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*Residential Loft, New York City**Tod Williams Billie Tsien and Associates Architects*

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Unsung Hero(in)es: Celebrating the Nontraditional Professional Career

Exact figures are hard to come by. A conservative estimate puts the ratio of AIA members active in alternative careers at one in six, a 50 percent increase over the last four years.

I know the appeal is there. A scheduled 1991 AIA convention panel billed as *Alternative Careers Roundtable: Determining Your Professional Path*, which some had expected to draw a handful of attendees, ended up filling a large hall with 300 enthusiastic participants (see RECORD, July 1991, page 71).

Years ago, while working for another publication, I wrote an editorial I called *Unsung Heroes*. The editorial dealt with those who, although trained as architects, now labor in a different part of the vineyard from those in private architectural practice. In reading over the other day what I wrote, it struck me how little, in some respects, had changed, and in other respects, how much.

For one thing, there are no longer just heroes; there are likewise heroines, or perhaps hero-persons. For another, new types of careers have emerged. There are those, such as Wesley Janz from Minneapolis, who consult with large corporations in the development of new products, packaging, and corporate graphics. Facilities management has evolved into a distinct career quite different in scope and responsibility from the days when this crucial job at corporations was held by someone who ordered buildings in the morning and paper clips in the afternoon. Some companies, such as Eli Lilly, have come up with the rather elegant sounding title for this position: "corporate architect."

Other architecturally trained people have gone into apparel design, environmental design, crafts-making and, in the rather spectacular case of Harvey Gantt, senatorial politics. Then there are people such as Tony Aeck, Dennis Neeley, and, right here at McGraw-Hill, Griff Burgh, as well as the folks at Jung/Weber and others, who have dived into the often-treacherous waters of software design and marketing.

These are the new ones. The traditional alternate careers persist and flourish—teaching, journalism, research, public agencies, photography.

Few can aspire to the glamorous alternate careers of Jimmy Stewart or José Ferrer, both Princeton architecture-school graduates. But the allure persists for those who value the one great discipline an architectural education confers—the ability to create order out of a mass of disparate, often conflicting influences—but who prefer to march to a different drummer. The attraction blooms in a period of recession, when offices in private practice trim staff, and the possibility of a steadier paycheck in other fields beckons.

The career of architecture must be seen as more than private practice. It is the opportunity, for those with a common training ground, to influence every aspect of our environment. This wider view is essential in these turbulent times.

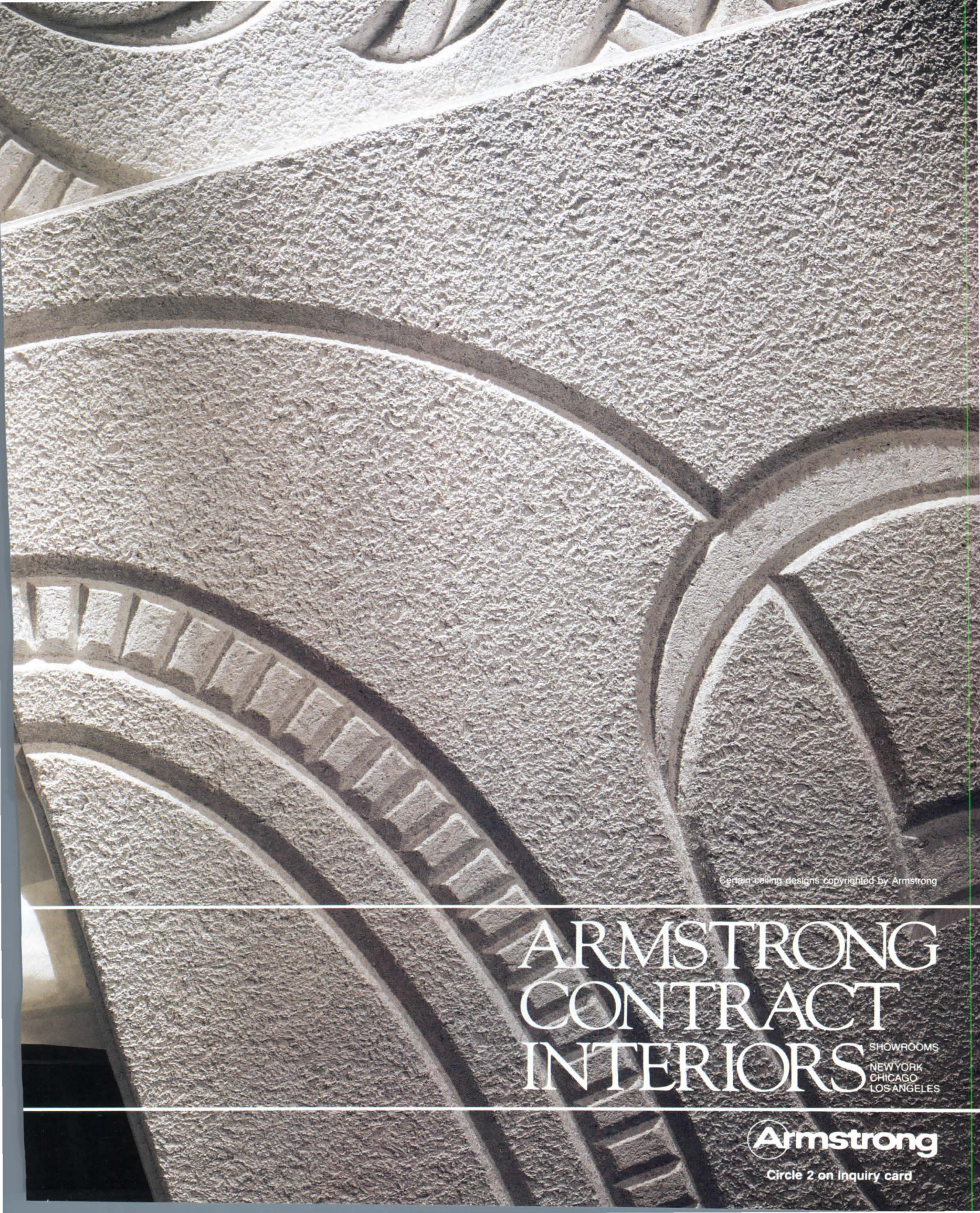
These men and women must not remain the unsung heroic figures of our profession. *Stephen A. Kliment*



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Centennial

It is characteristic of ARCHITECTURAL RECORD to keep a steady eye on the future. That's why I have to amen prefacing the Centennial issue with an editorial on architectural education. Architects everywhere can count on your clearheaded reporting and your passion as invaluable resources in making a future not simply of more, but *better*.

That's enough reason to celebrate a job well done and to wish you another century of distinguished service.

James P. Cramer,
*Executive Vice President/
Chief Executive Officer*
AIA

Congratulations—what a wonderful RECORD!

Norman Foster, Architect
London

What could have been an exciting Centennial issue is a visual disaster. Wide black horizontal lines, monocolored photographs, and lack of hierarchy discouraged me from even trying to find out if there is a message.

Peter Van Dine, Architect
San Francisco

I just finished reading "Future Talk" [July, pages 176-81]. I think you did a masterful job of capturing the positive spirit and concerns of the discussion. I do have one complaint, however, which is that my firm is improperly credited. I am a partner in a firm called Berke & McWhorter Architects. This partnership was formed over two years ago, and ironically, appeared correctly identified in the April issue of RECORD. I have long advocated greater acknowledgement of the collaborative nature of architecture in the media and within the profession itself. The perpetuation of the image of the architect

as a solo genius/mythic hero, silhouetted against the setting sun, cape blowing in the wind, does us all a disservice.

Having now said my piece, I'd like to get a few more copies of the magazine, if possible.

Deborah Berke, Architect
New York City

Star search

I would hope that 20 more years will not pass before your magazine and others start to actively seek out "star-caliber" minority work to be published in your predominantly white publications. Please join the Illinois Chapter of the National Organization of Minority Architects in its effort to ensure that professional architectural publications cover past and current projects of minority architects. There are several minority architects who have been elected to the College of Fellows by the AIA, and several minority architects who have received architectural awards for "star" projects around the country. How can these major accomplishments go unnoticed?

We are willing to help you discover America's best-kept secret, "star-caliber" work done by architects who are minority in number but not in talent. We will help ourselves while we help you, by leading you to it.

Ronald E. Garner,
President, Illinois Chapter
National Organization of
Minority Architects
Chicago

We welcome your help in identifying distinguished work by minority architects. At RECORD we follow a methodical, minority-blind process in seeking out deserving projects for publication.—Ed.

September 17

"Views on American Architecture," lecture series opening with Mary McLeod; future speakers include Mack Scoggin, Ronald Krueck, Peter Eisenman, and Fay Jones. San Francisco Museum of Modern Art, 401 Van Ness Ave., San Francisco. 415/863-8800.

September 24-October 1

"Designed by Cass Gilbert: Drawings for Forest Park," Cohen Gallery, St. Louis Art Museum, 911 Washington Ave. St. Louis, Mo. 314/621-3484.

September 25-26

"Capital Design Week," 8th annual symposium on architectural and residential interior design. Washington Design Center, 5 D Street S. W., Washington, D. C. 202/554-5053.

October 3-December 31

"Tadao Ando," Museum of Modern Art, 11 W. 53rd St., New York City. 212/908-7400.

October 17-18

"Fulfilling the Promise of Mixed-Income Housing," 1991 Housing and Society Trust Annual Conference in conjunction with the Chicago Dwellings Association. Embassy Suites Hotel, Chicago. 617/328-3100.

October 17-19

"Designer's Saturday," International Design Center of New York, sponsored by Designer's Saturday Inc. New York City. 212/826-3155.

October 20-23

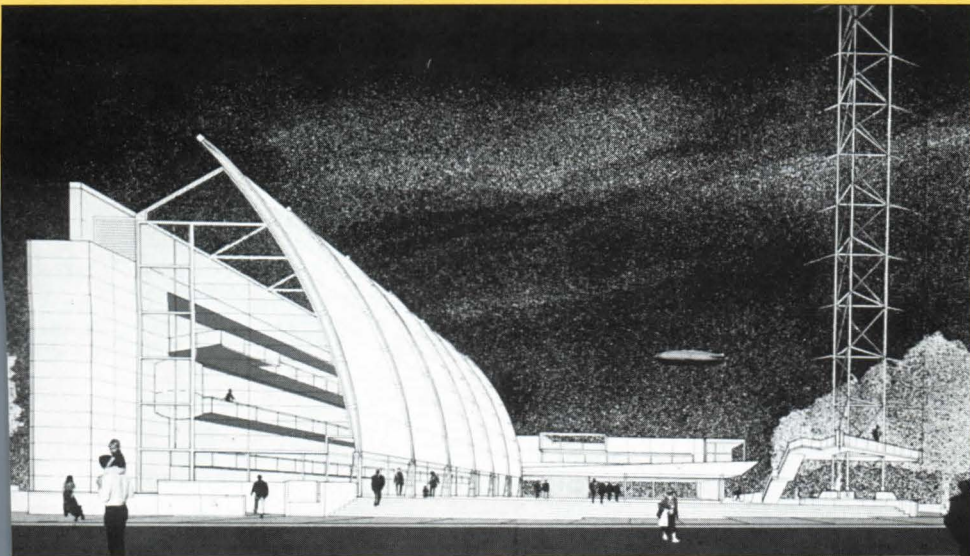
Industrial Fabrics Association International Convention, Opryland Hotel, Nashville, Tenn. 612/222-2508.

October 28-31

A/E/C Systems Fall '91 Conference and Exhibit, Nashville Convention Center, Nashville, Tenn. Contact Sharon Price. 800/451-1196. ■

Ohio

Polshek Invents Hall of Fame



Designing the National Inventors Hall of Fame in Akron, Ohio, "gave us the opportunity to do some inventing ourselves," says Akron native James Stewart Polshek. The museum is the first building Polshek's firm has planned for his home town. Guarding the main exhibit hall, which is submerged 35 feet below grade, is a long, sweeping stainless-steel wing, a circular fragment expressing infinity. The signature science exhibit is an active, 200-foot-high mass-dampening tower, designed by Ove Arup to demonstrate the stabilizing action of these devices. Along with the tower and underground Great Hall, the museum provides a visitors' center, theater, cafe, and gift shop. It will sit at the gateway to the University of Akron, a major center for polymer chemistry research. Polshek is also working on a convention center and master plan for Akron. *P. D. S.*

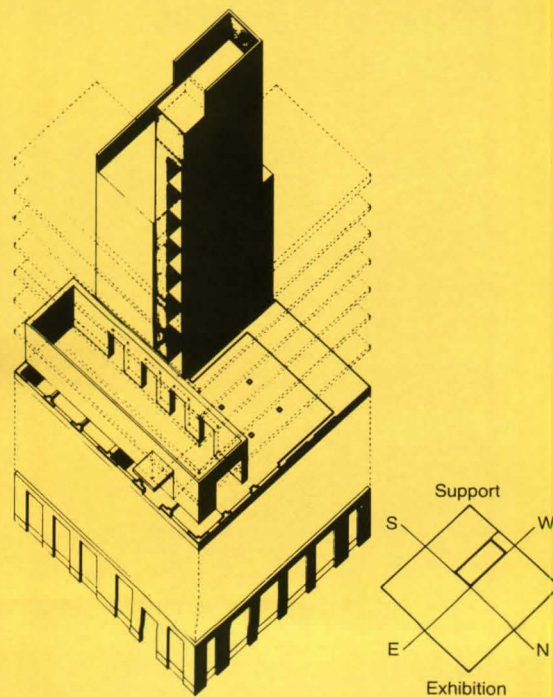
Pennsylvania

Warhol's 15 Minutes Get Permanent Museum

As befits Andy Warhol's legacy as a pioneer of the union of industrial production and fine art, a new museum devoted to his work is planned for an industrial building in Warhol's native Pittsburgh. Architect for the renovation of the seven-story, 70,000-sq-ft building, built in stages from 1911-22, is Richard Gluckman Architects of New York City, in association with UDA Architects of Pittsburgh. The renovation retains the existing structure and terra-cotta details, while interior planning accommodates galleries for permanent collection of 700 paintings, a large variety of Warhol's prints and drawings, screening rooms for film and video, and an archive/library. Scheduled to open in the fall of 1993, the museum is a joint venture of the Dia Art Foundation, the Warhol Foundation for the Visual Arts, and the Carnegie Institute. ■



