrance manages to avoid claustrophobia, thanks to the light and sky visible through "cut outs" in the outside wall.

Viewing the courtyard and entrance from inside, the visitor sees a panoramic view of the west wall, set off by a dramatic slice of light that recalls the use of light in courtyards in the houses of Tadao Ando. Inside the living room is a massive, almost ceremonial fireplace of poured-in-place concrete, set in a chimney stack of concrete block. The centrality of fireplace and chimney, both structurally and psychologically, is reminiscent of the use of these elements in the 19th-Century American house.

Solar techniques dictated the treatment of light. Heat loss through the glass curtain wall, for example, is offset by the solar gain in the concrete floor. But reliance on solar energy hardly diminishes the pleasure that architects Hertz and Rendler have taken in exploiting



THIRD FLOOR PLAN



SECOND FLOOR PLAN



FIRST FLOOR PLAN

N ← 20'6m



the behavior of light. Sunlight has a "surface active" role in the house, raking across the walls and making the house a giant sundial. Constantly shifting shadows indicate the movement of time. The play of light and shadow is one of many polarities explored in the house; themes of open versus closed, public versus private, and work versus leisure also appear. In the end, it is an internal dialogue; in a harsh urban environment, the house offers an added sense of refuge. Says Hertz, "It's a monastic house." **Morris Newman** ■

The author, a former real estate editor of the Los Angeles Business Journal, is a freelance writer in Los Angeles.

Project: Venable Studio, Venice, California.

Architects: David Hertz and Michael Rendler (Kim Colin, Stacy Fong, James Meraz, Eric Ruffing, Nelsen Valentine, assistants).

Client: Susan Venable.

Site: a 40' x 100' lot among homes and apartment houses near the Pacific Ocean.

Program: an artist's studio, work room, and presentation gallery, with living space and a rental unit, totaling 3804 sq ft.

Structural system: wood-frame and stucco walls; truss joist upper floors; masonry fireplace.

Major materials: raw stucco exterior, trowel-burned concrete slab floor, board-formed exposed concrete, concrete block, Douglas fir doors and windows, plywood cabinets, exposed 6" x 12" fir beams, galvanized sheet metal, rusted steel, Syndecrete lightweight concrete countertops, sinks, shower stalls.



Mechanical system: forced air.

Consultants: Syndesis and Susan Venable, landscape and interiors; Michael Rendler and Gordon Polon, structural; Computer Aide and Michael Rendler, mechanical.

Contractor: Robert Halderman.

Costs: \$300,000.

Photos: Tom Bonner.

At the center of the living room is a set of stairs (above left) with Douglas fir treads, steel T-section handrails, and plate steel balusters. Behind the stairs is the kitchen (top) with Douglas fir plywood cabinets. A wedge-shaped skylight throws light shadows on the east wall. The countertops (above) are made of "Syndecrete," a special concrete developed by Hertz, who claims the material has twice the strength and half the weight of conventional concrete. The material also holds pigment well.

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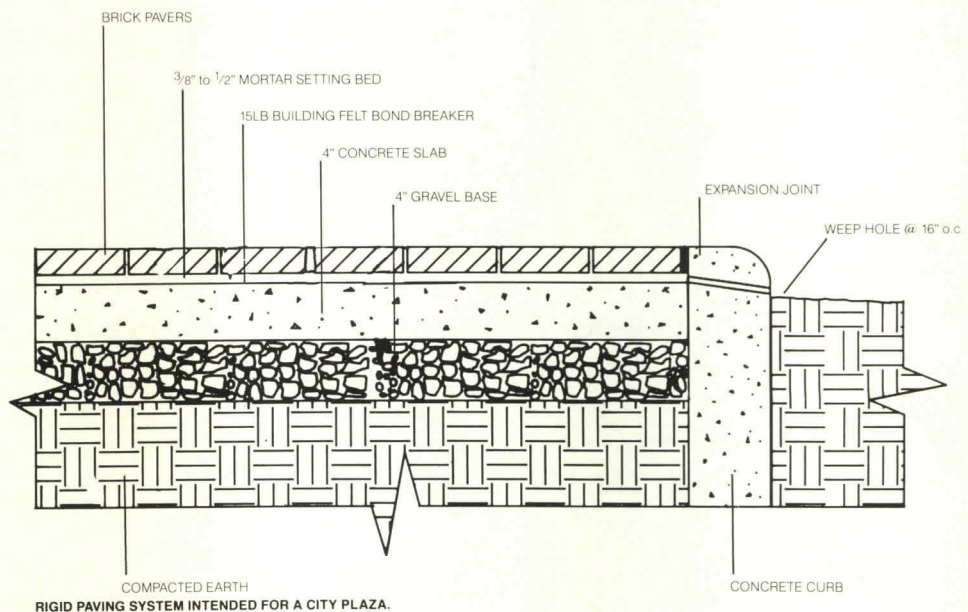
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- 107 **Brick pavements:** Different designs and details are suited to different circumstances.
- 111 **Concrete unit pavements:** Mechanical installation brings new opportunities and design considerations.

RIGID PAVING SYSTEM	
Light and Medium Traffic: Pedestrian traffic, e.g. patios, sidewalks, shops	1½"
Heavy Traffic: Vehicular, e.g. streets, docks	2¼"
FLEXIBLE PAVING SYSTEM	
Light Traffic: Pedestrian traffic, e.g. patios, walkways	1⅝"
Medium Traffic: Pedestrian traffic, e.g. city sidewalks, shopping malls. Vehicular traffic, e.g. driveways, parking lots	2¼"
Heavy Traffic: Vehicular traffic, e.g. streets, docks, airports	3"

UNIT PAVER THICKNESS.



Brick Paving

Brick paving has been used for thousands of years and in thousands of applications. The multitude of colors of brick and its numerous textures and laying patterns makes a great variety of paving possibilities. All of these varieties of brick paving can be classified as rigid or flexible.

The Basics

Rigid paving is characterized by mortar joints. A properly designed rigid paving system consists of a well-compacted subgrade, a properly prepared base, a reinforced concrete slab, a mortar setting bed, and brick paving with mortar between the pavers. A rigid system is often used where there are poor soil conditions, in highly used pedestrian areas where spaces between pavers are intolerable, or where the look of mortared brick paving is desired. Any time mortar is used between the brick, a rigid concrete slab must be used to support the paving.

A flexible system can be used in various applications ranging from a brick patio to a city street. It requires a well-compacted subgrade beneath a layer of

crushed stone, a sand setting bed, and fine sand between the pavers.

In general, a flexible system is preferred over a rigid system for a number of reasons. A flexible system requires fewer materials and less skilled workmanship than a rigid one, and is usually less expensive.

With a rigid system, matching control-joint spacing in the concrete with expansion-joint spacing in the brick requires greater layout skill. In a flexible system, each material is independent so each can undergo movement independently. Periodic maintenance is required for mortared brick paving. The mortar will typically need replacing before the pavers themselves. This is an added cost over the lifetime of the pavement. Whichever system is used, materials, design, installation, and detailing must all be considered.

Masonry Materials

Brick paving units should conform to ASTM C 902, Standard for Pedestrian and Light Traffic Paving Brick. This standard addresses those units used in patios, walkways, floors, plazas, and driveways. For most exterior

applications, a brick unit meeting or exceeding the requirements of Class SX should be used. The requirements include a minimum compressive strength of 8000 psi, a maximum cold-water absorption of 8 percent and a maximum saturation coefficient of 0.78. ASTM C 902 is not intended for heavy vehicular or industrial applications, for which a separate standard is being written. Many brick manufacturers can make units that will perform in severe applications. Salvaged brick is not recommended for paving; generally speaking, used bricks are not uniformly durable when exposed to weathering, and most salvaged material was never intended to be used in pavements.

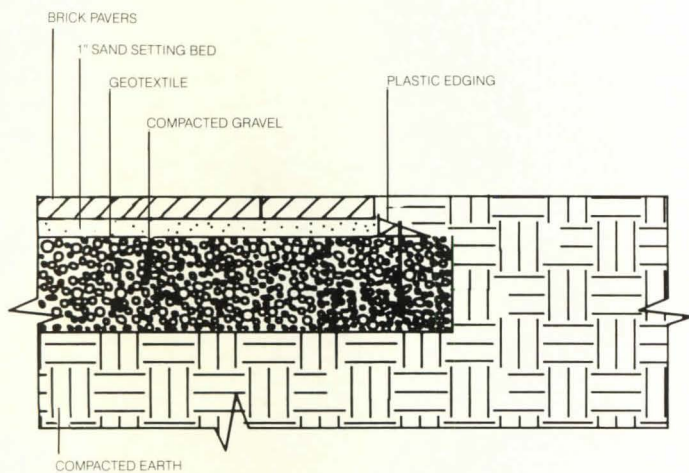
If mortar is to be used in brick pavements, it should conform to ASTM C 270, Type M mortar. Portland cement-lime cementitious materials provide greater durability than other cement types. A Type M mortar is mixed one part Portland cement, ¼ part hydrated lime (optional), to three parts masonry sand. The mortar ingredients should be mixed in a mechanical mixer and laid by traditional bricklaying methods.

Design

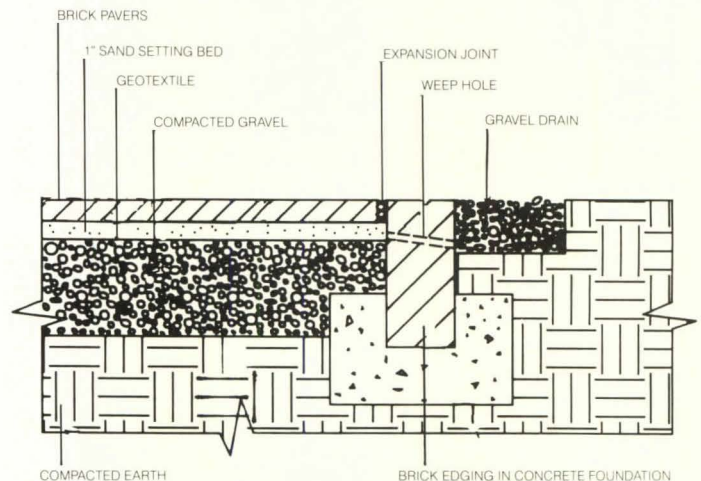
When designing brick paving, consideration should be given to traffic, drainage, edge restraint, expansion-joint placement, abrasion, and slip resistance.

The type of traffic anticipated may dictate the system to be used and the geometry of the paved area. Heavy traffic may require the use of a rigid base, whereas pedestrian traffic can be accommodated on a flexible base. The thickness of the brick paving unit is determined by the type of traffic and paving system being used. A rigid system may use thinner pavers, since the whole system acts as one in resisting the applied loads. A flexible system may require deeper pavers to resist some of the rotational loads imposed by turning or braking vehicles.

One of the main reasons for failures in paving systems is the lack of adequate drainage. Standing water can lead to failures such as cracking or spalling during freezing weather. The type of drainage depends on the type of paving system. Three types of drainage are used in brick paving: surface restricted, sub-surface restricted, and non-restricted. Surface restricted



FLEXIBLE SYSTEM FOR A BRICK PATIO APPLICATION.



FLEXIBLE PAVING SYSTEM USED IN PEDESTRIAN OR VEHICULAR APPLICATIONS.

drainage relies on a relatively impervious surface on which primary drainage takes place and is typical of a rigid paving system. Sub-surface restricted drainage permits water to filter down between the units and flow along an impervious layer or membrane. Handtight brick laid on asphalt or on a water-resistant membrane permits drainage below the brick. Unrestricted drainage occurs not only along the surface and between the brick, but also through the subgrade, as in flexible brick paving over a flexible base.

In all cases, the paving should be sloped at least $\frac{1}{8}$ " to $\frac{1}{4}$ " per foot. Drains should be located as necessary to direct the water away from the paving. For any sub-surface drainage, sub-surface drains may be required as well as weepholes at curbs.

A rigid-edge restraint material must be used to prevent horizontal movement of the brick pavers. The edging may be a concrete curb, brick soldiers set in concrete or mortar, pressure-treated lumber, or rigid steel or plastic edging. All curbs or edging that could prevent drainage of water from the paving surface must contain weepholes.

Expansion joints are required to accommodate thermal expansion and differential movement. A rigid paving system acts as a single element and requires more expansion joints than a flexible paving system, which can accommodate some expansion between the units. Expansion joints should be located within large paved areas, between differing materials, around permanent structures such as manholes, curbs, gutters, or at changes in base conditions. The spacing of expansion joints depends upon climate, location, surface color, and compressibility of the joint material.

