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Introduction 63	
Thever Residence Phoenix, Arizona 64	<i>William P. Bruder, Architect</i>
Artist's Studio and Residence La Conchita, California 72	<i>Tigerman McCurry, Architect</i>
Gorman Residence New Canaan, Connecticut 76	<i>Hariri & Hariri Design, Architects</i>
Martin Residence Kennett Square, Pennsylvania 84	<i>Tanner Leddy Maytum Stacy Architects</i>
Studio/Guest House Hillsdale, New York 90	<i>Deborah Berke and Carey McWhorter, Architects</i>
Westchester Residence Westchester County, New York 94	<i>Bentley LaRosa Salasky, Architects and Decorators</i>
Goldberg-Bean Residence Los Angeles, California 100	<i>Franklin D. Israel Design Associates, Architect</i>
Technology News 30	
Technology 32	Acoustics of a high-tech recording studio;
Technology Focus 108	Stairway details
Practice 38	Computers: Data Control When Many Players Are Involved, <i>by Kristine Fallon</i>
Software Reviews 40	AutoCAD for Windows Release 12/Tempra Pro 3.0
Observations 42	
A conversation with Ada Louise Huxtable	Robert Campbell talks with Huxtable about the current architectural scene and architectural criticism.
Editorial 9	Environmentalists at a Crossroads
Letters/Calendar 4	
Design News 23	Manufacturer Sources 119
Practice News 28	Classified Advertising 134
Product News 36	Advertising Index 136
Product Literature 114	Reader Service Card 137

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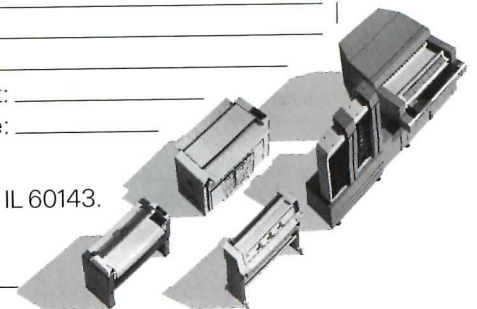
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Frankfurt Campanile

Relative to your article in the February 1993 issue of RECORD, page 71, and Mr. Jahn's inferred parallel between his Messe Tower plaza and St. Mark's Square, I can only suggest that either Mr. Jahn return to school or he "get off the stuff."

Mario A. Polizzotti, Architect
New Canaan, Connecticut

Postscript on Brickbats

Raimund Abraham's design for the New Austrian Cultural Institute on East 52nd Street, which you denounced in your February 1993 editorial ["Flawed Signal, RECORD, page 9], is a strong work of a particularly important and diligent architect which ought to be realized. The strange black and white forms of his mask/core/vertebra concept engage and provoke as they add a modern poem to a city which has been choking in developers' historicist constructions for decades. Your remarks are indicative of a traditionalism which ought to leave room for new approaches. Our modernity is incomplete. Modernity should embrace new definitions of time; simultaneous time, archaic coexisting with ultra-modern, and reversible time. We might imagine new ways of thinking which correspond to a generation which longs to break free of the successive, linear time monumentalized by Venturi's kitsch clock.

Steven Holl, Architect
New York, New York

I write to express my dismay at your February editorial. Your acclamation of the winning design for the Staten Island Ferry Terminal building with two vague words, "strong" and "simple" fails to establish why you think the design will "wear well." The selection of this particular design is a lost

architectural opportunity. The competition in which several prominent architects participated could have culminated in the creation of a serious public structure. Instead New Yorkers will have to expend "a fortune" to subsidize a giant and already wearisome joke.

The building's claim to originality is its 10-story-high clock, of no relevance and little use except as a foil for distracting from the remainder of the design with its cliché cut-outs. But that bit of frivolity might be forgiven if the building embodied hints of architectural invention. Alas, the published photographs so far indicate none.

Unfortunately for the architectural community, it is this self-centered, ego-laden approach to design that reinforces the public image of architects as superfluous and, using your word, "quirky." By contrast, the winning design for the Austrian Institute Building, despite its small size, within a confined and confining site, is an elegant and sincere exploration of mathematical proportion. Its sensitive manipulation of surfaces and volumes makes it an architectural expression of some of the deeper concerns of our time, not an evasive spoof of both old and new architecture.

For laymen lacking training in architecture, originality which challenges the comforts of the familiar is typically resisted. It is surprising to read the same reactions in your editorial.

Medhat Salam, Architect
New York, New York

I found Stephen Kliment's February editorial to be totally inappropriate. As editor of one of
Continued on page 6

Through April 30

The Art of Architecture, an exhibition of works by laureates of the Pritzker Architecture Prize, sponsored by the Hyatt Foundation; National Building Museum, Washington, D. C. Call Donna Anderson at 202/272-3606.

April 23

American Arbitration Association 17th Annual Dispute Resolution Day. Contact American Arbitration Association, 140 West 51st St., New York, N. Y. 10020 or call 212/484-3233.

April 25

Conference on "The Environment, Sustainable Development, and Design." Contact Harvard University Graduate School of Design, 48 Quincy St., Cambridge, Mass. 02138 or call 617/495-4315.

May 1-5

"Agenda for America's Communities" conference in Chicago. Keynote address by Atlanta Mayor Maynard Jackson. Contact Margot Morrison at American Planning Association, 1313 E. 60th St., Chicago, Ill. or call 312/955-9100.

May 3-7

Course on Reinforced Concrete Design, University of Wisconsin-Madison, College of Engineering. Contact Rolf T. Killingstad, UWM, 432 N. Lake St., Madison, Wis. 53706-1498.

May 15-July 25

Design, Mirror of the Century exhibition, retracing the History of Design for the last 150 years through objects of daily life; at the Grand Palais, Paris. Contact Claudine Colin Communication at 42-72-60-01.

May 16-19

International Contemporary Furniture Fair, Jacob K. Javits Convention Center, New York City. Admission \$20. Contact Tobin and Tucker, 212/879-5776 or 800/272-SHOW.

Continued on page 6

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Continued from page 4

only three major architectural publications, Mr. Kliment already exercises enormous power and control over what receives publicity and exposure in the profession—it should hardly be necessary for him to further impose his views through this type of editorial. For him to characterize the decisions of a legitimate architectural jury as a “failed selection process” results in a further expansion of the media’s already excessive power to form public opinion.

Whether or not Mr. Kliment personally likes or dislikes the competition winners is completely beside the point, and is certainly not the reason I subscribe to RECORD; the competition process exists to allow decisions not to be controlled directly by such powerful institutions as the press. A carefully argued editorial on the merits of two different urban-design concepts, one that calls for holding street edges, repeating forms of neighboring buildings, etc., versus another that calls for monumental formal treatment of institutional structures, layering of urban space, etc. would have been well illustrated by the Venturi, Scott Brown and Abraham competition schemes, respectively. But that is not what we have here. Please, Mr. Kliment, spare us the Ellsworth Toohey treatment!

*Robert McCarter, Architect
Chair, Professor
University of Florida
Gainesville, Florida*

I appreciated your February editorial. It’s about time in this business that somebody had a real opinion. Thus goes a sacred cow. Wonderful.

*William E. Markercow
Fair Haven, Vermont*

Brooding Hulk

Didn’t our profession recently go through 10 years of turmoil that stressed the importance of designing for humans? Wasn’t our goal to strive to get away from brooding hulks that pound the user into submission? Wasn’t your magazine on the battlefield urging this change? If so, why have you chosen to publish the latest depressing slab [by Antoine Predock] to come out of Albuquerque [RECORD, February 1993, page 62]?

I read with keen interest how Mr. Betsky’s February article was going to justify the total lack of regard for scale, surrounding, and use. His words failed him. Mr. Predock’s concern for the landscape is expressed by pounding flat the site, removing all vegetation, plopping this mass of cute windows punched into a slab of brick and concrete, adding six small trees and acres of concrete paving, and claiming that the design echoes the mountains that surround it. Sure! That description is made for an awards jury. It will be selected because of the architect’s reputation; not the project that he designed.

Although the sculptural portions of the mass are very impressive, as is the size of the project, Mr. Predock is continuing his trip down “memory lane” in some strange attempt to design current projects in the 1960s brutalism. Just because the client wanted a building that people would hate or love, couldn’t this have been done with a bit more human touch than the final result?

I thought that the days of starting with a slab, sticking holes in the skin, and submitting it for

award were gone for good. Now I’m not so sure.

*Gary L. Hill, Architect
Houston Texas*

Mexican Standoff

I am disturbed by the superficiality of “Going for the Gold South of the Border” by Peter Hoffman [RECORD, February 1993, page 30]. There were many inaccuracies about Mexican and American architectural practice. Furthermore, the author demonstrates an appalling ignorance of the Mexican educational system.

*Rossana M. Gutierrez,
Architect
Nyack, New York*

Mr. Hoffman replies:

I cheerfully confess that I am not an expert on Mexico or Mexican architectural education. This was not a piece from a correspondent in Mexico on the Mexican educational system, but a Practice News business story on professional opportunities that might be afforded by the NAFTA agreement, as seen from a Washington perspective. As to “numerous inaccuracies,” she doesn’t back that up with any examples. In any event, not one of my sources—all of them respected architects with professional experience in Mexico—have complained about my reporting.

Corrections

“Caryakids At Play” [RECORD, March 1993, page 78] in several places made incomplete reference to the design architects. The correct credit should read: Venturi, Scott Brown & Associates.

The rendering of the A. L. Lewis Elementary School was drawn by Terry Guilbeau [RECORD, March 1993, page 13]. ■

Continued from page 4

June 7-10

A/E/C Systems ’93 trade show, Anaheim Convention Center, Anaheim, Calif. Contact Sharon Price, 800/451-1196.

June 17

All-day conference on “Rethinking the Suburbs: Overcoming Impediments to Change.” Speakers include Andres Duany on “Decline of the Suburbs.” Fee: \$75. Call Abigail Lattes at Maryland Institute College of Art 410/225-2219.

June 18-21

American Institute of Architects 125th annual convention in conjunction with World Congress of Architects, Chicago. Contact Lynne Lewicki, 202/626-7467.

June 23

“Focus: Healthcare” seminars and break-out sessions on healthcare topics. Write Pacific Design Center, 8687 Melrose Ave., Los Angeles, Calif. 90069 or call 310/657-0800.

September 5-9

Design Renaissance: Designing for Regeneration; Glasgow, United Kingdom. Write the International Design Congress, 29 Bedford Square, London WC1B 3EG or call 71/580-2338.

November 18-21

Sixth Symposium on Healthcare Design, Chicago Marriott, Chicago. Contact National Symposium on Healthcare Design, 4550 Alhambra Way, Martinez, Calif. 94553-4406; 510/370-0345.

Competition

A \$10,000 Ermanno Piano Scholarship for six months’ work (October 1993 to March 1994) in Renzo Piano’s Genoa, Italy, laboratory. Newly graduated architects may apply by letter, including CV, short A4 dossier, examples of work, to Renzo Piano Building Workshop, Piazza San Matteo 15 (16123 Genova) before May 31. For more information, call 10-203-856. ■

Environmentalists at a Crossroads

Paul Kennedy's new book "*Preparing for the Twenty-First Century*" paints a grim picture facing us on Spaceship Earth in the next century. Overpopulation, a growing gap between rich and poor, hunger, disease, environmental disaster—all of these threaten to dislocate for good a world already severely battered. Yet the one problem with Kennedy's thesis is his assumption that the bashing will proceed unchecked and that the marketplace will fail to come up with methods to solve some, if not all, the hazards. Nowhere is this need more pressing than in dealing with the environment, where costly, misdirected overkill combined with the neglect of even greater perils threatens to derail and even bankrupt a vigorous, upbeat movement dating back to the late 1960s. 1969, remember, was the year the Cuyahoga River caught fire, dramatizing pollution as a national issue.

Since then, various pieces of legislation such as the Clean Water Act, the Clean Air Act, and the Endangered Species Act have served to contain real threats to America's environment. But largely buried by the enthusiasm are two dangers. The first, to use an appropriate metaphor, is missing the wood for the trees. Dramatic and tragic as they are, such disasters as Love Canal and the Exxon Valdez do not necessarily need the kind of massive legislative and regulatory response that is sometimes likened to killing a fly with a howitzer. The oil spilled by the tanker damaged the regional ecology for years, but nature, according to scientists, will assert itself and eventually the region will return to normal. And legislation spawned by the Love Canal soil pollution has triggered such instances of overkill as using \$20 million of Superfund money to clean up a polluted site at Columbia, Mississippi, in order to bring its toxic ratio down to a level so squeaky clean that children can eat a half spoonful of dirt a month for 70 years without the risk of cancer. The Congressional Office of Technology Assessment was in fact told that toxic chemicals in the environment cause no more than 1 to 3 percent of all cancers.

There are other instances. The campaign to root out asbestos from every nook and cranny in the built environment is now, according to the Environmental Protection Agency, agreed to have missed its mark, having released tiny asbestos fibers into the air, aggravating a problem rather than relieving it. Similarly, the hazard in dioxin, at one time labeled by the EPA as a highly toxic substance, has since been downgraded, and of the 2000 residents of Times Beach, Missouri, evacuated in 1982 due to dioxin found in its dirt roads, none has suffered harm.

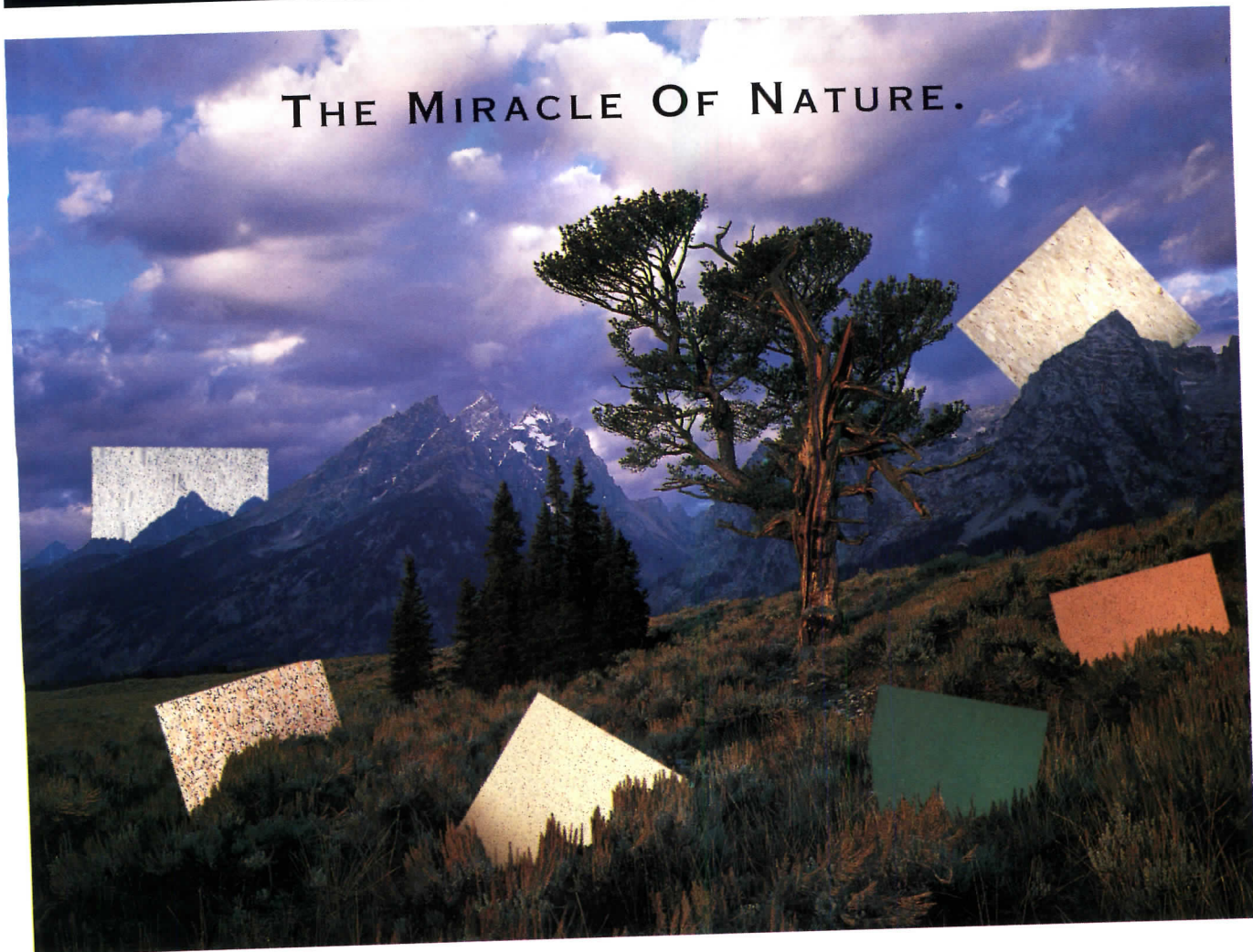
Meanwhile, real attention to the longer range problems of global warming, acid rain, deforestation, and ozone depletion has gone begging. Focusing on local or regional environmental concerns has sidetracked those far greater hazards, which were so vividly highlighted at last year's Rio conference and which if ignored could place this planet into a terminal tailspin. These problems are international. In Norway, 90 percent of acid rain comes on winds from abroad.

In this scenario the architect has three roles to play. One, continue to design individual buildings and complexes so as to conserve nonrenewable resources and to limit emission of toxic substances into the ground or air. Two, to seize this crucial opportunity to train for and provide a vital, fee-producing new service as environmental specialists. And, three, prepare to push, at the landmark AIA/UIA convention this June in Chicago, for a better balanced, better focused, and more far-sighted national policy on saving our environment. *Stephen A. Kliment*

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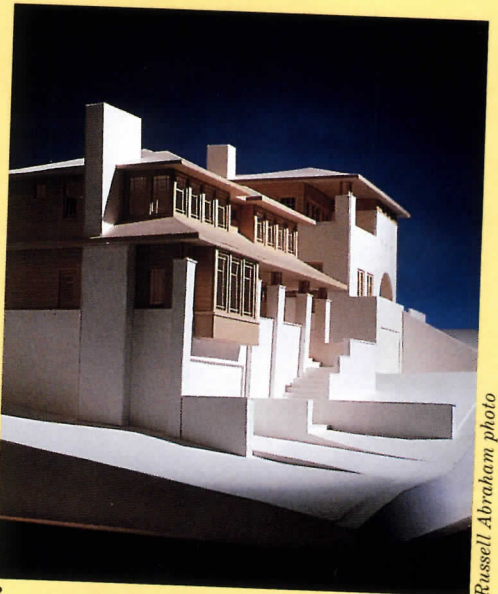
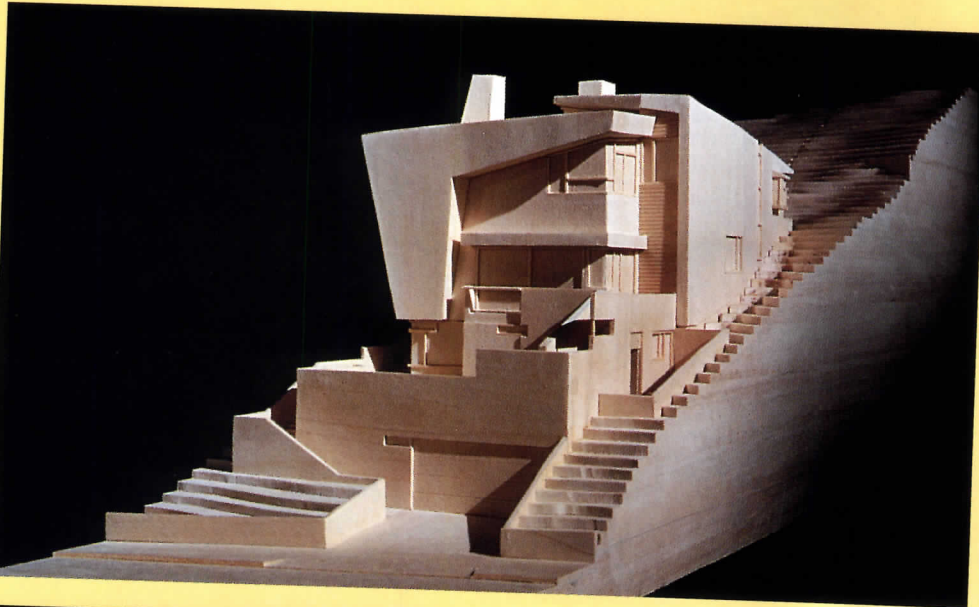
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California

Oakland/Berkeley Rebuild After 1991 Firestorm That Destroyed 2,800 Houses



© Tom Bonner photo

Russell Abraham photo



Tim Perkes photo

Richard Barnes photo

DeCredico/Sergent photo

Almost a year and a half has passed since fire raged through Berkeley/Oakland neighborhoods destroying nearly 2,800 dwelling units. Nature almost immediately began to reassert itself, but humans, plagued by slow insurance settlements, shifting regulatory requirements, and psychological unreadiness, have taken a little longer. To date, Oakland has issued 945 construction permits; 127 of these homes have been completed. An estimated 30 percent will sell their land and not rebuild. Most who are rebuilding chose to re-establish the familiar,

erecting designs similar to their previous homes, although averaging 15 per cent larger. Others, however, had no desire to recreate the past, but took the opportunity to begin anew with the kind of houses they had always wanted. The Drager home (1), designed by Frank Israel, responds empathetically to its site, terracing up the hillside and attempting to sculpt itself into the terrain. The roof appears to slip away in a series of skylights and clerestories. Though heavily reliant on historical precedent in style, the Adcock/Barney

house (2) by Swatt Architects is a single structure designed for two households and organized around a common yard. On a Modernist note, the Becker house (3) by Jim Jennings is two separate volumes connected by an outdoor bridge. The Siler house (4) by MacCracken Architects is a pillared fortress that splays itself outward from a center axis, embracing and framing the views below. Reflecting a Spanish heritage, the Goodin house (5) by DeCredico/Sergent is arranged around a courtyard, integrating the landscape into the house. Pam Kinzie

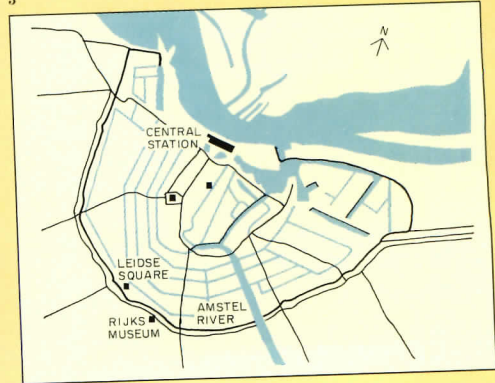
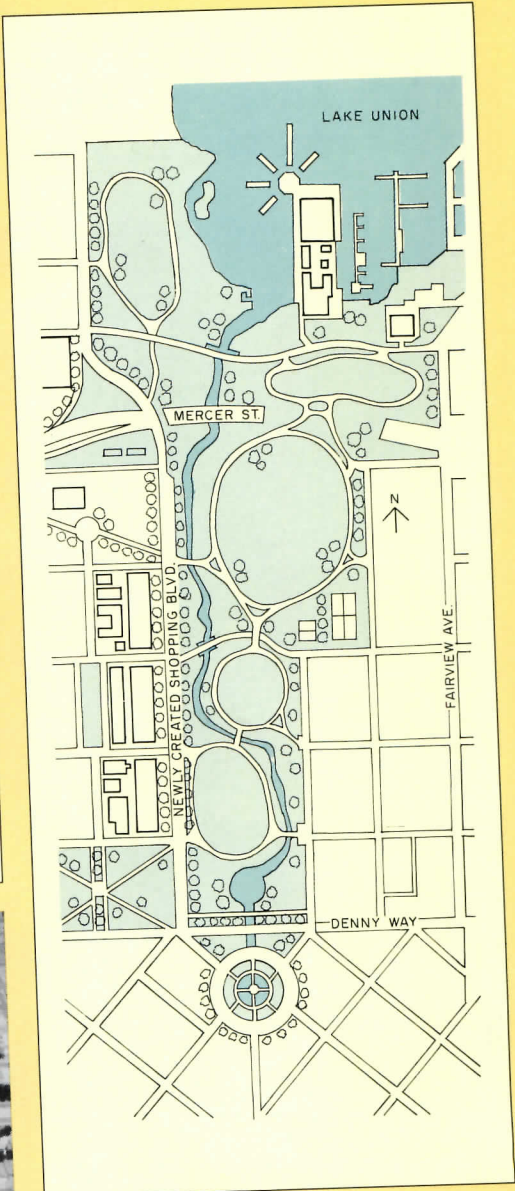
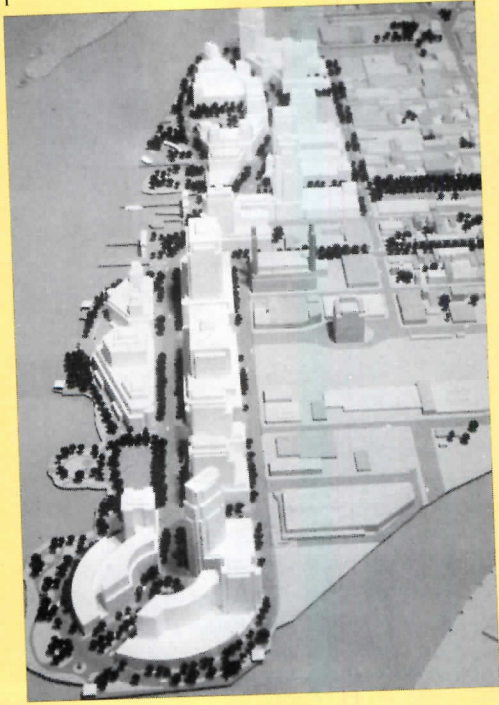
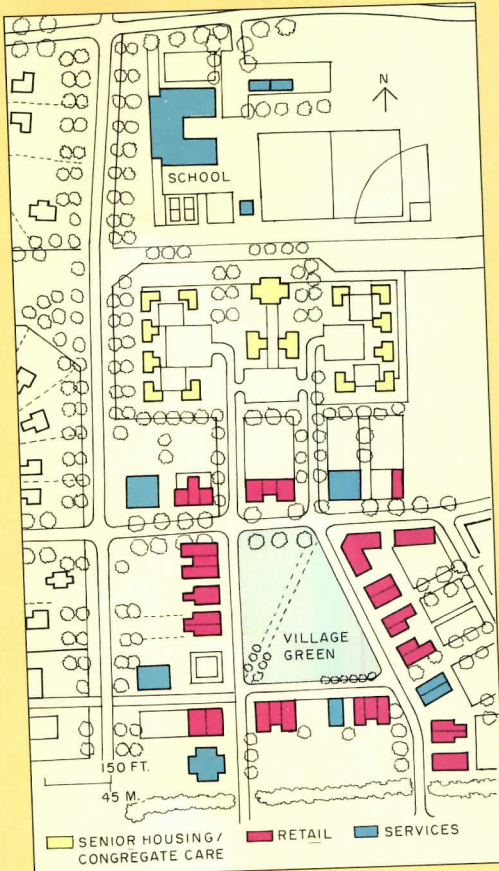
Planning Tackles Urban Villages, Rural Urbs, And the Carless Office District

1. The Buckhurst Fish Hutton Katz & Jacquemart plan for the 1,300-acre mixed-age Beaver Creek Township east of Dayton, Ohio, places senior and congregate-care housing at the community hub within walking distance of retail village green, tennis courts, local transportation, and community services, including shared grade-school facilities. Single and low-rise multifamily units fan out from the hub shown here. Second-floor rental housing may top the retail. An inactive barn and an old brick schoolhouse will be retained for community use.

2. A Gruzen Samton Steinglass/Beyer Blinder Belle joint venture is completing design guidelines for Queens West, a New York City new town located in a residential/industrial area on 74.5 acres of underutilized Queens County shoreline. The master plan calls for 6,300 affordable and market-rate housing units, 2,350,000 sq ft of large-floor office space and hotel, 340,000 sq ft of retail and public space, 19 acres for recreation, and a continuous waterfront esplanade. Towers are narrow and spaced for the most transparent views to and from mid-Manhattan.