Enchuan Liu

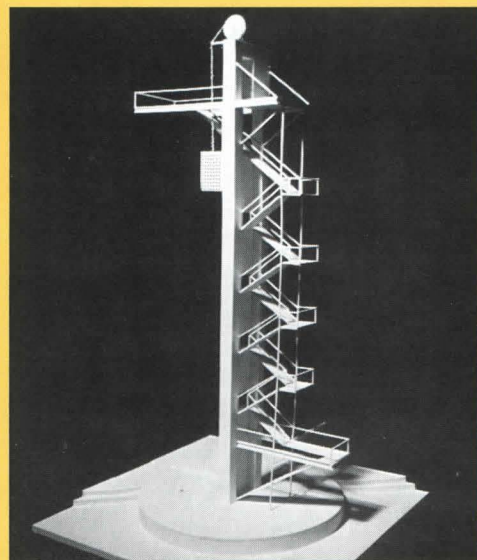


Van Valkenburgh and Saitowitz Collaborate in Columbus



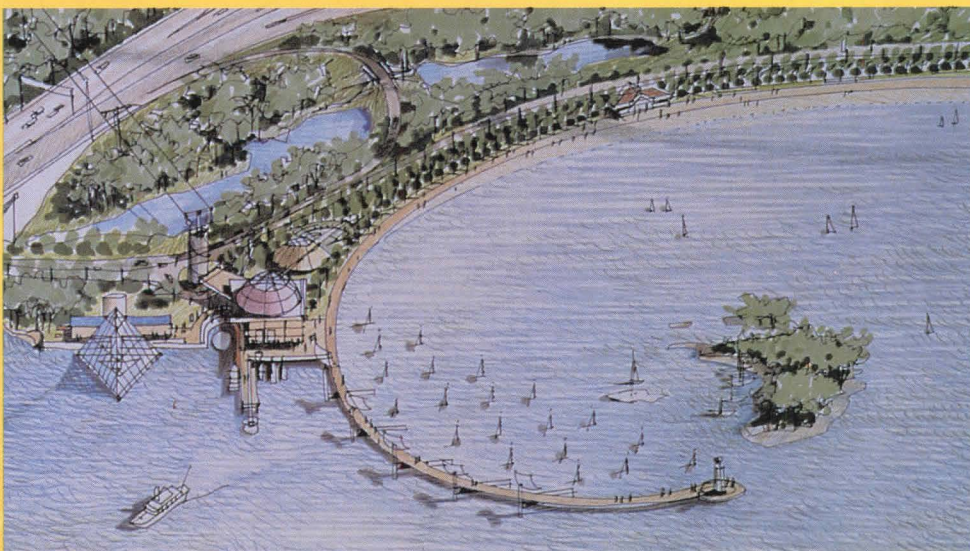
Mill Race Park, an 86-acre site on a floodplain of the White River at the western edge of Columbus, Indiana, is a joint project of landscape architect Michael Van Valkenburgh and architect Stanley Saitowitz. Van Valkenburgh proposes a

new, perfectly circular lake, defined by a masonry walk and flowering trees, as a contrast to the winding river. An earthen amphitheater, drawn from Native American earthworks indigenous to the region, will rise above the flood plain. Along with the



amphitheater stage and public buildings, Saitowitz has contributed a 90-foot concrete tower with exposed steel stairs, elevator, and viewing platform. The platform floor features a granite map of the city, which is visible beyond the park. *P. D. S.*

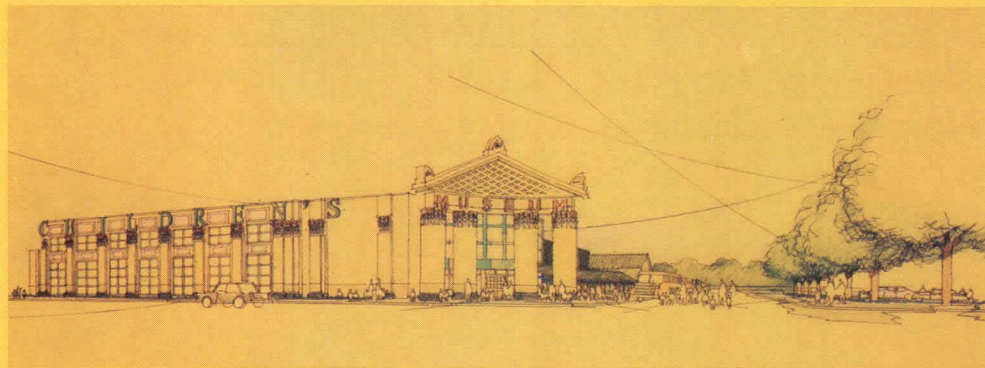
Massachusetts Firm Redesigns Perth Waterfront



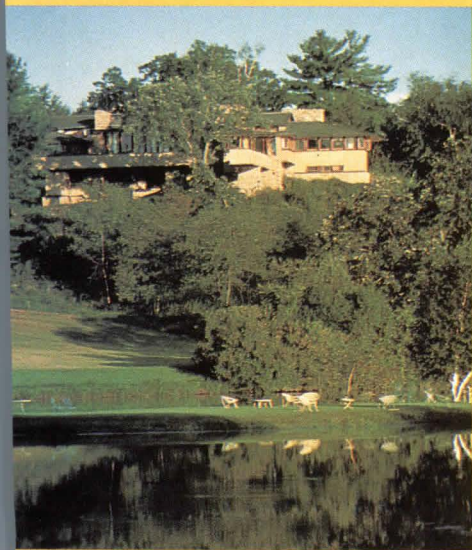
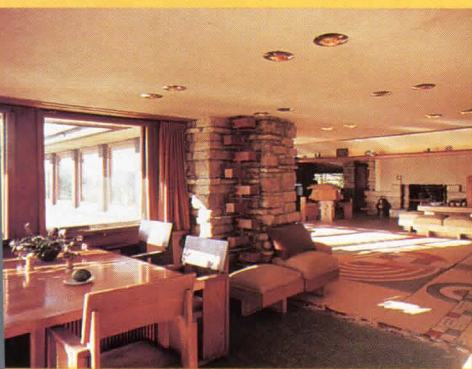
The city of Perth in Western Australia has chosen Cambridge, Massachusetts-based architects Carr, Lynch, Hack & Sandell as winners of an international competition for the redesign of its two-mile riverfront. The main thrust of the winning plan, called Waterside Perth, unites the city with the Swan River shoreline by creating a series of parks, an urban beach, and a large crescent shaped promenade. The architects created a large island for botanical gardens and arts activities by carving a new creek through the water's edge. In addition to recreational and tourist facilities, the plan includes Perth Center, a new commercial district, with offices, housing, retail, and transportation, as well as a new city hall in the existing civic center. A proposed World Environment Center, an education and research facility, serves as the project's signature building. ■

Venturi and Scott Brown Head for the Playground

A multicolored facade, columns shaped as boys and girls from various cultures ("Caryakids"), and a playground greet visitors to Venturi, Scott Brown and Associates' proposed Mary Gibbs Jones Building for the Children's Museum of Houston. Clad primarily in cast stone, the 44,000-square-foot addition contains galleries, an auditorium, classrooms, and an art studio. A rhythm of arches in a spectrum of colors graces the two-story, clerestory-lit "Kid's Mall"—the focal point of the addition. The addition is scheduled to open in November 1992. ■



State and Wright Foundation Join Forces at Taliesin



The State of Wisconsin and the Frank Lloyd Wright Foundation have together established the Taliesin Preservation Commission, a private, nonprofit organization dedicated to the preservation of Taliesin in Spring Green, Wisconsin. The comprehensive effort encompasses not just Wright's house and studio, but also his nearby Hillside School, Midway Farm, Romeo and Juliet Windmill, and Tan-y-deri cottage, as well as the 600 acres on which these structures sit. A new center designed by Taliesin Associated Architects to handle the growing number of visitors—27,000 last year—is planned for an adjacent site. Robert Burley, a preservation architect from Vermont, was selected by the 20-member commission to administer the job. He describes the existing structures, built between 1897 and 1938, as suffering both from the normal deterioration of age and from inadequacies in their original construction. "Taliesin was a design laboratory for Wright, and he sometimes built more ambitiously than time and money allowed." On the other hand, Burley notes that "from a preservation viewpoint, the structures are in good shape. They've always been owned by Wright, or by the [Frank Lloyd Wright] Foundation, and so the building forms are intact, inside and out." To fund this large endeavor, the commission hopes to raise about \$28 million from private and public sources. For its next project, the foundation may turn to Taliesin West. *Nancy Levinson*

Briefs

Promise

A shut-down symbol of New York City's economic malaise could see daylight again. Hardy Holzman Pfeiffer Associates has been tapped to renovate the Biltmore Theater, a landmark Art Deco theater that closed its doors four years ago and has since been damaged by fire and vandalism.

Disappointment

Things don't look so good for Daniel Libeskind's proposal for a museum in Berlin dedicated to that city's Jews. The city, strapped for cash following reunification and preparing an expensive bid for the 2000 Olympics, is putting the museum on hold for at least five years.

Helping out

The Partnership for the Homeless, a New York-based nonprofit corporation, has launched Furnish a Future, a new program that looks past the absolute basics of shelter. FAF will direct furniture from its Brooklyn warehouse to the Partnership's clients once they have found a home. FAF is reaching out to the design industry for tax-deductible donations: 718/875-5353.

Competitions

The Building Stone Institute has issued a call for entries in the 1991 Tucker Architectural Award Competition. Submissions can be made in six categories. Contact Lacy S. Vernon, President, Building Stone Institute, P. O. Box 5047, White Plains, New York 10502; 914/232-5725. ■

Frank Lloyd Wright Foundation

Michigan

Squeeze Play at Tiger Stadium?



In mid-July, a task force appointed by the Detroit Chapter of the AIA released its recommendation for a new Detroit Tigers baseball stadium. The present Tiger Stadium, erected in 1912, is ranked by the National Trust for Historic Preservation as one of America's Eleven Most Endangered Historic Places. The task force consisted of three board members of the Detroit Chapter, one of whom had participated in the 1978 renovation of Tiger Stadium and had sports-stadium expertise. Two renovation/preservation proposals, the Cochrane plan and the Birkerts/O'Neal plan, each projected to cost well under \$100 million, were rejected, even though a new stadium could cost an estimated \$200 million. (Although the task force's recommendation is nonbinding, the Tigers are eager for a new home and have threatened to leave Detroit.)

Jerry Shea, president of the Detroit Chapter, said that the structure of Tiger Stadium is "basically sound," but noted that the task force (which made just one trip to the site) had expressed concern for unforeseen problems, many of which surfaced during the



1978 renovation. One of the Tigers' main worries is parking. The existing facility has no parking lot, and there is concern about how introducing a projected 12,000-15,000 parking spaces for a new ballpark would affect the downtown neighborhood the Tigers have their eye on. Still, the Tigers lean toward a site a half-mile from Tiger Stadium. John Davids of TMP Associates, architect of the Cochrane plan, still hopes the old stadium can be saved. "Our whole thrust is that they don't need to spend that money on a new stadium." *Maria L. Angeletti*

California

Morphosis Splits Up

Michael Rotondi and Thom Mayne, the partners of Morphosis Architects in Los Angeles, have announced plans to "expand their range by pursuing their individual interests" as principals of their own firms. This architectural divorce was not brought on by economic adversity and is not an acrimonious one—not unrelated factors. Instead, the split shows how differences in approach can be resolved. Rotondi will pursue the relationship between architecture and other forms of visualization, such as the application of computers to graphics and the emerging technology known as *virtual reality*. To this end, he is teaming up with graphic designers April Greiman and Eric Martin and filmmaker Robert Greenberg to explore ways in which "the computer can be used to conceptualize space, not just produce drawings." Mayne, building on a base of four urban-design commissions currently under way at the office, is expanding his practice to include larger projects. "You might say Michael is growing inward, while I'm growing outward," says Mayne, who will continue the office and current projects under the Morphosis name. *Aaron Betsky*

France

Maintaining Model Research Center

Though U. S. government funding for American building research has been minimal, the French government established its Centre Scientifique et Technique du Bâtiment shortly after World War II. The government gives CSTB's five labs about \$40 million annually for construction research and for testing products and procedures. In addition to basic research, the CSTB performs tests commissioned by manufacturers and sells reports of its research. For information: CSTB, 4 avenue de Recteur-Poincaré, 7578 Paris Cedex 16, France. *Richard Rush*

District of Columbia

HUD to Regulate Overregulation



"Not in My Back Yard," a report issued in July by the White House-sponsored Advisory Commission on Regulatory Barriers to Affordable Housing, under Secretary of Housing and Urban Development Jack Kemp, pointed its finger at three hurdles to affordability: "an increasingly expensive and time-consuming permit-approval process," "exclusionary zoning," and "well-intentioned laws aimed at protecting the environment and other features of modern-day life." The panel proposed a batch of recommendations to loosen the hand of what Kemp calls "eco-bureaucrats" on the collar of beleaguered builders.

The title of the report refers to widespread efforts to bar "undesirables" from established communities. "Many communities in suburban Chicago zone out manufactured housing and make use of estate zoning with five-acre lots as a minimum," wrote Suzanne Hayes, Community Development Director for the Cook County Department of Policy, Planning and Development. The commission came up with 31 recommendations to provide "the legislative and administrative tools" necessary to reduce regulatory overkill. Among the proposals: authorizing HUD not only to place conditions on assistance to state and local governments, based on their barrier-removal strategies, but also to set up incentives to develop barrier-free strategies. In addition, HUD and other federal financial agencies should develop means to guarantee investment in older urban communities.