Abrasion or wearing of the pavement is important in high-volume pedestrian traffic or in vehicular traffic. It is rarely a problem with hard-burned brick pavers. In areas of high traffic demand, pavers conforming to ASTM C 902 Type I should be sufficient. In areas such as patios and walkways, a Type II paver can be used.

The texture of the brick unit aids in providing a slip-resistant surface. The coarser the texture, the better the slip resistance. A wire-cut surface is more slip-resistant than a die-skin surface.

Installation

Beginning with the subgrade, the soil should be uniformly compacted to produce a stable layer in which to install the rest of the system. Uncompacted soil can result in a differential settlement, especially in a flexible system. A plate compactor for larger jobs or a hand tamper for smaller jobs can adequately compact the soil. The gravel or crushed-stone base and the sand setting bed should also be compacted and free of salts or alkaline material to prevent efflorescence.

Rigid brick paving is installed with a mortar setting bed and joints, much the way brick is placed in walls. The wet mortar should be laid down for the setting bed as installation proceeds. The brick pavers should be buttered with mortar on the bottom and two sides and pushed into place to ensure that all joints are totally filled.

Another way to install mortared brick paving is to use a soupy grout mixture that is poured over and between the already laid pavers. The brick paver's bed face should be coated with wax before installation to permit cleaning of the top sur-

face of the brick later. This is not as desirable as the first method.

Flexible brick paving is installed with sand between the joints. The brick pavers should be spaced between $\frac{1}{16}$ " and $\frac{1}{8}$ ", to prohibit the pavers from hitting together and chipping the brick's edges. A cement-sand mixture is typically not necessary between the pavers, except in areas subject to heavy water runoff.

Detailing

The accompanying illustrations show details for a variety of typical pedestrian and some vehicular applications. The best design may be based on a successful project that has similar traffic and similar exposures. Another alternative is to get advice from the experts in the field who are experienced in brick and brick paving design. **Brian E. Trimble** ■

The author is a staff engineer in Engineering and Research, Brick Institute of America.

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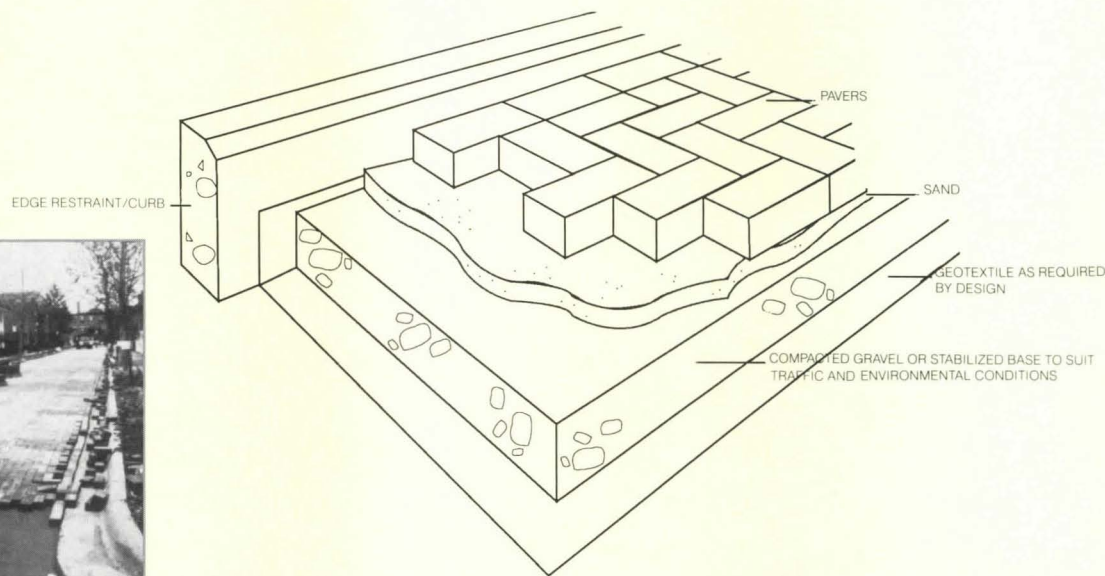
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MECHANIZED INSTALLATION WITH CUTTING OF EDGE UNITS.



TYPICAL COMPONENTS OF AN INTERLOCKING CONCRETE PAVEMENT SYSTEM.

Interlocking Concrete Pavements

Interlocking concrete pavements continue to be specified in plazas, entrances, and walks because of their human scale and visually exciting graphic design possibilities. Two technical developments, however, have extended their use to larger areas of pavement such as streets, industrial areas, ports, and airports. First, experimental load tests have shown that the system acts as a flexible pavement, nearly identical to asphalt. The paver and underlying sand layers, therefore, can take credit in the engineering of a pavement cross section as an integrated structural component, rather than as separate bedding and surface wearing courses.

Mechanized Installation

Second, the advent of mechanical installation has reduced construction time and the drudgery of manually setting large areas. An automated installation machine enables a three- to five-fold increase in productivity with the same number of people. About ten square feet of pavers can be placed every 20 to 30 seconds.

Each layer of 35 to 40 units is manufactured and mechanically placed in the final laying pattern.

In order to gain the efficiencies from mechanical installation, some design forethought is essential before the first paver is laid. A paver shape compatible with mechanical installation must be selected. Check with local manufacturers for suitable types and availability. When placed on the bedding sand, the layer of units should form a continuous interlocking pattern. This will minimize lateral movement from braking and accelerating vehicular traffic. The interlock from layer to layer also distributes loads which helps to minimize deformations.

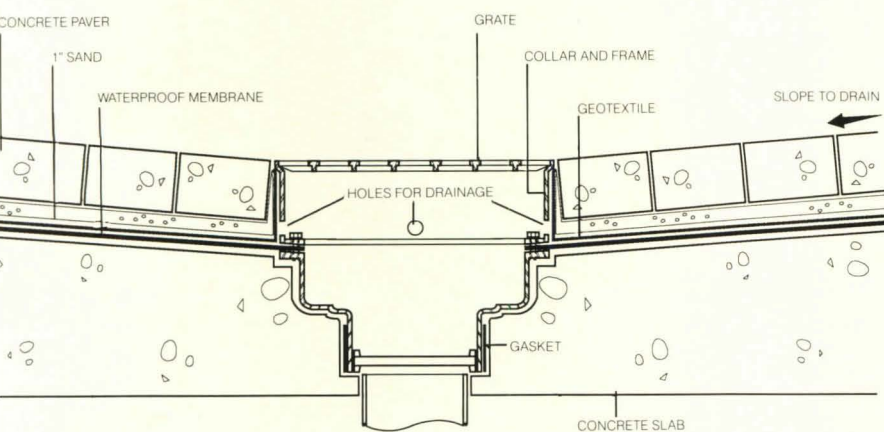
Rectangular shapes require no edge units and can be cut to fit against a curb or other stationary edge restraint. Layers made in a 90-degree herringbone pattern require that two stones in each layer be moved to lock the pattern of one layer with the next. These stones are moved immediately after the layer is placed. Other patterns require that no units be adjusted to create a continuous pattern, but they may require edge units to be manually placed in order to

obtain a finished appearance.

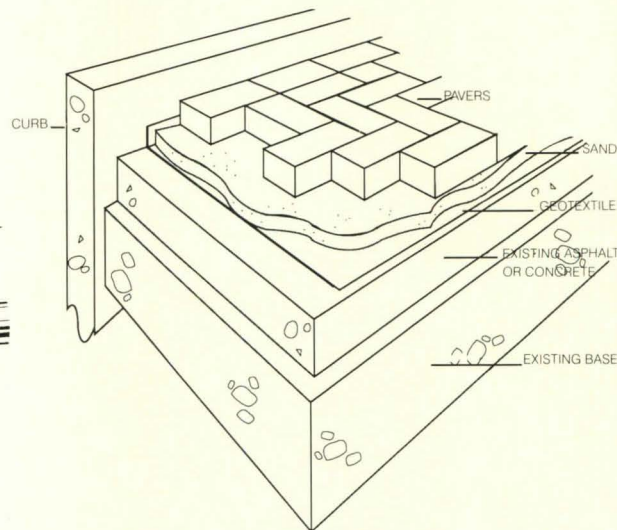
The dimension of the paved area should be based on a unit paver module to minimize left-over units and cutting. It is usually not possible to make the machine-set layer drop neatly into place at the end of a course of layers. The remaining portion is often left along the edge of the pavement and removed later. Extra units can be cut for edge pieces, if necessary.

Product Specifications

Concrete pavers must conform to ASTM C936, which calls for a minimum compressive strength of 8000 psi. Absorption should be less than 5 percent, and units should lose no more than 1 percent of their weight after 50 freeze-thaw cycles. The units are made under intense compression and vibration, which can yield strengths over 10,000 psi and absorption less than 3 percent. The specification exceeds poured concrete, which is typically 3500 to 4000 psi. While the cement content of concrete pavers is not specified, it is almost twice that of poured concrete to achieve the ASTM standard. This contributes to their long-term durability.



TYPICAL DECK DRAIN DETAIL.



CONCRETE PAVER OVERLAY/INLAY.

Iron oxide pigments are often added for color. In order to resist the fading that can come from weather, at least 4 percent pigment should be used, expressed as a percent of the weight of the cement in the concrete mix. Efflorescence can be controlled by additives placed in the concrete mix at the time of manufacture, as well as admixtures to increase strength. Efflorescence is a natural by-product of cement hydration. If it appears after the pavers are installed, it can often be removed by washing with muriatic acid and water rinse.

Base Design

A concrete paver installation will be no better than the quality of the materials and installation of the base. Typically the base is compacted gravel conforming to the standards set for local street and highway construction. Under heavy loads, or particularly on weak/wet soils, a cement- or asphalt-treated base will be required. For engineering guidance, the American Association of State Highway and Transportation Officials (AASHTO) published the 1986 *Guide for the Design of Pavement Structures*. This

reference provides the basis for flexible pavement design which can be used for interlocking concrete pavements. Many state, county, and city governments have adopted the engineering procedures in this manual. Local procedures should be followed for base design.

Sample specifications for the construction of the sand and interlocking pavement are available from the NCMA. Pavement design software, called PAVECHEK, is also available. The software follows the AASHTO engineering design methodology.

Concrete pavers are usually set and vibrated (by a high frequency plate vibrator) into a one-inch bed of screeded concrete sand. This sand should conform to ASTM C 33. Sand is swept and vibrated into the joints of the laid pavers until they are full. It is the sand that enables loads to be transferred between adjacent blocks through vertical shear. For pedestrian areas and residential driveways, 2 $\frac{3}{8}$ "-thick units are recommended. For streets and other areas subject to continuous vehicular traffic, a minimum thickness of 3 $\frac{1}{8}$ " is recommended.

Pavers are often placed on rigid concrete or asphalt, either as new pavement or as an overlay on existing pavement. Drainage of the sand beneath the pavers at the lowest point(s) is essential. This can be achieved by penetrating the pavement or by draining the water at a drain, as in the case of deck applications. In every case, filter fabric should be placed over the drainage holes and cracks and joints in the pavement, to retain the sand bedding beneath the pavers.

Interlocking concrete pavements are not ordinarily mortared in place except when channeled water could wash sand out of the joints. In this case, acrylic-fortified mortar should be used for the joints and setting bed.

Segmental paving systems are as old as humanity. They have literally provided the backdrop for the great civilizations of the ancient Greeks, Romans, and other Europeans. Interlocking concrete pavements are the modern version of this time-tested concept that is functional, durable, and in scale with people. **David R. Smith** ■

David R. Smith is manager of paving products for the National Concrete Masonry Association.

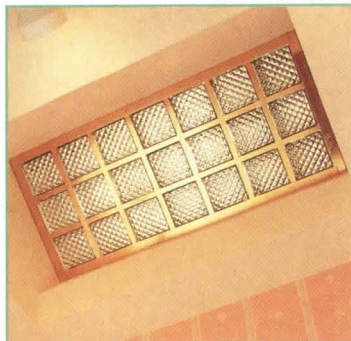
New Products and Literature

114 Products and Literature
continued
129 Computer Software



A new system for bending and tempering glass was unveiled by Glasstech at interGLASSmetal '89, an industry trade show. The Advanced Bending and Tempering System for Architectural Glass is the first to bend and temper large sheets (7' x 12' maximum) of flat, single thickness glass in one continuous process. The sheets can be bent into a wide variety of contours from S curves to J shapes and can be used on building façades, balustrades, workstation dividers, shower enclosures, and a variety of other applications. A British glass company is the first to take delivery of one of the furnaces that makes this process possible; two other furnaces are in production for delivery in Asia and the United States. Glasstech.