3. The Committee for the Seattle Commons, a large, energetic citizen group, believes an 85-acre park joining downtown to the Lake Union shore will attract the residential and business investment needed to turn 470 acres now heavily populated by parking lots into a walkable "urban village." (Opponents claim the scheme is unnecessary and designed to enrich a small group of property owners.) The urban-village proponents support tax-increment financing—not yet tested in state courts—for the \$250-million system of meadows and streams, with a bridge loan until revitalization begins to generate taxes. The plan includes zoning and design standards, extensive housing rehab, mainly low-rise building, and landscaped shopping streets linking the Commons with other neighborhoods. With a \$20-million line of credit, the group has been buying park-site properties at current depressed prices, and plans a fund to insure affordable housing.

4. Amsterdam is using new periphery garages, more public transportation, wider sidewalks, and thousands of traffic-stumping bollards, known locally as "amsterdammers," to gradually banish motor vehicles from its three-square mile historic downtown, home of Holland's largest concentration of offices. ■



Los Angeles

High House Masters All It Surveys



Construction begins this month on a 4,200-sq-ft residence by Edmund Einy on a height overlooking Santa Monica Bay. A movable glass-wall perimeter around a light-gauge steel structure on a 16-sq-ft grid blurs distinctions between outdoors and the open-plan interior. A bermed lawn and an upstairs screen wall provide street-side privacy, but a skylight the length of that side compensates for lost contact with the outdoors. ■

Connecticut

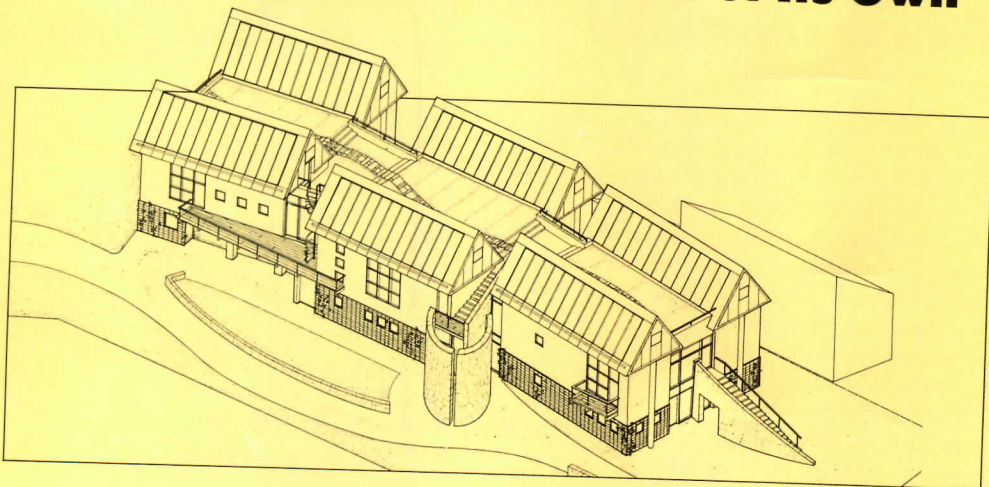
Philip Johnson Adds a New Folly To Glass House Estate

After his association with John Burgee ended in 1991, Philip Johnson, 86, opened a new office. His first building to be realized is a visitor's pavilion at his Glass House estate in New Canaan, which he willed, with a maintenance endowment, to the National Trust for Historic Preservation in 1986. The fragile privacy of the house, once protected by a fieldstone wall, gives way to a new public role, with this roadside tower serving as a beacon for visitors and affording views of the property from its upper floor. It joins a collection of architectural follies Johnson has built here over the past 45 years, including a study-library ("I can't work in a glass house," Johnson told RECORD in 1983. "There are too many squirrels running around outside."); a skylit triangular sculpture pavilion; and an underground picture gallery. *David Cohn*



Frankfurt

"Green" Machine With a Life of Its Own

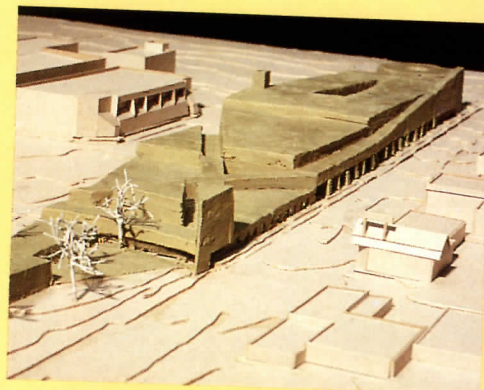


Respect for the planet starts early in Germany, where William McDonough—whose "green" prophecies are just beginning to be heard in the U. S.—won an international day-care-center competition by proposing re- placement of the machine-for-living with what he calls "a living machine" that works with sun and trees to channel and conserve energy. Current analysis indicates that the winning scheme of pitched roofs of super-insulating R-8 glass and photovoltaic energy collectors can generate enough energy for the building's year-round heat and hot-water

needs. Children control glare with crank-operated shutters suspended from the roof ridges. Broadleaf trees close to the building help block heat during the most intense months, but let weak rays through bare branches in the winter. As needs change, the center can be broken into houses or apartments. Opening ceremonies will feature the donation of trees to the former East Germany; McDonough has already calculated that 10 acres will compensate the Earth for the energy embodied in the materials and construction of the day-care center. ■

Albuquerque

"Desire Lines" Cast in Stone

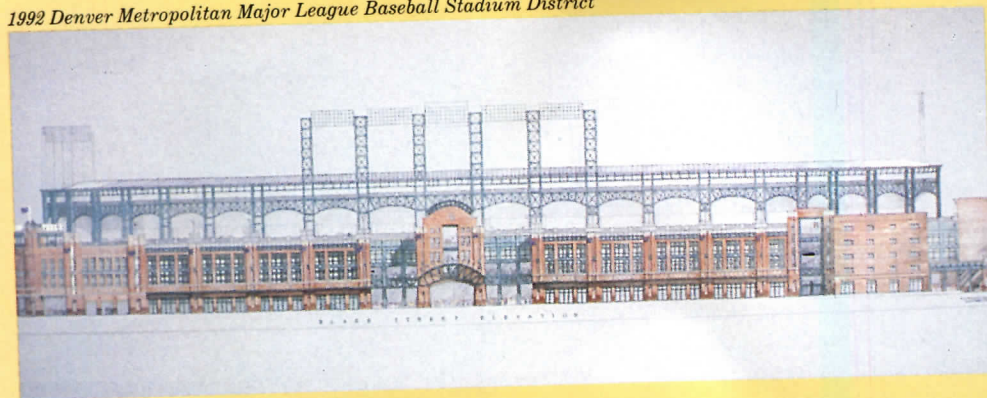


Even though 75 per cent of the 400,000-sq-ft bookstore/retail/parking structure at the University of New Mexico is devoted to the parking structure, Antoine Predock arranged the scheme to honor time-worn pedestrian "desire lines." The X-shape in the clay model above organizes the ad hoc footpaths that were established during the site's history as a parking lot, and carries the vitality of the city's main artery onto the campus. The exterior will be warm-toned exposed concrete, "with glass to make the skin sparkle at night," says Predock. ■

Denver

Field of Dreams for Colorado Fans

1992 Denver Metropolitan Major League Baseball Stadium District

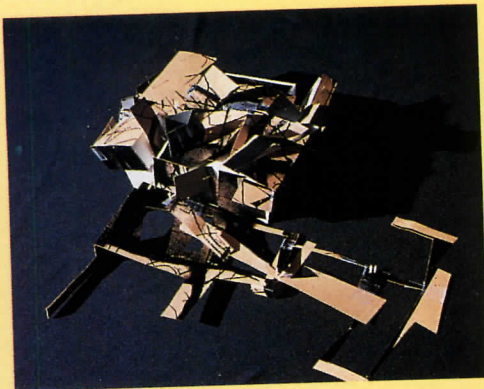


Natural Colorado stone, brick, and lacy steel arches will greet baseball fans when Coors Field, the new home of the Colorado Rockies major-league team, opens for the 1995 season. HOK Sport designed the \$141.5-million open-air stadium to recall intimate old-style

ball parks—with modern amenities—and to be compatible with the nearby historic neighborhood. The 43,800 seats will be as close to the action as possible, and many fans will have views of the skyline and mountains.
David Ballast

The Netherlands

Museum-in-Canal Gets Guest Architect

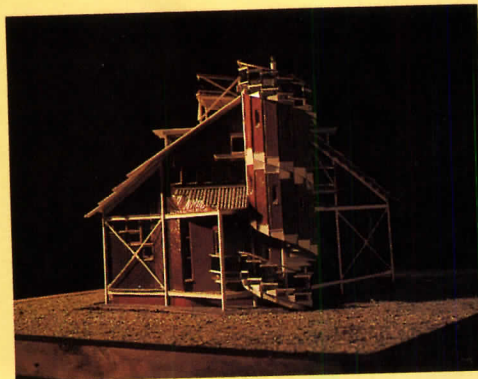


Coop Himmelblau takes over design of the exhibit hall at the Groninger Museum of Art that was previously assigned to Frank Stella. Conceived by Mendini Milano to sit in the middle of a canal and feature the work of guest architects, the 16th-century-to-contemporary museum will also have exhibit halls by Philippe Stark and Michele De Lucchi. Coop Himmelblau's two-story portion, which explores the unfolding of positive and negative space, stands on the shoulders of a two-story free-standing Mendini base now under construction. ■

Russia

Moscow Architects Turn to the Dacha

Russian architects have penetrated a field that until now seldom employed even skilled builders—the *dacha* (country cottage). Yu. L. Galustyan, L. S. Gribova, and T. E. Iscoskova, use two external circular stairs to join the rotated floors of this five-person unit near a Moscow suburb. A diagonal roof ridge oriented to the corner stairs leads to asymmetric pentagonal slopes. Internal and external balconies, a rooftop solarium, and a glassed veranda complete a sophisticated organization of elements that appear not so much built as accreted over time. ■



France

A New "Lite" Rail Viaduct Formula



For a rapid-transit viaduct serving the city of Rennes, Sir Norman Foster and Partners jettisoned the traditional European railroad theme of massive columns and beams on uniform centers—the kind of bridge that used to speak of powerful engines and equally powerful owners striving to conquer nations and continents—in favor of a lighter, more elegant image bespeaking the ease with which a modern transportation system can slip through the urban environment. Developed with Ove Arup & Partners, this scheme is based on a kit of four parts: tall steel pylons, paired suspension cables, precast-concrete deck units, and steel torsion links to support and join the separated track structures and unite the concrete deck with the suspension cables. Decks for rail track are partially cantilevered off, and partially suspended from, either side of a slim central spine of pylons and cables. Daylight filters down through the split decks, while at night artificial light glows from beneath to give this gateway symbol of Rennes a drama akin to the Eiffel Tower. Construction should begin by 1996.
Judith Davidsen

Briefs

Reichstag plans

As part of a likely German federal government move to Berlin, three first prizes were awarded for redesigns of the Reichstag, the former Parliament building. Per client request, Norman Foster and Santiago Calatrava enlarge the plenary hall inside the existing building; Pi de Bruijn puts it out front in a podium. Final design choice is expected this summer. Axel Schultes was chosen from 800 entries in the urban-planning competition for the Spreebogen, the new district around the Reichstag. *Tracy Metz*

"All My Architecture"

The more operatic episodes in Frank Lloyd Wright's life inspired *Shining Brow*, an opera premiering April 21 in Madison, Wisconsin. Scenes include his elopement with a client's wife and his staff, self-described as slaves. Sets include his office, Taliesin, the Cliff Dweller's Club, a building site, and the Cheney house. Meanwhile, the Frank Lloyd Wright Building Conservancy in River Forest, Illinois, is listing Wright homes for sale; the Taliesin Preservation Commission bought his Spring Green Restaurant to use as a visitor center; and New York's Museum of Modern Art plans a show early in 1994.

African burial ground

New York's Landmarks Preservation Commission has created the African Burial Ground and Commons Historic District in the area where the remains of some 400 colonial-era African-Americans were found during building excavations over the last 18 months.

Competition

April 30 is the deadline for Urban Outhouse entries. Contact Vermont Structural Slate, 3 Prospect Street, Fair Haven, Vt. 05743.

Money, money, money...

The New York Landmarks Conservancy has \$1.5 million in low-interest loans available for low-income areas. Call (212) 580-9548.

Award

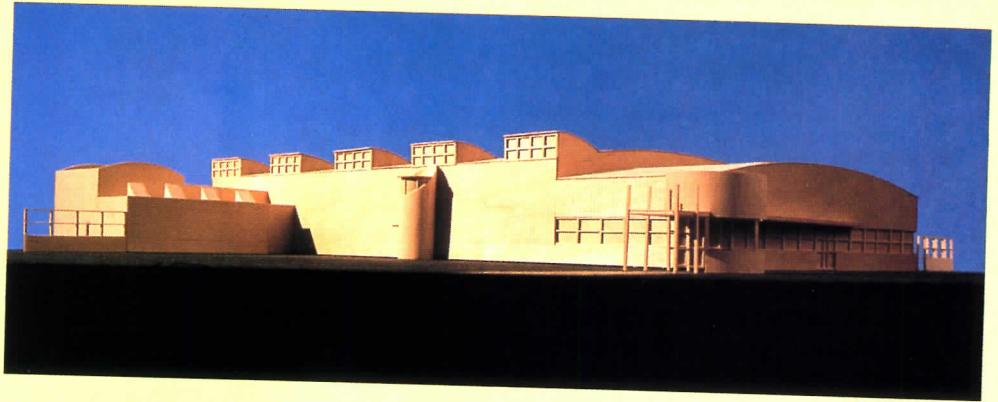
Barton Myers Architect Inc. and Kuwabara Payne McKenna Blumberg Architects have won Canada's Governor General's Medal for Woodsworth College, University of Toronto.

Remembered

George M. How of Kohn Pedersen Fox died of AIDS in February at age 35.

Elizabeth Wood, a public-housing maverick, died in January at age 93.

R. E. Alexander, former partner of Richard Neutra, died at 84 in November. ■

Post Office Rises in Community Under Renovation

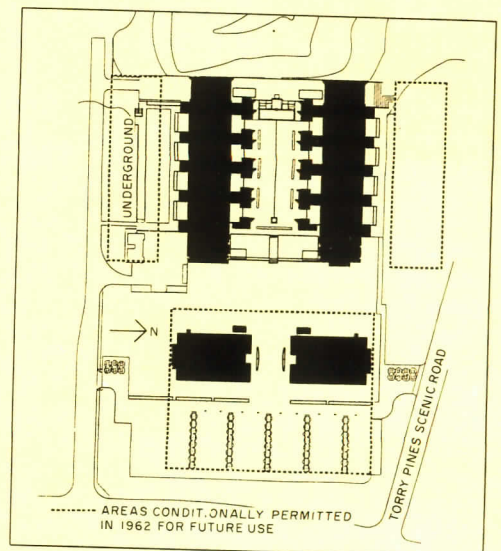
A new 20,000-sq-ft central U. S. post office by Ratcliff Architects is under construction in Emeryville, a gentrifying San Francisco Bay community more given to renovating abandoned industrial structures for new uses than to building from scratch. The de-

sign responds to its surroundings with updated uses of corrugated metal and painted cement plaster, a curved standing-seam metal roof, and metal grilles and canopies. Skylights and clerestories draw natural light into customer-service areas. ■

Opponents Balk as Salk Announces New Scheme for Addition to Kahn Icon

The Salk Institute for Biological Studies plans to move its proposed laboratory/administrative addition back another 10 ft from Louis Kahn's 1965 complex. The Anshen & Allen design unveiled in September 1992 now sits 140 ft east of the original, but, says principal for design David Rinehart, still covers a third of the eucalyptus grove that makes the axis of Kahn's monumental court an unexpected discovery. Los Angeles Museum of Contemporary Art assistant director and opposition leader Sherri Geldin calls the sequence "absolutely fundamental to the experience." The new approach is between two two-story structures that mirror Kahn's split composition and materials, and through an abbreviated grove. Rinehart (who worked on the original with Kahn) says the mirroring of the main court will "prepare you for the experience" rather than "mimicking and devaluing it." The addition's form can still change, but probably not its placement. The institute can't afford to build on the expansion site Kahn originally chose south of the complex because it holds an underground structure, or to replace current parking with a multi-

level structure. The Salk and its architects dismiss the Kahn choice directly north of the original as "inappropriate." Kahn collaborator Anne Griswold Tyng proposes a skewed building to preserve surprise in the entry sequence, but Salk will continue developing only the current plan. *Aaron Betsky*



New York City

AIA President Cites Clinton Support for Architects' Role

"I'm optimistic on getting the issues across to the new Administration," said Susan Maxman at RECORD's annual lunch to host the incoming AIA president. Revealing that she had had a 15-minute conversation with President Clinton the previous week, she described the President as very supportive of architects.

Her most pressing issue: sustainable design, the theme of this year's national AIA convention in Chicago in June. "It's more an attitude than a totality," she said. Nonetheless, she recently designed a building in which the annual energy savings will be substantial over conventional hvac systems. "Architects' preoccupation with copying styles [rather than paying attention to environmental considerations] has made the U. S. look all the same." An obvious by-product

of sustainability will be regional diversity, she maintains. "Architects have the overall view, and, if they don't take the lead, there are plenty of others out there waiting to do it." Questioned on "the dichotomy between green and photogenic buildings," Maxman responded that it is a question of what people get accustomed to seeing. "Besides," she added, "we'll get better at it."

Maxman came to architecture relatively late in life, having first raised a family, and points out that her experience proves women can do whatever they strive toward. When questioned on why there are so many architects, she responded: "I am in favor of as many as possible, but they should be educated as generalists to do problem-solving." *C. K. H.*

Washington, D. C.

ACEC and AIA Get Together

"Together, AIA and ACEC can re-establish the leadership of architects and engineers in the construction process," says AIA president Susan Maxman, referring to a joint statement from the two groups on mutual goals. With the help of RECORD contributing editor Peter Piven of the Coxe Group, the two organizations met in early March to produce the new document. Among its goals: firm quality, not low fees, as the basis for procurement of professional services, joint business-practice services, and improved quality and profitability. ■

Texas

Pine Springs Cafe, 2 Park Service, 0

A 61-year-old cafe has twice been the target of the Park Service's efforts to get it out of Texas's Guadalupe Mountains National Park, created in 1966. First the service offered to buy the site, but Bertha and Walter Glover, who started the cafe, refused to sell. Instead they won a \$55,000 settlement and the right to stay for life. The last Glover died in 1982, leaving the property to their daughter Mary Hinson. First, Secretary of the Interior James Watt intervened when the service tried to evict her; then Secretary Donald Hodel followed suit. Now the service is at it again, claiming that hazardous gasoline storage and deteriorated buildings are a hazard. "We never had anyone tell us we were doing anything wrong," claims Hinson. ■

California

Sending a New Message To Congress

A new type of stamp to help pay for social causes is the brainchild of a California architect. "America needs an attitude adjustment in the way people contribute to projects that we used to assume were paid for by taxes," says Peter Stevans, who already claims to be getting his agenda across to the new administration. His idea: semipostal stamps.

These exceptionally designed issues (see example above) have been used in Europe for some time. They carry a premium charge, which is used to fund programs that might otherwise go begging. He envisions public projects ranging from an International Visitor Center/Museum for the Golden Gate Bridge to housing the homeless.

Why have Americans been so slow? Quoting former Postmaster General Anthony Frank,



Stevans says: "The idea is generally submitted to his office five to 10 times a year, but gets lost quickly because the Postal Service is quite powerless to initiate a program without Congress's permission." This is not forthcoming, says Stevans, because "fundraising Congressional-lobby groups do not want slices into their domains."

He estimates that there are 40,000 post offices in the U. S., not to mention countless vending stations, making it "the largest chain store in the nation." He admits that makes for an extra bookkeeping problem for the postal service and suggests that 10 percent of stamp premiums be allotted to overhaul the system. "America needs some new ideas because our old ways are not as good as we think they are," he declares. *C. K. H.*

Briefs

No misrepresentations in North Carolina. "An architect who has been an employee of another architectural practice may not claim unconditional credit for projects contracted for in the name of the previous employer," says a new amendment to the *North Carolina Board of Architects Laws and Regulations*. As a sign of the times there, the state board of architecture notes that some 150 corporations registered in the state are past due on renewals.

The band plays on in New York City. Upholding a lower court decision, the Appellate Division of State Supreme Court has ruled unanimously that the city cannot demolish the Naumburg Bandshell [RECORD, April 1992, page 32] because the city administrative code forbids destruction of a gift. The Beaux-Arts limestone structure was donated by banker Elkan Naumburg in 1923 and was recently the target for removal by a private fund-raising group that claimed it was in the way of restoring parts of Central Park to its 1859 Olmstead and Vaux plan. "This may not be the end of it," Marjorie Cadogan, counsel for the city's Department of Parks and Recreation, says ominously.

Surviving inquiries in Georgia. SCAD, the Savannah College of Art and Design, was the site of both student and faculty unrest last year, including a bomb blast that cancelled graduation. At the heart of the problem was contention between some former trustees and the school president and provost. Teachers loyal to the school termed the situation "growing pains," and apparently both the National Architectural Accrediting Board and the Southern Association of Colleges and Schools agreed. They continued the school's accreditation.

Marketing with a hammer and saw in Chicago. Architect Jerome Cerny didn't wait around for residential clients to knock on his door. Instead, he built a 6,300 square-foot "idea House," with which he hopes to in-

spire new commissions. Like builders' models, it sits open for public inspection of "the latest in products, amenities, and construction techniques."

Location, location, location, and price in California. "The most successful builders in '93 and beyond will be those that focus on the most desirable neighborhoods—and offer the most affordable houses in them," claims Ralph Lewis of Lewis Homes, predicting a reversal of the recent trend to build bigger and bigger houses in most upscale neighborhoods. The tack seems to be working for the California builder, which, unlike many rivals, claims 1992 was a banner year.

Marketing new realities in Florida. Citing a break with interior designers' tradition of starting new projects from scratch, South Florida designer Zeni Habif claims to market austerity with a mix of existing and new furniture. "Maybe add only one or two new pieces for an exciting fresh look," she says.

Prompt pay in California. The California Council of AIA is sponsoring a bill in the state legislature that would require public and private owners to pay within 30 days of billings or face interest penalties. In turn, architects would be required to release monies owed subconsultants within 15 days of client payment. Another bill being sponsored by the council would strengthen requirements to hire women and minorities.

Blossoming in Tokyo. Architects casting eyes towards Japanese markets include more than those who design buildings. A large U. S. landscape-architecture firm, Peridian, is opening a branch in offices it will share initially with Japanese landscape architects TLA, with which it has worked on individual projects before. It will share more than space. The more than 100 employees of TLA will also be available to work on Peridian projects, which currently include master planning for a new town. *C. K. H.*

New Haven, Connecticut

Poor Overlooked at Yale Conference

"Architects are used to working for the rich, not the poor," sums up New Haven architect Felix Drury after attending a January Yale Conference on Housing. "It was easy to see that most conferees were only looking at the wounded body of [the poor's] housing at arm's length to see if sophisticated design could cure it. A complementary exhibit of 'innovative housing' culled from a nationwide solicitation was sometimes quirky and individualistic—'This [house] is for a retired championship boxer and his wife who designs puppets.' It would have been much more promising if the participants had attended the Connecticut Housing Coalition's conference two days earlier." There, says Drury, they would have met the people who sponsor and find funds for housing, identify needs, and work out support programs—the clients for the housing architects of tomorrow. ■

Chile

If All Else Fails



A group of Chilean architecture professors are avoiding the pitfalls of practice and working off their creative urges by building their own houses in Cooperativa Amereida on the Pacific Coast near Punta Piedra, reports traveling Fulbright scholar Dennis Fukai. The cooperative is 20 years old and contains 13 houses in various states of evolution and styles, ranging from *Road Warrior* (casual constructions of seemingly found spiky objects) to low-tech (an inverted ship-shaped hull with a translucent-canvas and stick-truss roof) to subterranean. ■

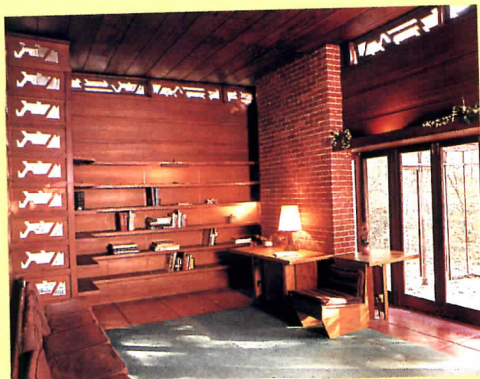
Restoration

Second Move for Wright Landmark

The Pope-Leighey House, a National Trust for Historic Preservation property, is awaiting its second move and restoration. Originally built in Falls Church, Virginia, it is a 1941 "Usonian" that Frank Lloyd Wright built for Americans of modest means. Among its innovations are radiant heating in the concrete-slab floor and sandwich-panel wall construction.

The house was first moved hurriedly (in 1965) out of the path of Interstate 66, and some of the structure's current problems (especially differential settlement) may be attributable to soil conditions on its current site—on Mount Vernon's Woodlawn Plantation—according to restoration architect Cheryl Jacobs, of Quinn/Evans Architects in Washington D. C. Quinn/Evans proposes to dismantle the house and reconstruct it 25 ft northwest of its current location, correcting deficiencies that led to roof sagging and wall bowing. The work will include improved conventional foundations, new brick closer to that selected by Wright, and recontouring the site to match the original. Insulation, supplemental ventilation and humidity control, fire detection and suppression, and security systems will be concealed.

The National Trust continues to seek contributions toward the restoration's \$550,000 cost (Linda Goldstein, Director, National Trust, 703/780-4000). *Naji Al-Hasani*



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Metric Update

Conversion: The Hard and Soft Way

METRIC CONVERSION FACTORS (Approximate)

Symbol	When You Know Number of	Multiply By	To Find Number of	Symbol
LENGTH				
in	inches	2.54 (exact)	centimeters	cm
ft	feet	30	centimeters	cm
yd	yards	0.9	meters	m
mi	miles	1.6	kilometers	km
AREA				
in ²	square inches	6.5	square centimeters	cm ²
ft ²	square feet	0.09	square meters	m ²
yd ²	square yards	0.8	square meters	m ²
mi ²	square miles	2.6	square kilometers	km ²
	acres	0.4	hectares	ha
WEIGHT (mass)				
oz	ounces	28	grams	g
lb	pounds	0.45	kilograms	kg
	short tons (2000 pounds)	0.9	metric tons	t

While most federal agencies have agreed to convert to metric (SI) units for construction by January 1994, conversion in the private sector will likely be slower. Robert Osborn of Leo A. Daly, an A/E in Washington, D. C., said that the firm's private-sector work remains entirely in "English" units even though 30 to 40 percent of their jobs are for the federal government and done in metric. He anticipates that private industry will take years to adopt metrication. Bill Brenner, executive director of the National Institute of Building Sciences (NIBS)—whose Construction Metrication Council is overseeing the metric conversion of the construction industry for the federal government—said metrication would be in full effect 10 to 15 years from now. Some private companies, especially those with significant international operations, have, however, rapidly adopted metric.

Though private industry is concerned about costs, Brenner claims they are minimal. "There are a number of pilot programs underway, particularly in the Philadelphia area, that are currently being built in met-

ric," he says, and GSA has so far found no increase in the costs of construction or design. "Most measurements are fairly easy to convert into metric," he says. "And with the new CAD systems, to which contractors now have access, this shouldn't be a terribly difficult accomplishment." General Motors' conversion cost less than one percent of original estimates, according to the Council.

Metrication will penetrate construction in two phases: "soft," which means relabeling existing dimensions in SI, and "hard," which will require changes in modular components to rounded-off metric units. According to NIBS, 95 percent of all construction products will not change size because they are not modular or panelized. A 2 3/4 by 4 1/2-in. wall-switch face plate, for example, will be relabeled 70 by 115 mm; a 30-gal tank, 114 L. Surprisingly few components will be affected by hard conversion: a 6 ft-8 in.-high door will be 2,000 mm—only about one-tenth in. difference. Stud spacings at 16 in. and 24 in. will adjust slightly; concrete masonry units will, however, come in somewhat different metric sizes. *N. A.-H.*

Trade Center Blast

Systems Failed in Attack

The February 26 explosion that rocked New York City's World Trade Center raised new questions about supposedly redundant life-safety systems in tall buildings.

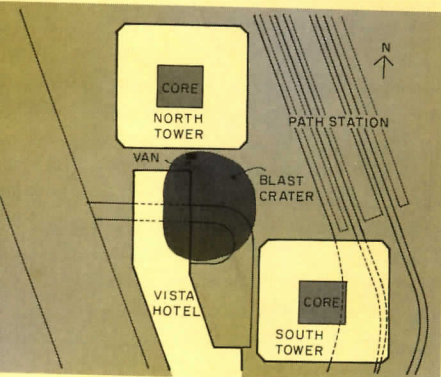
The explosives-laden van was parked close to the 12-million-sq-ft complex's only emergency-command center. The explosion damaged the center and cut off the emergency-communications system. "This really hurt us," commented Paul Marchese, the Center's chief of planning and design.