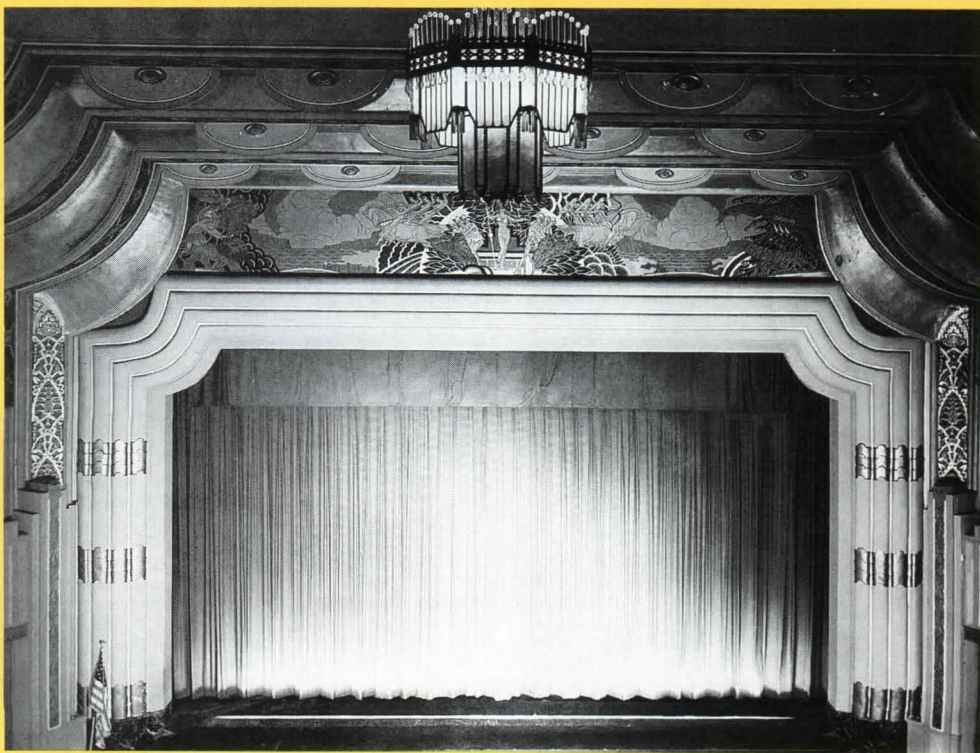
By Peter Hoffmann

Pennsylvania

State Ruling Jeopardizes Landmark Laws Across U. S.

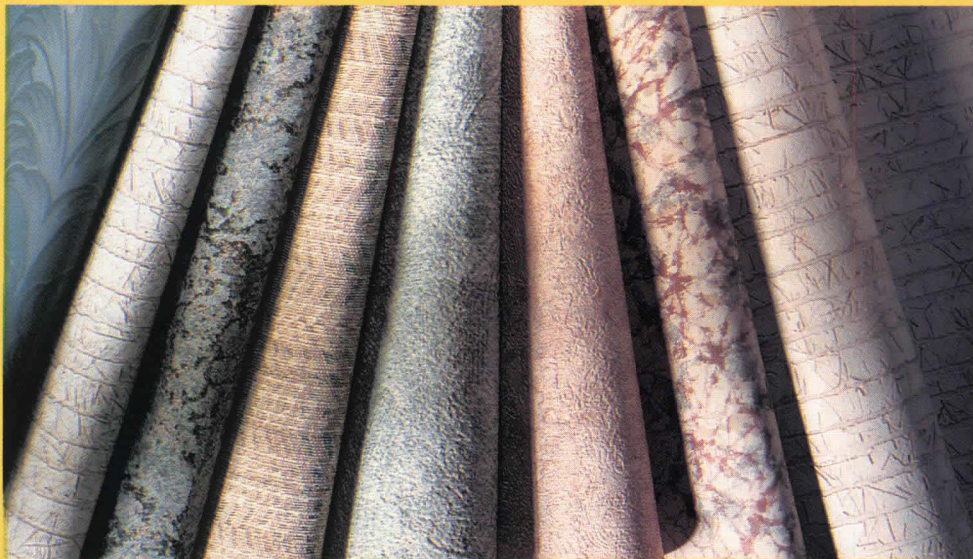
In a surprise ruling July 10, the Pennsylvania Supreme Court struck down Philadelphia's historic-preservation law, declaring it unconstitutional under the Pennsylvania Constitution. In *United Artists Theater Circuit Inc. v. City of Philadelphia*, *Philadelphia Historical Commission*, in which the plaintiff sought to divide the interior of the Boyd Theater, an Art Deco movie palace (photo below), into a multiplex cinema, the court held that landmark designation constitutes the taking of private property without just compensation. The ruling "came out of the blue," says Jack Kerr, a board member of the National Center for Preservation Law. Two lower-court rulings and the briefs before the court were "based on statutory considerations. The court went out of its way to rule on constitutional grounds." Because a ruling based on a state

constitution precludes a challenge in U. S. Supreme Court, the Philadelphia Commission, backed by state and national politicians, has asked the court for a rarely granted reconsideration, its only recourse. Even if the judges reverse themselves, says Kerr, the ruling—which cannot serve as a precedent in other states—"is a roadmap for property owners on how to get around their state constitution." Laurie Beckelman, who heads New York City's Landmarks Preservation Commission, notes that although New York City's law has withstood tests in state and federal courts, "I'm very concerned with the impact of this ruling on landmark laws across the nation." Meanwhile, the Philadelphia Historical Commission has indefinitely postponed scheduled designation hearings. "No one's optimistic," says Chairman Richard Tyler. P. D. S.



Michael Wakely

Touchable



300



301



303



302



304

Decorative vinyl wallcoverings in a new range of upscale prints, bright and warm colorations, and distinctive borders are a far cry from the once-ubiquitous beige burlap look. Specification-grade vinyls successfully pass the most stringent flame and toxicity tests, such as California Fire Marshal and New York City's Materials and Equipment Acceptance Division requirements. The industry is confident that its products also will meet the proposed emission standards of the State of Washington, which will establish permitted air-quality levels for interior furnishings. (Currently being developed, these protocols will measure offgassing of materials after a 30-day air-out period.) The patterns and textures shown here add a large measure of tactile and visual interest to even the most institutional of spaces (and help hide the inevitable dings). All are Class A rated per ASTM E84 and come in easy-to-install 54-in. widths. *J. F. B.*

300. Design elements from rice paper, stone, sponge painting, and burnished metal are used in new Guard patterns. Columbus Coated Fabrics.

301. Embossing gives a layered appearance to LX in Weave, Mesh, and Build-Up patterns. Innovations in Wallcoverings.

302. Competitively priced Geometry comes in 90 colors. Innovations in Wallcoverings.

303. Vizcaya is a nondirectional flow of scrolls and textures in saturated deep tone and gilding. Forbo-Vicrtex.

304. Large- and mid-scale designs in the Signature 54 line come in over 100 colors. J. M. Lynne.

305. Volume IV prints such as Ferucci come in colorways that complement other interior finishes. Koroseal Wallcoverings.

306. Self-adhesive Belbien wall surfacing comes in photorealistic motifs. C. I. Kasei.

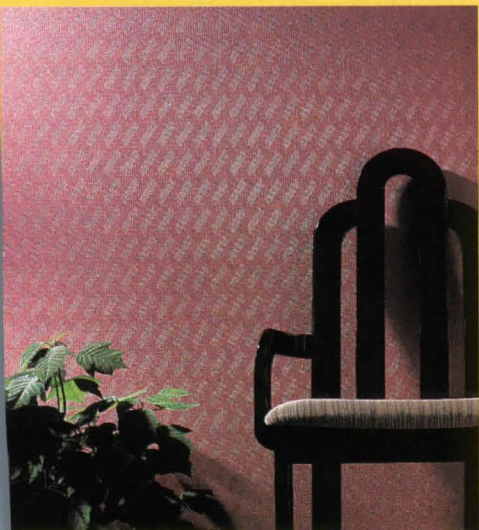
307. An "ageless" hospital room by interior designer Penny Gisclar features a custom border of local landmarks overprinted on Genon vinyl. GenCorp Polymer Products.

308. A hospital playroom enlivened by a custom border from the Guard-By-Request program. Columbus Coated Fabrics.

309, 310. Two new patterns shown in healthcare settings: a cozy floral from the Essex Living Environments line, and a Bolta Source 54 landscape print. GenCorp Polymer Products. ■

Patterned wallcoverings add warmth to institutional environments—and are an economical upgrade in a competitive market.

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



05



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Practice

Practice This Month Pricing Services

The theme this month is basic: how to run a design business—especially ways to deal with root financial problems and issues confronting architects in the current economy:

• **Pricing Services.** On this page, management consultant Peter Piven takes a new look at how to get better fees for your work.

• **Construction Volume Update.** McGraw-Hill economist George Christie predicts how much work is *likely* and what kind.

• **Getting Paid.** Architect and attorney Timothy Twomey describes how to improve your chances of collecting those fees.

• **Marrying Kind.** Architect Bradford Perkins tells you how to know when selling out or buying another firm makes sense and how to go about it when it does.

• **Specification Series: Carpets.** Specifier Katherine Freeman outlines considerations that will assure the carpet you call for is the one you want.

• **Biting the Bullet.** Computer expert Kristine Fallon shows how basic applications can improve your practice by discussing experiences of architects and others in two areas: multimedia and automated instruction.

If all else fails, one architect interviewed by Perkins has perhaps found the ultimate solution to running a business. He sold it to another firm that likes running businesses and lets him get back to why he went into the profession in the first place: to design.
Charles K. Hoyt

By Peter Piven

The current perception of the marketplace for architectural services is:

1. Most markets have dried up;
2. All the rest have become more competitive;
3. As a consequence, the ability to get adequate compensation for services has declined.

The evidence is clear that some segments of the domestic marketplace have declined substantially, particularly those commercial and residential projects generated by developers. Some markets, however, have remained relatively stable, especially in the educational and corporate fields, and others have been growing—particularly health faculties and research laboratories. But those markets have seen increased competition for commissions as firms with historic strengths and interests in other markets that have temporarily disappeared cross over to seek work where it still exists.

The supply-demand relationship applies as much to architectural services as it does to any other sector of the economy. Supply in excess of demand drives down price. While increasing the number of firms competing, firms crossing over use low fees as a way of entering a market in which they may lack experience—a typical posture for entry-level firms in any field. And the broad mid-range of the institutional/corporate/governmental marketplace was the most competitive even before the new pressures, with the largest number of firms going after each project.

Three types of markets and firms

If we view the marketplace as segmented according to what clients seek and, therefore, what firms offer, we can identify three kinds of markets and firms:

Mr. Piven is a management consultant with the Coxe Group in Philadelphia.

- Strong idea
- Strong service
- Strong delivery

Strong-idea firms provide singular expertise innovation, or both on projects of a unique nature. Strong-service firms provide experienced handling of complex assignments under circumstances that may change sharply from one project to another. Strong delivery firms provide highly efficient service on projects similar to each other (e. g., healthcare facilities) to clients who seek more product than service.

Value pricing in strong-service firms

Much of the market that has remained active today falls into the strong-service segment. Traditionally, 60 to 70 percent of firms in practice were this kind of firm; crossovers have increased the percentage. The design methods of a strong-service firm emphasize the management process that coordinates comprehensive, multidiscipline talents and services until the client's problem is solved and the project is built. The technology is time-intensive. Firms must take this into account in pricing services to ensure adequate compensation.

Value pricing means that architects are compensated on the basis of the value they bring to the assignment as they should be and not on the cost of the effort. But the value differs and the market says that the more people that can provide the service, the lower the value—a classic demonstration of the supply-demand model.

How, then, do you move from effort to value pricing? For strong-service firms, what counts is differentiating their services from their competitors' on the basis of quality and/or other characteristics, but not on price. First they must be selected and then try to negotiate better fees for bringing value that others do not.
Continued on page 153

The Decline Stops Here Construction Economy Update

By George A. Christie

To update the Dodge/Sweet's *1991 Outlook*, construction-contracting data for the first half of the year warrant two interpretations of how things stand.

A simple year-to-date match-up with 1990 puts the situation in its worst light: the total value of new starts at the end of six months was a dismal 16 percent less than for the opening half of 1990. However, closer inspection shows that 1991's second quarter brought a small improvement. It wasn't much—contracting in the second quarter averaged 2 percent more than in the first—but the importance was in the change of direction. After six consecutive quarters of decline (beginning with the fourth quarter of 1989), even a small gain is welcome.

The reversal of the Dodge Index of construction contracting happened under promising circumstances. The economy is pulling out of recession, inflation is under control, and interest rates are workable. In this context it can be said that the first half of 1991 began with the end of one building cycle, and ended with the beginning of a new one.

Because the Dodge Index measures contracts to build, not building, the key measures of the construction market will be out of sync for a couple of quarters. This

usually happens at the cyclical turning points, and it's what is coming up next. Through most of the second half of 1991, when contracting for new construction will be rising, expenditures for construction put in place, as well as for shipments of building products, will continue to decline. Due to the shrinking volume of construction started late in 1990 and early in 1991, current spending for labor and materials won't bottom out for several months.

The upturn of contracting starting in the spring should result in stabilized employment and materials demand before year-end. In 1992, all macro measures of construction activity will again be heading in the same direction . . . this time up.

However, for 1991 as a whole, total construction-contract value will finish in the negative column again despite the prospect for continuous gain in the quarters ahead. A full-year total of \$226.5 billion of newly started projects, 8 percent less than in 1990, will leave the Dodge Index at an estimated 144 for the whole of 1991. With half the year behind us, the main concern of this *Second Update of the 1991 Outlook* for construction contracting is the contrast between the two halves of this "turnaround year" and the prospects for the second half.

Housing: the leading edge

Two generalizations are enough to summarize the outlook for the biggest of all the construction sector's submarkets: (1) housing is where construction cycles usually begin, and this one is no exception; (2) there are two housing markets (one-family and multifamily), but only one of them has the capability of short-term improvement.

The reversal for total housing starts is the most positive event so far in 1991, and that occurred early in the year. Starts hit bottom in January at an annualized rate of 850,000 units—just about where the 1982 crash came

to rest. By mid-1991, the rate of starts had improved by 15 percent. Despite this recovery, however, the June rate for starts barely exceeded 1 million units, and the average for the first half came to only 900,000 units, 10 percent fewer than in the previous six months. At this point, if the total of housing starts for all of 1991 were even to equal the historic lows of 1982 and 1975, the second half would have to show an improbable 40 percent improvement over the first half. Qualitatively, however, 1991's smaller total—now estimated at an even 1 million units—offers a higher proportion of single-family units than the former cyclical lows.