Circle 100 on reader service card



A new mortarless glass block modular frame system for windows, skylights, and walls has been introduced by Pittsburgh Corning. A brushed aluminum alloy grid, developed and manufactured by Innovative Building Products, Texas, is the structural system in which eight-inch Thinline Series PC GlassBlocks® are inserted. Silicone sealant is used in place of traditional masonry to cut installation time and construction costs. A similar system for walkways and stairs uses PC GlassBlock® paver units. The IBP Glass Block Grid System™ comes in pre-assembled panels or as on-site assembly components. Pittsburgh Corning.

Circle 101 on reader service card



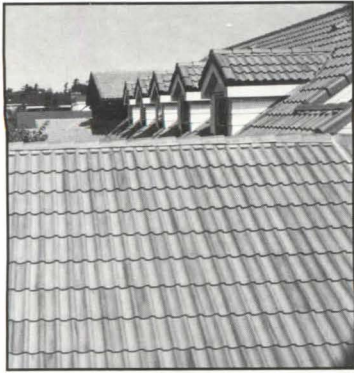
Full-circle wood windows (above) are available with Heat Mirror™ for the first time. The decorative windows, which were put into production in response to a steady stream of requests from architects and specifiers, can be ordered in one-inch standard insulating glass or with Southwall Technologies' Heat Mirror™ 66 or Heat Mirror™ 88. Three primed wood circles and three clad wood circles with a choice of white, sand, or bronze extruded aluminum finishes are available.

Hurd Millwork Company.

Circle 102 on reader service card

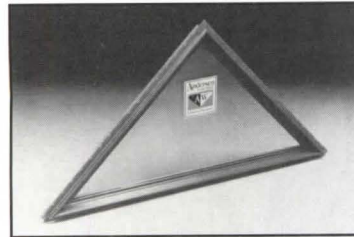
Added protection against the fading of fabrics, furnishings, and art has been incorporated into Southwall Technologies' Heat mirror™ 66, 77, and 88 glazing systems. Called XUV™, the new glazing film is said to block over 99.5 percent of the sun's ultraviolet radiation (double glazed windows block 48 percent). A transparent film, covered with a thin metallic coating (patented by the Massachusetts Institute of Technology), is permanently sealed between the layers of glass in a window. Southwall Technologies.

Circle 103 on reader service card



Concrete roof tiles are made of portland cement, blended aggregates, and pigment. Marley.

Circle 104 on reader service card

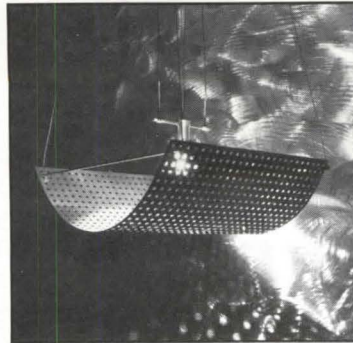


The Isosceles Triangle window extends the Perma-Shield® Flexiframe® line. It can be custom ordered to fit any rough opening up to 60 square feet. Andersen.

Circle 105 on reader service card

A parquet flooring collection is based on "earth tones, pastels, and Indian geometric patterns." Four preassembled patterns, each in four colorways, are available. Avonite.

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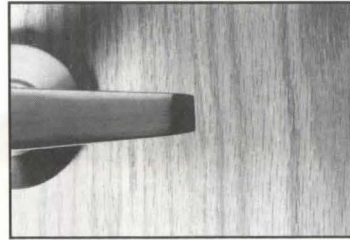


A light fixture called Lamp. One is made of milled aluminum, punched aluminum sheet, brass, braided cable, and rubber tubing; it can be wall- or ceiling-mounted. Dog On A Cold Stone Floor Design.

Circle 107 on reader service card

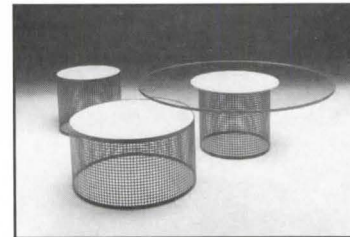
Self-adhesive silicone door gasketing is fire labeled and listed. It seals against noise, air, and smoke infiltration, and compresses to 1/16 inch. Pemko.

Circle 108 on reader service card



A new wood veneer called Craftwood™ Door Mate Veneer Covering™ has been added to the existing line of laminate surfacing options. Wilsonart®.

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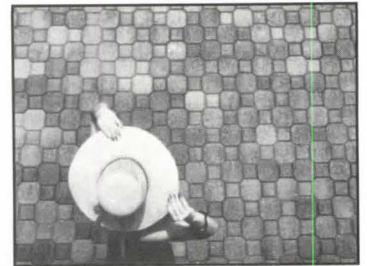


Conference, coffee, and end tables have been added to the Grid Column table collection. Each has a 1/2-inch thick smudge-resistant frosted glass top and perforated square grid steel pedestal column base. Nienkämper®.

Circle 110 on reader service card

Spiral and circular stairs can be ordered with a variety of surfaces and treads; platforms are also available. Duvinage.

Circle 111 on reader service card



An interlocking paving stone can be specified for commercial, industrial, or residential applications. Uni-Group U.S.A.

Circle 112 on reader service card



Sliding glass doors called Series 800 can be specified up to ten feet high. Two-, three-, and four-panel configurations are available.

Arcadia Manufacturing.

Circle 113 on reader service card

(continued on page 116)

SAN DIEGO



CIVIC CENTER

• Design/Build Competition •

The City of San Diego announces the opportunity to design a new center of civic government that is the keystone of an overall redevelopment strategy for the creation of a vital and active downtown.

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The Design/Build Competition process is comprised of the following phases:

- Phase I: Prequalification of Architects
- Phase II: Formation of Design/ Build Teams
- Phase III: Design/Build Competition
- Phase IV: Contract Award
- Phase V: Implementation

The Project Prospectus and Submission Requirements for Architects interested in participating in Phase I of the Design/Build Competition process is available. The deadline Phase I Submissions is January 31, 1990.

Design/Build Teams will be selected through a separate Phase II Request for Qualifications that will be available for interested Teams on February 19, 1990. Design/Build Teams selected to compete in Phase III: Design/Build Competition will be paid an honorarium of \$100,000 upon submission of a proposal in accordance with Competition Regulations. All inquiries should be addressed to the following:

Donald J. Stastny, Professional Advisor
San Diego Civic Center Design/Build Competition
C/O Maureen A. Stapleton, Deputy City Manager
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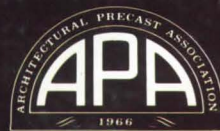
Veneer-faced precast concrete panels offer many advantages, including: freedom of design; strength; durability; aesthetic effect; ease and speed of erection; quality control with factory fabrication; lower construction costs; and

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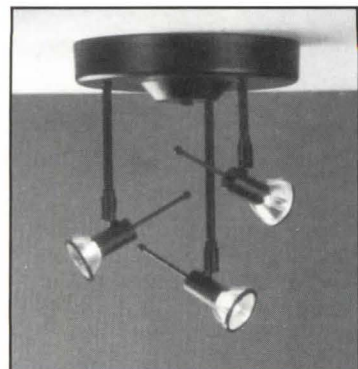
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(continued from page 114)

Weatherproofing products and systems for protecting and maintaining concrete decks are described in a new brochure. Tremco®.

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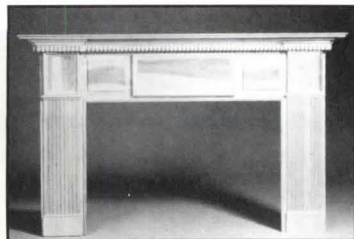


Lighting systems for halogen lamps include enclosed and exposed spotlights; canopies with one, two, or three heads, and free-standing models. Artlogen.

Circle 114 on reader service card

The "Guide to Preparing Built-Up-Roofing Specifications" has been updated. Built-up roof components and their functions are described, and general reference information is provided. Asphalt Roofing Manufacturers Association.

Circle 201 on reader service card



Handcrafted mantels, in standard or custom designs, can be specified for job-site finishing. Kentucky Millwork.

Circle 115 on reader service card

Gyro-Swing door systems' models GT 300 and 400 are available in Wind Resistor models which replace the spring-close operator with a power-assist close operator. Gyro Tech.

Circle 116 on reader service card

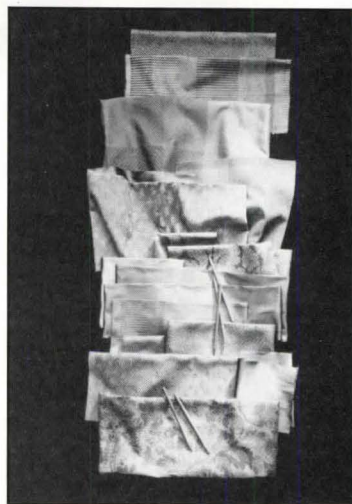


Two new computers have been introduced. The Macintosh IIx features built-in video; the Macintosh Portable is a full-function system. Apple Computer.

Circle 117 on reader service card

A skylight measuring 21 1/2" x 46 1/2" is now available for skylight models VS, FSF, and FS. Velux-America.

Circle 118 on reader service card



A collection of printed jacquard weaves on two styles of groundcloth called Carminia includes 22 designs and 100-plus colorways. Zimmer + Rohde.

Circle 119 on reader service card

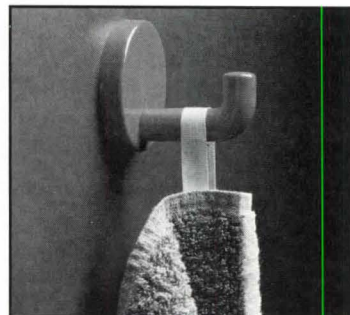
Resinous flooring systems, coatings, and sealers are described and illustrated in a new brochure. General Polymers.

Circle 202 on reader service card



A horizontal monorail is self-propelled on a dual-rail guideway. It has commercial, industrial, and civic applications and is integrated at grade level. VSL Corporation.

Circle 120 on reader service card



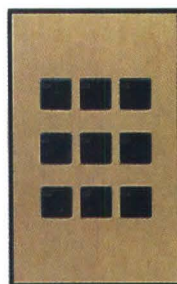
A variety of nylon hooks is available in 13 colors. Single and double hooks, rotating triple hooks, and steel reinforced double hooks are some of the styles available. Hewi.

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(continued on page 118)



PHOTOS BY EVERETT & SOULÉ



*Touch
Your
Imagination!*

LiteTouch 2000 catches your eye and captures your imagination. With an intriguing mix of uncompromising quality and contemporary design, LiteTouch 2000 is destined to create lighting control trends that will demand your attention.

Up until now, total flexibility in lighting control has only been a dream. LiteTouch 2000 makes that dream a reality by providing the freedom to create the environment you desire with control for every lifestyle.

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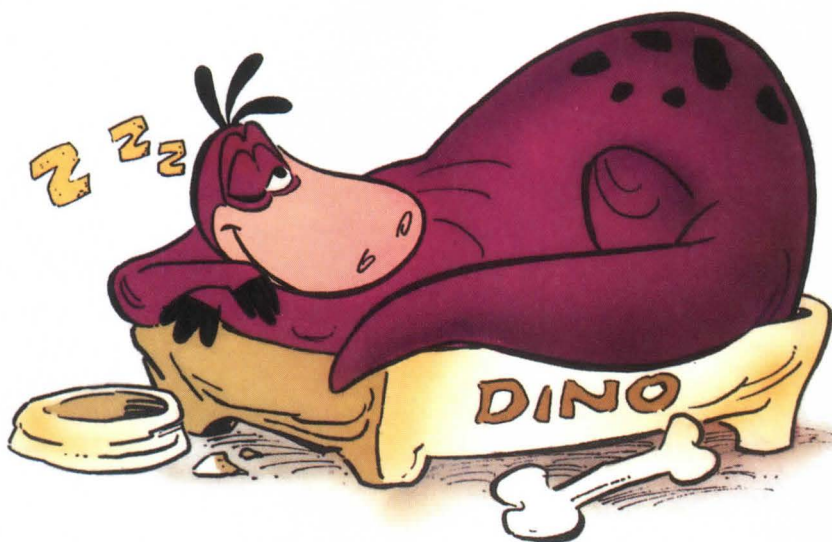
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You just can't beat CarpetBoard for keeping things quiet.