The collapse of two floor levels in the underground garage broke primary water pipes which flooded emergency generators.

The blast cut off five of the eight primary electrical feeders. According to the Port Authority of New York and New Jersey (the center's owner), the remaining feeders were adequate to power elevators, emergency lighting, and equipment, but fire-department officials required a complete power shutoff to reduce the risk of fires or explosions.

The explosion's power breached the fire wall separating the garage from the North Tower and elevator-shaft walls within the tower. With ventilation systems off, the back effect immediately drew smoke up elevator and exit-stair shafts. "We had an almost instantaneous smoke condition on the 11th floor," reported Marchese.

This "domino effect" of system failures has happened before, most recently at the One Meridian Plaza Fire in Philadelphia, where



emergency power was cut off and pumps supplying standpipes failed. There was little spread of fire after the bomb exploded at the World Trade Center, but the disaster will rekindle the debate on whether complex detection and suppression systems can be used instead of fire-resistive construction and compartmentalization [RECORD, February 1992, pages 36-39].

The complexity of the systems also delayed reoccupancy of the buildings. Because soot interferes with operation, for example, workers have cleaned and examined every one of the building's thousands of smoke detectors. The center's refrigeration plant, beneath the bombed area, was covered with debris and may not be repaired until late spring.

On the other hand, some things worked. Using fire marshals designated from among tenants and following drilled plans, the building evacuation was orderly and panic-free despite smoke and lack of lighting in stairs. Also, the buildings' primary structure was virtually undamaged. "The heavy columns created a kind of shield," says Leslie Robertson, a structural engineer who was on the original design team and who has been retained for remedial structural work. Though the blast has been described as "the largest nonmilitary, nonindustrial bomb," the garage's primary structure did not collapse, though many columns lost two levels of horizontal support. The damage outside the garage structure is virtually invisible.

Among proposals in a 1985 report analyzing the center's security was that the garage be closed to the public and that the operations center be supplied with additional backup. The Port Authority had planned but not implemented additional system backup, and rejected closing the garage. Now, reflects Robertson, "owners of big buildings—especially with parking inside—are certainly searching their souls." *J. S. R.*

Bridge Design

St. Paul's Collaborative Edge

The Wabasha Bridge, a replacement project in a high-visibility location, is a prototype of the kind of architect-artist-engineer collaboration envisioned by recent highway-funding legislation. The design places a cable-stayed central V-mast on a mid-river island. The mast splits the 1,200-ft deck, supports a central pedestrian path, and accommodates a bend in the roadway. The bridge is a collaboration of sculptor James Carpenter's Design Studio (he blurs the line between art and architecture), engineer Jorg Schlaich, of Stuttgart, Darrel Berkowitz of TKDA Engineers (St. Paul) and Sverdrup Corporation (St. Louis). Carpenter was unanimously chosen by the Wabasha Street Bridge Task Force after an international competition followed by a local public forum. The design is controversial, mainly due to its \$32-million cost, though most funding is supposed to come from federal sources. The team is already at work on two alternates that are both less dramatic and less costly. The bridge can play, says a local commentator, "a vital role in the city's definition of its future." Officials will have to decide what that's worth. *N. A.-H.*



David Sundberg

Good Sound for "Bad Animals"

© Grant Ramaly photos



Canted and sloped shapes diffuse sound and prevent unwanted flutter echoes within the main studio.



In the control room, acoustical absorption, reflection, and diffusion devices focus sound symmetrically.

There is nothing like the sweet spot. That is where the engineer or producer sits when directing a recording session. At the Bad Animals Recording Studio it is located in the middle of the control room. It's the focal point of speakers embedded in a concrete wall in front of the engineer who sits at the center of a sound board with more controls than you are likely to see at NASA's Mission Control. Everything in the room, from the elaborate, sand-filled bass traps to striated walls known as Helmholtz resonators, is geared to creating a perfect balance of frequencies and tonalities at that one spot. The effect is an astonishing sense that the music has been liberated from the instruments, gaining a presence all its own.

Creating such a spot is expensive. Leapfrogging technology has not only made consumer equipment hugely more sensitive, it has changed the way music is composed and produced. Though architects are rare in this specialized milieu, three of them lead Studio Bau:ton. George Newburn and Peter Maurer worked for the Waterland Group,

one of the most successful designers of studio spaces in the country. Gruneisen, who is Swiss, credits his training at the Technical College in Thun for his ability to master and keep up with the complicated technology that is at the heart of their craft. Newburn, Maurer, and Gruneisen met at Southern California Institute of Architecture (SCI-Arc) five years ago. They took the school's esthetic of layered and fractured forms and, says Gruenison, "learned [our craft] on the job, and by going to lots of trade shows."

Bad Animals is the firm's best example to date of their marriage of technology and architecture. Housed in an anonymous brick warehouse building just outside Seattle's downtown, this former video recording studio is now the home base for the rock group Heart. Clients Ann and Nancy Wilson, in collaboration with producer Steve Lawson, asked for a "live" space (meaning one where sounds take as long as possible to decay) suited to their folk-based music, but that could also be rented out to other musicians. What they got was what Lawson calls "an

extraordinarily bright and crisp space" yet one with the flexibility to host such diverse artists as the Seattle Symphony and the Georgia rock group R. E. M. The 5,000-square-foot facility contains not only a 25,000-cubic-foot recording studio and a control room, but also a separate taping room, isolation booths, and the kind of artist's lounge that, says Lawson, "is where these people really live when they are spending two months recording an album."

Isolating the studio

"The task in making a good space for recording music," explains Gruneisen, "is first of all to get rid of all excess sound, both inside and out." That means completely isolating the spaces where music is made or recorded (from each other as well as from sounds entering from outside), and building into each space a series of architectural devices that "trap" (meaning eliminate) and evenly diffuse sound waves. "This has become especially important now that most music is digitally edited (even when recorded on magnetic tape), because you can hear

The work of Studio Bau:ton shows what architecture can contribute to a specialized, technology-driven building type.



For individual instruments, the piano booth provides acoustics that are similar to the main studio but more controlled.



A sine wave of maple plywood breaks up higher frequencies; a layer of fiberglass behind it traps lower frequencies.

frequencies that you never could before,” Gruneisen says.

Isolating sound begins with the floor. Typically the firm pours two concrete slabs, the lower containing chases for wiring, and a 4- to 6-in. finish slab separated for damping by up to 2 in. of rubber or foamed-plastic board. The Bad Animals studio needed only the upper slab, floating on a 1-in. layer of styrofoam. The main studio, control room, piano booth, and isolation booth each has its own separate stud-wall acoustical shells which rest on the slabs over continuous strips of 1/2-in. rubber. The control room has an additional inner wall of acoustical treatment (plan page 35). The stud walls are faced with laminations of drywall, acoustically rated soundboard, and 1/2-in. plywood. To complete each shell, the architects mounted the ceilings on the new walls rather than suspending them from the structural frame. Components attach to the building envelope only through rubber or neoprene gaskets. “You don’t want anything to touch—even one nail or one screw can set

the whole wall reverberating,” says Gruneisen. The isolating effect works both ways: no exterior noise penetrates the space, and a session in full swing is inaudible outside the studio.

Achieving the desired sound

Once they have created an acoustically independent environment, the architects then have to make sure that the sounds produced in the room are clear and precise. That means getting rid of both “standing waves” and “flutter,” reverberation phenomena caused when sound waves either bounce back and forth between parallel walls—canceling each other out—or accumulate in certain areas. The bulging, canted, and angled forms visible within the studio are stylish but functional. Surfaces at least 6 deg out of alignment from any other and corners greater than 90 deg diffuse a wide range of frequencies (opposite left). The undulating maple deflection panel—the “sound wave” in the ceiling—breaks up vertical symmetry, and conceals a mass of fiberglass insulation that traps unwanted bass (low-fre-

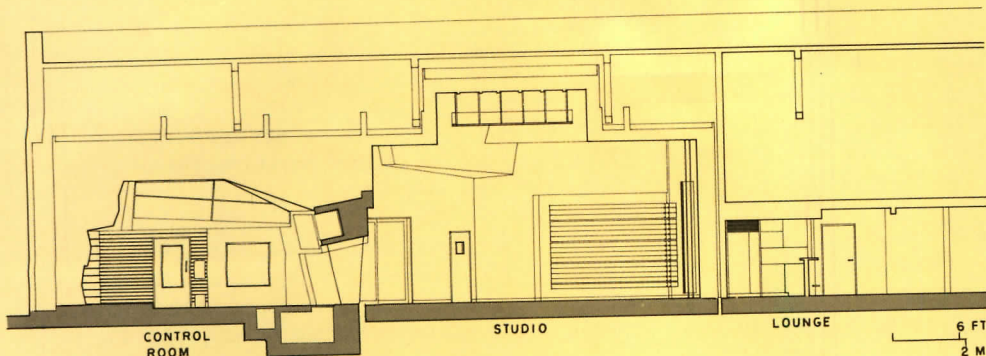
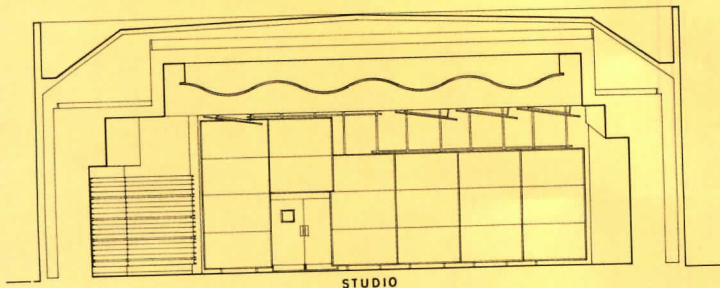
quency) noise (top right). Similar bass traps of fiberglass are concealed behind plywood panels throughout the room.

Two corners contain Helmholtz resonators. These are stacks of slats split down the middle with narrow openings. A mathematical formula determines the spacing of the slats and the size of the openings so that the designers can “tune” the room, creating the desired reverberation time. In the studio, the maximum reverberation is 1.8 seconds. The architects take pride in their “low-tech tuning device”—a set of heavy stage curtains that can be pulled across plywood panels—that further absorb the sound (next page). The acoustical qualities are flexible enough that the space is used to record rock, jazz, and classical music.

Acoustics is not only a science, of course. Lawson describes the sound in the studio as “bright” and “hard” because that is what most rock recording artists prefer. For a shorter reverberation time, Studio Bau:ton provided two separate isolation booths. One



The reverberation time of the room can be altered by pulling out theater curtains, here shown in the half-open position.



is used mainly for voice recording, while a larger piano booth creates a more controlled version of the ambiance of the main room, achieved by lining most of its interior with maple-plywood panels. A large, double-glazed, sliding glass door lets the musician look into the main room.

A "wood-paneled spaceship"

The control room is outfitted with Helmholtz resonators, angled corners, and bass traps (including one that is a sand-filled trench in the floor). Here, however, everything is symmetrically focused on the sweet spot (opposite). A massive concrete frame between booth and studio supports television monitors and speakers, minimizing feedback (top right and toned in plan below). The large speakers are custom made and look impressive, but Gruneisen points out that engineers will also verify the mix by placing in the room "speakers that sound more like what you and I will hear in our cars or in our living rooms." A 3/4-in.-thick sheet of glass on the control room side, and a 1/2-in. thick sheet on the studio side allow the engineers to see the studio space; television monitors permit soundtrack mixing for film and video.

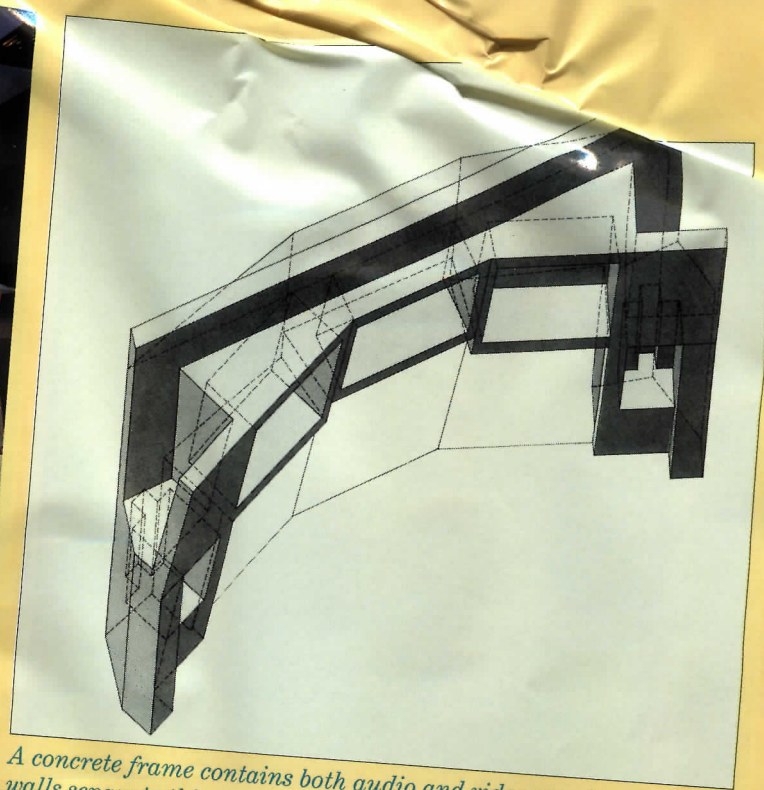
With architectural treatments that diffuse, absorb, and reflect sound and the massive amount of electronic gear, the control room is like a wood-paneled spaceship. The architects had no control over the design of the 20-ft long sound board (used for mixing the relative intensity of voices and instruments), nor any of the playback devices, editing machines, speakers, and other electronic ephemera that fills the room, but they have made all this equipment easily accessible by placing much of it in arm's reach or on carts.

Since recording studios need wood for its acoustical properties, they're typically done in what Gruneisen calls "that woodsy, '70s cabin look." Studio Bau:ton has updated rather than abandoning that palette of materials, giving it a cleaner, crisper appearance, less at odds with the technology it contains. Gruneisen does not claim that the studio's expressive forms are completely defined by acoustical needs. Rather, "architecture and acoustics go hand in hand." *Aaron Betsky*

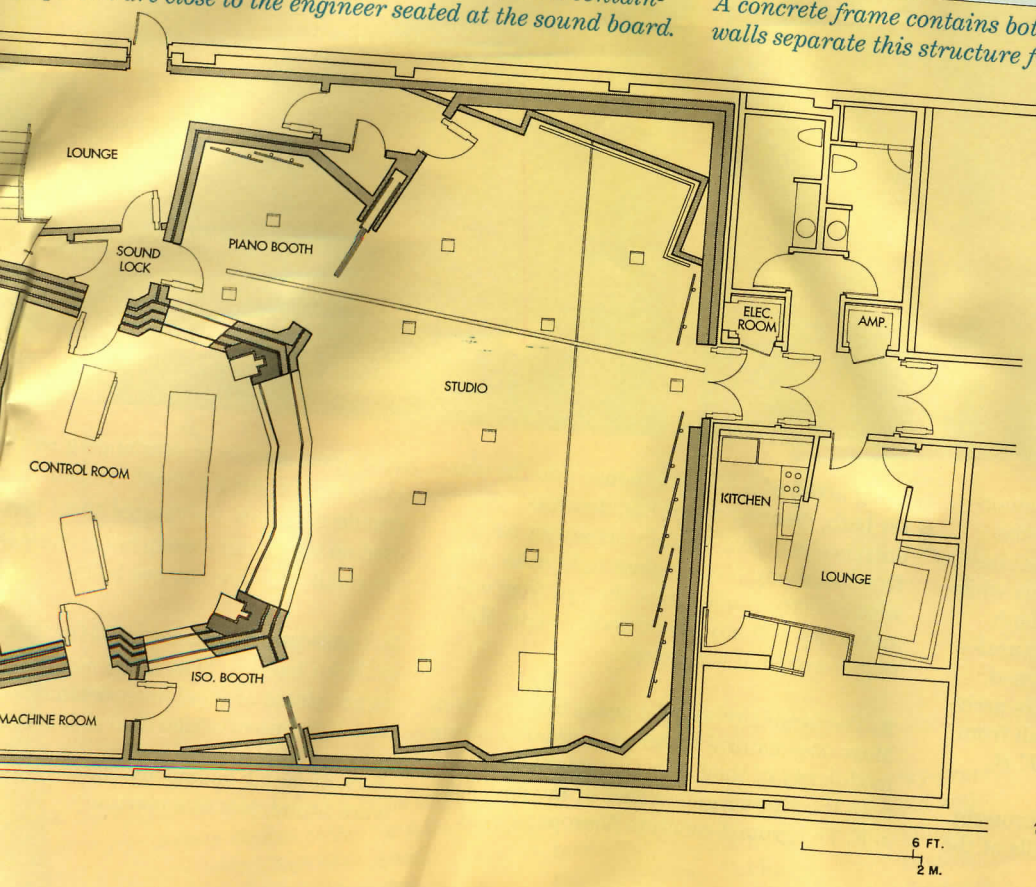
The acoustical qualities are flexible enough that the space is used for rock, jazz, and classical music recording.



Within the symmetrically arranged control room, carts containing equipment are close to the engineer seated at the sound board.



A concrete frame contains both audio and video monitors. Stud walls separate this structure from the recording studio.



In the studio, "you want a small controlled space, but you also want as much [spatial] volume as possible," explains Peter Gruneisen. A multilayer stud-wall construction isolates the recording and control areas from exterior noise (left). The number and kinds of layers vary according to location. The studio is set on an isolating slab (sections opposite).

Materials:

1. Slate: Ann Saks. Tinted grout: ... Stone sealant: HMK. Faucets and showerhead: Grohe. Aluminum windows: Milgard. Over-mirror light: custom by architect, fabricated by Becca Foster Lighting.
2. Sinks, faucets: Elkay. Cooktop: Viking. Ovens: Thermador. Dishwasher: Bosch. Refrigerator: ...

Architectural Record April 1993 35

- Pulls: Forms+Surfaces. ...
- Shower: Stadium. Counters: Chinese slate.
- Faucets: Speakman. Sink: Franke. Cooktop: Dacor. Dishwasher: Kitchen-Aid. Refrigerator: Traulsen. Recessed lighting: Halo.

5. A bath by Michael Folonis is full of light from tree-top windows. Maple flooring has a gymnasium finish; the sandblasted-glass partition fades from obscure to clear, for a permanently steamed appearance. Counters and surrounds are Chinese black slate; wall-mount cabinets are clear of the floor.

ARCHITECTURAL RECORD Practice

Computers: Data Control When Many Players Are Involved

By Kristine Fallon

In Chicago, birthplace of many 19th-century construction innovations, a new method of project delivery was developed over the past five years for two major public projects to be built under design-build contracts. Both projects—the 750,000-square-foot Harold Washington Library Center, occupied in 1991, and the 2,900,000-square-foot McCormick Place expansion project, entering construction this year—have challenged the traditional view of design-build in which most decision-making authority has been highly centralized. For both of these projects, decisions were made by an ad-hoc incorporation of developer, contractor(s), and design firm(s).

The public's interest is that a design-build entity guarantees performance on schedule at a fixed price. The entity must have the savvy and management ability to do this and must assemble a team with the talent and reputation that can win the commission, including the minority and women participants required on all publicly funded projects. On the design team, there may be a dozen or more firms that are not part of the design-build entity and that work under traditional contracts with it.

Pursuing this type of project is high-stakes poker. The design-build entity must walk into the initial interview guaranteeing the price, delivery date, and performance of the concept they present. The team composition and many design decisions must be finalized in the proposal phase of the project. The team has major costs before the project is awarded. Chicago-based A. Epstein and Sons International, Inc. is the architect and engineer of record for both the Harold Washington Library Center and the McCormick Place expansion. Design architects are Hammond Beeby and Babka, and TVS, respectively. Epstein is also a partner in the developer organizations SEBUS for the library and Mc3D for McCormick.

How computers help

These projects have motivated Epstein to specify, design, and implement highly specialized computer systems to streamline and control the flow of technical information. Epstein has already incorporated lessons

learned on the library project into the systems design for the McCormick Place expansion, asserting that both the resulting organizational structure and the application of computer technology provide models for an integrated design and construction industry for the 21st century. The focus on these pages is on the information systems developed for the McCormick Place expansion.

CAD has been the principal drawing-production technique for both projects. The McCormick Place expansion benefits from an obvious increase in CAD competence, especially in the smaller firms involved, and the fact that lower prices have permitted all firms to own more advanced systems. Epstein chose not to compel the entire team to work on the same CAD system, because the DXF exchange format allows different sys-

tems, units, use of reference files, layering, line styles, text styles and heights, and line weights. The firm also documented any data types that did not translate to other systems. Although all members of the design team committed to abide by these CAD standards, Epstein has had to assure that all groups understand and are indeed following them. If they don't, it is seldom apparent by looking at the drawings, so there must be special computer-based checks. These problems are independent of the CAD system being used. Even if all firms were using the same one, they would need to coordinate their standards and drafting techniques to achieve effective data exchange.

Communications

The team is geographically dispersed, as well as large. In this situation, computer-



New McCormick Place addition (left) spans Chicago's Lake Shore Drive.

tems to communicate. The majority of drawings are being produced on the Intergraph/Microstation format, but there are two other CAD systems in use on the

project, and Epstein has achieved effective two-way data exchange via DXF with both. (See list of firms and their systems on opposite page.)

Organization of files

More important to effective data exchange than the data format is the internal organization of CAD files. Before any CAD work began, Epstein published project standards, which included directions on coordinate sys-

based communication can be particularly useful. The team employs the C4 Construction Network, which provides a nationwide

communication system as well as electronic mailboxes (for storing and forwarding drawings) and plotting services. The advantage is that access to this network is by monthly subscription. There is no need for any consultant to make a major investment in communications systems.

Distribution control

One challenge in CAD is triggering and managing the distribution of files. On early CAD projects, technology enthusiasts wou-

Two design-build projects in Chicago illustrate how consortiums of consultants can use different systems and still communicate efficiently.

frequently initiate file exchanges and bypass both review procedures and transmittal documentation. Permitting uncontrolled data exchange is a sure way to waste time and money—which the design-build team is highly motivated to avoid.

The C4 Construction Network fortunately provides an “electronic transmittal,” which logs file transfers. As coordinating architects and engineers, Epstein maintains the central point of distribution, receiving file transfers and forwarding them to the intended recipients. Thus it can very precisely track the flow of graphic information among team members.

In addition to managing wide-area electronic communications, Epstein’s computer-technology management group has developed a comprehensive document-control and management system to enhance access to and sharing of project documentation within a Chicago-based project-team center, staffed by members of four of the design firms. The major parts of the system are:

File management

Controls access to project files.

Permits only one person to check out a file or edit.

Permits any number of users to use the same file as a reference (view only).

Maintains a back-up copy of all files checked out for edit.

Automatically checks any reference files associated with a drawing.

Manages any type of file, no matter which computer program produced it.

Scanning system

Supplied by Speedscan.

Scans small-format documents such as photos, letters, contracts, and transmittals.

Has optional optical-character recognition. Indexes and stores documents on Write Once Read Many (WORM) optical disks.

Draw/plot system

Associates computer files with the project-document list.

Simplifies view, print/plot, and markup access for checkers and managers.

Tracks the dates drawings were last updated, plotted, and transmitted to others.

- Interfaces with software that displays multiple-document formats including scanned images, Intergraph native, AutoCAD native, DXF files, word-processing files, and plots.

Making information instantly accessible to authorized personnel and accurately tracking changes to documents helps the team eliminate lag time for information distribution and ensures that everyone is acting on the most current data. If the team can reliably distinguish which of the 4,000 drawings have been updated since the last round of distribution, it reduces reproduction and distribution costs. This streamlines workflow, compresses the design schedule, and improves coordination and communications.

Getting this system in place, however, was time-consuming and costly. Epstein made the mistake of not starting development until the project was firmly underway and thus found itself still getting bugs out at the design-development deadline. Malfunctions of the system at this critical juncture reduced the team’s confidence in it, which in turn required an extraordinary public-relations and support effort from the computer staff.

The obvious question is whether Epstein should have purchased rather than attempted to develop the document-management capability. In the past few years, a number of document-management products have appeared on the market. Many of the simpler ones are CAD-system specific and would not have met the teams’ needs. Others are very robust, but they were developed primarily for manufacturing. These systems tend to be expensive (\$20,000 and up) and require considerable customization, generally by the supplier, at additional cost. They are still an awkward fit for the building-design workflow. Since this is a relatively new software market, suppliers tend to be small and unstable, frequently unable to meet their commitments for new releases and customization services.

This is an area of technology to watch. It holds immense potential for streamlining design communications, but must be evaluated with great caution and attention to detail. ■

Companies working on McCormick Place expansion and their systems

A. Epstein and Sons International, Inc.
Chicago. *Intergraph*

Barton Aschman Associates, Inc.
Evanston. *AutoCAD*

Alfred Benesch & Co.
Chicago. *Intergraph*

d’Escoto, Inc.
Chicago. *Intergraph*

Environmental Systems Design
Chicago. *Intergraph*

Globetrotters Engineering Corp.
Chicago. *AutoCAD*

SWA Group
Dallas. *AutoCAD*

Schirmer Engineering Corp.
Deerfield, Illinois. *AutoCAD*

Thompson, Ventulett, Stainback & Associates
Atlanta. *CADVANCE*

Weidlinger Associates
New York City. *AutoCAD*

Wendell Campbell & Associates
Chicago. *Intergraph*

Paul Alan Magil & Associates
Costa Mesa, California. *AutoCAD*

Ross Barney Jankowski
Chicago. *CADVANCE*

VOA Associates
Chicago. *Intergraph*

AutoCAD for Windows Release 12

By Steven S. Ross

This first stand-alone Windows release of AutoCAD, version 12 costs the standard AutoCAD price—a full \$3,750—unlike the AutoCAD Release 11 Extension for Windows, which is free to buyers of the DOS version. For the money, you get a much faster and more capable program than the Windows Release 11 version, with an almost complete set of Windows features. Those features include:

- **Faster redraw and regeneration.** The Windows speed is now up to the speed of the unadorned DOS version. You should note, however, that graphics accelerator cards are more widely available and generally quicker for DOS than for Windows. Thus, the DOS version runs faster in production-drafting installations. Also, the higher Windows speed is mainly due to a display-list driver built-in. This requires plenty of RAM—typically 2 MB or more for a large drawing.
- **Multiple sessions.** You can open up to three copies of Windows Release 12 at once in the same machine, and move back and forth among them—copying parts of files, showing rendered versions, and so forth. You need about 5 MB extra RAM for each new copy you open. What you *can't* do is open multiple windows within a single session, with separate drawing files in each one.
- **Multiple render views.** You *can* open multiple windows and view several rendered images at the same time on-screen.
- **Good context-sensitive help** through the F1 key (in case your mouse is in the middle of a command sequence).
- **Object Linking and Embedding.** This version acts as an OLE server (but not OLE client); it can move “objects” (drawings or data) to other OLE-compliant software in Windows; as you edit the objects in AutoCAD, they are automatically updated in the other applications. Dynamic Data Exchange (DDE) can go in either direction—Windows Release 12 can update data linked from other DDE applications, as well as send DDE. These features make it relatively easy to design add-on applications such as bill-of-materials reports. Windows Release 12 also has ODBC (Open Database Connectivity) support, for relatively easy data exchange with Informix, Microsoft Access, Oracle, and other database software.

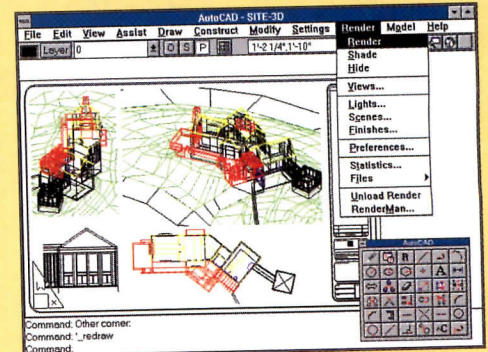
- **Intuitive Clipboard support.** You can copy and paste true vector drawings as well as bitmap images back and forth between AutoCAD and other packages.
- **Compatibility with Visual BASIC 2.0.** Makes it easier for savvy practices and third-party vendors to write add-on applications. There's also built-in SQL, which makes writing applications easier.
- **Full printer support.** You can make large multiple-page images on a laser printer and stitch them together later for giant presentations (up to 130 8.5- by 11-in. pages). You can print through Windows; the software comes with extra drivers for many popular architectural printers and plotters. If yours is not among them, you will probably need an updated driver from the equipment vendor; ADI 4.1 and older drivers will not work—you need at least ADI 4.2.