Multifamily outlook bleak

The prospect for near-term improvement in multifamily development is close to zero. This side of the housing market was already in steep decline before either the credit crisis or the recession compounded its oversupply problems. Between 1985 and 1989, under relatively favorable economic and credit conditions, annual starts of apartments and condos declined by 50 percent to 400,000 units. Since 1989, the breakdown of the banking industry has led to a further 50 percent decline.

The economy's recovery from its recent recession won't help the multifamily housing market much since it doesn't address the basic problems of oversupply or lender resistance. A nominal second-half improvement should result in a full-year total of 200,000 units in 1991.

Singles: half a recovery is better than none

In the single-family house market, the challenge is to regain the 1-million-unit volume of the 1980s. It's a long way back to where this business was not very long ago.

For seven years (1983 through 1989), a supportive combination of demographics and affordability sustained single-family house



building at an uncharacteristically steady million-unit-a-year pace. The credit crunches of 1989 (S&Ls) and 1990 (commercial banks) changed all that. Single-family starts fell to an average of 825,000 units. And in the first half of 1991 they sagged below 700,000 in the first quarter before recovering a bit in the second.

How much improvement can be expected in 1991's second half? Demographics haven't changed, and a backlog of pent-up demand—perhaps for 200,000 single-family houses—exists beyond the current need for a million units annually. The recession's conclusion is restoring consumer confidence, according to opinion surveys, and low inflation spurs buying, as confirmed by buoyant sales of existing houses.

Credit (not just mortgage money or construction loans) is the immediate impediment to even a partial recovery of the housing market. Cleaning up the mess that real estate lending became in the 1980s will retard the recovery of house building to half its customary pace this time around. Even at that, single-family housing will be the dynamic part of the construction sector for the time being as starts advance to an average rate of 900,000 units in the second half of 1991.

Beyond 1991

Supply issues—the oversupply of multifamily units and the scarcity of development funds for singles—will continue to inhibit the expansion of total housing starts well beyond the current year. For 1991, even the estimation of 1 million units (800,000 single, 200,000 multis) seems like a stretch at this point, since it would require a fourth-quarter rate of as much as 1.15 million units. If this can be achieved, a 1992 total of between 1.2 million and 1.225 million units (a year-to-year gain of 20 percent or more) is within reach. As in 1991, most of next year's potential will be in one-family houses.

Commercial and industrial building: wait 'til next year . . . or the year after

One of the lessons learned from previous building cycles is that it would be unrealistic to look for a revival of commercial and industrial building for at least a year after the conclusion of a general recession.

1991 National Estimates Dodge Construction Potentials Second update 7/91

	1990 Actual	1991 Forecast	Percent Change 1990/91
Nonresidential Buildings			
Floor Area (millions of sq ft)			
Office Buildings	166	100	-40
Stores and Other Commercial	486	360	-26
Manufacturing Buildings	127	105	-17
Total Commercial and Mfg.	779	565	-27
Educational	144	157	+ 9
Hospital and Health	69	66	- 4
Other Nonresidential Buildings	152	142	- 7
Total Institutional and Other	365	365	—
TOTAL NONRESIDENTIAL BUILDINGS	1,144	930	-19
Contract Value (millions of \$)			
Office Buildings	\$ 17,679	\$ 11,925	-33
Stores and Other Commercial	23,397	18,875	-19
Manufacturing Buildings	8,182	7,550	- 8
Total Commercial and Mfg.	\$ 49,258	\$ 38,350	-22
Educational	\$ 15,652	\$ 17,175	+ 10
Hospital and Health	9,039	8,900	- 2
Other Nonresidential Buildings	15,974	15,300	- 4
Total Institutional and Other	\$ 40,665	\$ 41,375	+ 2
TOTAL NONRESIDENTIAL BUILDINGS	\$ 89,923	\$ 79,725	-11
Residential Buildings			
Dwelling Units (thous. of units)			
One-Family Houses	834	800	- 4
Multifamily Housing	302	200	-34
Total Housekeeping Residential	1,136	1,000	-12
Floor Area (millions of sq ft)			
One-Family Houses	1,490	1,445	- 3
Multifamily Housing	326	220	-33
Nonhousekeeping Residential	51	25	-51
Total Residential Buildings	1,867	1,690	- 9
Contract Value (millions of \$)			
One-Family Houses	\$ 83,479	\$ 81,725	- 2
Multifamily Housing	17,317	12,675	-27
Nonhousekeeping Residential	4,688	2,850	-38
Total Residential Buildings	\$105,484	\$ 97,250	- 8
Nonbuilding Construction			
Contract Value (millions of \$)			
Transportation Construction	\$ 24,597	\$ 25,725	+ 5
Environmental Construction	20,483	18,775	- 9
Total Public Works	\$ 45,080	\$ 44,500	- 1
Utilities	\$ 4,883	\$ 5,000	+ 3
TOTAL NONBUILDING CONSTRUCTION	\$ 49,963	\$ 49,500	- 1
All Construction			
Contract Value (millions of \$)			
Total Construction	\$245,370	\$226,475	- 8
Dodge Index (1982=100)	156	144	- 8

1991 Regional Estimates		Dodge Construction Potentials			Second update 7/91		
Construction Contract Value (millions of \$)	1990 Actual	1991 Forecast	Percent Change 1990/91	1990 Actual	1991 Forecast	Percent Change 1990/91	
Northeast CT, ME, MA, NH, NJ, NY, PA, RI, VT							
Nonresidential Building				Residential Building			
Commercial and Manufacturing	\$ 8,995	\$ 7,025	-22	One-Family Houses	\$ 9,857	\$ 9,575	- 3
Institutional and Other	8,900	8,575	- 4	Multifamily and Nhskpg.	3,741	3,325	-11
Total	\$17,895	\$15,600	-13	Total	\$13,598	\$12,900	- 5
Nonbuilding Construction	\$ 9,818	\$ 9,975	+ 2	TOTAL CONSTRUCTION	\$41,311	\$38,475	- 7
North Central IL, IN, IA, KS, MI, MN, MO, NE, ND, OH, SD, WI							
Nonresidential Building				Residential Building			
Commercial and Manufacturing	\$11,928	\$ 9,000	-25	One-Family Houses	\$17,729	\$18,550	+ 5
Institutional and Other	9,331	9,175	- 2	Multifamily and Nhskpg.	4,574	3,150	-31
Total	\$21,259	\$18,175	-15	Total	\$22,303	\$21,700	- 3
Nonbuilding Construction	\$10,924	\$10,850	- 1	TOTAL CONSTRUCTION	\$54,486	\$50,725	- 7
South Atlantic DE, DC, FL, GA, MD, NC, SC, VA, WV							
Nonresidential Building				Residential Building			
Commercial and Manufacturing	\$ 9,303	\$ 6,950	-25	One-Family Houses	\$19,942	\$19,100	- 4
Institutional and Other	7,727	8,400	+ 9	Multifamily and Nhskpg.	4,794	3,025	-37
Total	\$17,030	\$15,350	-10	Total	\$24,736	\$22,125	-11
Nonbuilding Construction	\$ 8,519	\$ 8,450	- 1	TOTAL CONSTRUCTION	\$50,285	\$45,925	- 9
South Central AL, AR, KY, LA, MS, OK, TN, TX							
Nonresidential Building				Residential Building			
Commercial and Manufacturing	\$ 6,002	\$ 5,225	-13	One-Family Houses	\$10,917	\$11,650	+ 7
Institutional and Other	5,266	5,900	+12	Multifamily and Nhskpg.	1,315	1,125	-14
Total	\$11,268	\$11,125	- 1	Total	\$12,232	\$12,775	+ 4
Nonbuilding Construction	\$ 8,405	\$ 8,150	- 3	TOTAL CONSTRUCTION	\$31,905	\$32,050	-
West AK, AZ, CA, CO, HI, ID, MT, NV, NM, OR, UT, WA, WY							
Nonresidential Building				Residential Building			
Commercial and Manufacturing	\$13,030	\$10,150	-22	One-Family Houses	\$25,034	\$22,850	- 9
Institutional and Other	9,441	9,325	- 1	Multifamily and Nhskpg.	7,581	4,900	-35
Total	\$22,471	\$19,475	-13	Total	\$32,615	\$27,750	-15
Nonbuilding Construction	\$12,297	\$12,075	- 2	TOTAL CONSTRUCTION	\$67,383	\$59,300	-12

Prepared by the Economics Department McGraw-Hill Information Services Company,
George A. Christie, vice president and chief economist.

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- Employment growth needed to fill empty offices is notoriously slow to rebound as firms exert cost controls to restore profitability. The unemployment rate, now crowding 7 percent, isn't likely to retreat below 6 percent for another year or two.

- Recessions leave the manufacturing sector with excess capacity, and capacity utilization is currently only 77 percent.

- Shopping-center development, which is a derivative of house building, needs a solid recovery of the housing market as a stimulus.

For these reasons, even under ordinary circumstances, the recovery sequence of the construction cycle leaves commercial and industrial building out of the action for at least the first year. And 1991 could hardly be called "ordinary circumstances."

This time the lag is apt to be longer than usual for reasons that predate the recent recession: the commercial-building market was in distress long before the economy's 1990-91 setback. Overdevelopment in the mid-'80s building boom, which had been "subsidized" by accelerated depreciation, distorted normal supply/demand relationships.

Even before tax reform restored full depreciation, soaring vacancy rates prompted a determined cutback of new construction (especially, but not exclusively, office buildings) in an attempt to restore balance. But once recession set in, demand for commercial space fell as fast as supply could be reduced. To make matters worse, the S&L bail-out leaves the Resolution Trust Corporation with 1,300 office buildings, 600 shopping centers, and nearly 200 hotels to unload on any terms it can negotiate.

Just how long it takes for the commercial/industrial building sector to recover from the chaotic condition of the 1980s is a subject for next fall's *1992 Outlook*. But it is apparent that this market will not fulfill its traditional role of "second-stage booster" next year. For the nearer term, the coming and going of the 1990-91 recession finally established the bottom of the commercial/industrial slide in 1991's first half at just under \$40 billion (annualized rate). Stability

Getting Paid

close to this depressed rate is the most likely prospect for the remainder of the year.

Public construction: what recession?

The contrast between private and public construction markets is an interesting subplot of the 1990-91 recession. Since the third quarter of 1989, private building (housing and commercial) collapsed by more than one-third, yet public construction (institutional and infrastructure) is still as strong in 1991 as it was at the 1989 peak.

While so much has been going wrong for the past couple of years, here's an insulated part of the construction market where—at least until now—things have been going right. Insulated, in this case, means independent of the stressed-out banking system.

In 1991's second half—and in 1992—institutional building could be exposed to some unfamiliar resistance. Although the need for schools, health-care facilities, and other public buildings continues to mount, the ability of state and local governments to provide them has been diminished by the consequences of recession—falling tax revenues and rising social benefits. Operating expenses (salaries especially) are at greater immediate risk than capital projects, but deferral of some marginal plans is inevitable.

New strategies needed

In its early stages, this recovery will not look much different from previous ones. Initially, one-family homebuilding will carry total construction contracting ahead while nonresidential building stabilizes. Overall, this means an improving second half—by perhaps 10 percent—but the improvement will be confined to housing.

Beyond 1991, beware! Although it is reasonably safe to say that the decline of construction contracting reached its end earlier this year, it can't be taken for granted that the usual vigorous recovery will follow. On the contrary, the path to the next cycle of construction is strewn with obstacles: a broken-down banking system, an overdeveloped commercial-real-estate market, a shrinking young-adult population, to name a few. These are some of the issues to be dealt with in the *1992 Outlook*. ■

By Timothy Twomey

Each of these suggestions can improve your chances of getting paid on time—or getting paid in court, if necessary. They are not exhaustive nor applicable without modifying them to suit your own circumstances.

1. Do no work without a contract

Describe, at a minimum, services to be provided, compensation to be paid, and when payments will be made. Because it takes time to consider and negotiate a comprehensive agreement—which may not be available before starting work—some architects have simple, standard client-commitment letters for almost any circumstance. These letters include essential minimal terms and conditions. A quick fax to the client of the appropriate letter, with the client's executed return fax, can be simple and fast, and is much better than having no written agreement at all.

2. Get an advance against final payment

The amount should equal at least the anticipated billings during the two largest consecutive billing periods.

3. Bill more often than monthly

For example, bill every two weeks, or bi-monthly. A short billing cycle *and* the right to suspend services for nonpayment (see item 6) will reduce your financial exposure.

4. Include dispute-resolution procedure

Require in your agreement that the client advise you in writing (in a defined short period of time) of any good-faith dispute with all or any portion of your invoice. State that all amounts not disputed must be paid when due, while disputed amounts do not become due until the dispute is resolved. While this allows clients to avoid payments on disputed amounts until the dispute is resolved, it also assures prompt payment of amounts not in dispute.

5. Require disputes to be mediated first

This is usually only warranted on large projects. The mediator's decision should be

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binding on the parties, but not on a court or arbitration panel that may later hear the dispute. This will protect your cash flow somewhat in the face of a client's bad-faith dispute, while not hampering either party's right to finally settle the dispute by litigation or arbitration.

6. Say you can suspend services

As long as the agreement establishes payment-due dates and clearly provides a dispute procedure (see item 4), saying you will suspend services for slow payment is reasonable and may overcome your natural reluctance to do it. Also state that you will incur no liability for damages or delay to the client and that the client will indemnify you against claims by third parties alleging damages or delay incurred by them.

7. Get stop-and-start costs

This should apply whether it is the client or you who suspends work. The schedule and your fees for work afterward should also be adjusted to account for the suspension period.

8. Put a penalty on overdue amounts

This is often referred to as interest. But you are not lending money to the client. Refer to this penalty as a service charge.

9. Put copyright notices on all documents

This may enhance your ability to prevent un authorized use.

10. Make document use contingent on payment

This bars nonpaying clients from using your drawings, specs, and other documents.

11. Make your certificates contingent on payment

This should include all certificates, whether to the client, the contractor, lenders, or building officials for certificates of substantial completion, building permits, or certificates of occupancy.

12. Choose arbitration over litigation

Generally, though not always, arbitration is quicker and costs less than litigation, and disputes have a better chance of being resolved appropriately by arbitrators who are knowledgeable about construction. ■

Twelve ways to improve your chances.