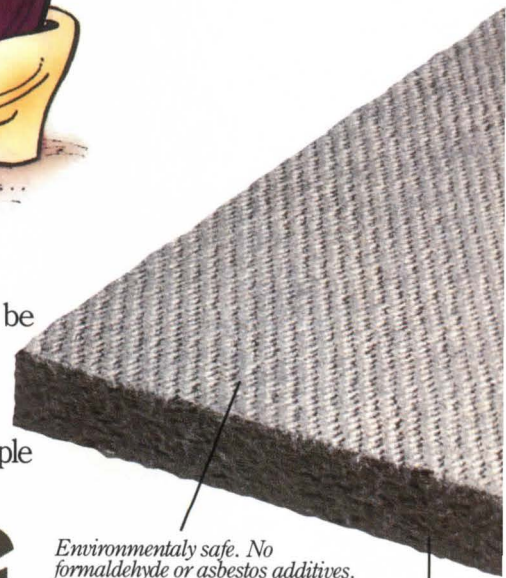
There will always be neighbors who behave like Neanderthals. So Homasote developed 440 CarpetBoard specifically to reduce both impact noise and sound transmission in floor systems with carpet, tile, wood parquet or hardwood strips.

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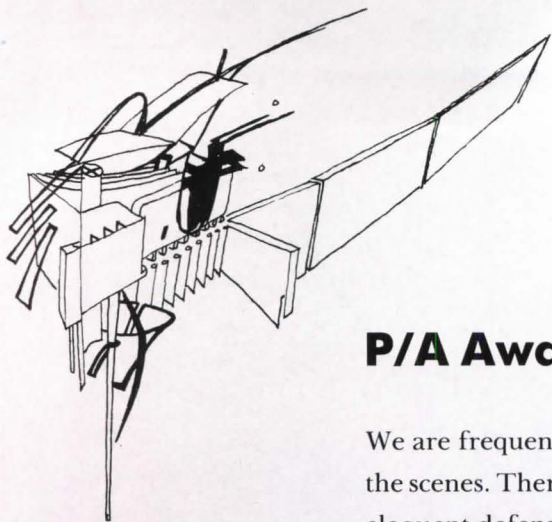


Environmentally safe. No formaldehyde or asbestos additives.

Acoustically rated IIC 65 and STC 48 on wood subfloor/ceiling assembly.

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Coming Issues



P/A Awards Issue

We are frequently asked what a P/A Awards jury is like, what really happens behind the scenes. There are delightful moments when, for example, a juror launches into an eloquent defense of a project. But there are also long hours spent poring over hundreds and hundreds of submissions piled high on tables and desks.

For three days, starting at noon on a Sunday, eight jurors convene in our offices in Stamford to begin the judging. The first day is spent weeding out the obvious noncontenders. There is usually little discussion, but by the end of the day, a few sore backs and strained eyes. On the second day, Monday, things heat up. In arguing why certain projects deserve to stay in the running, the jurors discover where their real differences in opinion lie. Bursts of discussion alternate with periods of further reading and occasional daydreaming (traces of which are often left as doodles on legal pads or the wrapping paper covering our conference table). By the third day, the jurors get down to the last, most difficult cut, convening as a group in the afternoon to discuss their decisions. After a crescendo of debate and a final vote in the late afternoon, the jurors are whisked off to airports or other destinations, and we are left, at P/A, with hours of tapes to transcribe and mountains of brochures to cull through. The product of those three exhausting, exhilarating days will appear in your hands in January, our 37th annual P/A Awards issue. It will show each premiated project, summarize the juror's comments, give biographical information about the winners, and provide some of our own thoughts about what we at P/A saw in this year's program and what it says about the state of American architecture. There will be, in other words, much to see and think about in the January P/A.

P/A in the 1990s

It isn't the turn of a decade so much as the changing needs of our readers that has prompted us to rethink the way in which we cover architecture and design in P/A. You will see in next year's issues not only a new format that is easier to use, but a new breadth and depth to our coverage. There will be types of articles and levels of information and criticism rarely seen in P/A, or any other American architectural magazine for that matter. We think you will be surprised—and pleased.

Doodle by Mack Scogin made during the judging of this year's awards submissions.



Bold and exciting! Two support styles, a variety of seating panels, and an innovative litter receptacle are the basis for the new Petoskey Group from LFI.
Only from LFI/Landscape Forms, 431 Lawndale Avenue, Kalamazoo MI 49001.
616-381-0396, 800-521-2546.

More Than Meets The Eye.

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1988 I.A.I.T.A. WINNERS
Space Group of Korea
Foster Associates
Trevisan & Giuliani
Devine Erby Mazlin
Cox, Richardson,
Taylor & C.

Venice 1990: an Appointment



**SYDNEY 1988,
 VENICE 1990,
 LONDON 1992...**

These dates and places represent the past, present and future of the most prestigious award for the development of innovative technologies applied to architecture.

The first presentation of the Award which was held in Sydney in the majestic frame provided by the Opera House, before the Governor-General of Australia and other internationally prominent personalities from the worlds of politics and culture - was a great success.

The world press and other media placed great emphasis on the event, the works of the five winners and the catalogue of the projects which had qualified for the finals.

The Quaternario Foundation and the other bodies which have promoted the Quaternario Award are inviting architects from all over the world to attend the second presentation of the Award which is to take place in Venice.

On the occasion of the presentation of the Quaternario Award an exhibition of the works competing in the finals is going to be arranged and the 1990 catalogue reviewing them all is to be published.

Second edition: The presentation will be made in September/October 1990 at a ceremony to be held in Venice and will comprise a cash award of US \$ 30,000 plus a gold sculpture and certificate for the winning entry. Awards including a silver sculpture will also be made to the four other finalists.

REGULATIONS

Note. The International Architecture Award "Quaternario" sponsored by the QUATERNARIO Foundation, will be presented every two years.

1. The Award for 1990 will be presented to an architect or an architectural office who has designed a building or group of buildings which should have been completed no later than December 1989 at a completed cost (without land and furnishings) in excess of US \$ 5,000,000. These projects, designed for commercial, industrial or institutional activities (big multifunctional building complexes, designated to service centres, commercial offices, laboratories and culture centres) must demonstrate a substantial invention or innovation of technology in the design, manufacture or installation of the structure, envelope, lining or services employed with appropriate cost effectiveness and demonstrating aesthetic and environmental sensitivity.

2. The Organizing Committee, presided by the Director of the "Istituto Universitario di Architettura di Venezia", Prof. Paolo Ceccarelli, supported by the architect Franco Posocco, Segretario Generale per il Territorio della Regione Veneto, and Mr. Massimo Colomban, President of the organization and the Secretariat for the Award.

3. The applicants are required to make first stage submissions no later than 28 february 1990 to:

ISTITUTO UNIVERSITARIO DI ARCHITETTURA DI VENEZIA - IUAV
 GALLERIA D'ARCHITETTURA FONDAZIONE MASIERI
 Volta de' Canal, Dorsoduro 3900 - 30123 VENICE - Italy

4. The first stage submission which should be typed in English, should include:

- a. A complete entry form (or copy of entry form).
- b. A project, presented in a maximum of 10 pages (A3 size =

420x297 mm), including drawings, diagrams, photos and written explanation, (or 24x36 mm slides in maximum 20 copies) to clearly demonstrate a substantial invention or innovation of technology with appropriate cost effectiveness. Scale models will not be accepted.

5. A first stage Judging Panel will meet in Venice to select 30 finalists.

The judges will be:

- Prof. Arch. GINO VALLE
- Prof. Arch. JAMES STIRLING
- Prof. Arch. MARIO BOTTA

6. The 30 finalists will be requested to submit more detailed information in a specified format to be received at the Secretariat no later than 30 may 1990.

This will involve the submission of drawings of high quality suitable for the presentation in a specific publication edited by ELECTA Publishers, Milano and that will be distributed internationally. Such publication will function as a catalogue for the show that Quaternario Foundation will organize for the opening of the Award and on other qualified occasions.

7. The 30 final projects will be examined by an international Judging Panel:

President:

- Prof. Arch. KENZO TANGE

Vice President:

- Prof. Arch. NORMAN FOSTER

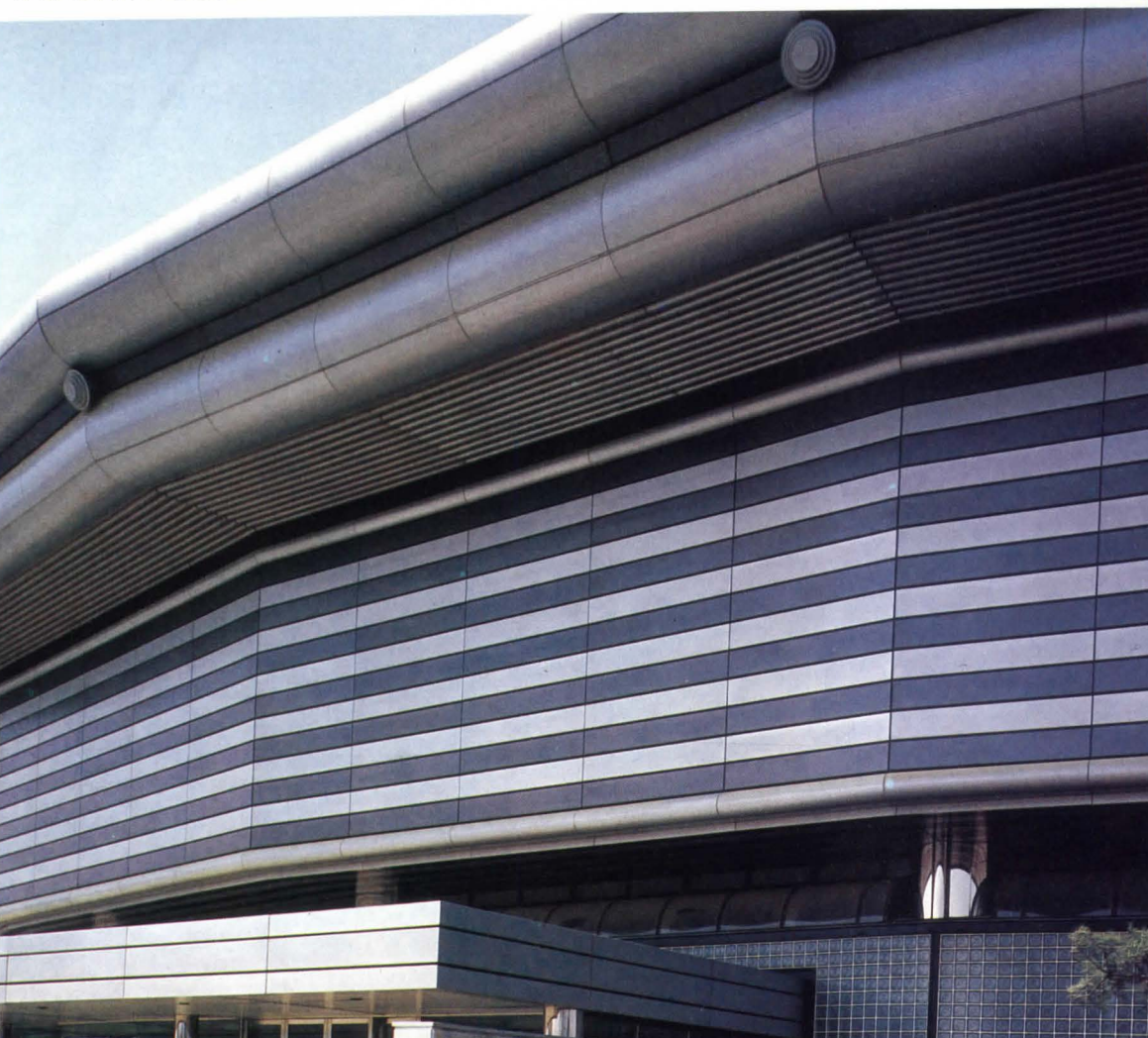
First stage judges:

- Prof. Arch. GINO VALLE
- Prof. Arch. JAMES STIRLING
- Prof. Arch. MARIO BOTTA

The judgement will be unappealable.