How does AutoCAD Windows Release 12 compare with other versions of AutoCAD, in particular AutoCAD 12/386, the corresponding DOS version? Out of the box, performance is about the same. It is easier and less expensive to configure the DOS version for production drafting. There are more accelerator cards available, and you may already have installed one for earlier AutoCAD versions. Also, there are far more sophisticated add-on software packages for DOS than for Windows versions of AutoCAD at the present time. On the other

AutoCAD for Windows Release 12 Summary

Equipment required: An IBM or compatible computer capable of running Windows 3.1 in enhanced mode. Math coprocessor (80486 has coprocessor built in). DOS 3.31 or higher (DOS 5.0 or higher strongly recommended). At least 8 MB of RAM strongly recommended. Complete installation requires about 34 MB of disk space. If you use less than 8 MB of RAM, reserve plenty of disk space for the Windows swap file. Mouse or digitizer (in this version, the digitizer can control the menus without using a separate mouse).

Vendor: Autodesk, Inc., 2320 Marinship Way, Sausalito, Calif. 94965. Phone 415/332-2344, fax 415/331-8093. \$3,750. Free swap for other AutoCAD Release 12 versions pur-



A multiple-view drawing in AutoCAD for Windows Release 12 features a deep pulldown menu to activate rendering, floating toolbox (lower right corner), and AutoCAD command line (lower left). Part of toolbar is visible beneath render menu.

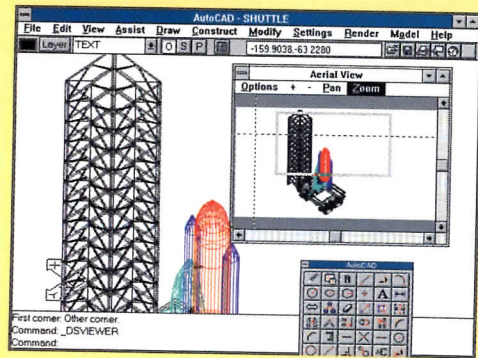
hand, if you are relying on temporary or short-term help, or if you are using AutoCAD for conceptualizing as well as drafting, Windows is for you—it is more intuitive to use when you are not using it eight (or 12) hours a day.

How does Windows Release 12 compare with CADvance 5.0, the new full-featured Windows drafting package from IsiCAD [RECORD, February 1993, page 38]? CADvance requires fewer machine resources, is easier to set up, has better control of basic Windows features like multiple on-screen windows and files, and can (out of the box, with no add-ons) more easily handle symbol libraries. It is also far cheaper—the list price is under \$2,000 and there are liberal trade-in policies. The CADvance manual is far superior (in particular its tutorial),

chased or upgraded within 30 days of availability of Windows version; \$75 swap for those who purchased other versions after roughly February 1, 1993. Call Autodesk at 800/964-6432, extension 912, for details. **Manuals:** Two letter-size paperbacks, one the standard-style Autodesk installation and performance guide, the other a guide to Windows features and operations, with a short section on programming add-on features. Fine if you are familiar with Windows and with earlier versions of AutoCAD; inadequate for neophytes.

Ease-of-use: On a system with plenty of RAM (we used 16 MB), this program is a dream. As is becoming standard for Windows-based CAD products, AutoCAD 12 compensates for the awkward Windows pulldown menu system (few menus but long lists of commands in each) with a toolbar

Tempra Pro 3.0



Aerial view keeps track of zoomed-in view with reference to entire drawing for you.

but publishers are already rushing out AutoCAD books to reduce that gap.

AutoCAD offers a wider range of drawing tools, easier 3-D (though still not easy), and better compatibility with its own DWG files. (CADvance can import and export DWG now, but must change the internal entity structure slightly because the two programs do not describe objects in exactly the same way).

CADvance seems faster in same-task comparisons, but you must do some things (like drawing complex curves) in different ways in each of the two programs; AutoCAD has more specific tools for doing things in fewer steps. We showed both programs to architecture students who have done production drafting. Their opinions varied as to which is faster and more comfortable—it depends on how they think about putting 3-D objects on a 2-D screen, and how adept they were at creating macro instructions to do repetitive tasks.

Circle number 300

and floating toolbox that can be customized by users. Installation does not modify your CONFIG.SYS file to make sure the number of files you can open is at least 40, but most Windows users already have their FILES statement set that high. You can import and export conventional binary DWG files between Windows, DOS, UNIX, and Macintosh platforms without thinking hard. There's also DXF, of course, and DXB (binary or ASCII-based plot files), along with IGES.

Error-trapping: About as good as it gets in Windows—which means not perfect. In particular, multiple sessions with different configuration requirements must reference different ACAD.INI and ACAD.CFG files in different places on disk. If you try to open several files at once, the software's internal error handlers note the error and get on with their business. ■

This package, meant more for graphics artists than for architects, can take a CAD file and turn it into a colorful presentation. It does not offer as many drawing tools as does Corel Draw [RECORD, November 1992, page 32] but in full form, with all animation, sound, and authoring options, it handles presentations more easily.

You can also modify the system to suit your tastes—right down to changing the cut of the “brush” used to paint images on the screen.

Tempra can handle large, colorful images quite fast, mainly because it is a true 32-bit application. It will run under Windows or OS/2, but only in a DOS box. A version that works with Windows NT (the 32-bit operating system due to be released by Microsoft this summer) is expected to be available later this year.

Tempra Pro 3.0 Summary

Equipment required: IBM or compatible, 640K of RAM (4MB strongly recommended), VGA monitor, 80286 or later CPU (80386 or later strongly recommended), mouse, or digitizer.

Vendor: Mathematica, Inc., 402 S. Kentucky Ave., Lakeland, Fla. 33801, 813/682-1128, fax 813/686-5969. Tempra Pro (includes Tempra Show for multimedia presentations), \$695. Tempra Author (adds Turbo Animator and other device-specific control features), \$995.

Manuals: Clearly written paperbacks discuss each command and function in detail, with good examples.

Ease of use: Good. It is possible to create truly huge images, however—40 MB or more. Leave plenty of disk space. The interface is “graphical” but unique, with reasonably intuitive dialog boxes and pulldown menus. We had trouble installing some of the software automatically on an 80486 computer with AMI BIOS; the INSTALL program thought we were running DOS 3.3 instead of 5.0. The problem is in the install “engine,” and has happened with other packages.

Error-trapping: Good. The system warns you of any action that will destroy work. The system is also extremely stable, even though it is a tight fit in any computer. ■

The authoring tools are of particular note, because most architectural presentations are flexible on time but must be exacting in content. This works well with Tempra’s “event-based” authoring controls. Event-based authoring also seems more natural to the newcomer.

The biggest weakness for architects is an inability to import DXF or other common CAD files directly. If you are using a Windows-based CAD package, however, you can save what’s on your screen to the Clipboard and then to a BMP file. Tempra will also import GIF, TGA, WIN, TIF, PCX, EPS, PCC, PTN, and Autographix files. You can keep up to 16.7 million colors in a file if you go to 24-bit, but 8-bit (256 colors) is almost always good enough for presentations, and uses only a third the disk space.

Circle number 301



This is a 24-bit color image produced with Tempra Pro. Note the shadow gradations under the shelf and the fine detail. You can edit an image 8196 by 8196 pixels, if you have enough disk space.

A Conversation with Ada Louise Huxtable

Robert Campbell and Ada Louise Huxtable in her New York City apartment, surrounded by "the accumulation of a lifetime," including furniture designed by her late husband Garth, Artek chairs, and Tiffany glass.

By Robert Campbell

During 18 years as architecture critic of The New York Times, Ada Louise Huxtable established herself as the most trusted voice in the field. She left the Times in 1980 to embark on a new career as author and consultant. Living both halves of the American dream, she now divides her time between a beloved ranch-house-with-swimming-pool in Marblehead, Mass., and a penthouse apartment on Park Avenue in New York City.

It was in New York that she recently reflected on her years in architecture, in a talk with Robert Campbell. In this first of two installments, she looks at the current scene and comments on the purpose of architecture criticism. In the second installment next month, she talks about her own values and background, then speculates on our desire today for an environment of "themed entertainment."

The current scene

Robert Campbell: In the years you've been looking at it, how would you say the world of architecture has changed?

Ada Louise Huxtable: I think it's changed in a very basic and fascinating way. It's changed from a world of optimism to a world of profound pessimism. In the time since I started my career, which was really right after the Second World War, I've seen this change from believing that we can solve the world's problems, that we can make the world a better place, that architecture and design had a very powerful and positive role in helping people to live better. In the intervening years we lost that belief. In fact we've lost an entire belief system. This wasn't just something that depended on design or architecture or postwar optimism. It was part of the Modernism, part of the spirit of the 20th century. We truly believed that the horizons of technology, the horizons of art were going to lead us to a better place and make us better people. We became very disillusioned. We found this wasn't true. We became overwhelmed by problems that no technology can solve.

RC: Or in some cases, problems that technology had created. That the automobile had created, for example.

ALH: Had created, absolutely, yes.

RC: But that kind of thing happens throughout history, doesn't it? There are periods when we think of the Golden Age as being in the past, and we're devolving from it. And there are periods when the Golden Age is in the future and we're evolving toward it, a kind of Marxist progress. Have we undergone one of those shifts?

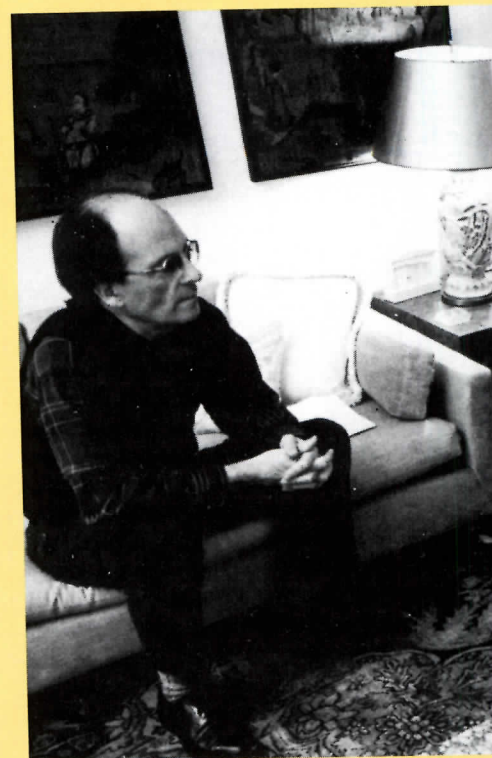
ALH: I think we've undergone quite a unique shift. I don't think any other century in history has included the profound changes this one has. I think art has been liberated. I think this is all good. I think there's been a tremendous opening up. The implications for art and architecture are enormous.

RC: Maybe you could cite some examples.

ALH: Well, there was a nice comfortable simplistic belief that form *did* follow function. It still has to be basically true, if you're not to do something outrageous. But it is not the way you define good building or good architecture any more. Function is something that happens in many different ways and can be interpreted in many forms. But because there was such a simplistic way of looking at it, a whole system of rules evolved which we called Modernism. And the fact that these no longer hold means that serious architects are looking not only at function and form. They're taking architecture apart and putting it together again in terms of how we now think about the world, how we see the problems, and see the relationships to people and to sites. I think we have a group of brilliant architects who are creating an art that is quite unprecedented, and yet is grounded in everything that has ever been sound about architecture and history. You want names?

RC: I want names, dates, telephone numbers.

ALH: OK, one we just lost. James Stirling. To me, he was Number One. That doesn't mean I don't have a lot of others right up there. But I feel that more than many, Stirling had the ability to conceptualize in a true architectonic way. A multispatial way. His concepts were more than three-dimensional. They were the total space, the total enclosure. When you read his plans and his sections you read them all at once. You never walk from one part to another. This is what great architecture does. It creates these multidimensional, total relationships. I think Stirling had it.



RC: What's your favorite Stirling building?

ALH: There's no building you can say is perfect. There's no one you can say you love all of. But I remember his submittal for the National Gallery extension in London, and just being bowled over by the drawings because of what they were conceptually, what they were in terms of seeing the whole program, the whole site, the whole use of space.

RC: He did play the whole game, didn't he?

ALH: He played the whole game.

RC: He had an attitude toward history, toward site and context, an attitude toward program, toward art movements, everything.

ALH: Everything present and everything handled with tremendous mastery. I think Stuttgart [the Neue Staatsgalerie], the urbanistic achievement there is unparalleled, amazing. The galleries disappoint me a little bit—I'm probably the only one—because they are too conventional. They are in line, enfilade, as the gallery wanted. They're superb for what they are, but they contain no surprises. Whereas at the National Gallery in Britain, I think Venturi, Scott Brown achieved the surprises. They achieved the vision from one gallery into another, a way of

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being paintings together, a way of anticipating spaces that the classical enfilade does not do.

RC: What about the future? Do you see something emerging?

ALH: Yes, I think we are now in one of the most significant creative periods—I don't want to say "in history"—I'll certainly say so in this century and the beginning of the next. I'm one of the holdouts who think Modernism was one of the great creative periods and great sea changes like the Renaissance. I sincerely believe that. I sincerely believe it was one of the great movements of history. We now see the closing of that chapter and the opening of a new chapter in which nothing important has been forgotten, in which everything is based inevitably on the lessons and changes of Modernism, whether structural or philosophical or esthetic. None of it gets thrown away. It becomes the base of the change that comes next. So that one mistake in thinking about Modernism is thinking that it's over; it's not. It is a foundation, as everything in history has incorporated the knowledge that went before it. That's what's happening in architecture today. In our field, I think it's a

perfectly marvelous time to be working.

RC: What about the movements of the moment? Deconstruction, for instance, and a term you hear around some of the schools, Realism, or the New Realism, a kind of return to a Modernism based on program rather than style?

ALH: I think this is all part of this very essential and quite wonderful process that's taking place, of taking it all apart, re-examining it, but re-examining it not in terms of some optimistic, looking-to-the-future set of

"I'm one of the holdouts who think Modernism was one of the great creative periods and great sea changes like the Renaissance. I... believe it was one of the great movements of history."

invented principles, but in terms of what has been done, what can be done, how various things we are familiar with can apply to completely restructuring what is being done.

RC: You speak of "pulling things apart." But of course that's what some of them do literally. Frank Gehry, for instance, takes a building program and literally pulls it into pieces which he then reassembles in a compositional way. Is that a metaphor? That the architect, in physically taking apart the program, is really taking apart an esthetic system that had grown up.

ALH: That's *exactly* what I mean. He's taking the package apart, taking the building apart, taking the philosophy apart, everything is being taken apart. Every architect does it in a different way. Whatever mannerisms he loves to apply or to integrate, he's absolutely studying program, studying site, studying the function in terms of how function moves from one part to another. He also is taking apart and conceiving in terms of bits and pieces and units. Each architect has a different way of unifying the result. I think this is basic to every one of these movements.

RC: Other things in our culture are getting pulled apart too. What people now call the "Eurocentric" tradition is being tugged at from all directions by a desire for greater pluralism.

ALH: You're absolutely right and I think art is always part of the culture whether it expresses it in a more formal abstract or esthetic way, or whether it concerns the fragmentation you just described. I think that's art's validity—good, bad, or indifferent. Its validity is that it's all part of a general consciousness.

The critic

RC: I'd like to raise another issue. It's about critics. What's an architecture critic for?

You're not a consumer guide. Nobody consumes new buildings the way they do movies or restaurants or art exhibits. So what's the rationale?

ALH: I think just the opposite. I think this is the ultimate consumerism. I think we are so subject to architecture. I think it has such an influence on us, both conscious and unconscious. I think it colors our days and our lives. It affects our attitudes toward our work and our environment. It can give us a sense of dignity and well being. It can destroy us. I think it's the most influential of all arts. Certainly the most complex of the arts. I think this is an enormous responsibility of the critic.

RC: What is the critic trying to do?

ALH: Trying to see that things are done in such a way as to have the maximum effect in terms of life and art and what we experience in our daily lives. Take an example. I just read about a school in the Bronx—kindergarten through sixth grade—with no windows. And dedicated teachers and students who are devoted to trying. And it is just so grim, so dismal, that someone has even drawn a window on one of the blank walls. It's a school! We build them supposedly to educate and mold our young people.

RC: And the first lesson is: Don't interact. Defend yourself.

ALH: Defend against the world. It's a sad

lesson. It has so much to do with your sense of self worth.

RC: So you see the critic's role as that of raising the level of understanding and demand for architecture, by defining what's good and bad?

ALH: Raising consciousness. Creating awareness. I think this is a supine world. It's a supine consuming public for architecture. People have entitlements for everything else. They know every entitlement, no matter how outrageous. But they do not know

"People have entitlements for everything else... no matter how outrageous. But they do not know their entitlements to architecture and the environment."

their entitlements to architecture and the environment. They have them and they should expect them.

RC: What are people entitled to?

ALH: They're entitled to places that go beyond decency—and many of them are below even that level. Places where you can be enriched and grow and feel your own sense of self-worth developing. Architecture can help all that. But of course, we mustn't make the mistake of thinking architecture can do what it can't do, which was the problem with the Modern movement. These cases of blowing up housing as if the architects and the buildings were at fault.

RC: You're thinking of Pruitt Igoe?

ALH: That kind of thing, yes. Surely too much hope was put upon giving people enough space and light and air and basic facilities. But there was no reason to destroy housing as being the creator of the problems—the multiproblem family, with which these housing units were stuffed. No construction could have survived it.

RC: What qualifies critics to decide what's good and bad? (You can tell I feel I've come to Delphi here; these are the answers I've been waiting for all my life.) Where do the judgments come from? Have you ever seriously regretted one?

ALH: Umm-hmm.

RC: What is it?

ALH: Only one. The only thing I think I really screwed up on was Yamasaki. It was shortly after I came to the *Times*. He was doing a new kind of work that I thought—quite early on, you see, this was the '60s—was going to lead us out of the traps of Modernism. Actually, it turned out to be a bunch of clichés. When he did the World Trade Center, which I remember calling the biggest *daintiest* buildings in the world, there was no substance.

RC: Everybody went overboard on

Yamasaki. I remember seeing him in *Time* magazine.

ALH: He was a cover.

RC: Anatole France [the French novelist and satirist, who lived from 1844 to 1924], I think it was, said that a critic is someone who reports on his adventures among masterpieces. How often does it happen that you hit a *real* masterpiece? For me that's the biggest thrill of all.

ALH: It *is* the biggest thrill of all, and it's sometimes quite unexpected. I remember walking down a London street in Spitalfields, and at the end of that street encountering a Hawksmoor church in the rain. There was this slick, shiny-dark pavement and this *strong*, complicated, marvelous church rising almost out of the mist with a reflection in the pavement, and it was, "Oh, wow." It just hit you so hard, the complexity and the mastery, and how complexity and mastery again became simplicity. That whole thing just worked so wonderfully. And you're blown over. And it happens enough to make it a wonderful job.

RC: I had an experience like that at the Alhambra, also alone, also in the rain. What are some others?

ALH: Almost any Aalto building has that effect on me. They are buildings that reward you so much more than you expect. You don't expect that total mastery. They photo-

graph badly, they're very subtle, so you expect something that is "good," but you don't expect to walk into, as I did, and this is another moment—the symphony hall in Helsinki, not Finlandia Hall, I'm not sure of the name [House of Culture], and there was an orchestra practicing so we were given special dispensation to just come up a side stair and look at the whole thing. You walked up that stair, you heard that music, you saw this circular interior, and you realized that *everything* worked at once; that this space had been conceived probably just like that, as a complete round space, that everything fed into it, not by careful manipulation or trial and error, but because here was a master. And the music was right and the space was right and the shape had utter simplicity, again, the simplicity of mastery. And it was a kind of epiphany.

RC: Do you have those experiences as often as you used to?

ALH: Anytime you get me to a building like that I'll have it. ■

Part II of this interview will run in Observations in May.



Ada Louise Huxtable at home.

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Desert Shield

Desert buildings are about sun and walls," states architect Will Bruder, who left his native Wisconsin for Phoenix in the early 1970s. An apprenticeship with Paolo Soleri and a lifetime appreciation of Frank Lloyd Wright have left Bruder with a keen eye for tying architecture to the landscape. For Robert Theuer, a retired airline pilot, and his wife Rhonda, Bruder designed a 2,500-square-foot house that embraces the rugged land in a sweeping curve. On one side of that curve is a desert garden, stocked with more than 40 species of local plants, while on the other lies a suburban wasteland of expensive tract homes. Relying on a simple palette of cinderblock, glass, weathered steel, and copper, Bruder erected solid walls facing the subdivision and glass ones looking north to the garden and the South Mountains in the distance.

Like traditional Southwestern houses, this one turns a weather-toughened face to the street and provides a sheltered forecourt only to those who have been allowed past the front gate. Although this inward-looking elevation contrasts with the more expansive north facade, it introduces many of the elements that give the house its character: bold curves, maintenance-free materials, and indigenous landscaping. Peeling away a concrete-block wall from the main house to form the forecourt, Bruder makes it clear from the start that this is an architecture of walls set in motion by the sun. And by hinting at what's to come, the architect has added a sense of mystery to the house's allure.

From the forecourt, the house reveals itself slowly. A recessed entry, designed as an elegant composition of glass planes set between a polished-concrete floor and a particle-board ceiling, draws the visitor indoors. Once inside, subtlety gives way to the spectacular view of the garden and the mountains beyond. Centered on a point 50 feet into the garden, the curving geometry of the north wall draws the eye to the outdoors. Ten-foot-high panels of half-inch-thick glass rise the full height of the wall, offering uninterrupted views.

"We wanted the outside in and the inside out," says Robert Theuer, "and Will certainly did a number on that." One example is a stainless-steel fireplace that sits half inside and half outside the glazed wall. Resting on a seven-foot-wide circular pan of water, the gas fireplace seems to hover between contrasting worlds.

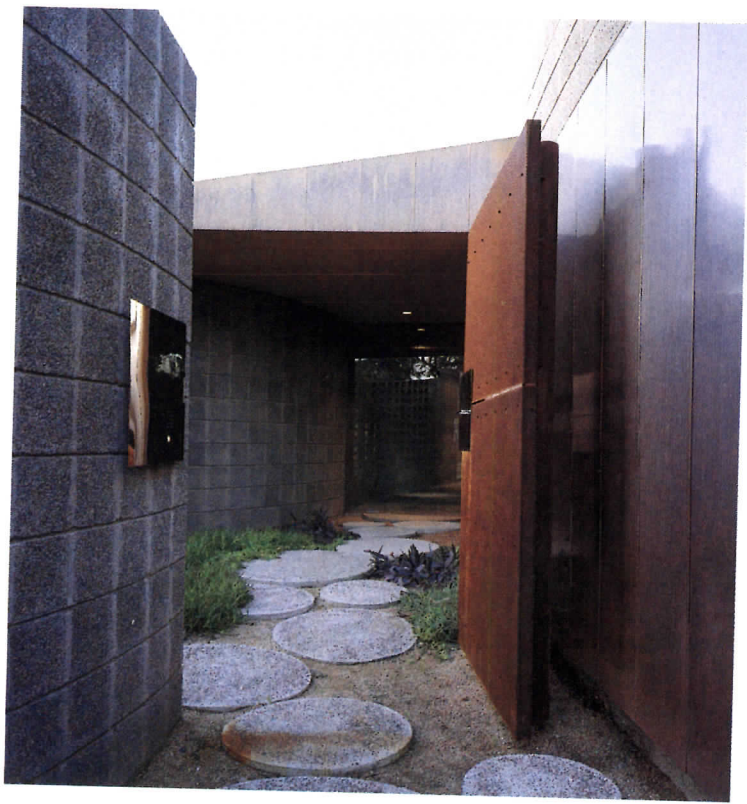
Instead of having separate living, dining, and family rooms, the house has one great room that provides the free-flowing living space the clients had requested. Even the kitchen works as an extension of the living area, separated by only a slender cantilevered counter. The sense of spaciousness is heightened by the contrast between the 10-foot-tall, glazed wall on the north and the seven-and-a-half-foot-high masonry wall on the south. Adding a final touch of drama to the composition is a one-inch-high strip of clerestory window sandwiched between the cinderblock wall and the low ceiling.

The single-loaded-corridor plan ensures that all rooms face the garden and provides cross ventilation to help cool the house. Roof overhangs also protect the house from the sun—three feet beyond the solid south wall and five feet beyond the glazed north wall. Further sun protection comes from a series of perforated-weathered-steel shade "sails" that hang from the roof above the covered garden terrace. A covered stable just west of the house and a dog run adjacent to the guest wing accommodate the clients' two horses and two Great Danes. Both for humans and animals, the house encourages what Bruder calls "resort living," a term that implies spending as much time outdoors as indoors. *Clifford A. Pearson*

© Timothy Hursley photos



Built on a one-acre lot in a suburban subdivision, the Theuer Residence faces its neighbors with a set of curving masonry walls that only hint at what's inside (opposite top). A concrete-block wall with some blocks rotated so they create a perforated effect encloses an outdoor forecourt. The entry gate to the forecourt is made of punched weathered-steel (opposite bottom left), as are the curving shade "sails" protecting the garden terrace on the opposite side of the house (above). The recessed entry is a play of rough and smooth materials (opposite below right). The structural system combines wood framing, load-bearing masonry walls, and steel members along the glazed north wall (previous pages and top).



Beachfront Basilica



*Stanley Tigerman melds
Midwestern barn imagery and
traditional church planning to
create a winter home/studio
for a Chicago-based artist.*

*Artist's Studio and Residence
La Conchita, California
Tigerman McCurry, Architect*





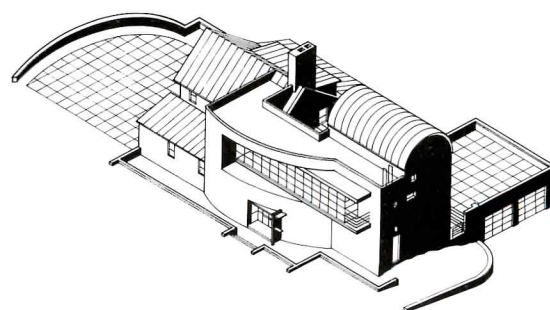
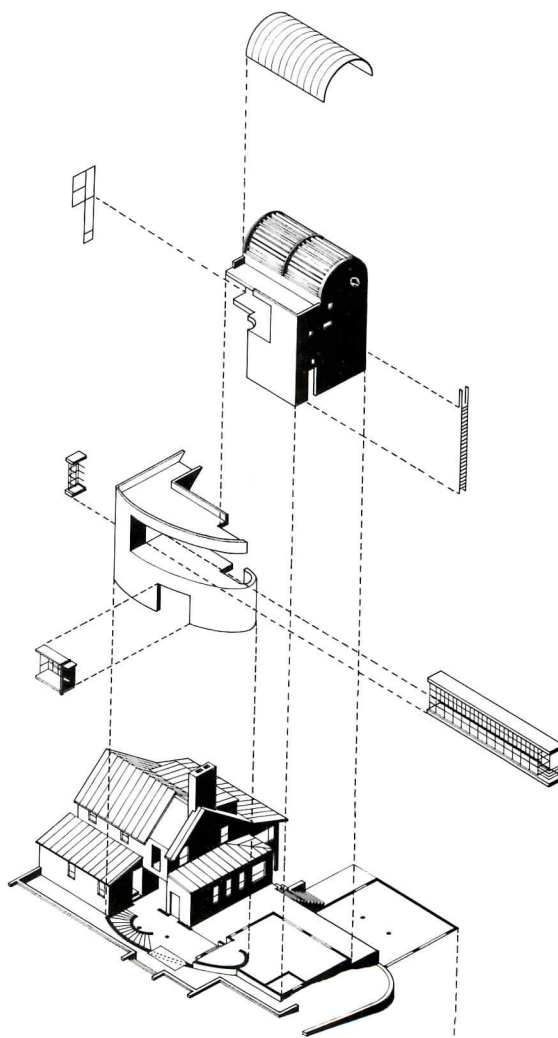
Although made of different pieces—old and new, gable-roofed and barrel-vaulted—the Gorman Residence is greater than the sum of its parts. Faced with an early 1900s carriage house and the changes made to it over the years, architects Gisue and Mojgan Hariri added several major new pieces of their own design, making everything snap into place like a good jigsaw puzzle. While all the elements retain their identities, they fit together—visually and structurally—so that removal of one would imperil the whole.