Sample Contract Provisions

You may want to use the following contract provisions as guidelines:

Client's right to dispute invoices

If the Client disputes in good faith all or any portion of any statement from the Design Professional, the Client shall notify the Design Professional of the nature of the dispute, in writing within ten days of receipt of the disputed statement. Such written notice shall clearly indicate the portion of the statement that the Client disputes and shall include a reasonably detailed explanation of the reasons for the dispute. Remaining, undisputed portions of each statement shall be paid by the Client within thirty days of the Client's receipt.

Amounts so disputed shall be deemed not due to the Design Professional and the Client shall not be required to make payment of any amount disputed in good faith by the Client in the manner and within the period of time set forth above until the matter in dispute has been resolved either by the parties or pursuant to the dispute-resolution provisions of this Agreement. If the resolution indicates that the Design Professional is entitled to be paid all or any portion of such disputed amount, then such amount to be paid to the Design Professional shall be due and payable within thirty days after resolution of the matter, together with interest thereon at the rate provided for in this Agreement, from the date such amount would have been due the Design Professional had the Client not so disputed such amount.

Nothing contained herein shall be deemed to waive the Client's right to later dispute the basis of any statement after payment has been made unless it involves a dispute that has been finally resolved pursuant to applicable dispute-resolution provisions of this Agreement.

Mediation of invoice disputes

Should the Client, pursuant to this Agreement, dispute an amount invoiced by the Design Professional, then the Design Professional, at its election, may require mediation of such dispute. Unless otherwise

agreed by the parties, mediation shall be conducted by a single mediator, in a simple mediation session, pursuant to the then current Construction Industry Mediation Rules of the American Arbitration Association.

If the Client and the Design Professional are unable to resolve such dispute within ten days of such mediation session then, at the written request of the Design Professional, a copy of which shall be simultaneously delivered to the Client, the mediator shall provide the Client and the Design Professional with a written settlement recommendation. If such recommendation indicates that the Design Professional is to be paid all or any portion of the amount in dispute, then the Client shall pay such amount to the Design Professional in accordance with the payment provision, if any, included in such recommendation or, in the absence thereof, within ten days of the Client's receipt of such recommendation.

Should the Client fail to pay the Design Professional in accordance with the provisions of the previous sentence, then the Design Professional shall be entitled to exercise such applicable rights as may be set forth in this Agreement. The written recommendation of the mediator shall not be introduced into evidence by either party in any arbitration, litigation, or other proceeding except by the Design Professional and for the limited purpose of establishing a basis of the Design Professional's defense to any claim or allegation asserted by the Client that the Design Professional was not entitled to exercise such rights.

Suspension of services for nonpayment

Timely payment by the Client of amounts due the Design Professional shall constitute a condition precedent to the Design Professional's continued performance of its obligations under this Agreement. At the Design Professional's election, the Design Professional may treat a failure to pay the Design Professional as a suspension by the client of the Design Professional's services. The Design Professional shall notify the Client in writing if such election is made. If such election is made, the Design Professional shall be paid and shall have such rights as are otherwise set forth in this

Agreement. In the event of such election, the Design Professional shall have no liability to the Client for delay or damages caused the Client because of such suspension of services, and the Client agrees, to the fullest extent permitted by law, to indemnify and defend the Design Professional, using counsel satisfactory to the Design Professional, from and against all claims and threat of claims by third parties, and all liabilities, losses, damages, judgments, awards, and costs related thereto including, but not limited to, court costs and attorneys' fees, caused by such third parties because of such suspension of services.

Demobilization and remobilization expenses

In each case of suspension of the Design Professional's services, whether by the Client for the Client's convenience, or on account of a failure by the Client to pay the Design Professional timely an amount due pursuant to this Agreement, the Client shall pay the Design Professional's reasonable demobilization expenses actually incurred. Upon recommencement of the Design Professional's services following such suspension, the Client shall, in addition to all other payments required to be made to the Design Professional pursuant to this Agreement, reimburse the Design Professional for reasonable recommencement expenses actually incurred by the Design Professional on account of such recommencement.

The Design Professional's compensation for services unperformed as of the date of such suspension, and the schedule, if any, for the performance of the Design Professional's services shall, upon recommencement of such services, be equitably adjusted to account for the period of such suspension.

Service charge on overdue amounts

Payments on account of services rendered and expenses incurred not made when due shall be subject to a service charge until paid at the lower of the legal rate or the rate otherwise set forth in this Agreement.

This article is intended as a discussion of legal principles and possibilities and should not substitute for legal advice in specific contract situations.

Marrying Kind

By Bradford Perkins

With all the negative press on corporate mergers, architects may find it easy to forget that a merger or an acquisition can be an effective strategy—even for a small firm. Still, they are common in the design professions. Why? Some more usual motivations:

Cashing in the chips

Many professionals find that they near the end of their careers without any way to get their capital out or to have their firm continue on without them. Merging with or being acquired by another firm is often the only real option without an ownership-transition plan. In other firms, the principals fear they have peaked in inspiration or income, or they are losing control to subordinates.

Filling out the line-up

Few firms—especially smaller ones—have all of the leadership skills to build a successful practice. Some find that the best candidates to fill out the line-up already have firms of their own.

New markets to conquer

Sometimes the firm lacks leadership in a new market it wants to enter. Acquiring an established team and track record is often the only cost-effective or quick way to compete. This is often true if the firm seeks work in new geographic areas, but it is even more important when it wants to offer a new type of service or do a new building type. In the last decade, a new variant of this approach has appeared as major foreign competitors have bought some of this country's best-known firms. Not only do they want to enter the U. S. market, but they find American expertise very marketable in their own countries. And whenever there is demand, firms willing to sell appear.

New mountains to climb

Not all firms want simply to expand the services offered. Others want a new or expanded challenge. Some smaller firms sell to be able to swim in a bigger pond; some mid-sized firms want something to occupy and interest their maturing middle-level

Mr. Perkins is an architect, frequent contributor to RECORD, and principal in Perkins Geddis Eastman in New York.

management; and still others—large and small—sell to have the resources to compete for more challenging projects.

What buyers look for

Probably the best recent study on design-firm merger and acquisition activity was completed last year by consultants Mark Zweig & Associates. Of the 1,500 design firms polled, it found that:

- There was broad interest in pursuing mergers and/or acquisitions, and the high level of activity will probably increase.
- Most of the interest was between firms in the same professional discipline (architects in other architects, engineers in engineers, etc.) in new geographic areas—particularly Washington, D. C., and the Southeast. Understandably, most firms appear to want to stick with what they know to reduce risk.
- Most buyers were looking for firms of similar or smaller size, but almost 20 percent were interested in larger firms.

Caution!

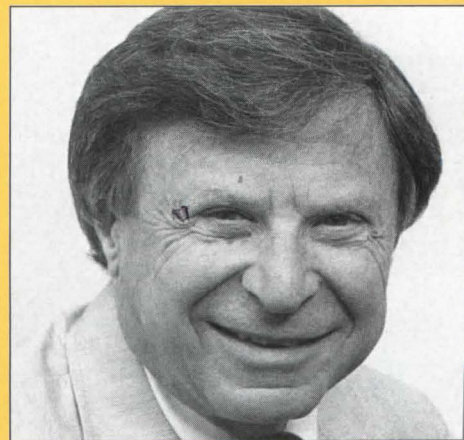
Zweig's and other studies discuss a number of recurring issues, including:

Distress sales: Desperate situations are the worst for selling, but are common for sellers who have a major problem or fear of future ones. In such sales, retiring partners often get a multiple-year employment commitment, rather than a rapid retirement.

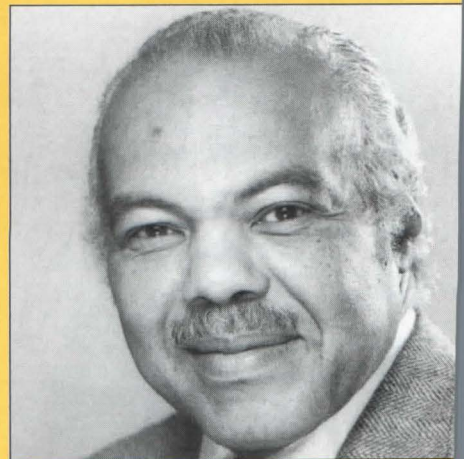
Time, distraction, and loss of privacy: Mergers and acquisitions often take three to 12 months to consummate and, in many cases, fall through. The process is time-consuming, requires exposure of all of the firm's skeletons and private information, and is psychologically draining. The selling firm often feels in limbo and has difficulty keeping staff and the practice going.

Cultural conflict: The major assets of any professional firm go home every night. After a poorly managed acquisition, the personnel may go home and stay home. CRSS's acquisition of EPRD is only one instance in which a major firm evaporated shortly afterward. All design firms have their own personality that is difficult to integrate into others. This is probably the major cause of failure for mergers and acquisitions.

Becoming a team: One of the most difficult adjustments, however, is not cultural. It is the difficulty that acquiring firms have in accepting their acquisitions in leadership roles. Conversely, there is the difficulty acquired-firm principals have in adjusting to being merely senior employees. Failing to build a united team leads to the mushroom syndrome: "They kept us in the dark, covered us with manure, chopped off our heads, and finally canned us." Of all the team-building problems, probably the most difficult is to integrate a design "star" into an existing organization lacking a strong design tradition. Because architecture is more art than business, egos and psychology cause serious problems if ignored. What leads to a successful merger or acquisition?



Macasai: Finding time to do what he wants.



Bond: Keeping his firm together.

A brief marriage manual for firms of all sizes that suspect a merger or acquisition may be their best proposal.

Knowing what you're doing

Once consummated, a merger or acquisition may be difficult to undo. Make sure it takes place within the framework of a well-thought-out plan, after a thorough review of the options, and only for very good reasons. One successful recent merger of a smaller firm into a larger one is the Deerfield, Illinois-based OWP&P's acquisition of the Chicago office of John Macsai & Associates.

Says Macsai: "I was at a stage of my career and life when I had to decide whether I was going to retire and spend my time writing, teaching, painting, and consulting, or again enjoy doing architecture. In the previous few years, I had spent too much of my time on administration. I was the only one bring-

to be impossible. I had several options. I could disband the firm completely and be an academic, or I could work with somebody." In a breakfast discussion with long-time friend Lewis Davis of Davis Brody & Associates, the idea of coming together came up. Even with a long personal relationship, however, both firms carefully talked through the issues to confirm that their initial enthusiasm was truly based on mutual goals, common professional approaches, and a clear business plan.

Researching thoroughly

A hurried courtship can lead to horrendous factual surprises during the honeymoon. One national firm is still reeling from the financial impact of the liabilities it inherited

the cost of buying rather than building from scratch. A patient firm may hire a few key people, invest the effort, and duplicate an acquisition at a lower or equal cost—more of which is likely to be tax deductible.

3. **Literal worth.** The buyer looks at how long it will take to recoup the purchase price, either through the acquired firm's earnings or the increased profit of the combined firms. Because earnings are uncertain in the profession, price may be partially contingent on actual future earnings. Multiples of four- to six-times average projected profits are not unusual starting points for a price, but any multiple depends on the reliability of projections. Most must be discounted. Firms also often have some net worth (the difference between their real assets less their real liabilities). In some cases, acquiring firms are interested primarily in the on-going business rather than the net worth. Some deals separate out the assets and the liabilities into a separate pool from which payout depends on receivables collected as payables are paid. Others discount the receivables or ask for guarantees.

4. Considerations such as responsibility for tax liabilities, pension payments, deferred income, on-going obligations, and the role of the selling principals.

Getting down to negotiations

Get good advice. The business, legal, and tax issues need expertise from the few people qualified in the special needs of the profession. Limit the working group to a small number of people from each firm and to a well-thought-out schedule so that negotiations do not paralyze either the buyer or seller. Possibly make a formal understanding for when a merger or acquisition may not work out—a prenuptial agreement. Remember that fairness is essential. If a deal is not good for both parties, it will be seriously or fatally flawed.

So what does this have to do with the practice of architecture and design excellence? While architecture is a very personal profession, it is also a team sport. Very little good architecture is built and very few successful architectural careers develop without the support of an effective team. Successful mergers and acquisitions can be one way to build it. ■

While architecture is a very personal profession, it is also a team sport. Mergers and acquisitions build teams.

ing in new business. It was clear that rather than being able to work hard, do good work, and still fund my retirement, I was funding insurance premiums. This isn't a unique problem among small firms. When the opportunity of being acquired presented itself, my associates and I realized that we could continue practicing our profession . . . without administrative hassles." A strong motivation by the seller, acceptable to the buyer, makes acquisitions work.

Courting sensitively

It is very hard to judge what firms or people are like until you have worked with them. Sometimes, firms have trial marriages using joint ventures on specific projects. If these work, there is a higher probability that a full marriage will succeed. In most cases, the courtship should not be rushed. Make negotiating and management guidelines clear.

er Max Bond, head of one of the country's leading minority-owned architectural firms and dean of the City College of New York's architectural school, a crisis occurred when a long-time partner decided to retire. "For me to be dean and run my office was going

when it acquired another firm to get into the health-care market. The acquiring firm looked at the accounts payable and assumed that some reduction could be negotiated in return for prompt payment. What they found after the marriage was that the amounts in the acquired firm's balance sheet had already been negotiated and further discounts proved difficult. Another possible liability requiring research: pending legal actions.

Knowing what a firm is worth

Potential sellers may be offered sums based on mythical formulas and payments in the form of inflated stocks. A fair deal for both sides cannot be reduced to a simple formula. Moreover, the terms are often as important as the dollar amounts. When setting a value for a firm, at the least consider:

1. The price at which it is worthwhile for the buyer to buy and the seller to sell. Value on either side can include intangibles that are difficult to quantify. The buyer may weigh the potential for major growth. The seller may weigh the loss of independence.
2. The make-vs.-buy choice depends on, e. g.,

Specification Series: Commercial Carpet



Kevin C. Rose

Tufted pile with staple-cut and continuous filaments for AT&T's Atlanta offices by Thompson, Ventulett, Stainback.