8. The Judging Panel's verdict and its statement of reasons will be pronounced during the Award ceremony which will take place in Venice in September/October 1990 in the presence of Authorities, Media and Press.

9. The Award will comprise the following 1st prize - gold sculpture "Quaternario 90"



with Architecture.

a certificate
a cheque for US \$ 30,000
nd prize (4 runners up)
a silver sculpture "Quaternario 90"
a certificate
ne business class return air ticket to Venice and the accomo-
tion in 1st class hotels are at the expense of the Quaternario
oundation.

D. All material submitted as an entry will not be returned but
all become the property of the Quaternario Foundation, and
ay therefore be exhibited and published at the discretion of
e IUAV as well as by the Foundation, which will not accept
y liability for any violation of patent rights, copy rights,
mmercial or other loss arising directly or indirectly
rough the submission of the entry.

L. Enquiries can be made to:
uaternario 90"
of. Paolo Ceccarelli - Director
stituto Universitario di Architettura di Venezia
entini, Santa Croce 197
135 Venice - Italy
l. 041 5221119-5237400
lex 420024 IUAV I
csimile 041 5200108

CONDITIONS OF ENTRY:

This entry form must be completed and signed.
All material submitted as an entry shall become the pro-
erty of the Quaternario Foundation.
The University of Venice and the Quaternario Foundation
cept no liability for any loss of patent rights, copyright or
her commercial loss arising directly or indirectly through
e submission of the entry.
Material submitted as an entry may be published and/ or
hibited at the discretion of the University of Venice and
aternario Foundation.
Material submitted will not be returned.
The decision of the Judging Panel shall be final and the Judg-
g Panel has no obligation to give reasons for its decision.

ENTRY FORM

Name of architect or
architectural office

Nominated architect

Address

Phone

Postcode

Country

Facsimile

Name of Building

Address

Owner

Approximate value in US Dollars
(excluding land & furnishings)

Sqm of cover
walking area

Volume
in cubic meter

Date of
completion

IMPORTANT

Please attach a description of the project and innovation detailing the contribution made.

CERTIFICATION

I certify that the information submitted as my entry is true to
the best of my knowledge, that I agree to be bonded by the
conditions of entry as printed on the reverse side of this form
and that I have ensured that any and all owners of the project
agree to my use of their material in my entry.

Date

Signature
of entrant

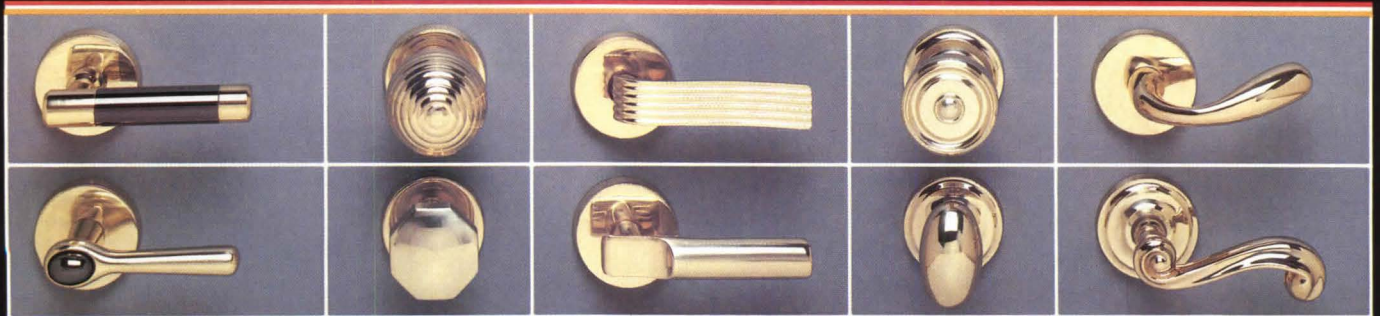


Quaternario 90

ISTITUTO UNIVERSITARIO DI ARCHITETTURA DI VENEZIA
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Volta de' Canal, Dorsoduro 3900 - 30123 VENEZIA - Italy

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The Alternative in Elegant Design

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Progressive Architecture

1989 Annual Index

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Perkins & Will: Capital High School, Santa Fe, N.M., Aug p. 79.
Perrault, Dominique: Bibliothèque de France, Paris, Oct p. 25.
Perry, Dean Rogers & Partners: Seeley G. Mudd Chemistry Building, Poughkeepsie, N.Y., Mar p. 111.
Pesce, Gaetano: Exhibition, Protetch Gallery, New York, Jan p. 23.
Piano, Renzo: Kansai International Airport, Osaka, Japan, Mar p. 33.
Pietrzyk, W.: Church, Poland, Feb p. 33.
Plater-Zyberk, Elizabeth and Andres Duany: Seaside, Fla., May p. 87.
Pomeroy, Leason: Gateway Center, Tucson, May p. 81.
Polshak, James Stewart: Yerba Buena Center, San Francisco, Oct p. 27.
Pomeroy, Leason: Gateway Center, Tucson, May p. 81.
Pomeroy, Lee Harris & Associates: Grand Central Terminal, New York, Jun p. 103.
Portzamparc, Christian de: Housing, Fukuoka, Japan, Oct p. 39.
Predock, Antoine: Beach House, Venice, Calif., Jun p. 44; Fine Art Center, Arizona State University, Tempe, Jun p. 65, 151; Rose House, Dallas, Jun p. 44; Rosenthal House, Manhattan Beach, Calif., Jun p. 46; Zuber House, Paradise Valley, Ariz., Jun p. 46; Winandy House, Phoenix, Jun p. 43.
Prowler, Donald: Pedestrian Pockets, May p. 89.
RTKL Associates: Cascades Town Center, Loudoun County, Va., May p. 80; Reston, Va., May p. 83.
Ranon & Partners: Convention Center, Tampa, Fla., Feb p. 80.
Roche, Kevin/John Dinkeloo: Jewish Museum addition, New York, Jan p. 24.
Rose, Peter: Canadian Centre for Architecture, Montreal, Aug p. 68.
Rosenwinkel, Livingston: Philadelphia Convention Center, Feb p. 80.
Rosetti Associates: Liberty Center, Troy, Mich., Mar p. 110.
Rosser/FABRAP: Pyramid, Memphis, Tenn., Sep p. 23.
SRG Partnership: Oregon Institute of Technology, Klamath Falls, Mar p. 109.
Saez, Michele: Design Express, Los Angeles, Jun p. 78.
Santos, Adele Naude: Ohgimi House, Tokyo, Japan, Dec p. 82.
Sasaki Associates: Cascades Town Center, Loudoun County, Va., May p. 80; Princeton Forrestal Center, Princeton, N.J., May p. 79; Reston, Va., May p. 83.
Schindler, R.M.: Schindler house, Los Angeles, Apr p. 86.
Schwartz/Silver: Architecture & Planning Library, MIT, Cambridge, Mass., Apr p. 37; 360 Newbury Street, Boston, Feb p. 68.
Sellers, David: Pedestrian Pockets, May p. 89.
Setter, Leach & Lindstrom: Minneapolis Convention Center, Feb p. 76.
Shuwirth, Klaus and Erol Erman: Medical Exhibition and Marketing Center, Hanover, Germany, Jul p. 89.
Skidmore, Owings & Merrill: Charnley House, Chicago, Apr p. 81; Columbus Center, New York, Jun p. 22; Enerplex, Princeton, N.J., Mar p. 117; McCormick Place, Chicago, Feb p. 76; Terraces at Perimeter Center, Atlanta, May p. 80.
Small, Robert: Pedestrian Pockets, May p. 89.
Smith-Miller + Hawkinson: Chalk & Vermilion gallery, New York, Sep p. 116.

Soderstrom Architects: Commonwealth Building Lobby, Portland, Oreg., Apr p. 90.
Solberg & Lowe: DC3 Restaurant, Santa Monica, Mar p. 91.
Solomon, Daniel & Associates: Design Ordinance for Multi-Family Housing, Pasadena, Calif., Jan p. 116; Gleeson/Jeanrenaud House, San Francisco, Dec p. 90; Lee's Orchards, Santa Clara Valley, Calif., May p. 85; Pedestrian Pockets, May p. 89; Residential design, San Jose, Calif., May p. 82.
Solomon, Barbara Stauffacher: Lee's Orchards, Santa Clara Valley, May p. 85; Topiary arches, Walker Arts Center, Minneapolis, Mar p. 123.
Steidle, Otto: Euro-Tower, Herouville Saint-Claire, France, Mar p. 33.
Steinberg Group: Civic Center, San Jose, Calif., Feb p. 79.
Stern, Robert A.M.: Somerset Square, Glastonbury, Conn., May p. 81.
Stirling, James: Center for The Performing Arts, Cornell University, Ithaca, New York, Jun p. 21.
Stubbins Assoc.: Suffolk County Jail, Boston, Aug p. 84.
Sullivan, Key, Merrill: Oaklawn Fairmont, Dallas, Jul p. 88.
Sullivan, Louis: Peoples Federal Savings and Loan, Sidney, Ohio, Apr p. 23.
SWA Group, P/A Profile: Jul p. 78.
Tatlin: Book, Apr p. 121.
Thompson, Ventulett, Stainback & Associates: Miami Beach Convention Center, Feb p. 75; Philadelphia Convention Center, Feb p. 80.
3D/International: George R. Brown Convention Center, Houston, Feb p. 77.
Tigerman, Stanley: Housing, Fukuoka, Japan, Oct p. 39.
Tobin, Farley: Detroit People Mover transit system, Jul p. 81.
Toczydlowski, Henryk: Academy of Science and Faculty of Architecture Building, Poland, Feb p. 34.
TRA: Washington State Convention & Trade Center, Seattle, Feb p. 75.
Trott, Richard & Partners: Columbus Convention Center, Columbus, Ohio, Jun p. 21; Wexner Center for the Visual Arts, Ohio State Univ., Columbus, Oct p. 67.
Tschumi, Bernard: Bridges of Lausanne, Lausanne, Switzerland, Nov p. 38; Flushing Meadow Corona Park, New York, Nov p. 37; Parc de la Villette, Paris, Nov. p. 65.
Tusquets, Oscar: Housing, Fukuoka, Japan, Oct p. 39.
Valerio, Joseph: Housing units, Colton, Calif., Nov p. 28.
Van Tilburg, Johannes: San Diego Design Center, Jul p. 22.
Van Valkenburgh, Michael: Profile Jul p. 72; Topiary Arches, Walker Arts Center, Minneapolis, Mar p. 123.
Venturi & Scott Brown: Breakers West, West Palm Beach, Fla., May p. 23; Philadelphia Orchestra Hall, Sep p. 36; Vanna Venturi House, Chestnut Hill, Pa., May p. 25.
Raphael Vinoly & Assoc: Carrefour, Bucks County, Pa., May p. 79; Lehman College Physical Education Facility, Bronx, N.Y., Sep p. 39.
Vitetta Group: Bucks County Rehabilitation Center, Doylestown, Pa., Aug p. 85.
Walker, Peter and Martha Schwartz: Solana, Westlake/Southlake, Tex., Apr p. 65; P/A Profile, Jul p. 56.
Wall, Phoebe & Associates, with Daniel Solomon & Associates: Design Ordinance for Multi-Family Housing, Pasadena, Calif., Jan p. 116.
Ward/Hall Assoc.: The Center for Innovative Technology, Aug p. 92.
Wheelock, Morgan: P/A Profile, Jul p. 82.
Williams, Tod, Billie Tsien & Associates: House in Rowayton, Conn., Jan p. 76.
Wolf, Harry: NCNB National Bank, Tampa, Fla., Feb p. 60.

Woollen, Molzan & Partners: Christ Church Cathedral, Indianapolis, Jun p. 102.
Wright, Frank Lloyd: Solomon R. Guggenheim Museum, New York, Apr p. 84; Price Tower, Bartlesville, Okla., Apr p. 21; Taliesin East, Spring Green, Wisc., Jul p. 19.
'YN: Eleven shoestore, Barcelona, Sep p. 92.
Zimmer Gunsul Frasca Partnership: Convention Center, Portland, Oreg., Feb p. 79.



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(continued from page 120)

Computer Software

Drafting

Architectural Power Tools is a new software program written specifically for AutoCAD Release 10. Functions include fully integrated 3D routines, parametric commands, hatch pattern generator, and fly-through animator. Caricato Systems.

Circle 127 on reader service card

A technical drawing creation and revision tool called OptiDRAFT[®] Station is designed to remove "bottlenecks" in revising technical drawings and maps. Optigraphics.