The project began with Donna and Geoffrey Gorman asking the Hariri sisters to add a second story to a freestanding garage and connect it to the 1,500-square-foot house. The architects also agreed to reconfigure circulation in the house, so the front door wouldn't lead directly into the living room. As the clients began planning for a family, the program grew. In the end, the Hariris recommended tearing down the garage, and building on its foundations a new two-story structure with a family room/den on the ground floor and bedrooms above. In the process, the garage would be pushed farther west and a new entry component would be inserted between the old house and the new family-room structure.

In designing the new elements, the architects kept in mind traditional New England building types. Thus, the family-room building became a "barn" with a barrel-vaulted roof and the connecting element became a "covered bridge" made of glass and steel. Built as a hybrid structure combining wood framing with some steel columns and beams, the new components overlap and penetrate each other so that part of the fun of walking through the house is marveling at how the pieces come together. A good place to appreciate this is inside the curving entrance hall (following pages) where a winding staircase on the south end leads to the second-story bridge and a set of three steps at the other end provides access to the family room. A column near the family room marks the southeast corner of the old garage foundations and helps support the new bridge, thereby serving as both a figurative and literal link between past and present.

Uncomfortable with the ad-hoc nature of the existing house, the clients asked the Hariris to create more free-flowing spaces. Their response was to open the living room directly onto what had been an enclosed porch and what now serves as the dining room. Also added was a new glazed entrance at the south end of the living room that leads onto a generous terrace. "Simple surfaces and straightforward design give our work a machine-like quality," says Gisue Hariri, recognizing her debt to early Modern architects. "But we like to think that our use of space and our search for connections give it a spirituality and a concern with human psychology that were sometimes missing in early Modernism." *Clifford A. Pearson*

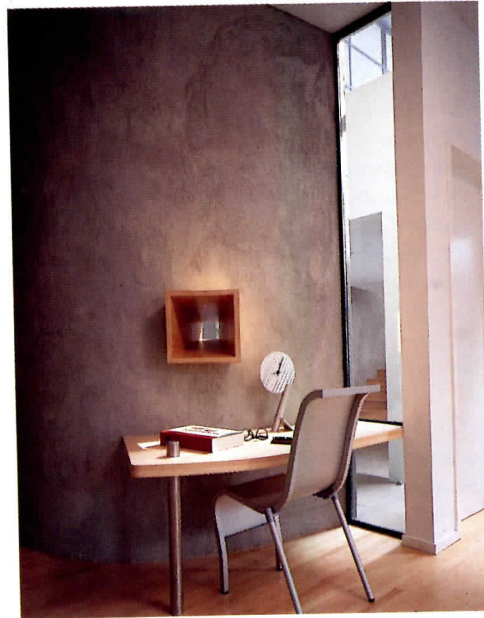
New components double the size of the house to 3,000 square feet. Old and new elements are finished with gray stucco, but each retains its own form and identity (opposite top). Connecting the old house with the additions are a second-story bridge (opposite bottom right) and a terrace on top of the new garage (opposite bottom left).



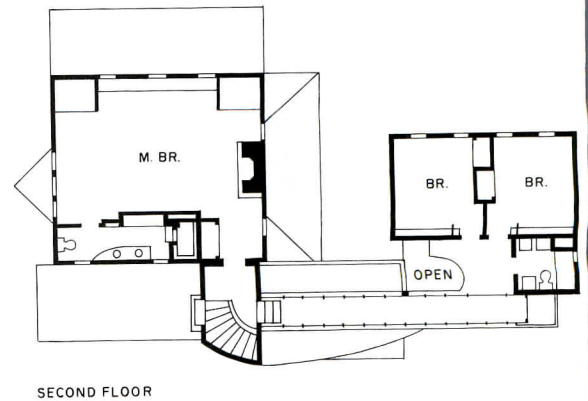
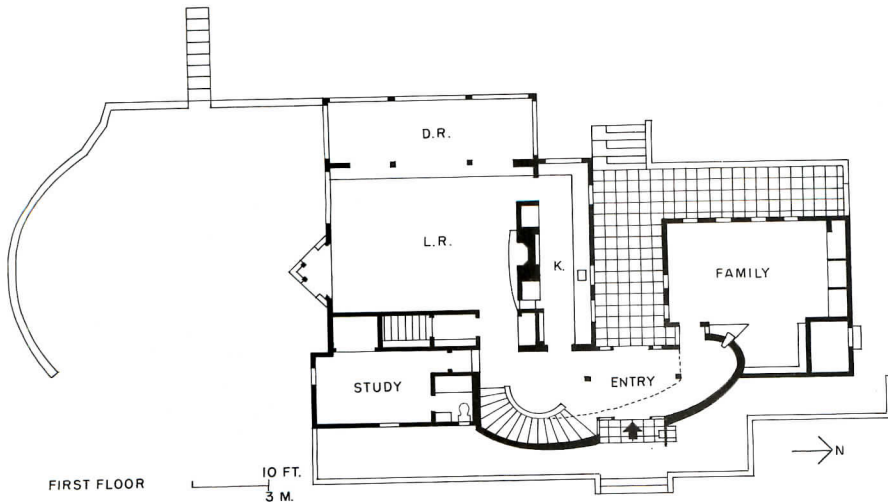


The curving structure between the existing carriage house and the family-room building serves as the new main entrance and as the connector between old and new (pages 76 and 77). Elements that link old with new or inside with outside—such as columns, a winding stair, and a glass-and-steel vestibule—penetrate the entry hall (opposite), reminding visitors that this house is a collection of parts.

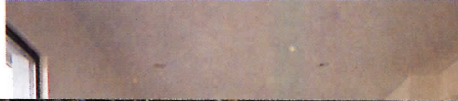
Simple materials such as sheet-rock, stone floors, and maple detailing give interiors a clean, uncluttered look. Three steps lead up to a two-story-high space just outside the family room (top). Inside the family room, a wooden “viewing box” and a narrow strip of floor-to-ceiling glass make connections with the entry hall (bottom right).



Just as the glass-and-steel bridge slices through upstairs, the entry vestibule penetrates the curving facade of the entry hall (bottom left and opposite). The lead-coated steel roof of the vestibule continues inside as well as outside the hall.







A glass-and-steel bridge (opposite) links bedrooms in the new building to the master bedroom (left bottom) and the rest of the

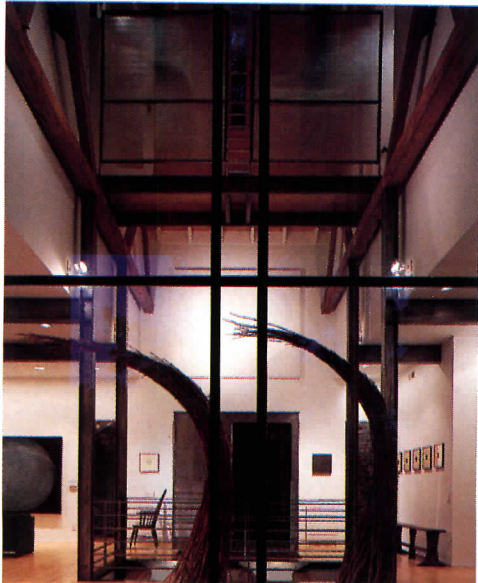
*Martin Residence
Kennett Square, Pennsylvania
Tanner Leddy Maytum Stacy
Architects*



Box Inside Box



The Martin house, situated in conservative Chester County, Pennsylvania, farm country, is a curious study in contrasts—a working couple returning East from San Francisco, he a molecular biologist, she an abstract painter, enlisted an architect known for free-flowing California-style high-tech (see RECORD HOUSES, April 1992, page 124) to design a house in a region known for 19th-century farm complexes with walls of 20-inch thick stone and hand-hewn oak tree



A central atrium connects the three levels (far left and opposite page). Boxy chairs and a coffee table are by the architects, and are supplemented by early American heirlooms such as a bench, a hinged table, and bookstands. Frequent entertaining occurs on the lower level (left and lower left). The kitchen is separated from dining by a custom-made metal-framed glass partition, with a cantilevered granite serving surface. Access to a large barbecuing terrace is through the stone wall to the left in lower photo. The house is heated by radiant hot water—partly by vertical panels, partly by pipes embedded in the lower level floor. Water is piped from a natural spring shared with two neighbors.

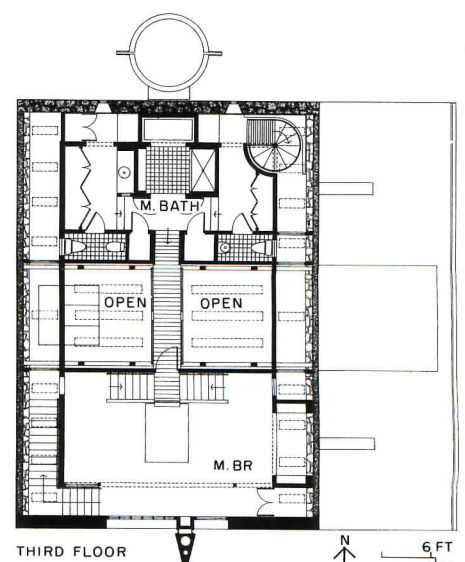
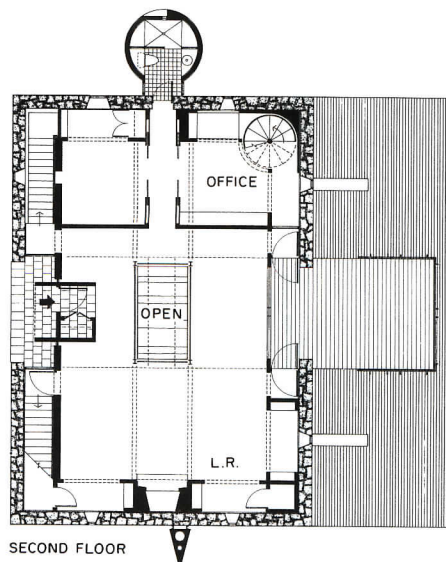
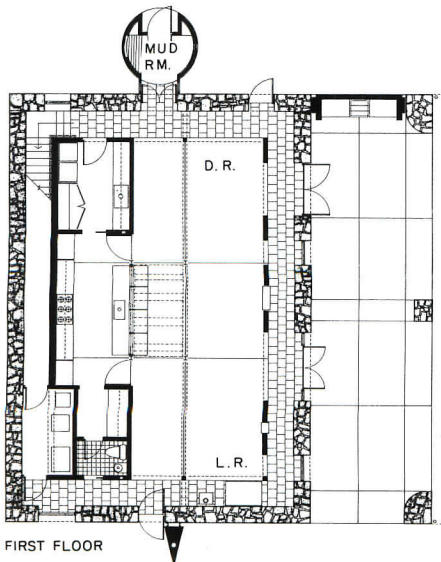
Credits

Martin Residence
Kennett Square, Pennsylvania
Owners: David and Kathleen Martin

Architect: Tenner Leddy
Maytum Stacy Architects—
William Leddy, partner-in-charge; Craig Edwards, job captain; Joanne Kennedy, Douglas Gauthier, Kim Kwan, project team

Engineers: Robert Chagnon (structural); Gary Debes (mechanical)

General Contractor: Mobač, Inc.





The program was deceptively simple: a modest-sized structure with enough space for guests, a painting studio, and holiday gatherings that would complement a 19th-century farmhouse on a 100-acre property in upstate New York. Architects Deborah Berke and Carey McWhorter's response blends with farmyard vernacular without aping it, thanks to the rigorous purity of its forms. Clients Peter Halley and Caroline Stewart's requirements initially seemed at odds with each other. He, a painter and leading proponent of the "Neo Geo" movement, grew up in a cramped Manhattan apartment craving wide-open loft space. She, raised on a Louisiana plantation, wanted a traditional farm compound and a porch. The architects accommodated them both within 1,500 square feet and a tight budget.

The hillside site facing the Berkshires is in the path of run-off streamlets, which created water-drainage complications. The architects constructed an arching curtain drain; filled with rocks and gravel, it draws water around the house before it resumes its course to a pond downhill. To anchor the structure, Berke and McWhorter set the north end into the gradually rising slope, merging building and land much the same way as the main house burrows into the hill. Only the lawn in front of the porch was leveled to create added usable outdoor living space.

The house is a three-part volume comprising porch, studio, and bedrooms. Materials are limited to shingles, sheetrock, plywood, and tongue-and-groove joined pine, but are used differently to express each of the parts. The studio is clad in shingles with four 8-foot 6-inch windows set flush into the eastern facade; by contrast, the guest house has vertical siding with 16-inch-deep window sills. The porch facade, topped by a cathedral-ceilinged bedroom, is the most complex composition. Here, the window sill of the gable intersects the wood framing of the porch, which rises above the base of the upper floor to dramatize its nonstructural role.

While the exterior clearly suggests a condensed farm compound, the interior has the spaciousness of a loft combined with the simplicity of a Shaker meeting house. Given the straightforward plan, there is a richness in the careful detailing and spatial contrasts. For example, the porch does not enter directly into the large studio; instead, passage is interrupted by a hall that turns into a staircase, its slow rise paralleling the nearby hill. The staircase to the bedroom over the porch appears to be cut out of the wall (opposite bottom); its steep grade is reminiscent of kitchen stairs in New England farmhouses. A sequence of two guest bedrooms and a bath off a long hall at the top of the graduated stair completes the plan. In these rooms, the windows, though smaller than those in the studio, admit generous east and west light.

Berke and McWhorter relied on such old-fashioned ventilation methods as high ceilings and small windows, and sited the house to take advantage of two shade trees. It is with such seemingly conventional gestures that the architects reveal the power of simplicity.
Julie Iovine

Julie Iovine is a New York City-based freelance writer.

Credits

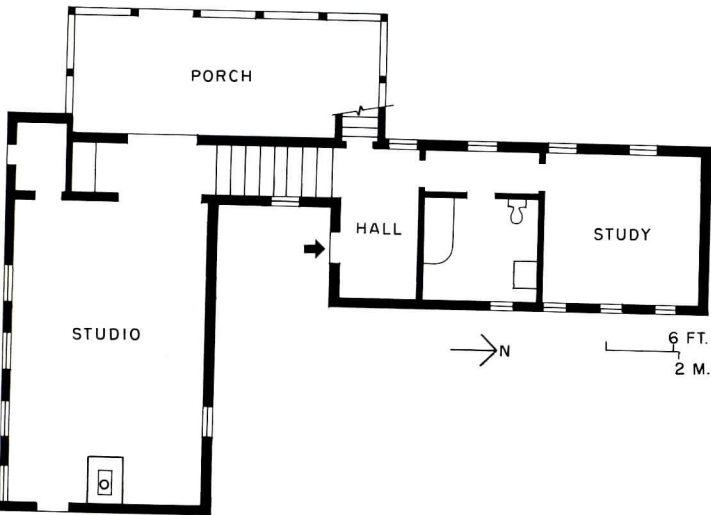
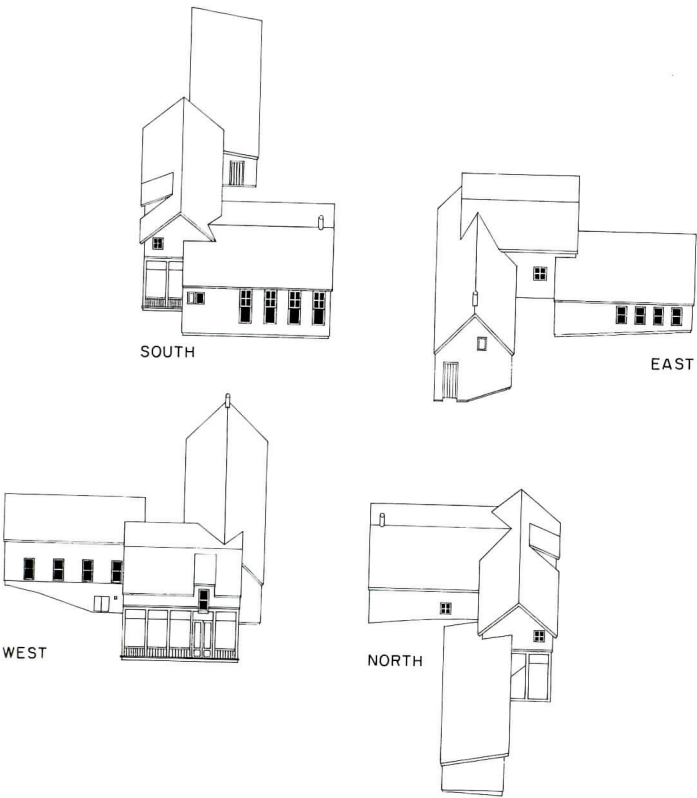
*Studio/Guest House
Hillsdale, New York*

Owners: Peter Halley and Caroline Stewart

Architect: Deborah Berke and Carey McWhorter, Architects

General Contractor: Shadic Builders, Inc.





Berke and McWhorter achieved the effect of a compound by interlocking three volumes with distinct functions. The porch elevation (opposite, top and center) has a single gable, while a shed-roofed portion (opposite, bottom) of the building contains two guest bedrooms and a bath. The architects originally

envisioned a single large window for the studio/gathering room, but their client artist Peter Halley said that he preferred windows like those in New England Congregational churches (top). Two stairs meet on a landing between studio and the guest-bedroom wing (bottom).

Though the house shown in these pages hardly looks experimental, it is the culmination of a 10-year exploratory process by Bentley LaRosa Salasky. The partners departed early from their minimalist roots, and the work is now neither archeological traditionalism nor tied to the trend of the moment—a quality that intrigued the clients. “What always comes up when Postmodernism is debated is that people are comfortable with tradition,” says Ron Bentley. “But people also want what Modernism offers—large expanses of glass, interlocking space, outdoor orientation.” The architects haven’t chosen one approach over the other, Bentley explains. “We try to make people comfortable, yet work with [Modern] aspirations.”

Having long and often walked the four-acre site together, the clients asked the architects to tuck the house into the highest corner to command a sweep of greenery studded with mature specimen trees and shrubs planted by a previous owner. (Landscape architect Billie Cohen collaborated in the substantial editing effort.) To take advantage of this “garden gone wild,” the architects found inspiration in the “butterfly” plans drawn by turn-of-the-century English architects to unify house and landscape for a then-new suburban clientele. Bentley LaRosa Salasky’s version anchors the house to its site with a central block containing the main living areas; the wings are hinged to form a graveled auto court to the west and reach into the expansive garden to the east. The visitor sees the house obliquely both entering and leaving (opposite top). This “picturesque” experience emphasizes the design’s abstract, geometric qualities—a distinctly “Modern” experience.

The punched, symmetrical windows and massive, attenuated chimneys of the central block (suggestive of country-house antecedents) counter the horizontal proportions, low-sloped hip roofs with deep eaves, and glazed and carved-away corners, all of which bring to mind Prairie-School Frank Lloyd Wright (preceding pages). As with Wright, there is a constant interplay between exterior and interior. The living room, exaggerated in the house’s massing, commands the most sweeping view. In plan, the room is a simple rectangle, but the architects have left the corners open, leading the eye to the complex interlocking spaces beyond, and permitting fingers of sunlight to penetrate indirectly virtually any time of the day.

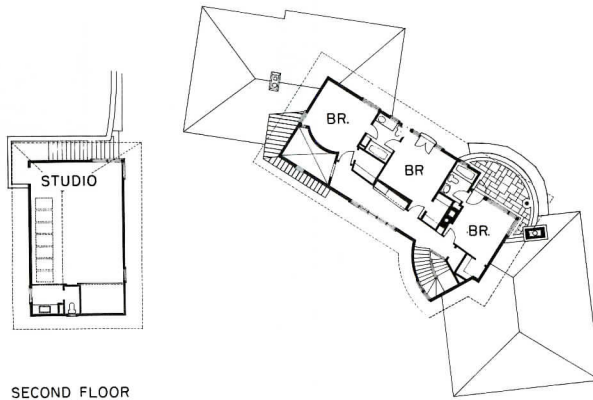
In details, there is also a tension between Modern and traditional. The symmetry of the main volume is emphasized through its hipped roof and vertical board-on-board siding. Yet this same volume is visually pulled apart by the overscaled window wall at the entry (top photo) and eroded by the curve in the bow-windowed den (opposite top). The house evokes but never quotes. At every turn, says Sal LaRosa, “We asked, can we transform this element, imbue it with another life?”

Equally at home with decoration and architecture, the designers developed and restated themes at an extraordinary variety of scales. A custom chandelier, reworked, is a sconce. Japanese proportioned “French” curves defined a family of profiles used for crown moldings, a fireplace mantel, column capitals, and cabinet tops; it’s turned vertically for wood “linenfold” paneling. Likewise, painted exterior wood columns reappear on the interior, slightly altered in proportion and lovingly detailed in oak and mahogany with a “capital” of wrapped copper wire. The near-obsessive scope of the design seems at odds with the words the architects use to describe what they hoped to achieve: “simplicity,” “composed,” “unself-conscious.” That this house looks like it has always been there—while looking like no other—testifies to their success. *James S. Russell*

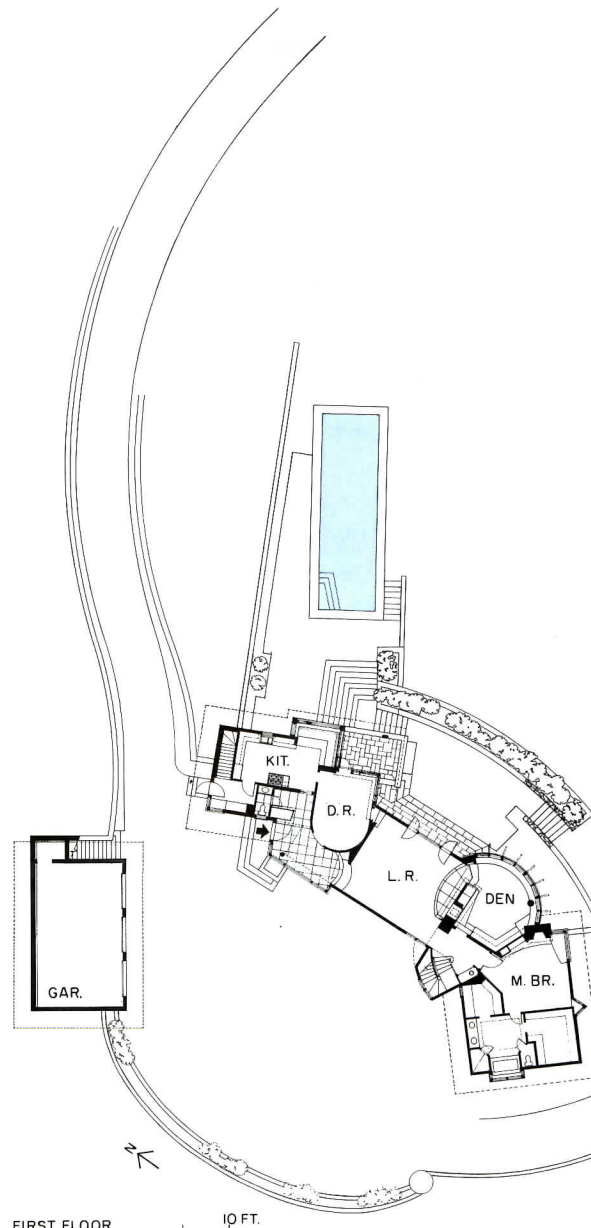


The Westchester house is intended to be seen from an angle (opposite top), though the frontal view best explains its relation of parts to whole (preceding pages). Viewed from a separate painting studio, an overscaled window wall signals the entrance (top). Deep overhangs emphasize the horizontal in the master-bedroom wing (opposite bottom). By carefully arranging stepped terraces and stone-faced walls, the architects protected the garden-side pool (above) without fencing it in.





SECOND FLOOR



FIRST FLOOR

10 FT.
3 M.

The open, flowing plan is overlaid with subtly developed axes: from entry to master bedroom, from dining to den. Paired columns supporting a roof over a terrace draw the eye through a dining nook to the landscape (opposite top left). A copper fascia and Arts and Crafts tiles transform a Wrightian device, the double-facing fireplace (opposite bottom). Details such as columns, molding profiles, and light fixtures recur, subtly re-scaled in the den (opposite top right), the entry (top left), and the upstairs corridor (left). Compare, for example, the oak column and a leg of the custom Windsor chair.

Credits

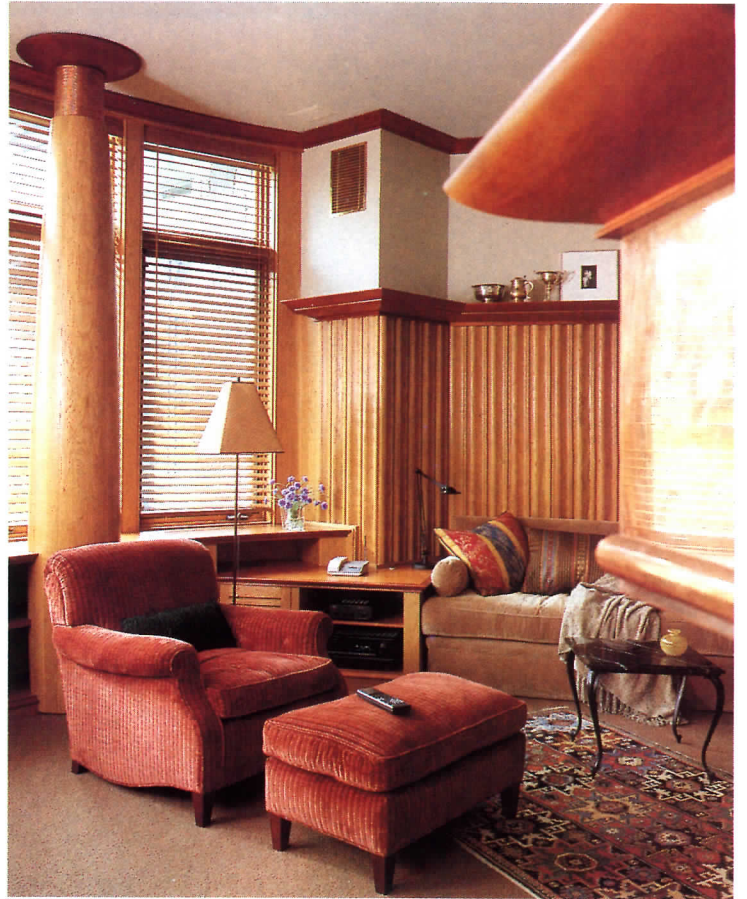
Westchester Residence
Westchester County, New York

Architect: Bentley LaRosa Salasky, Architects and Decorators—Ronald Bentley, Salvatore LaRosa, Franklin Salasky, partners-in-charge; Peter Dick, Denise De Coster, Benjamin Benson, Adam Rolston, Jylle Menoff, J. Robert Yogel, Lana Hum, Joseph Morrison, Jean Krueger, project team

Engineers: Robert Silman Associates (structural); Regis Engineering (mechanical)

Landscape Architect: A. Billie Cohen

Contractors: Franco Brothers (general); John Skovron (landscape)



Breaking Boundaries

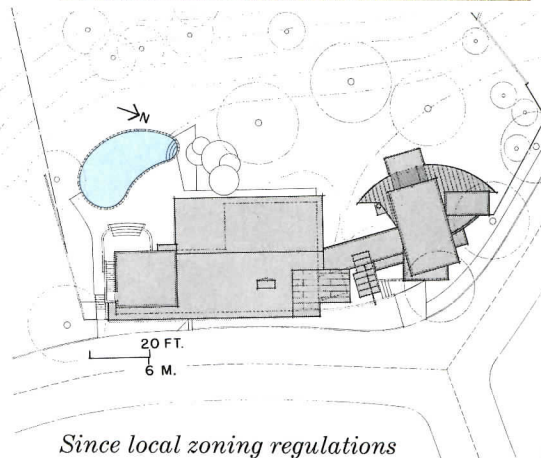
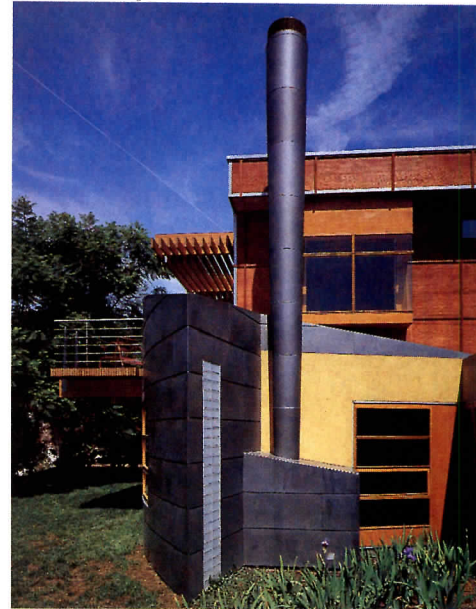
The house that Frank Israel renovated for Howard Goldberg and Jim Bean in the Hollywood hills is an attention-getter, even by Los Angeles standards. This will please those familiar with the original—a 2,400-square-foot 1950s bungalow on a 1/2-acre lot in the Outpost section of the “hills”—which lacked the sort of distinction suggested by the site. But like his clients, Goldberg, a talent agent, and Bean, a real-estate investor, Israel recognized potential. By adding a foyer/gallery and a master bedroom tower, totaling 1,550 square feet, and recladding the existing structure, the architect made the undistinguished ranch into a star.