By Katherine Freeman

Architects specifying carpet for commercial installation can choose from a wide array of products and construction types. Here are some major issues in specifying woven and tufted carpet for stretch-in, direct glue-down and double glue-down (both carpet and cushion) installation. These are coordinated with the guide specification (opposite page). A more detailed data sheet can also be used.

Such detail is especially crucial for large or complex projects, on which many manufacturers will bid to produce the carpet materials, or for projects requiring custom materials because it helps assure that all products will be equal in quality and appearance. Not specifically covered are fusion-bonded carpet, carpet tile, or hand-tufted carpets, although many considerations listed here apply to these types as well.

Fiber Selection: Carpet performance largely depends on choosing the appropriate fiber for your installation. Compare the choices: Wool is most usually specified for commercial installations. Many different types of nylon fiber are available. Each has specific properties and you need to compare the performance benefits among them. For

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best quality control, insert the nylon-fiber trade name in the data sheet. You are not excessively reducing competition among mills by semiproprietary selection; most mills have access to many major nylon-fiber types.

Specify whether the fiber is continuous-filament or staple-cut. Continuous-filament generally wears better, but staple-cut has a more wool-like appearance. Manufacturers also make carpet from other fiber types, such as polypropylene (olefin) and acrylic. Many are suitable for residential or very light commercial work, but may not withstand heavy traffic.

Yarn construction and dyeing: Manufacturers spin fibers into plies, which are long strands of yarnlike material. They may produce a single-ply yarn or spin them into two- or three-ply yarns for carpet. The size, type, and amount of twist given the yarns will determine many visual and performance characteristics of the finished product.

Dyeing methods: There are many methods of dyeing carpet materials, such as solution dyeing, yarn dyeing, and piece dyeing, to name a few. The dyeing process can occur at many stages of construction, from the raw fiber to the finished piece of carpet. The type of dyeing process will influence the color, colorfastness, and the size of the dye lot, as well as many aspects of appearance. In general, carpet manufacturers determine the appropriate dye method for the standard products they produce. Custom carpets with specific dye-lot sizes for color consistency or a high level of dye performance and colorfastness may require alternate dye methods. Discuss with the manufacturers and specify when required.

Carpet construction: Woven carpets and tufted carpets are the primary types specified for most commercial installations. Woven carpets are the traditional method of carpet construction. Different weaving processes (or loom types) such as Axminster, Jacquard, or Wilton, weave the yarn into the backing of the carpet. This produces a heavy, well-integrated construction and, generally, long wear-life. Large-scale patterns with many colors require the flexibility

of an Axminster loom to achieve the proper distribution of yarns.

Tufting was developed as a faster and less-expensive method of construction. In the tufting process, yarn is punched through a primary backing material to produce the face of the carpet and is held in place by a layer of latex underneath. Modern tufting machines offer high-quality construction with a wide range of designs and textures.

Backing materials: Typical woven-carpet backing is synthetic chain, stuffer, and filler material, back-coated with a layer of liquid latex. Typical tufted-carpet backing is either of unitary or double construction. In unitary construction, a very heavy layer of latex or other material is bonded to the primary backing, and provides a high-tuft bind and dimensional stability. The more traditional double backing has a primary layer, usually woven of synthetic fibers, laminated with latex to a secondary layer of such materials as polypropylene. Carpet latex should be antistatic and fire-retardant. The manufacturer must certify that the backing type and weight are appropriate for the carpet construction and application.

Fire-performance characteristics: Typical fire-performance characteristics for commercial carpet are indicated in the data sheets. Verify that the test methods and ratings indicated are appropriate for your project type and are accepted by the applicable codes and authorities. Many locales require additional testing or more-stringent standards for fire and toxicity.

Shading and watermarking: These can be major visual problems in any type of cut-pile carpet, including those made of wool and nylon fibers and those made by tufted, woven or fusion-bonded construction. The carpet industry does not consider them manufacturing defects. Exact causes are unknown. Shading appears more obvious in solid color or small, regular patterns. It also appears more obvious in large areas. Large-scale patterns and more organic designs with much color tend to hide shading. When a cut-pile carpet is selected, notify the owner in writing, prior to specification, that shading may occur. Slight shading may also occur in cut

This first of two parts covers selection of the product. A second part will cover installation.

loop combinations, tip-sheared loops, and loop-pile construction. Shading is generally not objectionable in these carpets, but, if it is obvious and objectionable, it is generally considered to be a manufacturing defect.

Warranties: There are two types of warranties commonly available for tufted carpets—fiber warranties and product warranties. Some nylon and other synthetic fiber manufacturers offer warranties on the performance of their fiber used in carpet construction. Many tufted-carpet manufacturers add onto fiber warranties with additional coverage for carpet construction. Product warranties often favor the manufacturer and should be reviewed by your client's legal counsel prior to incorporation into specifications. Most carpet warranties do not cover appearance and most carpets lose their appearance before they wear out. For a large project, legal counsel can advise on a warranty specific to it that covers such properties as appearance. Most woven-carpet manufacturers do not offer standard

warranties, but may be open to developing a project-specific warranty.

Carpet cushion: An appropriate cushion increases users' comfort and carpets' life, appearance retention, and performance. Carpet cushions may be applied to the carpet backing or may be installed under the carpet separately. Factory-applied carpet cushions increase the tuft bind and dimensional stability of materials they are applied to. Separate carpet cushions or underlayments are available in a wide variety of products and performances, ranging from residential felt synthetic-fiber pads to heavy-duty dense-spun-rubber and urethane cushions. Make sure to make the appropriate choice.

Accessories: Many different accessories are required for carpet installations. Make sure that products specified meet your project requirements. Ensure that transition strips are wide enough for safe passage. In general, accessories made of metal, marble, or similar materials that are integral to the

carpet installation are specified with carpet products. However, accessories made of resilient materials are specified in the resilient-flooring section. When color or finish are critical, make sure of the availability of what you specify from each manufacturer; not all offer the same choices, and color and finish options may affect costs.

Submittals: Require manufacturer's product literature, including delivery, storage, handling, and installation instructions for each type of carpet, cushion, accessory, and installation material. Include certified data on physical characteristics, wear resistance, fade resistance, antistatic performance, and flame-resistance characteristics.

Samples: Require samples of each type, color, and pattern of carpet material from the actual dye lots to be installed, and samples of each type of exposed edge stripping and accessory. Require labeling with complete documentation, itemizing all specified construction and performance criteria. ■

Guide Specification: Carpet

PART 1 GENERAL

A. Summary:

Section includes carpet, cushion, accessories, installation, substrate cleaning, preparation, and priming.

Section does not include substrate patching, leveling, and waterproofing.

Related sections: carpet tile, resilient flooring, others as applicable.

B. Submittals:

Product data.

Samples: minimum 18 in. x 24 in. for patterns.

Certification: fire-resistance ratings, physical characteristics, other requirements.

Shop drawings: carpet layout, direction, installation method, accessories, and seams.

Unit prices: subfloor prep, carpeting, accessories, installation, and bases.

Maintenance instructions.

C. Quality assurance:

Manufacturer qualifications: five years minimum experience, primary materials manufacturer, not other manufacturer's re-labeled product. Vertical mill (all spinning, dyeing,

and construction in-house) if required.

2. Installer qualifications: five years' experience, acceptable to manufacturer.

3. Mock-ups.

4. Pre-installation job meeting.

D. Delivery, storage, and handling

E. Project/site conditions:

1. Environmental conditions: climate-control by manufacturer recommendations.

2. Substrate conditions: alkalinity, moisture.

3. Ventilation: for adhesive fumes.

F. Sequencing and scheduling:

1. Manufacturers recommended adhesive dry time before placing furniture.

G. Alternates (if any)

H. Allowances (if any)

I. Warranty:

1. Standard warranties: fiber manufacturers and carpet manufacturer.

2. Special project warranty.

PART 2 PRODUCTS

A. Carpet Materials:

1. Color, pattern, and texture to match architect's samples.

2. Carpet Data Sheets or short-form specification: acceptable manufacturers, products/patterns/colors, physical properties, fiber content, fire-performance characteristics, backing type and materials.

3. Carpet wall base (if any).

B. Carpet cushion:

1. Types and properties, including fire performance and density.

2. Acceptable manufacturers and products.

C. Accessories:

1. Substrate priming material.

2. Cushion adhesive.

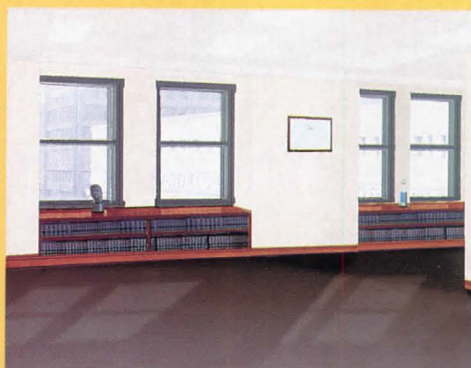
3. Carpet adhesive and seam sealer.

4. Seaming tape.

5. Tackless carpet stripping.

6. Non-resilient edge guards, stair nosings, and other accessories (resilient accessories specified in resilient-flooring section).

Biting the Bullet



By Kristine Fallon

"What people are now calling multimedia, I call unimedia," says Daniel J. Sandin, codirector of the Electronic Visualization Laboratory (EVL) at the University of Illinois at Chicago. "My idea of multimedia is slide projectors, video projectors, music, dance, all going on simultaneously. Nevertheless, it is very powerful to be able to incorporate many types of media—video, print, photography, computer graphics—into a unified computer environment. You are able to create a new medium."

Although Sandin's academic training was in physics, he joined the Art Department of U. of I. in 1969 to develop a "cybernetic" curriculum. In 1973, he was joined by Thomas A. DeFanti from the Department of Electrical Engineering and Computer Science. That marked the beginning of a long collaboration, which led to the establishment of EVL. It has participated in over 100 art and science exhibitions worldwide including at Pompidou Center, MOMA, and the Smithsonian. One early product was the computer-animation sequence created by animator Larry Cuba for the movie *Star Wars*.

EVL's full power

The equipment at EVL includes workstations from AT&T, DEC, IBM, Silicon Graphics, and Sun, as well as sound-synthesis and broadcast-quality video production gear. EVL's workhorse platform, however, comprises a dozen or so PCs equipped with TARGA boards. These enable the artists to grab frames, to produce computer-generated images compatible with standard video, and to control video-tape recorders.

The lab researches new methods and algorithms for visualizing scientific and mathematical data, as well as developing art works for exhibition. It is an interdisciplinary undertaking of the College of Engineering's electrical engineering and computer science program and the College of Architecture, Art and Urban Planning's art curriculum, offering M. F. A., M. S., and Ph. D degrees.

A recent outgrowth of EVL is the Software Technologies Research Center (SofTech). Its focus is the application of advanced visualization hardware and software to the solution of industrial and business problems. Its goal is technology transfer. The technique used to achieve this transfer is a one-on-one pairing of a graduate student and an industry participant. Sandin notes that art students tend to do better than computer science majors because they understand the importance of project completion and the product's appearance. To SofTech, however, the important end result is teaching business or industrial participants how to approach and execute a visualization project.

EVL's use by architects

Michael Goff, former director of information services for Holabird & Root, is a graduate of the U. of I.'s College of Architecture, Art and Urban Planning and an enthusiastic supporter of the EVL's work. In a graphic-design project for Chicago's mayor's office, he saw the opportunity to transfer some of EVL's know-how to Holabird & Root. The project was to develop presentation materials to communicate to public-interest groups the visual impact of proposed safety and landscaping improvements to Lake Shore

Drive that were expected to come under close scrutiny. (Design had been done by the Chicago Park District and landscape architects Jacobs Ryan Associates.)

Goff brought SofTech into the project, collaborating with M. F. A. candidate Maggie Rawlings, who had experience in video post-production. The product was a three-minute video incorporating live video, slides, prints, and computer-generated graphics. It begins with a familiar trip down Lake Shore Drive. At key points, the image freezes and is slowly painted over with views of the proposed improvements. Although there is no sound, the speed of the paint-over is gauged to permit a representative of the mayor's office to explain the improvements to the audience. The drive then continues to the next point of interest where the paint-over technique is repeated.

Professional-quality video equipment was supplied by EVL. PC and Macintosh-based imaging software, including Time Arts' Lumena and Adobe Photo Shop, as well as EVL's own software, were used to alter the grabbed (frozen) video images. SofTech's and Rawlings' biggest cost-savings contributions were the use of its video post-production facilities and her expertise. A 3/4-inch master was produced and mixed down to 1/2-inch VHS.

The tape has now been shown to a number of community groups, with either Goff or representative from the mayor's office narrating. Goff believes that the nature and quality of the visual information has enhanced communication and speeded decision making. "Everyone is used to watching T

Part of an ongoing series on automation in architecture, this installment is the second to examine basic uses in action—here multimedia and automated instruction.



"This type of visual presentation is highly accessible and credible."

Warming to the concept

Although this was Holabird & Root's first video production, the firm's graphic designers have incorporated digital-image processing into their presentations over the last year. Goff likens the computer tools to combined drawing, airbrush-painting, and photographic collage. The firm's preferred platform for this work is the Macintosh II.

Director of graphic design, Eric Brightfield, gives a fluent demonstration of these techniques. He has converted portions of the firm's photo archives to digital images using graphic-design service bureau. For any specific project, he takes context photos of the site, has them converted to digital format at a cost of \$10 to \$15 per slide, and then uses cut-and-paste techniques, borrowing elements from previous designs to illustrate the proposed design solution. The resulting graphics look like photographs of the completed project, not like computer renderings.

Watching a judge's chambers take shape illustrates the possible visual excitement (photos opposite). The first image is raw facade stripped down to the structure. The image at work in his current chambers is shown above. Brightfield traced around the image, cutting him out like a paper doll. Elements of furniture were clipped from a hand-drawn set of digitized interior photos, and finishes were borrowed and painted onto the surfaces of the new office (third photo).

Although Brightfield made all this look, literally, like child's play, this type of

compositing requires a flawlessly trained eye. The images are strictly 2-D, so, although they can be mirrored, scaled, and recolored, the perspective cannot be changed. The slightest error in perspective, says Brightfield, can ruin the realism of the image, even for the most unsophisticated viewer. Brightfield is so comfortable working in this way that he will take his Macintosh to a presentation and further develop the images in front of clients, basing the images—and the improvised revisions—on the clients' feedback.