Circle 128 on reader service card

The Drawbase line of software now includes version 106. Its features include additional programmer functions, geometric tolerancing, user defined hatch, dimensioning, and changeable pen and line types. CADworks.

Circle 129 on reader service card

Three-dimensional wireframe modeling and surface modeling capabilities can now be used with a new add-on module that customizes AutoCAD for architects. Autodesk.

Circle 130 on reader service card

Drafix[®] Windows CAD provides multiple interactive viewpoints, associative dimensioning and crosshatching, and a macro programming language. Foresight Resources.

Circle 131 on reader service card

A KAST[™] menu system performs drawing tasks, eliminates drawing regeneration, and offers access to 60-plus AutoLisp routines. KETIV Technologies.

Circle 132 on reader service card

An application development software tool kit for the DRAW-BASE[™] line is called DRAW-MAC. It is intended for "those who are familiar with programming languages." SKOK Systems.

Circle 133 on reader service card

Building Materials

Major materials suppliers for buildings that are featured this month as they were furnished to P/A by the architects.

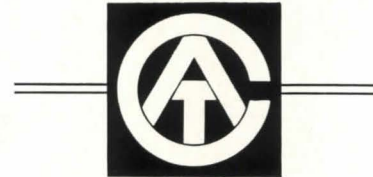
Krier House, Seaside, Florida (p. 66). Architect: Leon Krier, London, with Don Cooper, Cooper/Johnson Architects, Tampa, Florida.

Paint: Pittsburgh, Glidden 3900. Brass hinges: Stanley. Locksets: Omnia. Refrigerator/freezer: Sub-Zero. Laundry: White Westinghouse. Oak spiral stair: Ascente Stair. Lighting: Keyless. Lavatory: Crane. Kitchen sink: Kohler. Valves: Price-Pfister. Hot water heater: Bradford-White. Heating system and air conditioning system: RUUD.

Schnabel Residence, Los Angeles, California (p. 74). Architects: Frank O. Gehry & Associates, Santa Monica, California. Plaster: La Habra stucco. Wood sash windows and doors: West Valley Millwork. Aluminum tube skylights: Lane Aire Corp. Bituthene roof sealant: Grace Co. Exterior paint: Sinclair Co. Stainless steel hinges: Hagen. Stainless steel locksets: Baldwin. Low voltage incandescent lighting: CSL "Invisilite." Line voltage incandescent lighting: Luma, Hubbel, Capri, Halo, Lightolier, Norbert Belfer. Fluorescent lighting: Prudential. Tubs, lavatories, and water closets: Kohler. Sauna: Dornbracht.

Gleeson/Jeanrenaud house, San Francisco (p. 90). Architects: Solomon, Inc., San Francisco. Composition shingles, roof, and wall: Owens-Corning Fiberglas. Perforated galvanized steel interior surfaces: Acousta-Lite. Insulation: OCF. Door hinges: Schlage. Garbage disposal: ISE. Refrigerator: Sub-Zero. Range: Wolf. Washer and dryer: Gibson. Dishwasher: KitchenAid. Stainless steel sinks: Elkay. Lighting: Alinea and Halo. Plumbing fixtures: Kohler. Plumbing fittings: Chicago Faucet. Heating and air conditioning: Trane. Hot water heater: State Industries.

Tin House, Bryan, Texas (p. 98). Architects: Gerald Maffei, College Station, Texas. Exterior sheet metal: American. Aluminum frame windows: Alenco, Bryan, Texas. Counterflow gas-fired heating system: Carrier, Syracuse, N.Y. Industrial exhaust wall fan and automatic wall shutters: Triangle Engineering, Houston, Texas.



Central Artery (I-93)/Tunnel (I-90) Project Boston, Massachusetts

Announcement of a Design Briefing

The Massachusetts Department of Public Works invites interested design consultants to an information update on future section design contracts. Design professionals - **engineers, architects, landscape architects, and urban designers** - are encouraged to attend. Disadvantaged Business Enterprises are particularly encouraged to attend.

Monday, December 11, 1989
9:00 a.m. - 12:30 p.m.
Federal Reserve Bank Auditorium
Ground Floor
600 Atlantic Avenue
Boston, Massachusetts

Attendance will be limited to a maximum of one or two persons per organization, depending on space availability. Reservations and information can be obtained from Susan Bleistift at (617) 951 - 6186, until 5:00 p.m. December 4, 1989.

Commonwealth
of Massachusetts
Department of Public Works



Central Artery/
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Boston, MA 02110

SITUATIONS OPEN

Dean School of Architecture

Applications and nominations are sought for the position of Dean of the School of Architecture; the position is available effective July 1, 1990. The School, located in Newark, New Jersey, was established in 1974 and responds to a need for State-supported professional education in architecture. The School offers NAAB-accredited Bachelor of Architecture and Master of Architecture degrees, as well as a Master of Science in Architectural Studies; total enrollment numbers 400 full-time students.

The School is one of four colleges of NJIT, the largest comprehensive technological university in the New Jersey/New York metropolitan area. The Dean is the School's chief administrative officer and reports to the Vice President for Academic Affairs. The Dean will manage the School's resources and administer its institutional, research, service, and development programs.

Qualifications include: professional master's degree in architecture; professional registration; demonstrated executive or administrative capabilities; academic qualifications suitable to the rank of Professor; a demonstrated and active involvement in design through practice, scholarship, or theoretical inquiry.

NJIT does not discriminate on the basis of sex, race, color, religion, handicap, national or ethnic origin or age in employment.

The Committee will begin evaluating candidates by January 31, 1990.

Inquiries, nominations, and applications accompanied by detailed resume should be sent to:

Prof. Peter C. Papademetriou, Chair
School of Architecture Dean Search Committee
c/o Personnel Box D-SOA



**New Jersey
Institute of Technology**
Newark, New Jersey 07102

Architect, 40 hrs. wk., 8:00 a.m. - 5:00 p.m., \$700 week. Requirements: Bachelor's Degree in Architecture, 3 yrs. experience. Must have renovating ideas that fulfill necessities of modern & European styles. Willing to work in sites of projects. Prepare information regarding designs, specifications, materials, equipment, estimated costs, and building time after studying research of development & construction of property. Plan the layouts of the projects specifications. Design structures & peripheral environments in accordance with plans of project and the integration of engineering elements into unified designs. Responsible for preparing the scales and full size drawings and contract documents for building contractors and supervise administration of construction contracts and on site work in progress. Please send Resume to: **Job Service of Florida: 105 E. Broward Blvd., Ft. Lauderdale, FL 33301, Job Order No. FL-0165422.**

LABORATORY DESIGN CONSULTANT

Nationally recognized laboratory design consulting firm seeks highly motivated project manager. Must have 7-10 years architectural experience with 3 years laboratory design experience. Excellent communication skills required to work closely with highly sophisticated clients.

Resumes only to L. Pearce c/o Earl Walls Associates, 5348 Carroll Canyon Road, San Diego, CA 92121-1797.

UNCG Dept of Housing & Interior Design invites applications for Professor & Chair position to begin August, 1990. For position announcement, contact: **Interior Design Search, 239 Stone Bldg., UNCG, Greensboro, NC 27412 AA/EOE.**

UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN SCHOOL OF ARCHITECTURE

DESIGN Teaching Division seeks applicants for one or more full-time nine-month tenured Assoc. Prof. or tenure-track Asst. Prof. faculty positions to begin August 21, 1990.

Candidates should be highly motivated, dedicated individuals who can take advantage of the unique resources at the U of I for teaching and research. These include personal computer-based studios, major reference library, access to associated research programs (Housing Research & Development Program, Building Research Council, U.S. Army Construction Engineering Research Lab). Positions involve both studio and lecture/seminar teaching activities. Applicants with professional, teaching and/or research experience in ARCHITECTURE and URBAN DESIGN; THEORY AND CRITICISM; HOUSING or CAD, and who are interested in developing and/or pursuing INNOVATIVE approaches to teaching design studios, are especially encouraged to apply.

Rank and salary will be determined by candidate qualifications and experience. Minimum requirements are: Architectural registration plus a Masters Degree or a Ph.D., or similar and equivalent experience. Previous experience in teaching, research or national recognition for design excellence is desirable. For full consideration, C.V., statement expressing educational/professional philosophy, names of 3 references must be received by February 15, 1990. Send to: R.A. Forrester, Director, School of Architecture, Design Search Committee, 608 E. Colorado Taft Dr., Champaign, IL 61820. (217) 333-1330. U of I is an AA/EOE.

THE UNIVERSITY OF WISCONSIN-MILWAUKEE is seeking a Dean of the School of Architecture and Urban Planning beginning July 1, 1990. The School has over 1,000 students and 35 faculty and offers a B.S. in architectural studies, a Master of Architecture, a Master of Urban Planning, and a Ph.D. in Architecture. Candidates should have administrative and teaching experience, an active background in architecture and/or planning, and a research orientation. Send resumes to: Prof. James M. Kuist, Chair, Search and Screen Committee, Curtin Hall 439, University of Wisconsin-Milwaukee, P.O. Box 413, Milwaukee, WI 53201, by February 1, 1990. UMW is an Equal Opportunity/Affirmative Action University/Title IX Employer.

LEHIGH UNIVERSITY Assistant Professor Department of Art and Architecture

LEHIGH UNIVERSITY, Department of Art and Architecture, tenure track, asst't. prof. starting fall '90 in architectural history and design. Candidates must have teaching experience and should hold a professional degree and/or Ph.D. in art or arch. history with some professional experience in design. Teaching responsibility will include history courses and design studio in an architecture major at the undergraduate level in a four-year liberal arts program. The candidate will be expected to teach the architectural survey and other history courses in their area of specialization and design studios. Send letter of application, curriculum vitae, names and addresses of three references to Ivan Zaknic, Department of Art and Architecture, Chandler-Ullman #17, Lehigh University, Bethlehem, PA 18015. **Application deadline is January 31, 1990. L.U. is an EO/AA employer, minorities and women are encouraged to apply.**



TENURE- TRACK FACULTY POSITIONS

Syracuse University School of Architecture seeks candidates for full-time tenure-track positions in architectural design beginning in Fall 1990. Requirements include first professional architecture degree and a secondary area of interest and expertise. Additional degrees, professional experience and/or license are desirable.

Salary and rank are negotiable. Please send letter of application, including curriculum vitae and three references by February 1, 1990 to: **Professor Thomas K. Davis, Chair, Faculty Search Committee, SYRACUSE UNIVERSITY SCHOOL OF ARCHITECTURE, 103 Slocum Hall, Syracuse, NY 13244-1250. An Equal Opportunity/Affirmative Action Employer.**

SITUATIONS OPEN

FACULTY POSITION

The University of Texas at Austin School of Architecture is seeking outstanding applicants for tenure or tenure-track faculty positions beginning Fall 1990 who are qualified to teach in one of the following areas: basic and/or advanced design; history; theory and interpretation of architecture, Urban Space, and Landscape with emphasis on philosophical, cultural, and social factors; interiors; or landscape. Rank and salary are dependent upon qualifications and experience.

Applicants should hold a graduate degree in an appropriate discipline (Ph.D. preferred). Normal teaching responsibilities include a design studio and a lecture or seminar course in area of the candidate's expertise.

Review of applicants will begin in February 1990. The initial application should include a complete resume and the names and addresses of three or more academic and professional references.

Submit to:

Chair, Faculty Search Committee
School of Architecture
The University
of Texas at Austin
Austin, Texas 78712

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MASSACHUSETTS INSTITUTE OF TECHNOLOGY Department of Urban Studies and Planning

POSITION ANNOUNCEMENT

The department is seeking a distinguished individual for a permanent faculty position to teach and conduct research in real estate development. Candidates should have advanced degrees in one of the disciplines capable of contributing to real estate development and a distinguished record of research, publications and practice.

The individual appointed will be expected to teach core subjects in the intensive curriculum leading to an M.S. in Real Estate Development, and teach subjects of interest to students pursuing planning degrees. In addition (s)he should be prepared to assume a leadership position in the Center for Real Estate Development, supported by over 100 organizations in the development field, which conducts research and outreach activities to further knowledge of the field.

The appointment will be made at the tenured associate or full professor level.