Development of Outpost, a planned community, began in the 1920s and design regulations governing use of building materials virtually mandated a neighborhood style of Spanish revival. In recent years, the regulations, which architects considered stifling, have been mostly repealed, yielding a new but uneven crop of houses. In re-making the Goldberg-Bean house, Israel chose not to erase local history but rather to embellish it. An assiduous analyst of architecture with a special interest in the California building tradition, Israel is quick to point out various references in his work. Shiplap cedar siding on the new front gate, for example, is meant to recall the house’s previous lapped siding. The new mustard-colored stucco finish and reddish cedar cladding was inspired by the bright hues of original Outpost buildings. “Looking around the neighborhood you realize that in terms of color, this house is contextual,” says Israel.

Israel purposely casts a wide referential net. Discussing the layout of the rooms, he cites the Case Study Houses, the subject of “Blueprints for Modern Living,” a major exhibition at the Los Angeles Museum of Contemporary Art held prior to the Goldberg-Bean commission, as a bench mark of the city’s cultural identity and his own professional development. The Case Study prototype, where interior and exterior spaces seem to merge into one barrier-free living area, is evident in the new floor plan, which Israel conceived with project architect Steven Shortridge. By opening up the old living room with new sliding glass doors that lead to the backyard and then on to paved terraces that step down to the swimming pool (opposite top), inside and outside merge into one. The architects removed a row of mature shrubs along the narrow site’s western edge, where it dramatically drops 50 feet to reveal views of the city below. They also sharpened the contours close to the edge to further intensify the feeling of boundless space.

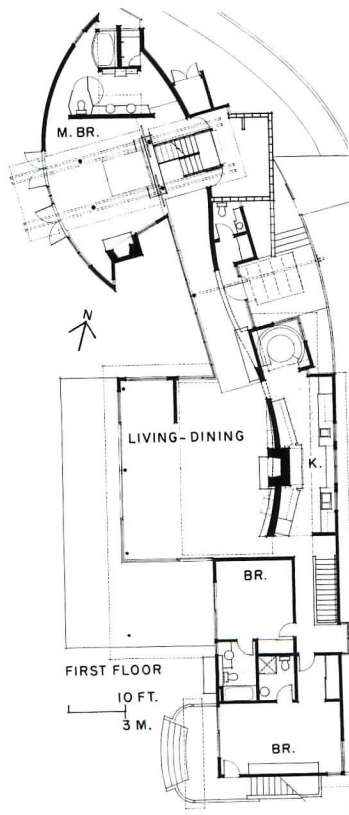
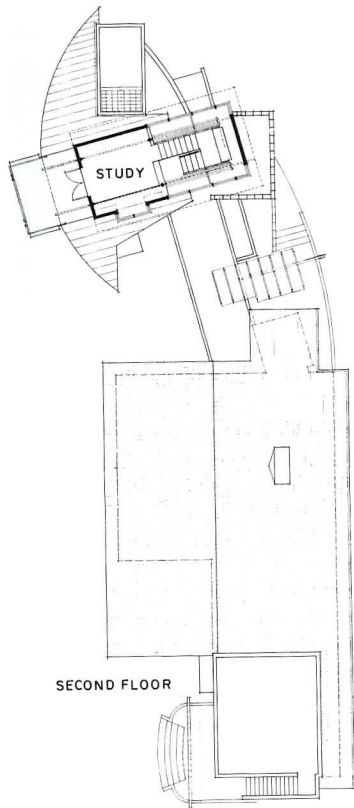
Whereas the west elevation opens to the garden and the city beyond, the east elevation presents a protected public face to the street (previous pages). Here, openings are few and serve more to admit eastern light than to provide views; even the recessed entrance is screened by a glass and steel canopy. The tower is aligned on axis with a perpendicular street, creating a visual hinge in the 150-foot-long street facade. The great length’s effect is lessened by the use of contrasting materials, a solution seemingly influenced by Frank Gehry. Israel agrees that he, too, wants “to emphasize the various pieces,” but unlike Gehry he eschews material “collisions” in favor of crafted joints, similar, in his mind, to the work of Italian master Carlo Scarpa. Joints are indeed meticulous: redwood battens accent the tower’s cedar panel modules, Douglas fir delineates window frames, and terra cotta tile on the roof distinguishes “old” house from “new,” echoing the tile once mandated by Outpost rules. Tying the pavilions together is a 90-foot-long blue stucco wall that begins inside as a fireplace surround (following pages), and then curves through the foyer to emerge boldly at the house’s north corner—a sweeping gesture worthy of Hollywood. *Karen D. Stein*

©Tom Bonner photos



Since local zoning regulations did not require a setback from the street, Israel’s 1,550-square-foot addition to an existing 2,400-square-foot 1950s ranch closely follows the curving frontage (site plan above). The entrance is, however, recessed in a forecourt and screened from public view and the sun by a steel and sandblasted-glass canopy (previous pages). A glass gallery, the link between the existing bungalow and the new tower master-bedroom suite (opposite), separates the foyer from the backyard. The architect used different materials to express the various forms: cedar plywood with redwood battens on the tower, bonderized sheet metal on the curved master bedroom wall and chimney, and a light-sand-finished mustard-colored stucco on the forms between.





A 90-foot-long curved blue-pigmented stucco wall with a smooth, steel-troweled finish ties the existing house to Israel's addition, emerging at the north corner. The blue wall separates the living room from an expanded kitchen (opposite top) and creates a light-filled gallery that links public rooms with the more private master bedroom suite (opposite bottom and following pages). The master bedroom is dominated by a built-in "two-poster" bed with two steel columns supporting Douglas fir gluelam beams (bottom left). Exposed floor joists of the study above (top left) form the "canopy." The study's balcony shades the master bedroom, while deep eaves shade the living room and adjacent porch.

Credits

- Goldberg-Bean House*
Los Angeles, California
- Owners:** Howard Goldberg and Jim Bean
- Architect:** Franklin D. Israel Design Associates—Franklin D. Israel, principal-in-charge; Steven S. Shortridge, project architect; James Simeo, Danny Kaplan, Jeffrey Chusid, Leslie Shapiro, and Michael Poris, project team
- Engineers:** M. B. & A. (mechanical); Davis Design Group (structural)
- Consultants:** Jay Griffith (landscape); F. I. R. E. Ltd. (lighting); Future Home (audio/visual)
- General Contractor:** A. R. T.—Lawrence Garcia





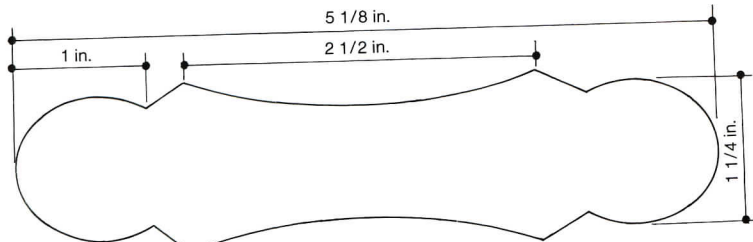


Stairway Details

As editors, we spend a considerable time getting to know each project we write about. We become privy to the intense effort that goes into making what may appear on our pages as simple and obvious. A window surround, a roof edge, a cabinetry profile may not assert itself in the design, yet can often be, as a friend says, a poem. Thus, we inaugurate this occasional series in which we show only details. Stairs make a worthy subject, especially within RECORD HOUSES, since they lend themselves to endless interpretation. This group has been chosen to represent a range

Westchester House

*Westchester County, New York
Bentley LaRosa Salasky,
Architects and Decorators*

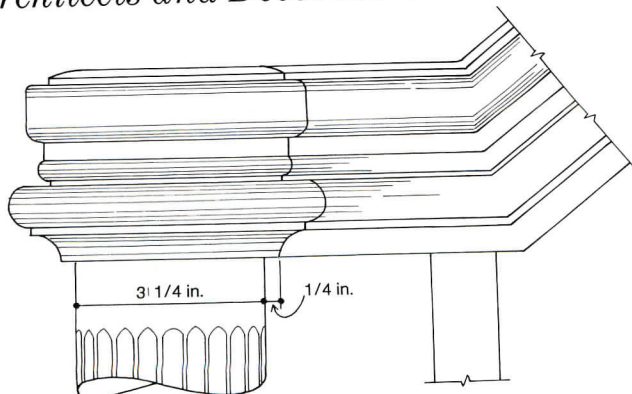


BALUSTER BOARD

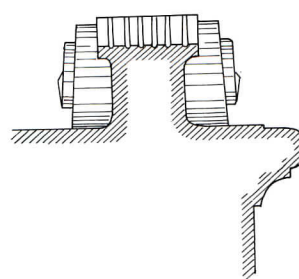


Addition to a House

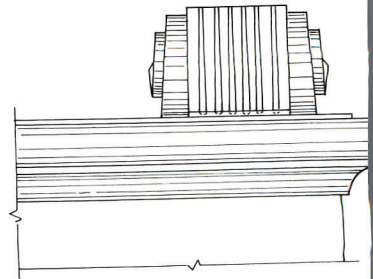
*Westchester County, New York
Bentley LaRosa Salasky,
Architects and Decorators*



NEWEL POST CAPITAL

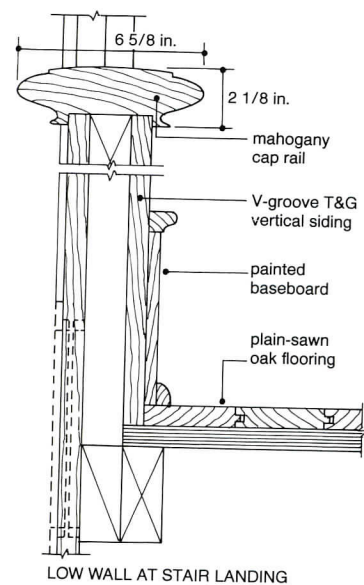


SECTION THROUGH HANDRAIL



END OF HANDRAIL

of budgets as well as styles. Note that assembling details in one story by type is an old idea we're bringing back. In March 1938, when *RECORD* incorporated *AMERICAN ARCHITECT AND ARCHITECTURE*, it began running that publication's portfolios of details (the first was rain leaders). It's still a fresh idea 55 years later. J. S. R.



Tight corner

Stair details for this house (shown on pages 94-99) restate themes developed throughout the design. The round newel posts are members of a "family" of columns, which occur at various locations. The architects adjusted the thickness and degree of entasis to suit each column's height. Likewise, the baluster of the open rail (plan detail opposite left) is a variation on profiles devised for moldings and trim. Unusually high, the stair stringer's dimension was designed to achieve a pleasing balustrade proportion. Prior to fabrication, woodworkers laid out the stair in their shop to verify that the curved shapes would fit together. A solid balustrade (attached to the lower newel post in far left photo but not visible) is clad in painted beaded-board (detail, near left) as an extension of an adjacent wainscoted surface. ■

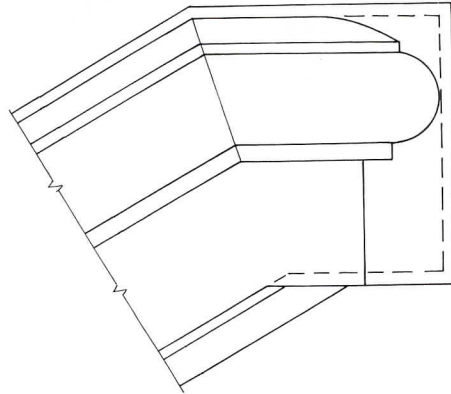


Classical return

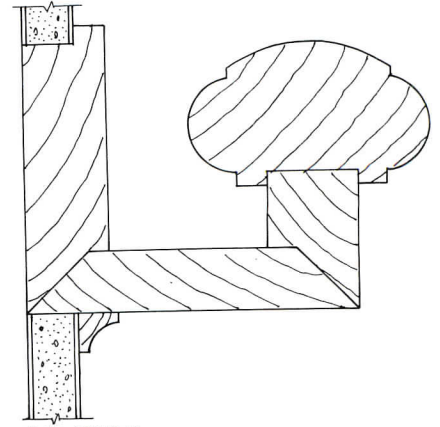
An existing stair had to be redesigned for an addition and remodeling that included creating a double-height entry hall within an existing envelope. The architects stayed with the classical French style of the house in designing the addition. Though treads and risers were retained, an open balustrade was designed incorporating three different thinly proportioned one-and-one-half-inch diameter balusters. Two are weighted more heavily to the bottom; one to the middle. The architects had seen such baluster combinations elsewhere. "We liked the interplay," comments partner Ron Bentley. From the newel post (detail opposite far left), a double-molding rail follows the balustrade up the stair, along the length of a balcony (near right photo) to a solid balustrade-cum-bookcase. The upper half of the rail profile ends in a scroll molding (opposite middle and right detail), while the lower half matches the profile of the bookcase's top. Another solid balustrade curves out of the wall; by carrying the paneling from the adjacent surface, it was treated as an extension of the wall into the space (left photo). ■

Allredge House

Glen Arbor, Michigan; Charles Warren, Architect



RAIL END AT WALL.



RAIL AT WALL

Cooper Bauer Apartment

Boston, Massachusetts
Denison Luchini, Architect



Photo courtesy Metropolitan Home

Davis Rosenthal House

Lyme, Connecticut
Scot P. Samuelson, Architect

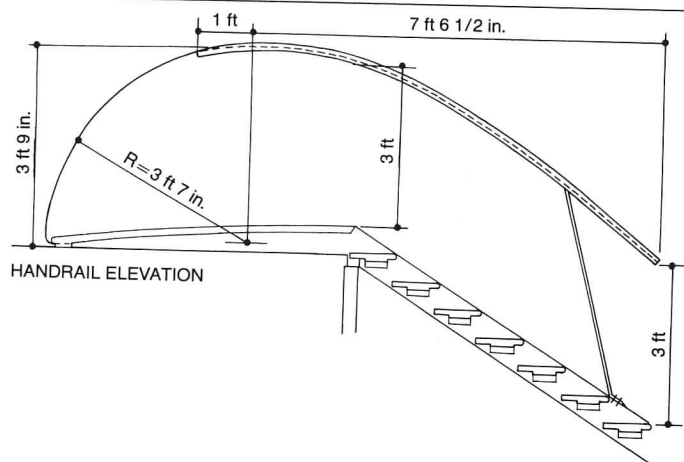


George Rose photos



Prairie Piranesi

With its intricate route, this stair evokes the picturesque vistas and intimate inglenooks of late-19th-century houses. Indirect sun from small dormer windows lights the lowest level. Light spilling down from a viewing tower leads the visitor up. The house's split-level scheme places the main floor a half level above grade for views over dunes to Lake Michigan. The stair is "sort of Piranesian," says architect Charles Warren. "From any one of the house's levels you can see the other ones." The level changes also separate the master bedroom suite from rooms for guests (near left). The bolted connections and simple joinery were inspired by forms found in rural Michigan. Warren has detailed the stair rail so that dropped posts divide panels of round and square balusters (left). The handrail profile (opposite left) is carried on wood brackets where the stair passes between walls (opposite right). ■



Compound curves

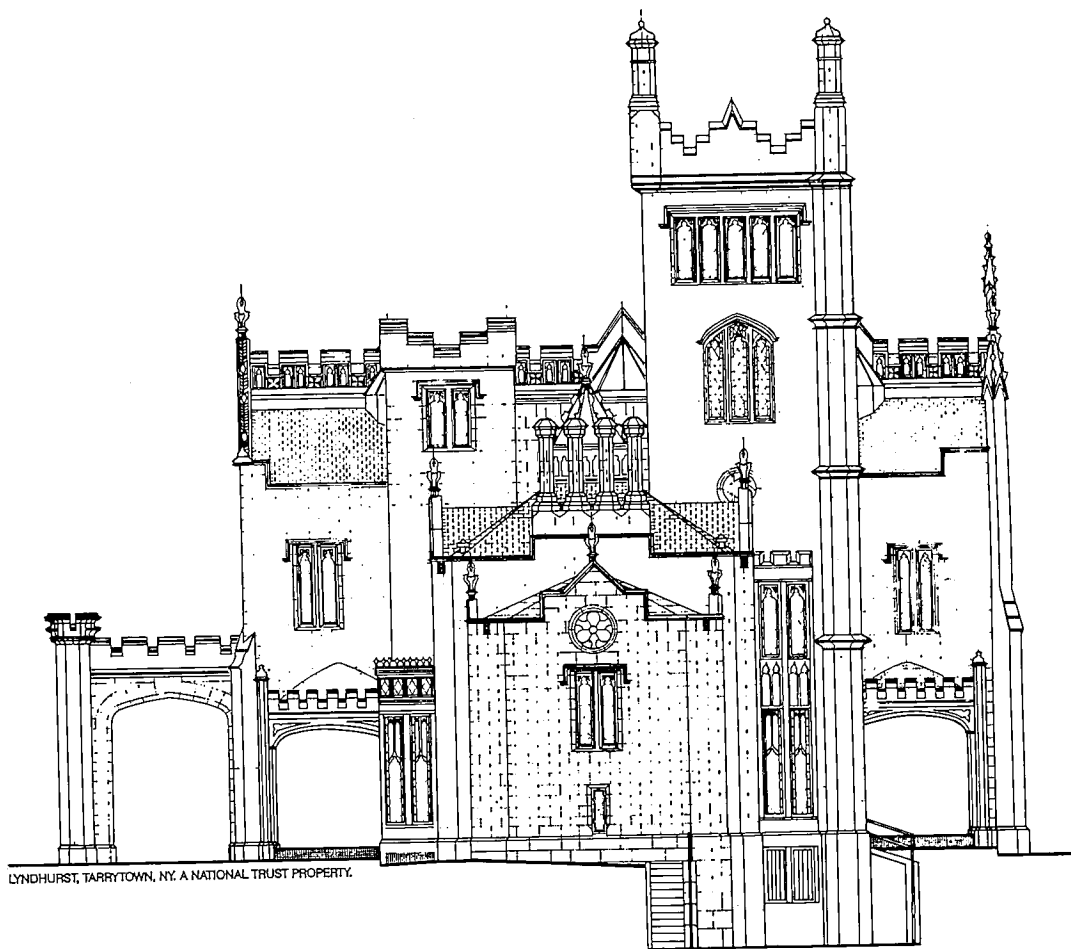
Stairs connecting three levels are the star of an apartment renovation within a loftlike old mill building. "Our attitude," said partner Dirk Denison, "was to get back to the wonderful texture and surfaces of the original building." The lowest stair is even penetrated by an existing building column. A mix of wood, sealed weathering steel, and brass, the stair rails have multiple trajectories. "We wanted the things we added to read as interventions," explains Denison. Adjacent (but separated from) the wall, a partly wood-capped curved metal rail springs from the base of the lower stair. After a gap, it's completed by another rail using a different radius (drawing left and photo opposite). On the open side of the stair, a steel balustrade, capped by a brass rail and infilled with metal mesh, flows parallel to stair treads. The architects added curved ramps at the top of the bottom flight and the bottom of the top flight. Metal rails are welded, and tongue-and-groove wood treads are bolted to steel stringers. The "self-consciousness" of the details is intended, says Denison, "to make people acutely sensitized to the environment and the way that they interact with it." ■



Shakeresque stair tower

Site restrictions mandated a narrow footprint for this small house (less than 1,300 square feet) for a couple with children. Architect Scot Samuelson pulled stairs out of the structure's main body and placed them in a tower. "With a house this small, the staircase becomes big in proportion to the rest of the house," he explains. "By getting the stair out of the center of activity, I felt I could get a better use of space." Responding to both a modest budget and a minimal fee, Samuelson produced an intriguing result with minimum means: carefully placed windows (taking advantage of water views), natural-finished yellow pine stair treads, and beaded-board tongue-and-groove cedar cladding. Cedar cap rails and newel posts have a Shaker-style simplicity. ■

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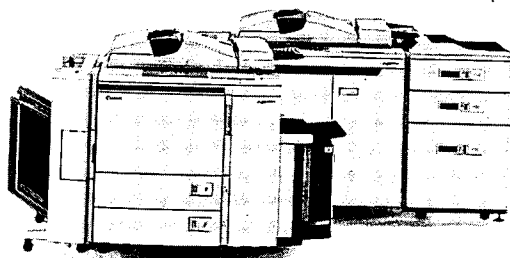
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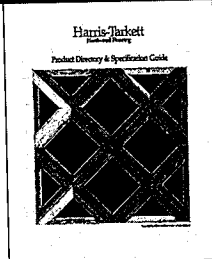
400. Tile portfolio

A colorful 44-page catalog illustrates all of this maker's ceramic products, including moldings and decorative inserts in floral, geometric, and Classical motifs, mosaic listellos for walls and floors, Granite and Tough-One commercial floor tile, and new 16-in. flooring in a marble pattern. Florida Tile Industries, Inc., Lakeland, Fla.



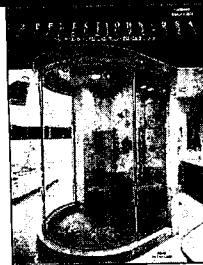
401. Masonry stoves

The Royal Crown stove, or "compact energy unit," is a factory-built high-mass heat-storage system faced in rustic materials like stone, or traditional ceramic tile. Claiming a combustion efficiency of 90-95 percent, the heater is said to be less costly than site-built stoves. European Fireplaces, Inc., Rockford, Ill.



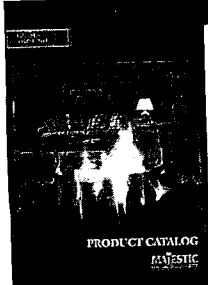
402. Hardwood flooring

Striking parquet and plank floors are shown in prefinished and unfinished red and white oak, walnut, ash, and maple wood. Specification guide describes the Air-Thrust shock-absorbing installation system for sports-floor applications, and includes technical and maintenance data. Harris-Tarkett, Inc., Johnson City, Tenn.



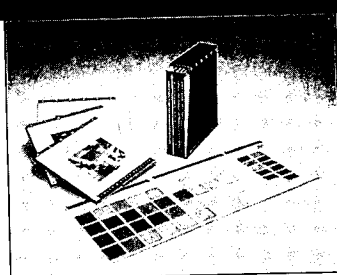
403. Shower enclosures

Custom frameless surrounds of clear glass can be configured in miter-corner, curved, bi-fold, and sliding-door designs. Hinges, pulls, and fittings are shown in polished chrome and brass; glass options include etched and beveled designs and colored tempered-glass panels. Reflections USA, Glen Cove, N. Y.



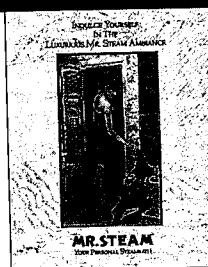
404. Factory-built fireplaces

The Majestic catalog features gas and wood-burning fireplaces with an unencumbered appearance produced by a baffleless firebox and hearth. Units come up to 48-in. wide, in wall, bay, three-side, and island styles. Noncombustible slate, cast-stone, and brick surrounds are illustrated. Majestic Fireplaces, Huntington, Ind.



405. Vinyl-floor kit

A new color and style selector kit offers 2- by 2-in. samples of VCT and luxury vinyl arranged by color, mounted in easy-to-store albums. Lists physical performance and test data; charts match tiles with the most appropriate wood and marble border elements and base. Azrock Industries, Inc., San Antonio, Tex.



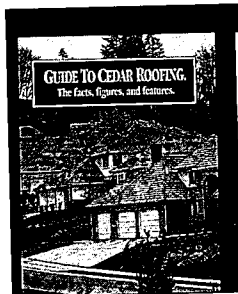
406. Steambath systems

A color brochure discusses five easy steps to select a Mr. Steam home steambath, factoring in room size, exposure, and type of fixtures. Illustrates control and temperature panels, and suggests placement of the compact steam generator. Towel-warming bars are also available. Sussman-Automatic Corp., Long Island City, N. Y.



407. Bath lighting

A 26-page catalog illustrates decorative and functional lighting for the special needs of the bath environment. Fixtures for task, over-mirror, and ambient use are designed to make best use of incandescent, halogen, compact-fluorescent and linear-fluorescent sources. Lightolier, Inc., Secaucus, N. J.



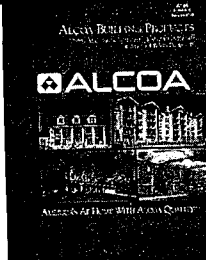
408. Cedar roofing

Pocket-size folder offers cedar facts and figures, explaining the insulation values, wind- and fire-resistance, extended useful life, and industry-wide certification programs offered by natural cedar roofing products. Cedar Shake & Shingle Bureau, Bellevue, Wash.



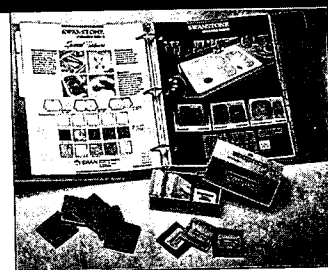
409. Windows in design

Visions of Light, a colorful portfolio, illustrates the design impact windows have on a house's appearance and on the feel of its interior spaces. Distinctive glazing and muntin options are shown in both contemporary and historically-correct homes. Pella Corp., Pella, Iowa.*



410. Siding and trim

A 32-page technical guide covers all Alcoa residential building products, including Lake Forest Kynar-finished vinyl clapboard, Mastie vinyl, aluminum, and steel siding, architectural details such as window mantels, vents, shutters, and rain-removal systems. Alcoa Building Products, Sidney, Ohio.



411. Solid-surface elements

Swanstone's architectural planning kit contains a binder with technical data sheets on the solid-surface material as used in countertops, vanities, tub surrounds, and drop-in sinks, as well as a sample box with all 15 solid and granite-look colors. The Swan Corp., St. Louis.

Continued on page 121

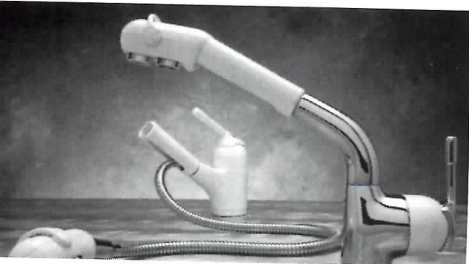
* Product data on CAD disk

New Products



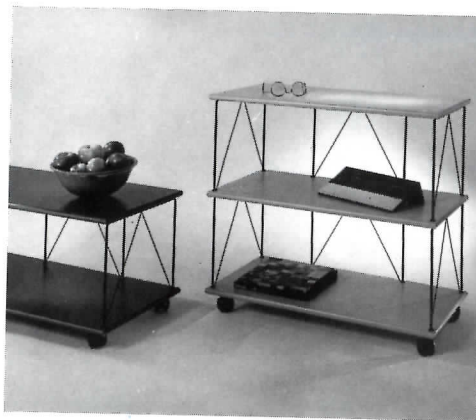
302. Deeper storage

Modular mirrored cabinets now come 6- and 8-in. deep, large enough to store supplies previously consigned to the linen closet and to clear the sink of hairdryers and other bulky items that won't fit in a standard, 4-in.-deep cabinet. The extra-depth cabinets can be fully or partially recessed, or surface-mounted using a mirrored side kit. Robern, Inc., Bensalem, Pa.



303. Double/double function faucet

A new kitchen faucet has a pull-out sprayhead that can be switched from aerated stream to a spray pattern at the flick of a fin-ner; the faucet handle itself breaks down to release a detachable, palmsize head that gives maximum spray control and maneuverability. Integral adjustments permit dialing-down water pressure and limiting temperature range. Franke, Inc., North Wales, Pa.



For more information, circle item numbers on Reader Service Cards.