Video training and computer-based instruction for learning automation: a small office's experience

"This time last year I had a staff of eight and one computer. Now I have a staff of four and three computers. Automation is really the answer to survival in a fluctuating market," says Lawrence Okrent. His firm, Okrent Associates, provides planning, graphic-design, and aerial-photography services. During Chicago's urban and suburban building boom in the 1980s, Okrent Associates scurried to keep up with demand from developer clients for planning and feasibility studies, as well as the production of sleek leasing and marketing brochures.

It was under the pressure of this demand that Okrent first considered automating. He started out his search with a decided preference for a Macintosh solution: his daughter had one at home and he had been impressed by its ease of use. Before purchasing anything, however, he hired an independent computer consultant to assist in defining requirements and identifying alternative products and sources.

The firm's first machine was a MacII CX with a 19-inch color monitor. It chose Adobe Illustrator and Quark XPress for desktop publishing, Filemaker to automate the production of client invoices, and Microsoft Word for word processing. It installed an Apple scanner that permits gray-tone scanning and allows scanning of maps and photographs, as well as line drawings. For in-house printing it chose an Apple Laserwriter printer.

Like most firms, Okrent Associates introduced automation during a period of peak activity, with no free time for training. Rather than send his employees out for seminars or scheduled classes, Okrent purchased Personal Training Systems' courses for Filemaker and Word, in which an audio tape guides the learner through a series of on-screen exercises. Despite the ease of use of the Macintosh, desktop publishing is a complex application to learn, but Okrent's staff feels that the video courses provided the depth of information required for real mastery of the software.

As the development frenzy of the '80s subsided, Okrent shifted his graphic-design team, all graduate architects, to a range of graphics projects, including graphic illustrations for courtroom trials. He credits the electronic environment with his staff's ability to switch gears quickly. Faced with the need to add another graphic designer, Okrent bought two more Macs so that each designer could have a dedicated workstation. His strategy paid off: his three graphic designers handle the work of four with ease.

A recent visit to Okrent Associates office in Chicago's historic Monadnock Building revealed designers' drawing boards stacked against a wall [RECORD, July 1991, page 185]. The three Macintosh II's are connected via AppleTalk, which permits them to share files and peripherals, such as the printer. Okrent is considering purchasing one more Mac for his own administrative use. What is remarkable about this firm is not only the speed with which it moved from a totally manual work process to a completely automated one, but also the fact that, within less than a year, it realized quantifiable productivity gains. ■

Alias Upfront 1.0

By Steven S. Ross

Upfront is a 3-D modeling package that runs under Microsoft Windows 3.0. It allows easy sketching of objects as solids that can cast shadows and have detailed surfaces. Finished drawings can be exported to full-blown CAD software via DXF, or to desktop publishing via bitmapped formats such as BMP,

WMF (for exchange with most other Windows-friendly software), TIFF, PIX, PCX, or EPS. There is also a version for the Macintosh; an update for the Mac is due soon.

To replace the napkin or patch of tracing paper, a modeling package must be flexible, fast, and easy to draw with. You should also

Alias Upfront (left) sets shadows by latitude, date, and time of day. Plots from Generic CADD (right) show capabilities of SketchMate pen plotter.

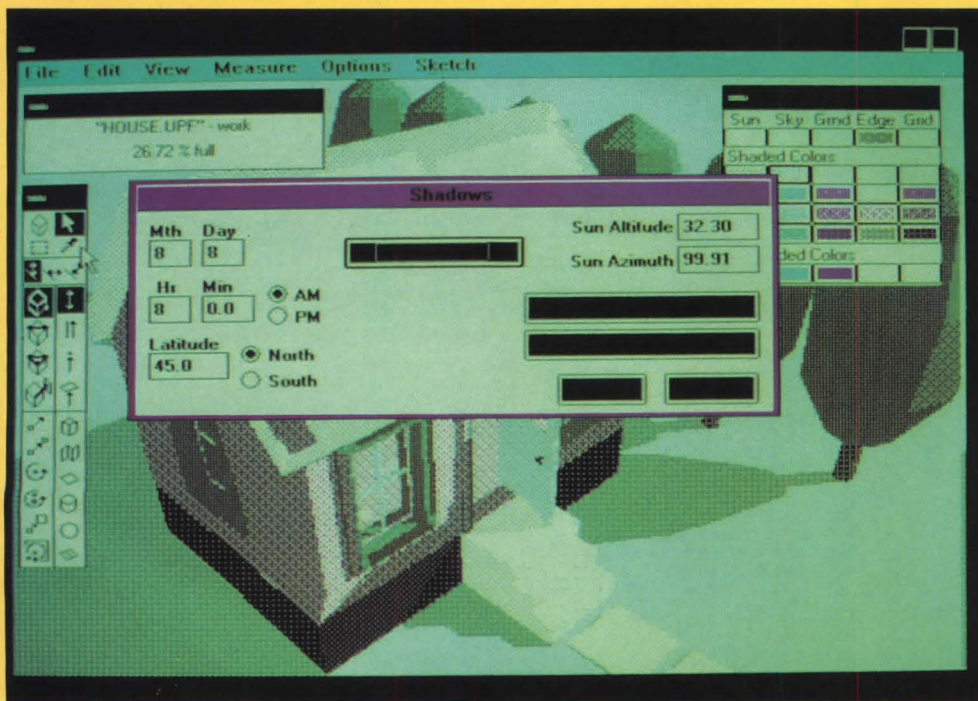
be able to import images (as backgrounds for your work, at least) and export the model to CAD to serve as a basis for hardline drafting.

Upfront scores well on all counts. There are some limitations on imports. DXF and WMF files cannot handle bitmapped fill patterns—only cross-hatching and patterns.

It is an ideal package for designing additions and structures on tight sites. Objects can be shadowed (any date, time of day, and latitude can be programmed) as well as cast shadows. Objects can also be made hollow by making surfaces two-sided, so that you can view them from the inside as well as from outside. Upfront does not have CAD-like drafting capabilities—curves, for example, are simulated as narrow flat surface segments. And although you can “walk through” a model, it is not as responsive as Virtus WalkThrough [RECORD, August 1991, page 40]. But it offers a nice compromise between realism and speed. And the resulting files have floating-point precision, making export to CAD almost error-free as far as dimensionality is concerned.

Memory needs can grow very large very fast, especially if you try to convert all surfaces of a large model into a two-sided mode at once.

Circle number 311



Alias Upfront 1.0 Summary

Equipment required: A computer capable of running Windows 3.0, with an 80386SX or higher CPU chip, mouse, 2MB of memory (4MB strongly recommended). Math coprocessor strongly recommended for computers with 80386 or 80386SX CPU.

Vendor: Alias Research, Inc., 110 Richmond Street East, Toronto, Ontario, Canada M5C 1P1. Phone 800/267-8692. Windows \$995; Mac \$895. Full upgrade to v. 2.0 in October.

Manuals: Good. The main manual is a comfortable spiral-bound book with tutorial and reference.

Ease-of-use: Good, almost intuitive so long as you leave the grids on-screen to guide

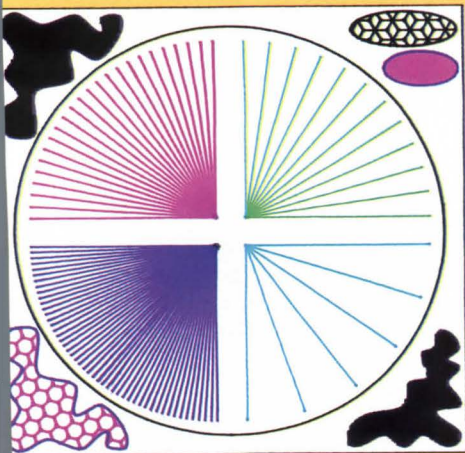
your sketching in 3-D on the 2-D monitor screen. Especially noteworthy is the ability to easily edit existing objects in a drawing—and even to make an existing object's walls “two-sided” so that you can view both sides of a surface. The underlying database of objects can be exported to a plain-text ASCII or comma-separated variable file that is usable by spreadsheets and database software, and by some CAD packages. You can rescale an entire drawing by respecifying the length of a single line. You can start drawing an object, then change your view to avoid another object that may be partially obstructing your view.

Error-trapping: Fair. Most changes can be “undone,” but you cannot undo a cut in a solid or surface. And you can only undo the last action before another mouse click. Click

the mouse again and your change is permanent. Surfaces that exactly align with each other can be drawn, but may not display correctly; you should separate such surfaces by a tiny amount—as when, for example, you cut a hole into a wall to insert a library symbol such as a window. The software does not automatically make a backup file; if you want one, use the “save as” option.

The last view on-screen when you save becomes the new “home view,” or standard view for the model. The manual warns that surfaces can become warped under some circumstances when you move them. We didn't run into this problem, however. Generally, you should create 3-D shapes by extruding or rotating in a “positive” quadrant. If you create a box by extruding a square in plan view downward, it may not display properly.

SketchMate RP-11W Plotter



ne of those annoying needs in the CADD world has been for a versatile, reliable, and cheap plotter. For black-and-white, various models in the Hewlett-Packard LaserJet line are common in architectural offices. There are even software and cartridges available

Generic CADD Architectural Applications

Generic Software is now bundling add-on applications for architects with the DOS version of Generic CADD 5.0. We looked at the first two application modules in the series—architectural and FF&E (furniture, fixtures, and equipment). Modules are also coming for electrical work, plumbing, and hvac. All the modules work independently. You do not have to buy the main architectural module to use the FF&E, for example.

The integration of the modules with Generic CADD is seamless. You install them in the same disk directory, call up Generic CADD, and select the module you want from a menu. Generic CADD 5.0 (reviewed in *ARCHITECTURAL RECORD*, April 1991, page 46) is a fast 2-D package that works well even on old XT-class computers. The add-ons, supplied by Softdesk, do not slow the parent program down appreciably.

The architectural module has most of the bells and whistles anyone could expect for production drafting. The packages are particularly suited to the brick and stick end of the business and small office buildings. They can work in plan, drawing double lines

to allow a LaserJet to emulate an HPGL plotter. Encad has a fine line of inexpensive machines, too. But its lowest-priced plotter has room for six pens, not the eight that are standard in larger plotters. There are also dot-matrix printer-plotters. But color ribbons are expensive and not all software will work

Roland Digital Group has now entered the competition with a \$695 A-size plotter that takes the standard eight pens. It comes with serial and parallel ports, and can be run from a Macintosh or DOS computer. It emulates HPGL (but not all the features of HPGL-2), so it should work with virtually any CAD package as well.

Our reviewers especially liked the pen count and plotting speed. It allows full-color check plots before sending a plot file off to the service bureau. One reviewer was unhappy with the noise level — no more than any other plotter, but distracting in a quiet office. *Circle number 312*

for walls and specifying wall, door, and window heights. The software then draws the elevation automatically.

Corners and intersections also are cleaned up automatically, except for walls (where you have to click on the intersection you want to fix). Symbols are easily placed or modified. You can create a simple door schedule or window schedule, too.

The FF&E module is basically a huge symbol library—everything from appliances to urinals. There's a good selection of office equipment and cabinetry as well. The module is for interiors only, however—houseplants but no landscaping. Symbol editing and placement is easy; so is creation of schedules.

Best of all, the symbols aren't bad looking. They are not super-detailed, but go beyond the spare, "computer-generated" look. *Circle number 313*

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

SketchMate Summary

Equipment required: Standard serial or parallel (printer) port on DOS or Macintosh computer.

Vendor: Roland Digital Group, 1961 McGaw Ave., Irvine, CA 92714, phone 714/975-0560, fax 714-975-0569; \$695 including simple "paint" software, 8 pens, and sample paper. Cables (if you need them) are \$25 each. Pens are available in 32 colors, and in 0.3 mm or 0.6 mm line widths.

Manual: A humorous and informative cartoon picture book.

Ease-of-use: As easy as a plotter ever gets. The system uses about 120 watts and can be inclined on a desktop to take up about 15 by 8 inches of desk space.

Error-trapping: The plotting surface is magnetized, so keep disks away.

Generic CADD Summary

Equipment required: Any computer that can run MS-DOS or PC-DOS, graphics monitor (standard VGA works fine), fixed disk, mouse, or digitizing tablet.

Vendor: Softdesk (formerly DCA Software), 7 Liberty Hill Rd., Henniker, NH 03242, phone 603/428-3199, fax 603/428-7901, or 800/228-3601. \$495 per module; \$995 for module packaged with Generic CADD 5.0.

Manual: A straightforward paperback that serves as a tutorial and reference manual. Items that overlap with Generic CADD itself (editing symbols, for example) are repeated from the Generic CADD manuals.

Ease-of-use: Good. "Help" screens show symbols before they are placed. On a moderate-speed 80386SX-equipped computer running at 16 MHz, the computer easily keeps up with your thinking. Installation is straightforward; we noticed, however, a mismatch between the instructions for FF&E installation and the actual disk names.

Error-trapping: Good. Generic CADD has a reliable "undo" feature.

New Directions in Housing

New Households, New Housing, edited by Karen A. Franck and Sherry Ahrentzen. New York: Van Nostrand Reinhold, 1989, 360 pages, \$32.95.

Reviewed by Christine Benglia Bevington

This book documents the architecture of nontraditional households in theory and practice in Europe and the United States. It is a comprehensive volume on collective, single-parent, and single-room housing with essays by 15 authors.

In the opening chapter on shared and collective housing, Franck takes us on a tour that leads from Dan Solomon's group houses in Fairfax, California, to Gwen Rono's project on Harvard Street in Cambridge, Massachusetts, where residents in self-sufficient apartments share amenities such as living/dining room, sundeck, and garden. Franck describes projects all too briefly, but illustrates them with plans and shows us a broad range of recent American work.

In a chapter tracing the history of housing in northern Europe, Norbert Schoenauer reviews English *catering flats*, Danish *kollektivhus*, Swedish *servishus*, German *einkuchenhaus*, and Russian *domkommuna*, thus covering European highlights of the first half of the 20th century. Another chapter, by Elizabeth Cromley, examines 19th-century apartments in New York City and the often-hilarious difficulties the middle class faced in adapting to them. Cromley's research stops, alas, at the turn of the century, ignoring later examples of American housing with shared amenities.