Send a letter of interest along with a resume by January 1, 1990 to:

Professor Gary Hack
Chair, Real Estate Search Committee
Room 10-485
Massachusetts Institute of Technology
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Positions require a minimum of 5-20 years' experience in architectural design with an emphasis on commercial or industrial facilities. Duties will include staff management, project management, design and client presentations. Must be a licensed architect capable of becoming licensed in the state of assignment. Must have a BA in Architecture, an MS is preferred.

ARCHITECTURAL TECHNICIAN

Immediate openings in Milwaukee and Gainesville for Senior Architectural Technician with a minimum of 6 years' experience in construction document production with an emphasis on commercial or industrial facilities (total experience of 10-15 years). Duties will include development of final construction drawings, material and systems research and service during construction. CAD/CAE experience strongly preferred.

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Those who are able to provide the vision needed should send a resume of experience and accomplishment with photo attached to:

Konoshin Murata, Manager, Personnel Division
Yamashita Sekkei Inc.

1-2, Kanda Ogawamachi, Chiyoda-ku, Tokyo, Japan, 101
Tel. 03-251-8091. Fax. 03-295-6953

SITUATIONS OPEN

Massachusetts Institute of Technology School of Architecture and Planning Department of Urban Studies and Planning

ASSISTANT PROFESSOR

**Tenure-Track position to teach and conduct research
on urban design and development**

Job Description

A junior faculty member is sought to teach and conduct research on the form and processes of urban development. The applicant must have a solid knowledge of design and development in North American cities; additional experience and interest in the urban issues of other cultures is desirable. The faculty member who fills this position will be expected to have advance knowledge in the field as well as be an effective teacher in both lecture/seminar and studio formats. Teaching will be aimed at both undergraduate and graduate students pursuing careers in planning, architecture, and real estate development.

Qualifications

The candidate must have a background in some field of design and an advanced degree, Masters or Ph.D., in planning, architecture, or landscape architecture. Important criteria for the position include: (1) Experience in making and implementing plans for the design and development, particularly public development, of cities; (2) A demonstrated capacity to conduct research. The Department is open as to the style and focus of inquiry that the candidate may wish to pursue. Women and minority candidates are especially encouraged to apply for this position.

Application Procedure

By January 15, 1990, applicants should send a curriculum vitae, a statement about their qualifications for the position, three letters of recommendation, and a sample of professional work. Materials should be sent to:

Dennis Frenchman, Search Comm. Chair
Dept. of Urban Studies & Planning
Room 10-485
Massachusetts Institute of Technology
Cambridge, MA 02139

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UNIVERSITY OF CINCINNATI SCHOOL OF ARCHITECTURE AND INTERIOR DESIGN

The University of Cincinnati is seeking assistant and associate professors to fill tenure track positions in its ARCHITECTURE program beginning with the 1990/91 academic year. Some appointments beginning in the 1989/90 spring and summer quarters are possible. Visiting appointments will also be considered.

Subject areas include structure, construction, environmental technology, architectural design for beginning students, urban design, graphic skills, design theory and history of architecture/interior design. Applicants should have a masters or doctorate, substantial historical and theoretical knowledge of their subject areas, and an interest in advancing the knowledge of those areas through research and practice.

Rank and salary will be commensurate with qualifications. Send resume, statement of studies and experience, examples of teaching, research or professional work and names of three references to:

Gordon Simmons
UC School of Architecture
and Interior Design
Cincinnati, Ohio 45221-0016
Telephone 513-556-6426

Review of material will begin on January 16, 1990 and will continue until positions are filled. The University of Cincinnati is an affirmative action employer.



DEAN School of Architecture

Syracuse University is seeking a Dean of the School of Architecture to take appointment July 1, 1990. Candidates should have achieved distinction in their field and should have appropriate academic and administrative experience or professional equivalents. The Dean provides creative leadership in all aspects of the School's academic life. The Dean is a faculty member and the senior administrative officer of the School of Architecture.

The School of Architecture, with a faculty of 33, is design-oriented and offers B. Arch, M. Arch I and M. Arch II degree programs with facilities in Syracuse, NY and Florence, Italy.

To be assured of full consideration, applications should be received by February 15, 1990. Applicants should send a letter of interest, curriculum vitae, and three references to: **Marleen Davis, Chair, Dean Search Committee, Office of the Vice Chancellor for Academic Affairs, 304 Tolley Administration Building, SYRACUSE UNIVERSITY, Syracuse, NY 13244-1100. An Equal Opportunity/Affirmative Action Employer.**

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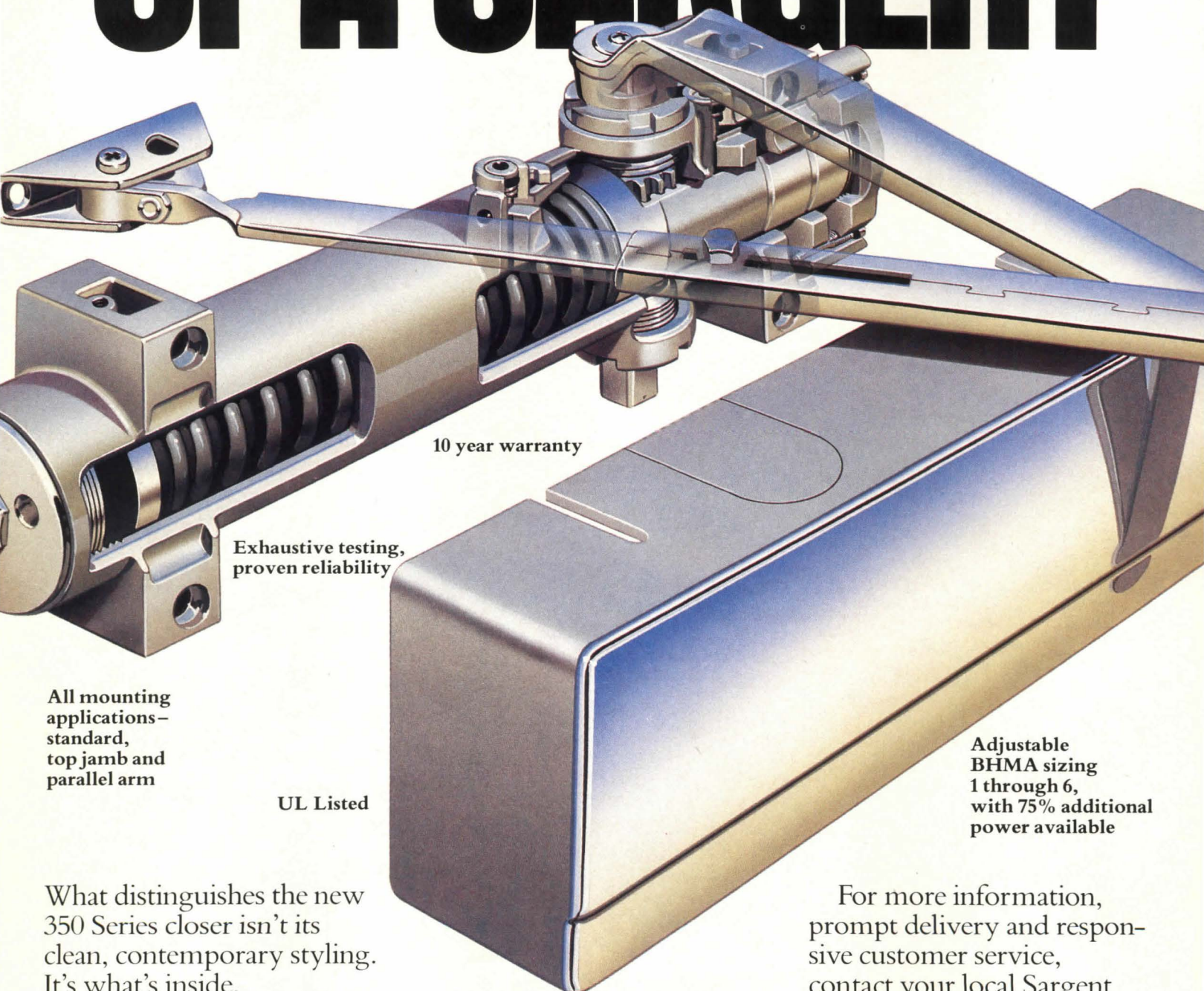
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Everything about the new Doral Saturnia says luxury and comfort. Including the elevators. Overlooking the famed Doral golf courses, this palatial spa pampers guests with sumptuous elegance. The six Dover elevators blend beautifully into the decor and ambience of a five-star resort. What's more, Dover's

exclusive DMC-I® microprocessor controls guarantee the discriminating Doral Saturnia patrons smooth, prompt elevator service of the very highest quality. For more information on how Dover DMC-I hydraulic elevators can make your building a winner, call your local Dover office. Or write Dover Elevator

Systems, Inc., P.O. Box 2177, Memphis, TN 38101.

Doral Saturnia, Miami

Owner: Carol Management Corp.

Architect: Jung/Brannen Assoc.

Contractor: Morse Diesel

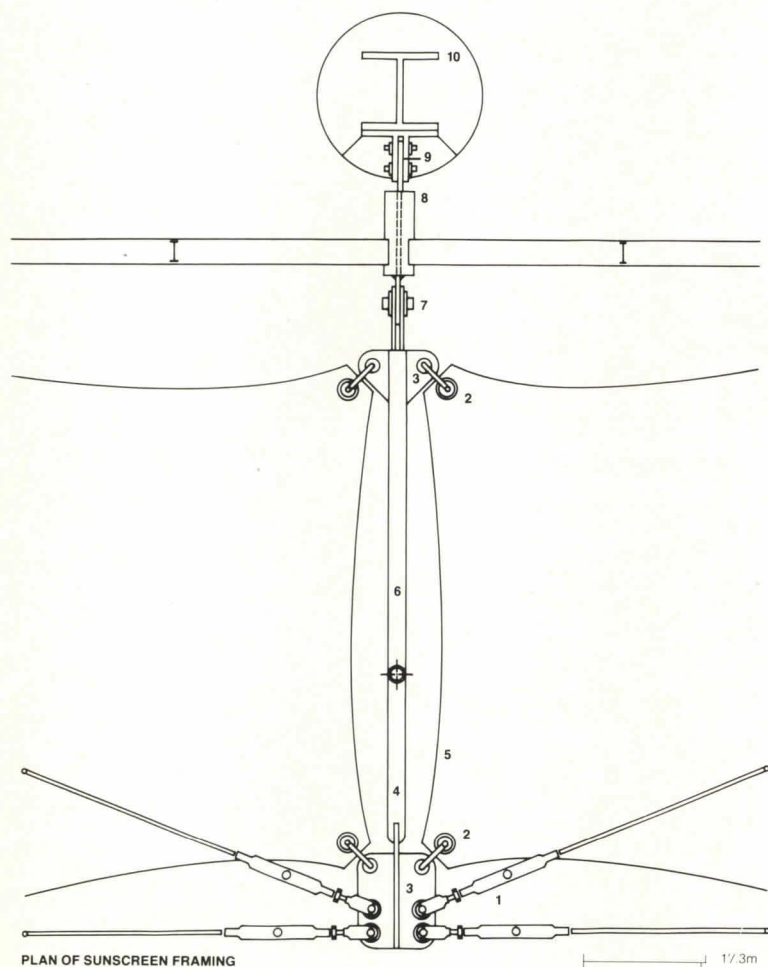
Dover Elevators sold and installed by Miami Elevator Co.