304. Mobile constructivist

Maynard Lyndon, a founder of Boston's Placewares stores and an architect by training and familial bent, designed Wendel build-it-yourself shelving and carts to be a lot more attractive than planks and cinder blocks. Sturdy composite-wood shelves, available in black, mahogany, or cognac finishes, sit on chrome or black wire wickets that fit into holes in the shelves. Two- and three-shelf units shown, on casters, can hold a television set and VCR or work as a serving cart. CSL/Creative Space Limited, Scarborough, Ont.

Continued on page 124

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Manufacturer Sources

For your convenience in locating building materials and other products shown in this month's feature articles, RECORD has asked the architects to identify the products specified.

Pages 64-71

Theuer Residence
William P. Bruder, Architect
Metal panels, gate, stainless-steel fireplace, and perforated-metal sunshade: Lewis Machine and Welding. Glass (windows and entrance): PPG Industries, Glass Group (Solex). Hardware and push bars: The Ironmonger, Inc. Aluminum patio chairs: Knoll International (Pesci). Bath lighting and low-voltage recessed lights: Halo. Sink: American Standard. Tile: Endicott. Switches: Leviton. Chrome chairs: Knoll International. Custom maple-veneer plywood doors, windows, and maple-batten ceiling: Laurent Construction. Refrigerator: Amana Refrigeration.

Pages 72-75

Artist's Studio and Residence
Tigerman McCurry, Architect
Stucco: La Habra Stucco. Aluminum-clad wood windows and French doors: Peachtree. Lever-handle locksets: Schlage. Glass: Twinsul. Corrugated-aluminum roofing: Industrial Building Panels. Ceiling fan: McMaster Carr. Track lighting fixtures: Halo. Paints: Dunn Edwards. Integral-color concrete: Ready Mix, Inc.

Pages 76-83

Gorman Residence
Hariri & Hariri Design, Architects
Steel windows and doors: A&S Window Associates. Stucco: Thoro System Products. Standing-seam roof: Berridge Mfg. (Galvalume). Modified-bitumen roofing: U. S. Intec. Paints: Benjamin Moore & Co. Garage doors: Finishline Ind., Inc. Exterior sconces: Poulsen Lighting, Inc. (Skot Wall). Entrance metalwork: Scott Madison. Locksets: OMNIA Industries, Inc. Fenestra Lime-stone flooring: Innovative Marble. Ceiling fixtures: CSL Lighting. Pivot hinges, cabinet pulls: Stanley. Self-closing hinges: Grass. Stainless-steel countertop: Lab Fabricators Co. Faucets: Speakman. Stove: Viking. Refrigerator: Traulsen.

Pages 84-89

Martin Residence
Tanner Leddy Maytum Stacy Architects
Metal cladding: Lead-coated copper. Spot lighting and recessed fixtures: Lightolier, Inc.; Halo. Living-room club chairs and tables: designed by William Leddy, TLMS. MR16 spots: Arteluce. Radiator: Runtal North America, Inc. Obscure glass at interior: Page Glass, Inc. Lever-handle locksets: The Ironmonger (D Line). Exterior lighting: BEGA/FS; Lumière. Pulls on kitchen cabinets: Forms+Surfaces. Ceiling lights: Poulsen Lighting, Inc. Skylights: O'Keeffes, Inc. Wood sculptures: Kathleen Edwards.

Pages 90-93

Studio/Guest House
Deborah Berke and Carey McWhorter, Architects
Shingle roofing: Bird, Inc. Exterior opaque stain: Samuel Cabot, Inc. (Barn Red). Awning and double-hung windows, patio door: Marvin Windows.

Paints: Dutch Boy. Entrance, interior and sliding doors, cabinetwork: custom by architects, fabricated by Shadic Builders, Inc. Hardware: Schlage Lock Co.

Pages 94-99

Westchester Residence
Bentley LaRosa Salasky, Architects and Decorators
Shingles: GAF (Timberline). Exterior stucco: Bonsal (Marblesil). Windows: Marvin Windows. Exterior sconces: Poulsen Lighting, Inc. (Orbiter). Switchplates: Lutron. Doors and cabinet hardware: Baldwin Brass. Countertops: Formica Corp. Carpeting: Stark. Paint: Benjamin Moore & Co. White-oak paneling: Breakfast Woodworks. Pen-

dant light in breakfast nook: Scandinavian Design. Other fixtures: custom by Bentley LaRosa Salasky, fabricated by Wainlands. Wood blinds: Levelor, Inc. Stone-flag flooring: Pennsylvania Bluestone. Fireplace tile: EPRO.

Pages 100-107

Goldberg-Bear Residence
Franklin D. Israel Design Associates, Architect
Mosaic and pool tile: American-Olean Tile. Windows: custom by architect. Roofing: U. S. Intec. Locksets: Baldwin. Master-bedroom fireplace: custom plaster and steel-plate hearth and mantel by F. D. Israel Design; prefabricated fire-box. Integral-color concrete: Suncrete. ■

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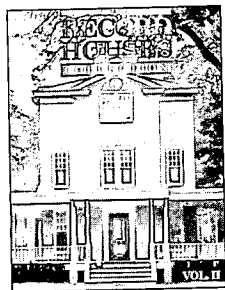
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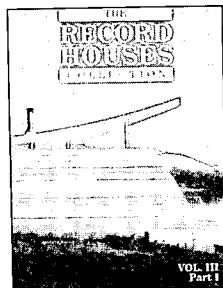
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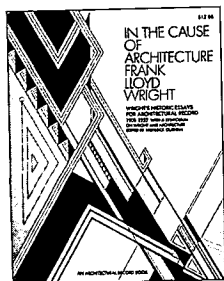
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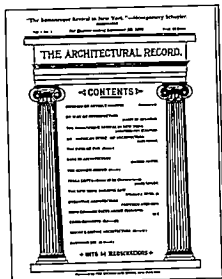


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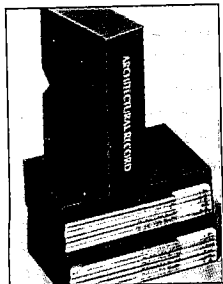
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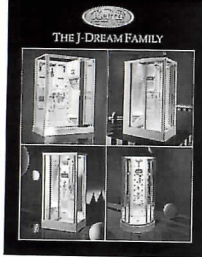
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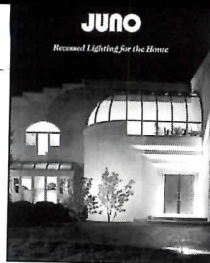
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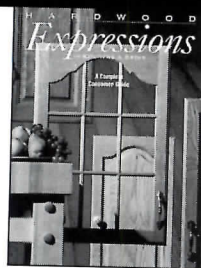
412. Multiple-function shower
New, more-compact J-Dream showers offer the same operating features of the 60-in.-long original model—adjustable shower, steam, water cascade, and hydromassage—at a lower price. There are two shorter and narrower units offering built-in seating, and a corner enclosure with curved-glass doors. Jacuzzi, Inc., Walnut Creek, Calif.



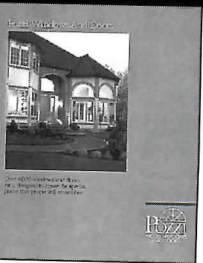
413. Residential lighting
A colorful applications guide illustrates attractive, functional lighting techniques room-by-room, focusing on how recessed fixtures can be used to accent art, highlight an architectural feature, provide security, and light tasks. Applications are matched with the appropriate fixtures. Juno Lighting, Inc., Des Plaines, Ill.



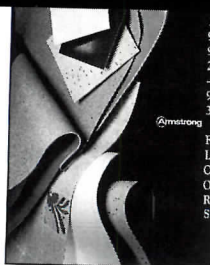
414. Hidden helpers
Catalog pages demonstrate a range of household accessories offered in out-of-sight housings. In addition to the classic fold-up ironing board, there are wall-mount can openers, toasters, and paper dispensers. Dimensions and finish options are listed. Iron-A-Way, Inc., Morton, Ill.



415. Hardwood in the home
A 22-page consumer guide illustrates the appeal of natural-wood cabinetry in both kitchen and bath. A picture glossary of framing styles, side-by-side grain patterns, upkeep advice, and layout tips are included. Hardwood Manufacturers Association, Pittsburgh.



416. Solid-wood windows
30-page 1993 catalog provides construction details, glass options, and complete size information on a 4,000-standard-design line of wood windows, bay and box units, sliders, and entrance doors. Drawings explain features such as extra-thick glass and true-divided-light glazing. Architectural binder available. Pozzi Wood Windows, Bend, Ore.



417. Flooring options
A spiral-bound portfolio illustrates residential sheet-vinyl and VCT floors in room settings, with close-up photography of all colors available in each pattern range. Maintenance and durability features are used to assign floor products to a good, better, or best category. Armstrong World Industries, Lancaster, Pa. *Continued on page 123*

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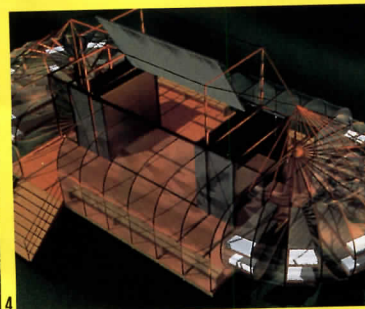
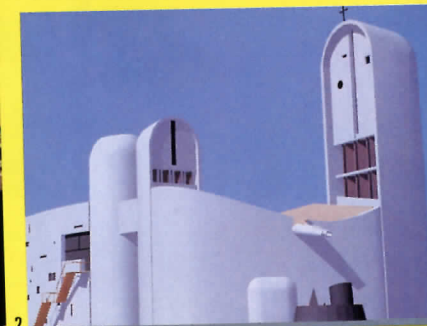
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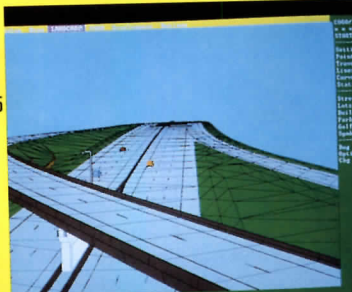


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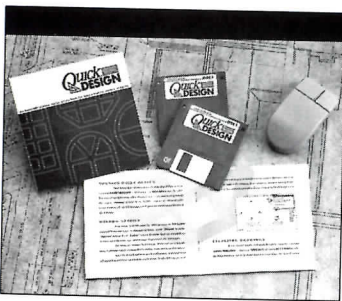


418. Hearth selection

An updated catalog illustrates factory-built wood-burning and gas fireplaces, some as wide as four feet, in room settings that convey the design impact of island, three-side, see-through, and corner units. New features include rounded, refractory edge treatments and larger fire-viewing areas. Superior Fireplace Co., Fullerton, Calif.*

419. Sink-selection tips

A foldout brochure puts all of this maker's stainless-steel sink styles on one page for comparison, and explains the functional and appearance benefits of heavy-gauge steel as a kitchen-design material. Elkay Manufacturing Co., Oak Brook, Ill.



420. Window-design software

Offered free to qualified architects, Milgard's Quick Design mouse/menu utility for AutoCAD generates details and elevations on wood, aluminum, and vinyl window and door products to 1/16th of an inch within a wide size range. Drawings and text can be exported to project-specific documents. Milgard Manufacturing, Inc., Tacoma, Wash.*

421. Luxury bath fittings

A 24-page brochure presents decorative faucets, whirlpool tubs, brass basins, Euro-style Alape vanities, hardwood bath furniture from Henredon and Drexel Heritage, and accessories for the traditional or contemporary-style bath. EPIC, Indianapolis.



422. Brass cabinet hardware

An architectural catalog shows knobs and pulls in a variety of decorative finish options, including Victorian and Fountainhead solid-surface materials that coordinate with other interior components. Metals come in both U. S. Standard and HMA finishes. Colonial Bronze Co., Torrington, Conn.



423. Ceiling fans

Individual catalogs illustrate the blade, control, motor-housing, and light options for both the traditional-style Emerson fan and the contemporary AirDesign line, which includes the three-bladed Tristar fan. Describes the summer- and winter energy-saving and comfort advantages of ceiling fans. Emerson Electric Co., Hazelwood, Mo. ■

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305. Curveable shingle panels

One-course versions of this maker's standard 8-ft-long shingle-siding panels turn an 8-ft radius. To form tighter curves, such as the 5-ft-radius wall pictured, panels are back-kerfed every two inches. Cedar siding comes in 4-, 5-, and 7-in. exposures. Cedar Valley Shingle Systems, Hollister, Calif.



306. Concertina-door hardware

Designed to provide clear access to the interior of wall-mounted cabinets, new Impulse fittings produce a multiple-panel door that both folds and slides. With one pull of the handle, four- or six-panel doors fold aside in a single package, sweeping to either side like a drapery. Mirrors can be added to the doors for bathroom applications; large clear-span openings (up to 70-in. wide and 43-in. high) allow use of pull-out storage units instead of just shelves. Hettich America, L. P., Harrisonville, Mo.



307. Long-span vinyl siding

Described as the first seamless-style vinyl siding, Symmetry comes in two profiles, both in a 40-ft.-long panel length, a span that eliminates the telltale breaks of standard, 12-ft.-long siding. Vinyl clapboards are installed with a special slide-on clip fastener that allows sufficient spacing to account for the expansion and contraction of a 40-ft.-long panel. The smooth surface has a low-gloss finish, available in five colors. Wolverine Technologies, Livonia, Mich.



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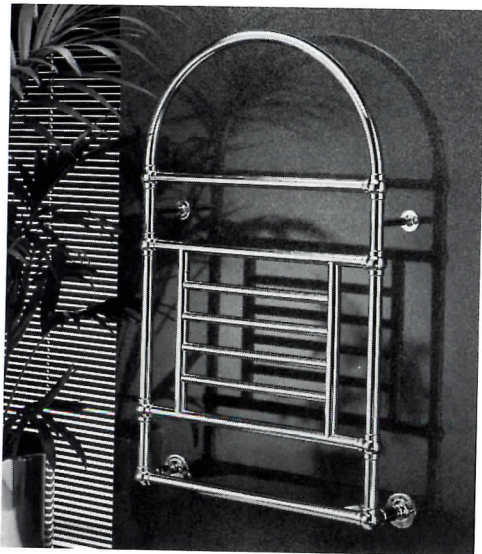
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308. Electric towel warmers

British-made bath accessory comes in 30 basic models for wall- and floor-mounting, with individual rails and components that can be combined in dozens of ways. Design-A-Rail kits can include arches, mirrors, and shelving; parts come in chrome, brass, gold plate, enamel, and combination finishes.

Wesaunard, Inc., Spotsylvania, Va.



309. Below-floor hydronic heater

The Twin-Flo II supplemental heater fits in the 8- by 16-in. space between floor joists, gently circulating warm air where needed. Units can be ordered with a decorative cast-iron or solid-brass grille that fits flush to the floor or carpet. An even smaller kickspace heater with grille fits into cabinets, bookshelves, and stair risers. The Reggio Register Co., Ayer, Mass.

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310. Solid-brass mortise lockset

A new entrance-handle set line comes in six different styles (Regal, Estate, and Chateau are pictured), with Schlage keyway cylinders standard for the backset mortise locks. Each lockset is part of a coordinated hardware line, with matching interior trim, passage sets, and accessories. Omnia Industries, Inc., Cedar Grove, N. J.



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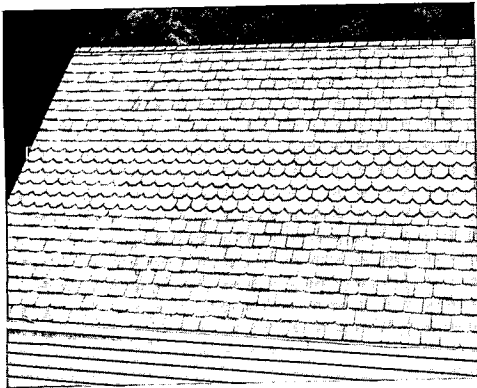
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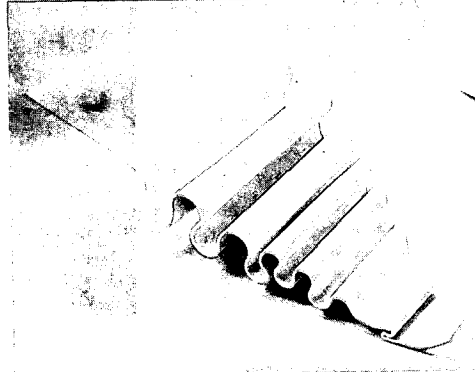
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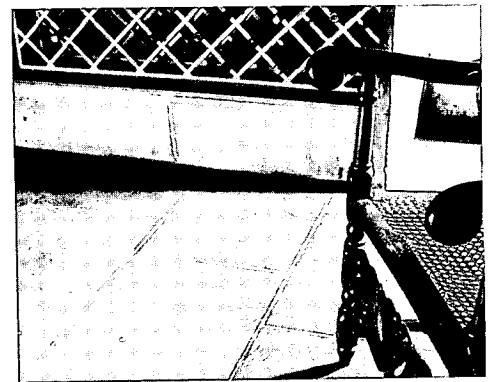
311. Chamfered-corner shingle

New Carriage House fiberglass roofing creates a 19th-century scallop-edge effect on steep slopes. Made with two full-size base shingles, the dimensional shingle comes in seven colorations of gray, brick red, and green that match the manufacturer's other Shangle roofing products. Chamfered shingles are shown, used to create a fish-scale pattern in a slate-shingle field. CertainTeed Corp., Valley Forge, Pa.



312. Surfacing hybrid

A new extruded thermoplastic with many of the performance and appearance qualities of solid-surface materials—at half the cost—Nuvel is described as an upgrade from laminates. Offered as a sheet to be glued onto a substrate like particleboard or MDF, it is impact- and heat-resistant (it originated as a GE product for car bumpers), and can be post- or thermo-formed to create waterfall edges and curves. Offered in five matte colors to match Surell solid surfacing, Nuvel can be seamed with it to create integral sink/countertops for less cost than an all-solid-surface installation. Formica Corp., Cincinnati.



313. Blue English limestone

This dense and hardwearing stone has a characteristic range of colors varying from greenish blue to deep blue/purple, with fossilized shells visible. Used as flooring since the 11th century (Canterbury Cathedral has blue limestone pavers), a newly developed source offers 1 1/2-in.-thick slabs, cut to size. Surface can be left its natural matte, or polished to an aged patina. Paris Ceramics, New York City.

Continued on page 135

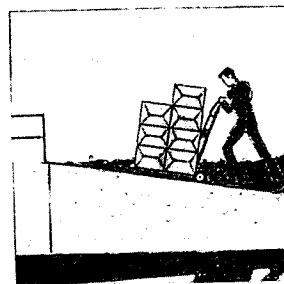
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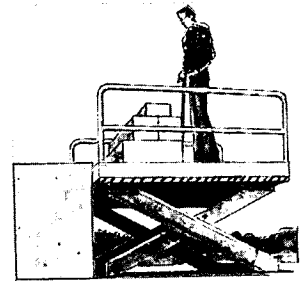
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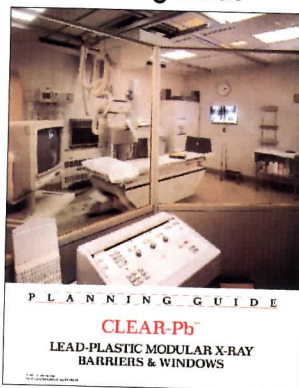


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Adjustable Fixture Co.

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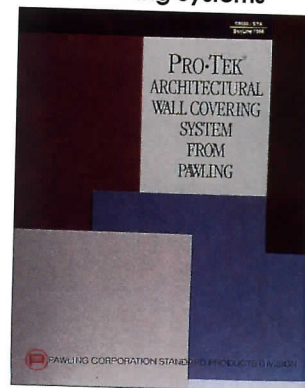


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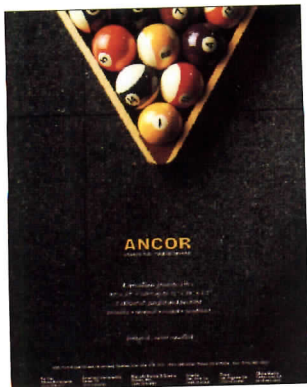
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Circle 52 on the inquiry card.

MYLEN OPEN-LOOK STAIR SYSTEMS



Get the lightest, most open stair design, both front and side, built with the strength of steel and warmth of wood with Mylen's complete line of OPEN LOOK STAIRS. Featuring an extensive choice of designs and options including the dramatic MONOSTRINGER. Available as complete stair units or individual components to be used with material by others. Detailed drawings included.

Mylen Industries

Circle 53 on the inquiry card.

Flame-Safe® and KBS® Firestop Products



Flamesafe® Firestop Products from IPC consist of putties, tapes, electric cable protection & through-penetration fire/smoke stops for pipes, cables & conduits. KBS® Sealbags provide fire-stop protection in phone & computer rooms; re-entrantable for retrofitting cables through fire-rated walls & floors. Systems are permanent or temporary, depending on needs. Products are Underwriters Laboratories Classified & Factory Mutual Approved. Free brochure, IPC at 800-334-8796, NJ 1-908-531-3666.

IPC Corporation

Circle 54 on the inquiry card.

Lustr-Mett® Glamour Lites



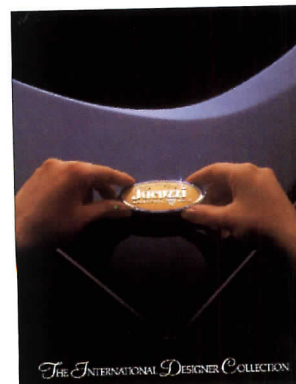
Lustr-Mett® Glamour Lites leave the ho-hum behind, setting a new pace which redefines elegant and transforms "beautiful" in "memorable". They are bold by design. Most clients will settle for the ordinary. Kaylien clientele will not.

Kaylien, Inc.
Post Office Box 711599
Santee, CA 92072-1599
800-748-5627
FAX 619-448-5196

Kaylien, Inc.

Circle 55 on the inquiry card.

Jacuzzi Whirlpool Bath



Jacuzzi Whirlpool Bath offers a 40-page, color catalog featuring the International Designer Collection of whirlpool baths, faucetry and the J-Dream family of shower systems. Jacuzzi® offers a variety of styles and features. Literature is also available on the Builder Group of whirlpool baths, the faucetry collection and shower bases. Call: (800) 678-6889.

Jacuzzi Whirlpool Bath

Circle 56 on the inquiry card.

CastleVeil Window Fabrics for Energy Control



CastleVeil vinyl-coated fiberglass fabric is used for window coverings. A variety of weaves & colors controls light entry, balancing heat gain & view. Free Data Sheets give measurements. CastleVeil retains shape & weave in extreme temperatures; colors won't fade; fabric is resistant to chemical pollutants, & is flame retardant. Use on roller shade with continuous bead chain, (hand or motor), or pleate, as a Roman shade. Wide range colors can be blended. 3 stock weaves: Twill, Basket, & 2 x 1.

Newcastle Fabrics Corp.

Circle 57 on the inquiry card.

Go Ahead- Pave it With Grass

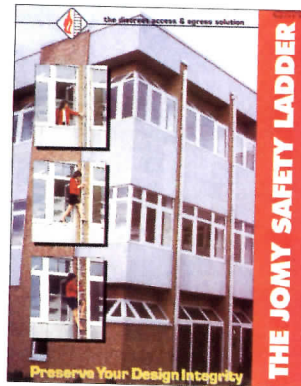


We've been developing products to meet increasing demands for porous paving for 10 years. You can count on Grassings² for features you want most: Flexibility, 100% grass coverage, excellent porosity/drainage, & fast installation - for vehicular & pedestrian traffic, with grass or gravel materials. For details about this proven, affordable system, call (800) 428-1333 or fax (303) 696-9757.

Rings, Inc.

Circle 58 on the inquiry card.

The Discrete Access & Egress Solution



Security requirements, space constraints & aesthetic considerations are a few of the problem-solving applications for the JOMY Safety Ladder. The ladder's discrete appearance makes it an ideal solution for access & egress requirements. The ladder looks like a drainpipe when closed, but opens to a heavy-duty ladder with slip-resistant rungs & a safety rail. The JOMY Safety Ladder Co., 1728 16th St., Ste. 201, Boulder, CO 80302. Phone 800-255-2591.

Jomy Safety Ladder

Circle 59 on the inquiry card.

Inner-Seal Lap Siding



InnerSeal[®] lap siding is made from small-diameter, noncontroversial trees and has exceptional moisture resistance to resist weathering, splitting or curling. Uniformly light in weight, they are unsurpassed in dimensional stability and durability. Siding is finished with a protective overlay that's pre-primed to hold paint and stain longer. The look of solid sawn siding without the expense, the waste, or the work.

Louisiana-Pacific

Circle 60 on the inquiry card.

Natural Stone Fireplaces



TULIKIVI Fireplaces and Bakeovens combine an internal Contraflow combustion system with nature's finest material for retaining heat: soapstone to provide a highly efficient and clean-burning fireplace. A brilliant 2 hour fire radiates heat for up to 24 hours. For more information: Call 1-800-843-3473.

Tulikivi Group

Circle 61 on the inquiry card.

THE CONSTRUCTION PROFESSIONALS



This new 16-page brochure is an overview of the capabilities of Ceco Building Systems in pre-engineered metal building construction. The Construction Professionals includes dramatic photography of completed projects, plus technical data including Frame Systems, Tilt-Wall Construction, Multi-Story Construction, Covering Systems, Roofs, Architectural Treatments, Retrofit, Accessories and Mini-Warehouses.

Ceco Building Systems

Circle 62 on the inquiry card.

Water Coolers Meet ADA Requirements

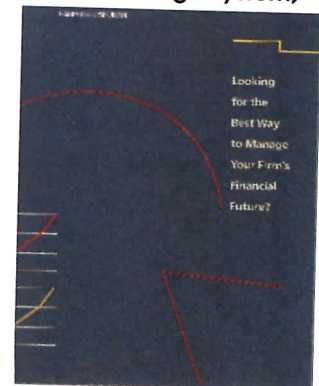


Halsey Taylor Water Coolers & Drinking Fountains that **meet ADA requirements** are featured in a new brochure. Choose from a variety of styles and finishes, including the sleek new HAC water cooler for both the physically and visually handicapped. Halsey Taylor...Satisfying Thirsts Since 1912. Phone (708) 574-3500, Fax (708) 574-3503

Halsey Taylor

Circle 63 on the inquiry card.

CFMS (Computer-based Financial Mgt. System)



Harper and Shuman develops, sells and supports financial management software specifically for architects. The only system of its kind sponsored by the AIA, MICRO/CFMS runs on PCs and CFMS runs on the DEC VAX. A modular approach lets you buy only what you need. Call today 1-800-275-2525. Harper and Shuman, Inc.

Harper & Shuman, Inc.

Circle 64 on the inquiry card.

Product Literature Showcase

New Information on Garaventa Stair-Lifts



Garaventa, the leading manufacturer of wheelchair platform lifts, has just revised and updated your *Stair-Lift Design and Planning Guide*. This 40-page booklet is now more comprehensive and easier to read than ever before. It'll answer your concerns on ADA compliance, layouts, contract specifications, and more. Call today for your free copy: 800-663-6556, 604-594-0422.

Garaventa

Circle 65 on the inquiry card.

New High-Pressure Laminate Compact Kitchens Catalog



Dwyer introduces a new concept in compact kitchen cabinetry...design freedom. Choose from the wide selection of Wilsonart®, Formica® and Nevamar® decorative laminates in thousands of patterns, textures and colors.

Dwyer

Circle 66 on the inquiry card.

VIXEN HILL MFG.



Tired of imitation shutters made from a mold? Unhappy with shutters held together by staples? Give yourself a surprise: traditional working shutters made of clear, old-growth western red cedar. Constructed with authentic teak-pegged mortise & tenon joints, Vixen Hill manufactures 8 classic panel & louver styles in standard & custom sizes. Cedar shutters feature heavy stiles & cross-rails as well as separate interlocking trim & extra thick louvers for extended product life. For brochure call 1-800-423-2766.

Vixen Hill Manufacturing

Circle 67 on the inquiry card.

VALID-AIR HIGH PERFORMANCE DIFFUSERS



Valid-Air High Performance T-Bar ceiling diffusers offer a quantum leap in draft-free design performance over conventional diffusers. Multiple high velocity patented dimple jets, induce secondary air to optimize room circulation and dramatically improve indoor air quality. Flush to the ceiling, anti-smudge design is available in a variety of sizes, colors, patterns and materials. Warren Technology, (800) 231-1084, FAX 305-557-6157.

Warren Manufacturing Co.

Circle 68 on the inquiry card.

Slide Storage System by Abodia



stores 1,000 to 12,000 slides. Scan, edit and view entire slide collections. Slides are stored on metal racks housed on either side of an illuminated viewing screen. Base systems store up to 65,000 slides and feature drawers for duplicate slides. Elden Enterprises, Box 3201, Charleston WV 25332. Free catalog call (800) 950-7775.

Elden Enterprises

Circle 69 on the inquiry card.

Weatherend® Estate Furniture

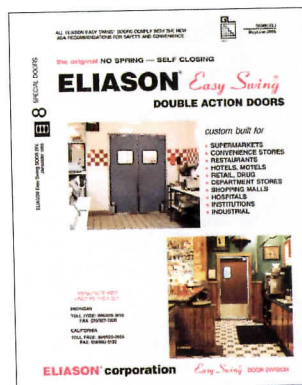


Offers 2 new brochures to supplement a color catalogue & resource binder. The 10 page brochures highlight quality site furnishings & amenities from a collection of more than 60 products. Installation photos of standard & custom furnishings are featured in interior & exterior contract & residential applications. For brochures & info. call (800) 456-6483 or write P.O. Box 648, Rockland, ME 04841.

Weatherend® Estate Furniture

Circle 70 on the inquiry card.

Self Closing Double Action Doors



Complete specifications, usage & application data on Eliason Easy Swing double action doors is described in a new eight page color brochure. Doors are gravity operated, open to a light nudge & close automatically with a safe, gentle time delay action. Doors can be specified & purchased direct. A complete Price/Spec bound catalog will be sent illustrating many new door models, designs & decor options for 1993. Eliason Corp. P.O. Box 2128, Kalamazoo, MI 49003.

Eliason Corporation

Circle 71 on the inquiry card.

Heat-Circulating Fireplace



The Heat-Circulating Fireplace That Provides Warmth, Self-Aid Efficiency Back to Customers.

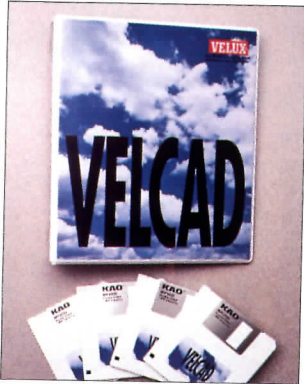
SUPERIOR

Warmth. Style. And efficiency. Just a few of the attributes of Superior's LBC heat-circulating fireplace. 2 sizes - 38" & 43" screen opening widths - the LBC offers a generous firebox: 24" high & 20" deep. LBC's recessed screen pockets, make the fire box opening appear larger. Aesthetically, the LBC offers typically Superior flair. It features realistic masonry-look refractor, an integrated ash lip & decorative flexibility with your choice of either standard black or optional polished brass grilles.

Superior Fireplace Co.

Circle 72 on the inquiry card.

NEW VELCAD SOFTWARE



VELUX introduces the first design software created exclusively for roof windows & skylights. Designed in Microsoft Windows™ 3.0 & operable within or out of AutoCAD®, VELCAD accommodates two levels of user experience & can generate & receive .DXF files. VELCAD users can print detail drawings & specs &, interfacing with AutoCAD, can manipulate elevations, drawings & schedules. Contains a drawing viewer for printing & viewing head, jamb & sill details. Available free-of-charge to design professionals.

Velux-America Inc.
Circle 73 on the inquiry card.

"Heisterholz Clay Roofing Tiles"

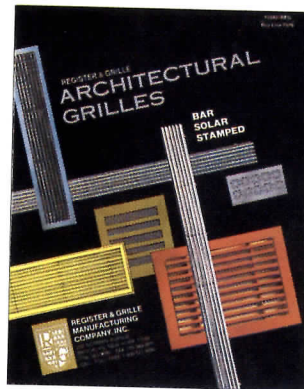


Heisterholz of Germany has been producing quality tiles for more than 120 years. These clay tiles come in a variety of styles and colors to complement and protect your project. Updated price lists, freight quotes, and samples are available. Contact our American Agent:

H.G. Roofing & Consulting
P.O. Box 406
Lakeville, IN 46536
(219) 784-2006
FAX (219) 784-3872

Heisterholz
Circle 74 on the inquiry card.

Decorative Grilles



Unusual visual effects emerge when our grilles are designed for area effects. Versatility is the theme. R&G offers architects & interior designers many ways to express the changing forms of metal with the integrity of R&G's architectural grilles. Custom or standard finishes are available plus any grille can be made in matching color to blend with your decor. 202 Norman Avenue Bklyn, NY 11222. 800-521-4895, fax 718-349-2611.

Register & Grille Mfg., Co.
Circle 75 on the inquiry card.

Vinyl Windows



Louisiana-Pacific's vinyl windows and patio doors meet the most demanding new energy codes and are a perfect fit for new construction as well as replacement. Made with a new generation of stronger, modified uPVC, they resist rust, rot, scratches and dents. And they're available in a wide range of sizes and styles, including a large variety of custom shapes.

Louisiana-Pacific
Circle 76 on the inquiry card.

Open & Private Offices A Single Source



Transwall combines these two basic wall requirements for today's high tech office with its Sounddivider open plan system and the full height Corporate series. The two systems offer complete interchangeability of wall mount components, as well as compatibility in design and appearance. Modular furniture blends with panel mounted work surfaces. Electrical and electronic support is system integrated.

Transwall Corp.
Circle 77 on the inquiry card.

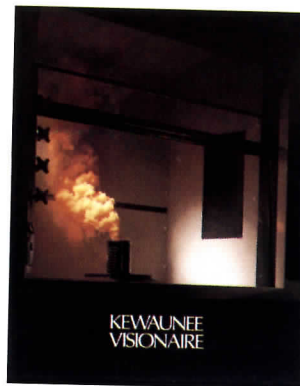
CLASSICA FAUCET



WATERCOLORS INC. introduces the new CLASSICA FAUCET, with swivel spout, porcelain or metal handles, 90° ceramic disc valves. Stocked in Polished Brass or Chrome, also available in 10 other metal finishes & 12 colors. Fittings for the Kitchen, Tub, Whirlpool, Shower & Bidet are stocked for Quick-Ship. Telephone 914-424-3327 and FAX 914-424-3169.

Watercolors
Circle 78 on the inquiry card.

Kewaunee Fume Hoods



Visionaire® offers excellent air flow dynamics to safely contain and exhaust harmful fumes. What's more, a special angled sash and overhead vision panel allows for greater visibility throughout the entire hood. For more information and a free brochure, contact Marketing Services Dept., Kewaunee Scientific Corp., P.O. Box 1842, Statesville, NC 28687.

Kewaunee Scientific Corp.
Circle 79 on the inquiry card.

A Practical Solution to Roof Paver Stone Applications



New bulletin shows a better way to transform a roof into a patio, terrace, balcony, walkway, plaza podium, promenade, or just plain roof deck, using the Pave-El Pedestal System. Designed to elevate, level, and space paver stones for drainage in any weather, Pave-El reliably protects roof, paver stone, membrane and insulation. Ellicott Station Box 119, Buffalo, NY 14205. 416-252-2090.

Envirospec
Circle 80 on the inquiry card.

Product Literature Showcase

HEAT-N-GLO Fireplace Products

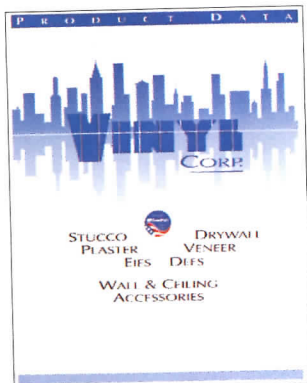


Looking for quality fireplaces that combine efficiency and aesthetics? Call for our brochure on energy-saving built-in gas or woodburning fireplaces. Including see-thru, three and four sided glass fireplaces, inserts for pre-existing fireplaces or our direct-vent (no chimney) gas fireplace available with remote control. Call 612-890-8367.

Heat-N-Glo

Circle 81 on the inquiry card.

NEW PRODUCT CATALOG



Vinyl Corp manufactures the most extensive line of over 450 quality wall and ceiling accessories for stucco, plaster, EIFS, DEFS veneer and drywall. All accessories are exclusively manufactured with BF Goodrich Geon® Vinyl compounds. For more information call (800) 648-4695, and ask for Vinyl Corp's new product catalog. VINYL CORP, 8255 NW 70th Street, Miami, Florida 33166.

Vinyl Corp.

Circle 82 on the inquiry card.

Discover The Value In Basements



The Basement Design Guide from Koch Materials Company can help you discover new ideas in designing warm, dry, comfortable living spaces in below grade areas. This 20-page brochure highlights construction techniques and design considerations that help make the basement a value to you and your buyers. Includes information on a 10-year limited warranty against exterior foundation leaks.

Koch

Circle 83 on the inquiry card.

EFCO 1993 Product Catalog

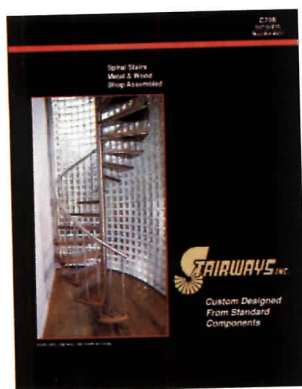


The 1993 EFCO Product Catalog is an invaluable tool for selecting Division 8 products. It features photographs of completed new construction & retrofit projects along with detail drawings & product info. It also includes complete product descriptions, specifications, performance ratings, lab test results, & options for the entire line. EFCO offers a complete line of Division 8 products plus custom designs & historical replications. For a free catalog: 1-800-221-4169.

EFCO Corporation

Circle 84 on the inquiry card.

SPIRAL STAIRS

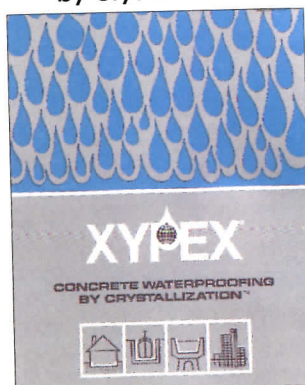


Stairs built by Stairways Inc., are distinctively styled, combined with the highest standards of craftsmanship. Stairs are built to your exact specifications into commercial, industrial, or residential projects. Stairs can be fabricated in steel, wood, stainless, brass, aluminum, bronze, with other materials available. You have the option of stairs, both wood & steel, completely fabricated for installation or kit form. For more info: Call 800-231-0793 or FAX 713-680-2571.

Stairways, Inc.

Circle 85 on the inquiry card.

Concrete Waterproofing by Crystallization

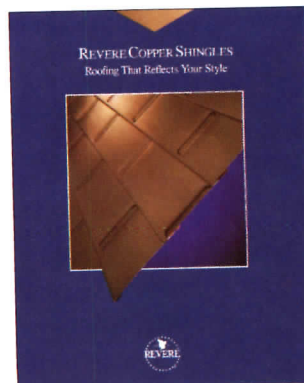


Applied as a slurry coating, Xypex is a chemical treatment that waterproofs by penetrating the concrete with a crystalline formation that 'plugs' the pores of the structure preventing water seepage. Xypex is ideal for use on the 'inside' of wet underground structures.

Xypex Chemical Co.

Circle 86 on the inquiry card.

Revere Copper Shingles



Revere Copper Shingles are quicker and easier to install than ordinary asphalt shingles. There are no special skills required and no special tools. Because Revere shingles are manufactured from solid copper, not a foil laminate, they will likely last as long as the building they protect. To learn more about our copper shingles, or any of our other copper roofing products, call us toll-free at 800-448-1776.

Revere Copper Products

Circle 87 on the inquiry card.

Marvin Windows' New Commercial Catalog



Marvin Windows' new commercial catalog describes the commercial capabilities of Marvin's entire line of wood and clad wood windows and doors. The catalog provides information on product styles, performance and design capabilities, as well as Marvin's Architectural Support Department and other non-residential services.

Marvin Windows

Circle 88 on the inquiry card.

Consultants Directory

Lighting Consultant

Lumenations, Inc.

Lumenations, Inc.
4747 Morena Blvd., Suite 240
San Diego, CA 92117

Lighting, Lighting control design for interior,
exterior, landscape and art

Bob Morrow
619-273-6285 FAX 619-273-6287

Circle 89 on inquiry card

Acoustical Consultant



Cavanaugh Tocci Associates, Inc.
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Specialized consulting services in architec-
tural, industrial, and environmental
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Greg Tocci
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Non Destructive Testing
Roof Moisture Audits
New Construction/Retrofit
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Sydney Kane
610-763-1700 FAX 215-342-6788

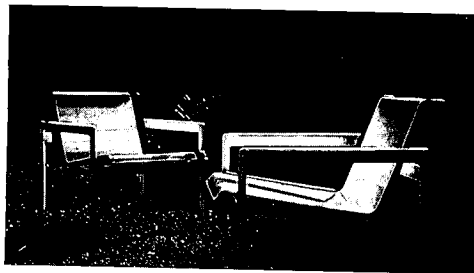
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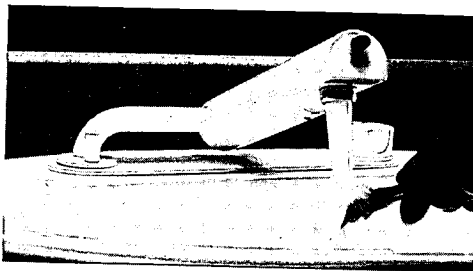
New Products

continued from page 126



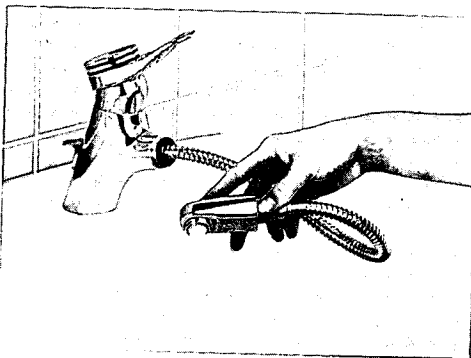
314. 'Sixties classic reissued

Designed in 1966 specifically for Florence Knoll's oceanside Florida home, a seven-piece outdoor furniture group is available for the first time since Knoll stopped making it in the late '80s. Chairs and chaises, manufactured under the designer's supervision, use the original materials: cast- and extruded-aluminum frames with vinyl-mesh sling seats. Richard Schultz Design, Barto, Pa.



315. Residential infrared faucet

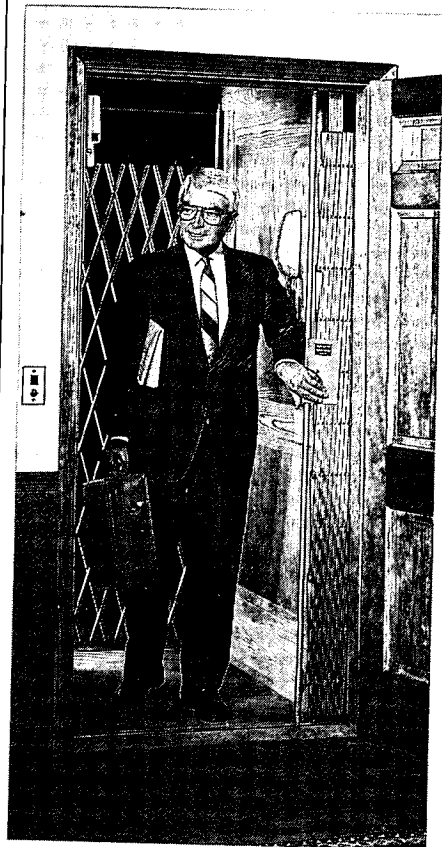
Automatic, sensor-activated faucets are offered in shapes and finishes appropriate for the home bathroom (above) and kitchen. Said to be easy to install with snap-together electronic connections, the U. S.-made Contempra faucet uses about 80 percent less water than manual fittings. A push button permits continuous water flow; temperature and operating sensitivity are adjustable. WaterFacets, Costa Mesa, Calif.



316. Loop-handle pull-out faucet

The EuroPlus lavatory faucet has a spout that pulls out 21 inches, making it easier to wash hair or babies in the basin. Can be fitted with a water-pressure toothbrush. Grohe America, Inc., Wood Dale, Ill. ■

A Higher Level of Luxury



Presenting the "Elevette" from Inclinator Company.

Once used exclusively for improved accessibility (and still tax deductible if recommended by a doctor), residential elevators have become a desirable luxury/convenience option in many upscale homes. And Inclinator Company is leading the way with the Elevette.

The Elevette is custom-built to your specifications, and comes in a variety of sizes and weight capacities. Inclinator Company even offers several interior design options to match every decor.

Send for free information of the best way to meet the needs of your upscale clients. The Elevette.

INCLINATOR
COMPANY OF AMERICA

Dept. 66, P.O. Box 1557
Harrisburg, PA 17105-1557
(717) 234-8065



Advertising index

Bold face—page number
Italics—Reader Service number

For detailed data, prefilled catalogs of the manufacturers listed below are available in your 1993 Sweet's Catalog File as follows:

- A**
Advance Lifts, Inc., 126; 40 [G]
(708) 584-9881
A/E/C Systems '92, 122; 35
(800) 451-1196
Alucobond Technologies, Inc., 13; 8
[G]
(800) 626-3365
American Express, 115; 29
(800) SUCCESS
Armstrong World Industries, Inc.,
Cov. II-1; 1 [G-E]
(800) 233-3823
Azrock Industries, Inc., 12; 7 [G-D]
- B**
Benjamin Moore Paints, 5; 3 [G-E-D]
Buchtal Ceramics, 62; 28 [G]
(404) 442-5500
- C**
California Redwood Assn., 49; 16
(415) 382-0662
Canon, 113
(800) OK-CANON
Chicago Metallic Corp., 54; 21 [G-D]
(800) 323-7164
Clear Plastics International, Inc.,
125; 38 [G]
(800) 759-6985
- D**
Dal-Tile Corp., 22; 12 [G]
(800) 933-TILE
- E**
Efco Corp., 55; 22 [G]
(800) 221-4169
- F**
Forbo Industries, 7; 4 [G-D]
(800) 233-0475
Formica Corp., 17-20; 10, 51; 18
[G-L-D]
- G**
Georgia-Pacific Corp., 21; 11 [G-I-L]
(800) 447-2882
Glen Raven Mills, Inc., 14-15; 9 [G]
(919) 227-6211
- H**
Hurd Millwork Co., Cov. III; 42 [G-L]
(800) 2BE-HURD
- I**
Inclinor Co. of America, 135; 41
[G-L]
Intergraph, 52; 19
(800) 345-4856
- L**
Lightfair International, 119; 33
(404) 220-2442
Louisiana-Pacific, 45; 13 [G-I-L]
(800) 223-5647
- M**
Marvin Windows, 2-3; 2 [G]
(800) 346-5128
MBCI, 60; 26 [G]
(713) 445-8555
Metropolitan Ceramics, 117; 31 [G]
(216) 484-4876
Milgard Windows, 61R; 27 [L]
(800) MILLGARD
- O**
Oce-Bruning, Inc., 10; 6
(800) 445-3526
Omnia Industries, Inc., 57; 24
(201) 239-7272
Overly Mfg. Co., 121; 34 [G-E-I]
(412) 834-7300
- P**
Portland Cement Association, 48; 15
(708) 966-6200
Product/Literature Showcase, 127-133
- S**
Smith Steelite, 118; 32 [G-I]
(800) 759-7474
Softdesk, Inc., 59; 25
(603) 423-3199
Steel Joist Institute, 50; 17
Stevens Roofing Systems Div., JPS
Elastomerics Corp., 56; 23 [G-I]
(800) 621-ROOF
Sub-Zero Freezer Co., 53; 20 [G-L]
(608) 271-2233
Sweet's Group, McGraw-Hill, Inc.,
116; 30
- T**
Tamko Asphalt Products, 8; 5 [G-I]
(800) 641-4691
3M Data Storage, 124; 37
(800) 889-1889
- U**
USG Interiors, Inc., Cov. IV; 99
[G-E-L-D]
(800) 950-3859
- W**
Weather Shield Mfg., Inc., 46-47; 14
[G]
(800) 477-6808
Weatherend Estate Furniture, 123; 36
(207) 596-6483
Worthington Group, Ltd., 126; 39 [G]
(404) 872-1608
- (G)** General Building & Renovation
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(I) Industrial Construction & Renovation
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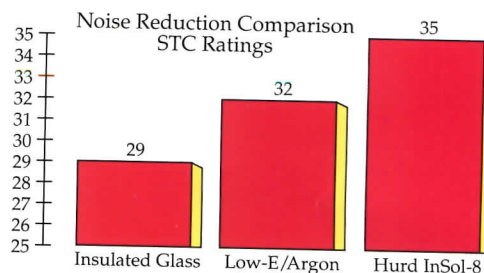
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Windows look good in line print and even better up close. See for yourself. Noise comparison data were based on independent testing by Riverbank
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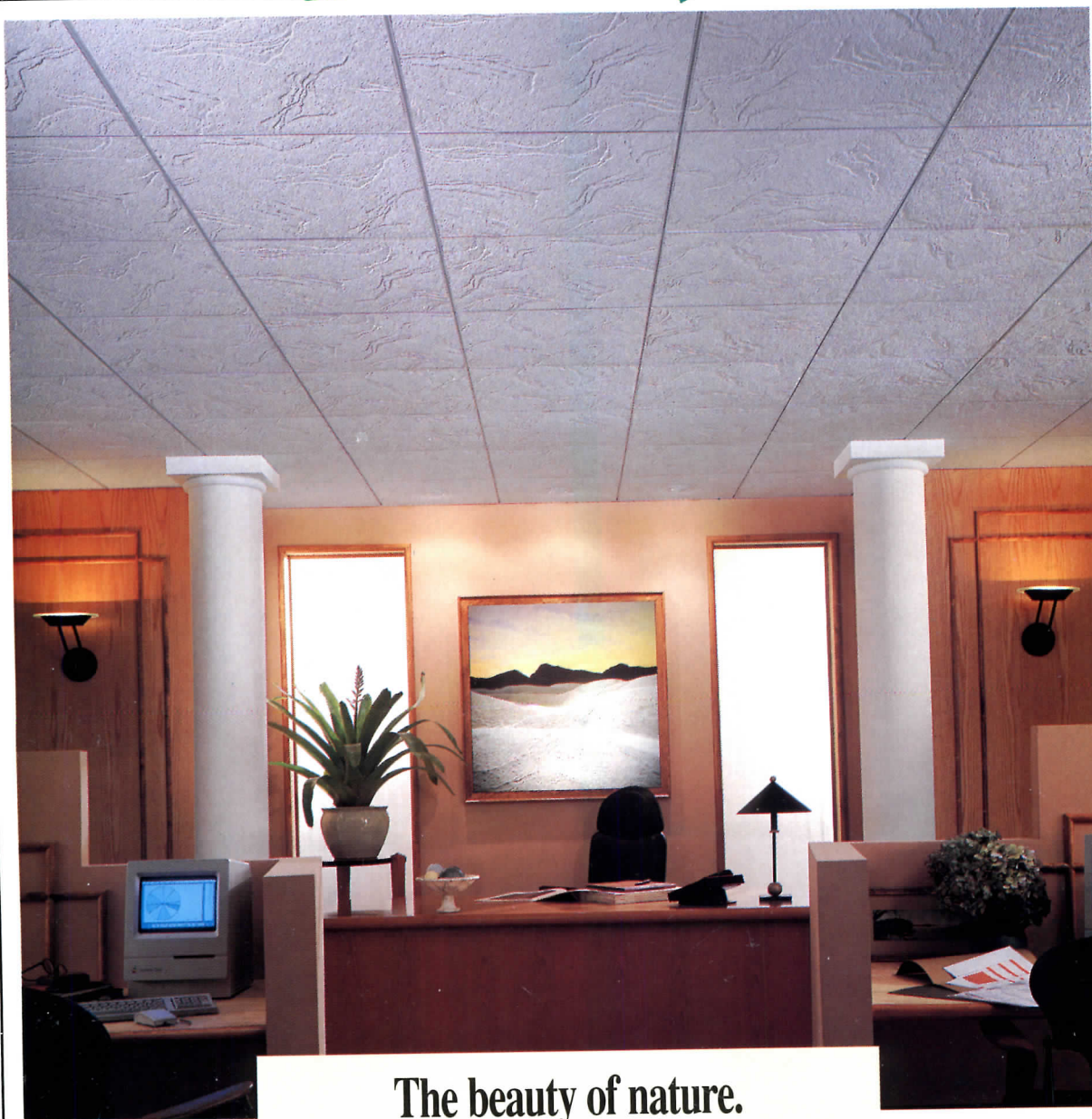
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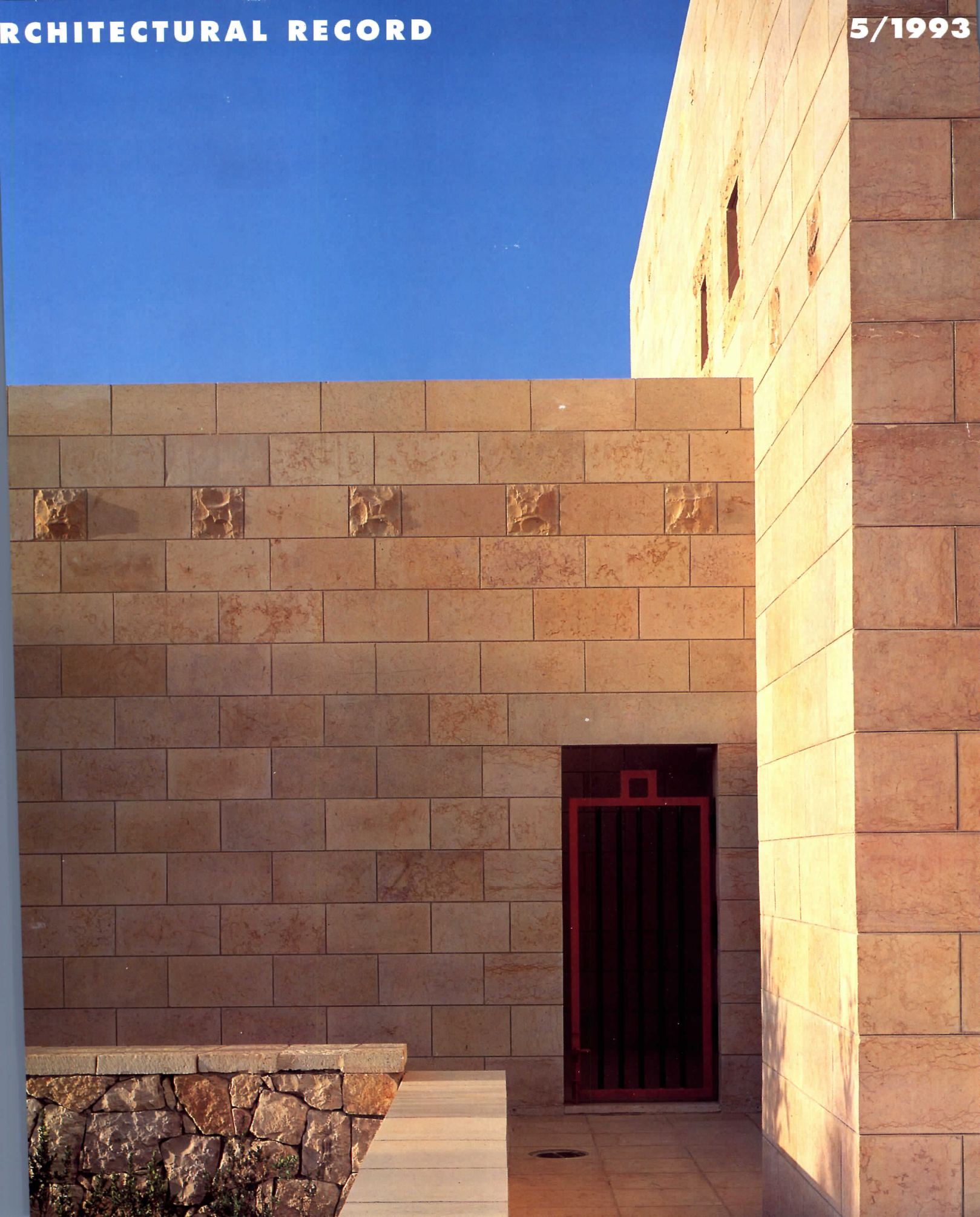
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