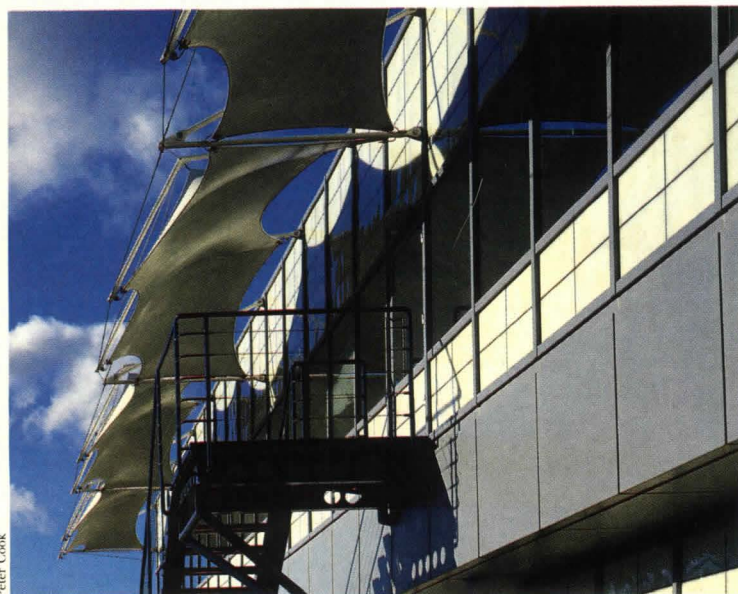
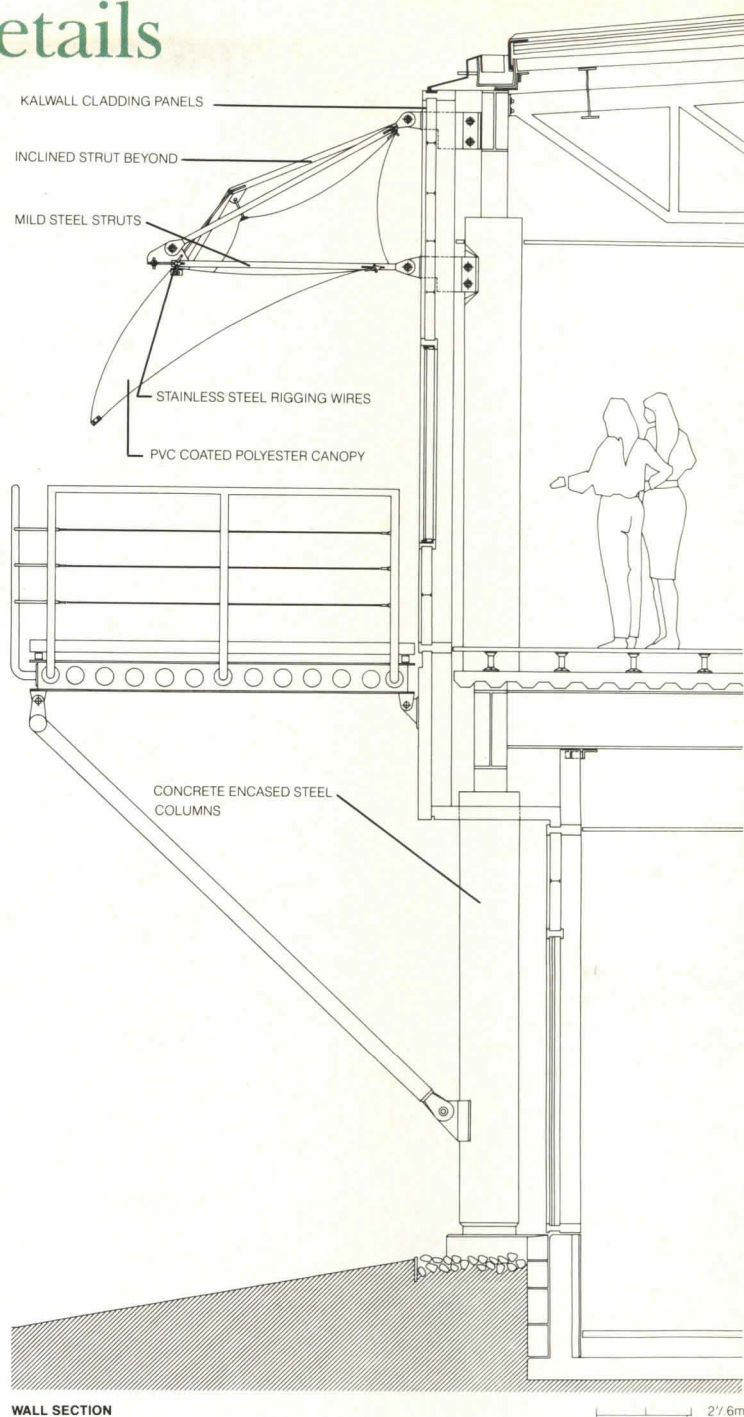
DOVER
ELEVATORS

*Making more
elevators makes
Dover No. 1*

Selected Details



- 1 STAINLESS STEEL ROD WITH SWAGED FORKEND AND RIGGING SCREWS WITH INTEGRAL TOGGLES
- 2 STAINLESS STEEL CLAMPING PLATE AND U-BOLT ASSEMBLY
- 3 POLYESTER POWER-COATED 10mm MILD STEEL PLATES WELDED TO CIRCULAR HOLLOW SECTION STRUTS FOR SAIL AND WIRE CONNECTIONS
- 4 42mm DIAMETER POLYESTER POWDER-COATED, INCLINED HOLLOW-STEEL STRUT
- 5 PVC-COATED POLYESTER SAILS WITH BLACK INNERLAYER TO PROVIDE 5 PERCENT LIGHT TRANSMISSION
- 6 HORIZONTAL STRUT
- 7 STAINLESS STEEL BOLT AND WASHER ASSEMBLY
- 8 ALUMINUM MULLION SLOTTED TO ALLOW 15mm MILD STEEL BRACKET TO PENETRATE FOR SUNSCREEN SUPPORT
- 9 MILD STEEL FORKEND BRACKET FIXED TO STEEL BRACKET WITH SLOTTED HOLES FOR TOLERANCE
- 10 CONCRETE ENCASED STEEL COLUMN



OBLIQUE VIEW OF THE SUNSCREENS IN FRONT OF THE ALUMINUM, GLASS, AND KALWALL CLADDING.

Sunscreens Apple Computers Building Stockley Park, London

The use of fabric awnings to shade windows is an old idea, but one rarely employed today, especially on office buildings. London architects Troughton McAslan Limited, with their engineers, Hunt Projects, have reinvigorated that old idea with these fabric sunscreens for an office building that they designed for Apple Computers near Heathrow Airport. Like traditional awnings, these sunscreens have a fabric cover and metal frame, although that is where the similarity ends. Here, the detailing is closer to that of boat rigging than awnings, with polyester powder-coated hollow steel struts welded to mild steel

plates to which are attached stainless steel clamps, U-bolts, and tension rods. The struts are tied to the building's concrete-encased steel columns with mild steel brackets that pass through slots in the curtain wall's aluminum mullions. The delicacy of these screens, along with the downward curve of their PVC-coated polyester fabric, gives them the look of sails billowing in the wind. But these sails are not just for show. They effectively shade the horizontal glazing of the second floor, with their black innerlayer allowing only 5 percent of the light to pass. As owners and developers continue to clamor for lower energy costs and more usable square footage in buildings, such a revamping of the old idea of awnings might be an answer. ■

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Robert J. Osborn
Vice President and Publisher

Richard A. Strachan,
Sales Manager

James J. O'Brien, Thomas K. Healy,
Charles B. Selden, District Managers

Atlanta, Georgia 30326:

3400 Peachtree Road, NE-Suite 811
Lennox Tower
404-237-5528 Fax 404 237 1372
Harmon L. Proctor, Regional Vice President
Ronald L. Miller, District Manager

Boston, Massachusetts:

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Thomas K. Healy,
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James J. O'Brien, District Manager
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Philadelphia, Pennsylvania:

600 Summer Street, P.O. Box 1361
Stamford, CT 06904 203-348-7531
Charles B. Selden, District Manager

San Francisco, California 94010:

840 Hinkley Road, Suite 233
Burlingame, CA 94010
415-692-1381 Fax 415 692-7406
Susan M. Werner, District Manager

Italy:

Publizeta
Studio di Pubblicità
Via Corticella, 216/6
40128 Bologna
Telephone: 051/320309-325452
Fax: 051-320309
Roberto Zucchini

Paris, France:

Continental Europe
12 Avenue Franklin-Roosevelt, 75008
Telephone: 43 59 36 06 Telex: 260717,
Fax: 43 59 76 70.
Yvonne Melcher, Manager

Tokyo, Japan 101:

Bancho Media Service
Dai-Ichi Nisawa Bldg, 5th Fl.
3-1 Kanda Tacho 2-chome
Chiyoda-Ku
Telephone: 03-252-2721
Fax: 011-81-352-2780
Genzo Uchida, President

United Kingdom:

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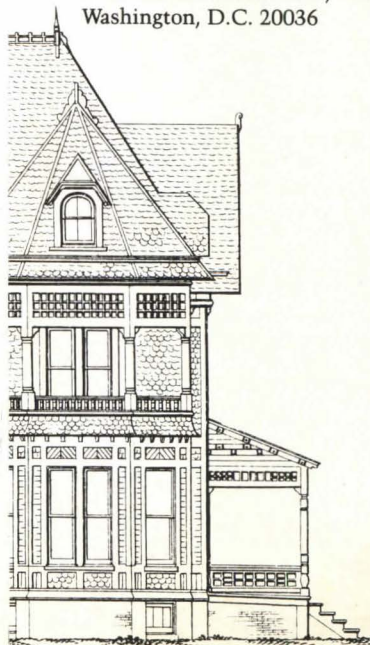
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Write:

**National Trust
for Historic Preservation**

Department PA
1785 Massachusetts Ave., N.W.
Washington, D.C. 20036





While they were celebrating V-E Day, Kentile was helping put affordable homes in their future.

The peace was won. The GI's on the way home. And the American dream of home ownership had a new vitality.

Kentile helped make that dream come true. Helped create home-sweet-homes for just \$6,600 each – by solving a problem for a builder named William Levitt.

To cut costs, he cut basements. Used less-costly slab foundations. That could have meant cold, damp floors, so Levitt installed radiant, up-through-the-floor, heating.

And thereby hung a problem: The heat might buckle the flooring. What he needed was something that could take it. Something resilient, easy to install, durable and economical.

Enter the Kentile concept – asphalt tile – and problem solved. Up went Levittown, the nation's pioneer com-

munity of affordable homes, in Long Island, New York. That was 45 years ago, and a lot of original buyers are still walking on those original floors!

Not surprising, because Kentile originated resilient tile flooring in 1899... and we've been innovators in tile design and manufacture ever since.

Today, our ideas, focused ahead to the 1990's, are already sparking higher-quality product, more cost efficiently, than ever – via new R&D and quality-control techniques.

It took heavy investment in new equipment, and re-fueled Kentile's design-oriented, quality-motivated drive. All the better to match designer, architect, building-owner criteria, and meet distributor and dealer needs.

It's our way of making our next decade, The Thriving 90's!

Americans crowd into Times Square, New York City, to celebrate V-E Day. Photo from front page of the New York Times, May 8, 1945.

Kentile
90th Anniversary
Kentile Floors Inc. Brooklyn, N.Y. 11215

Circle No. 331 on Reader Service Card

If you specify insulated steel commercial doors, this ad can prevent serious embarrassment.

Thermospan™ foamed core insulated steel commercial doors are the result of a technological breakthrough in thermal efficiency and quality construction. If you aren't specifying them now, you could be paying too much — and getting too little for your money. Find out now why the Thermospan line is all the door you'll ever need.

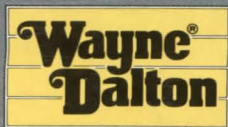


Thermospan 100



Thermospan 100 actually costs less than comparable steel doors with polystyrene insulation. Yet it offers superior foamed-in-place performance.

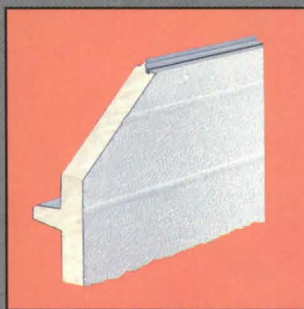
Call or write immediately for complete information (because there's nothing worse than discovering too late that you've paid too much for too little).



Wayne-Dalton Corp.
P.O. Box 67 / Mt. Hope, OH 44660
(216) 674-7015



Thermospan 150



This competitively priced premium door provides more insulating value than any conventional door on the market, making it an efficient system for commercial and industrial applications. Thermospan 150 offers an independently tested installed "U" value of 0.125. This outstanding energy efficiency is combined with an attractive pebble grain finish and quiet, smooth operation.



Thermospan 200



Independent tests prove that Wayne-Dalton's top-of-the-line door permits less heat transfer (installed "U" value of 0.11) than competitive doors nearly twice as thick. Available up to 40' wide, the Thermospan 200 is designed for heavy-duty applications and is built from foamed-in-place prepainted steel/polyurethane/steel sections 2" thick.

Thermospan quality features:

- High tensile steel skin with roll-formed integral struts
- sections bound together by foamed-in-place polyurethane insulation for increased rigidity
- a complete thermal break along joints and endcaps to reduce heat transfer between steel skins
- rubber bulb joint seals and factory-installed top seal to minimize air filtration
- U-shaped bottom seal that won't ice up and seals against uneven floors.

963-105