In a chapter on "cohousing," a concept imported from Denmark, Kathryn McCamant and Charles Durrett explain the role of a participatory planning process as well as a clustered layout in the success of these residential communities. Although the Danish model may need to be translated carefully as it moves to the U. S., many families and singles today should find it compelling.

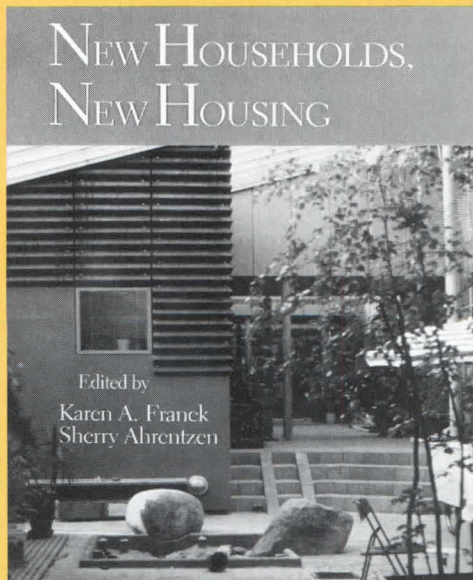
One highlight of the book's first section is Jill Stoner's essay on party walls (both physical and figurative), illustrated with sketches

and projects that explore how such partitions could be made less absolute, more permeable, and infinitely more sophisticated. This chapter is fresh theory, interesting for its method and style as much as its courage in tackling a fundamental design issue.

The second section of *New Households, New Housing* consists of Sherry Ahrentzen's overview of some of the best-known American and European schemes addressing the housing problems of single parents, followed by case studies of recent projects in the United States and Canada. The third part of the book is devoted to single-room-occupancy housing. Karen Franck traces SROs' rich history and celebrates their recent revival (particularly on the West Coast).

New Households, New Housing has its flaws. Some essential historical material is missing, and more comment on the general direction of America's current housing trends would have been helpful. But flaws and all, *New Households, New Housing* is the first substantial work of its kind. In fact, it is hard to imagine how anyone with more than a passing interest in housing would not want to keep a copy within easy reach, now and for the rest of the decade.

Christine Benglia Bevington is a New York architect specializing in family housing.



Neoclassicism in the North: Swedish Furniture and Interiors 1770-1850, by Hakan Groth. New York: Rizzoli, 1990, 224 pages, \$50.

Reviewed by Kate Nesbitt

This book tackles a period in Swedish design when the Classical traditions of Italy and France influenced many of the most lavish projects of the day. Hakan Groth's study begins with King Gustaf, a well-traveled man of taste and culture who brought back to Sweden a love of French furnishings and Italian architecture. His Haga Pavilion, built in 1787 on the model of the Petit Trianon, is perhaps the handsomest representation of the era named after him. Frescoes, *trompe l'oeil*, and furniture inspired by French and English pieces help characterize this style.

The second section of the book examines the Empire style, championed by Crown Prince (later King) Carl Johan XIV, whose French ancestry and service in Napoleon's army influenced his taste in interiors. Perhaps in reaction to the richness of Empire design, the more bourgeois Biedermeier style arose, lasting from around 1820 to 1850.

Neoclassicism in the North is well-organized and its text is clearly presented. Chapters cover individual buildings and flow in roughly chronological order. Groth's writing is not consistently scholarly and the author fawns a bit on the owners of the houses. The book's beautiful color illustrations show many interiors inaccessible to the public. Informative captions accompany each photograph and key them into the text. In fact, the captions are so full of description that some readers may choose only to skim the longer text.

While seemingly of interest to a limited audience, this book is actually a valuable reference for interior designers and architects who lean to Neoclassical and Biedermeier design. The projects included in the book show the delicacy of touch and responsiveness to Nordic light that characterize the best Scandinavian architecture.

Kate Nesbitt is an assistant professor of architecture at the University of Virginia.

New Classicism: Omnibus Volume, edited by *Andreas Papadakis and Harriet Watson*. New York: Rizzoli, 1990, 264 pages, \$65.

Reviewed by *Martin H. McNamara*

It is unclear what the publishers of *New Classicism* wanted to accomplish with this book. On casual examination, the volume appears to be yet another flashy and insubstantial coffee-table book. It is the requisite size and weight, with glossy pages and a cover that shouts "style." But wait. Between the beautiful photographs and colored renderings are essays by some of the best-known practitioners and theorists today.

Herein lies the major conflict of *New Classicism*. Like the fabled floor wax/dessert popping from *Saturday Night Live*, the book tries to be two things at the same time—and ends up leaving a waxy taste in the reader's mouth. There would be nothing wrong with creating a substantial picture book or a beautifully illustrated academic text. Yet *New Classicism* achieves neither. As two "books" are too poorly integrated to successfully form a coherent single volume, the reader can't help thinking that either the photographs were thrown in to dress up the essays and make them more salable, or the essays were included to lend legitimacy to the photos.

Some of the essays seem well suited to the grand, glossy treatment. For example, Leon Krier's three essays are elegant examinations of the nature and purpose of art and architecture. Porphyrios draws a rich illustration of art and architecture as forms that by nature imitate the world, not "in a servile manner, but by employing genius" and refashioning their models anew.

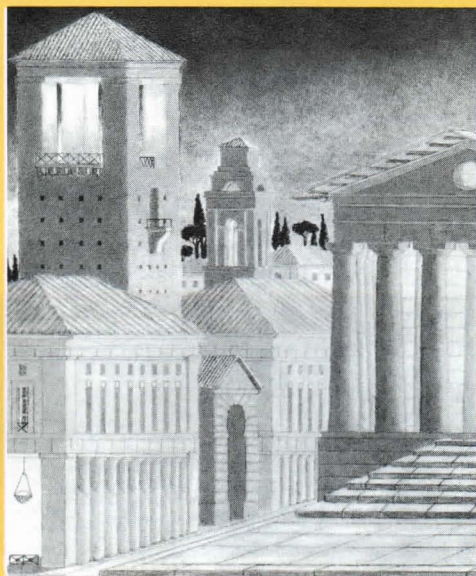
Other articles, however, sit less well here, not so much for their content but for their tone. Leon Krier's combustible Foreword, for example, rouses the reader from a coffee-table state of mind, shattering any expectation of gentle prose by using "Cape Town," "Romania," and "Hitler" as reference points for Modernism. Krier describes Industrial Modernism as something that

"merely builds business or industrial zones, suburbs and transport systems, dumping grounds and concentration camps." Though at times scattered, his essay is provocative and affecting; and yet, Krier's polemic seems somehow out of place in this tome.

Many of the other essays are similarly shrewd, making the book's chaotic structure all the more frustrating. Several essays help define and defend modern Classicism: Sir John Summerson's examination of the history, mystique, and use of the five orders; Robert A. M. Stern's exploration of the place and need for Classicism in today's world; Allan Greenberg's analysis of the ties between American democracy and Classicism.

Most of the essays published here were drawn from other sources: lectures, journals, other books, even a television script. This change in context has not helped the texts coalesce into a complete picture of Classicism today. It is ironic that a book that hails a return to a highly structured order based on millennia of development would fly in the face of traditional perceptions on how to present printed information.

Martin H. McNamara's writings have run in Metropolis and Landscape Architecture.



Leon Krier's Piazza Sedile illustrates his new Classicism.

Raymond Loewy: Pioneer of American Industrial Design, edited by *Angela Schonberger*. Munich: Prestel-Verlag, distributed by *te Neues*, 1990, 263 pages, \$65.

Reviewed by *Akiko Busch*

Who would think of a refrigerator as heroic? A toaster as voluptuous? A pencil sharpener as sensuous or a radio as having any need to be streamlined? But it is exactly these wild incongruities that mark the work of Raymond Loewy, grand luminary of American product design.

Compiled as a series of 21 illustrated essays, *Raymond Loewy, Pioneer of American Industrial Design* was originally published as a catalog to an exhibit organized in Berlin in 1990. As such, it scrutinizes Loewy's life and work from viewpoints biographical, historical, political, personal, and corporate.

The essays document the commercial climate of the times—first the consumer fervor of the 1920s and '30s when small-scale appliances invaded the home in the form of ranges, shavers, and toasters, and later the resurgent appetite for new goods in the postwar years. The volume serves as a visual archive of Loewy's work, from his better-known projects such as the Studebaker and Skylab to less-publicized interior-design and packaging campaigns. The work of Loewy's contemporaries is also given fair play, helping to place Loewy's own work within a broader historic context.

As Evert Endt points out in the book's initial essay, it was Loewy who insisted Skylab be fitted with a window. "If we recall the thrill in the astronauts' voices as they described their view of the Earth from on high, we may gain some idea of the psychological boost resulting from a simple movement like that," writes Endt. Indeed, just as Loewy opened up this view from the heavens, so too does this retrospective of his work give the more earthbound of us a frame through which to see our own values and how we have translated them in the material world.

Akiko Busch is a contributing editor of Metropolis and has written about industrial design for many years.

Briefly Noted

Free Money for People in the Arts, by Laurie Blum. New York: Macmillan, 1991, 260 pages, \$9.95.

For the resourceful architect, this handbook of little-known grants, prize-money, and other funding is a heartening find. The book tells you how to apply for money dispensed by nonprofit groups and federal sources, and where to look for individual and state grants.

Lesko's Info-Power, by Matthew Lesko. Kensington, Maryland: Information USA, 1990, 1,092 pages, \$33.95.

Free information and advice are available in this bureaucracy-sized guide. The book provides information on selling architectural services to the government, as well as data on historic preservation, transportation architecture, and archival material.

Practice Management for Design Professionals: A Practical Guide to Avoiding Liability and Enhancing Profitability, by John Philip Bachner. New York: John Wiley & Sons, Inc., 1991, 371 pages, \$59.95.

This book should prove to be a helpful survey of management skills needed to run a firm efficiently and professionally. Among the topics discussed are contracts, risk, marketing, professional communications, and human-resource management.

Staying Small Successfully: A Guide for Architects, Engineers, and Design Professionals, by Frank A. Stasiowski. New York: John Wiley & Sons, Inc., 1991, 297 pages, \$49.95.

Using case studies of successful small design firms, this book shows what it takes to survive. Developing effective plans and fo-

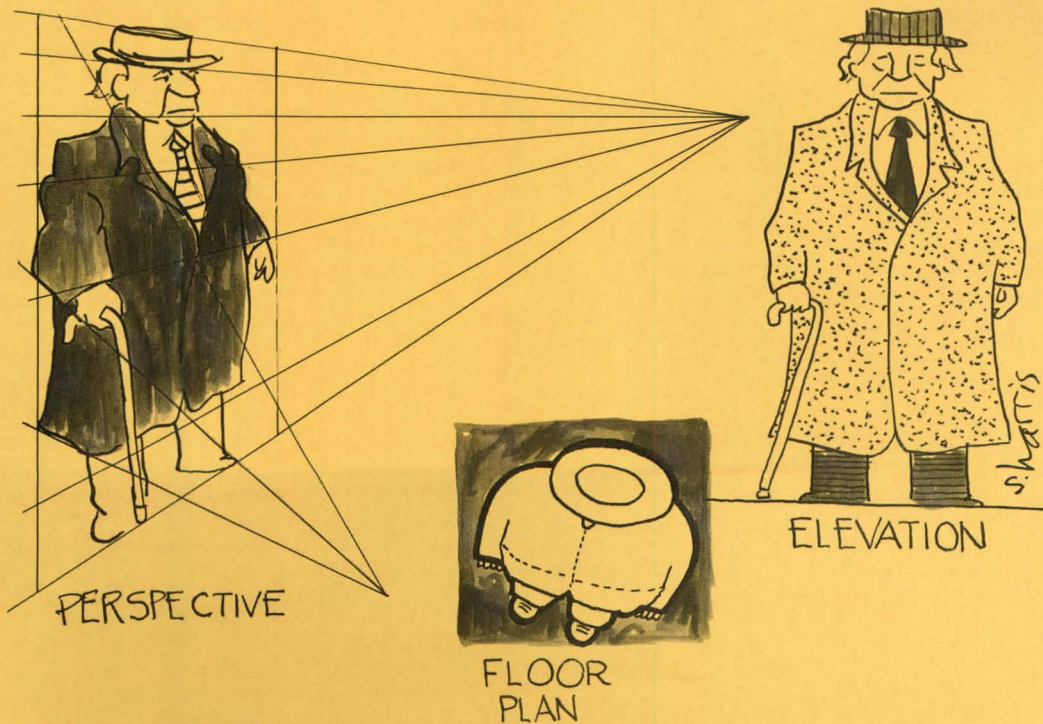
cus the practice are highlighted, as well as resources such as lists of management consultants, marketing plans, and costs.

Women in Architecture: A Contemporary Perspective, by Clare Lorenz. New York: Rizzoli, 1991, 144 pages, \$29.95.

This book not only celebrates women's contributions to the profession of architecture, but also raises questions about the female perspective on architectural form. Among the 48 careers this unique book highlights are those of Denise Scott Brown, Jane Drew, Gae Aulenti, and Christine Jachmann.

Native American Architecture, by Peter Nabokov and Robert Easton. New York: Oxford, 1990, 431 pages, \$22.50 (paper). Everything you wanted to know about the buildings of the original Americans.

Drawn for ARCHITECTURAL RECORD by Sidney Harris



Building Types Study 693/Record Interiors

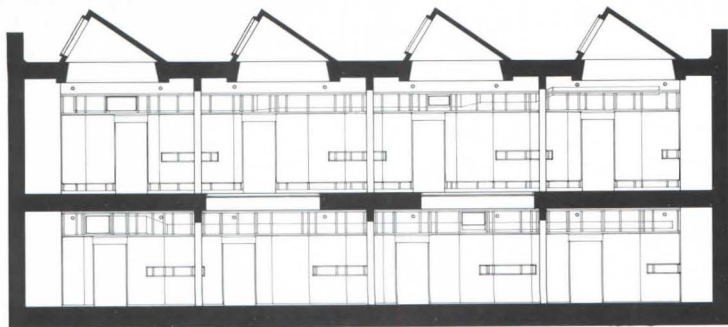
If there is a common thread among the 10 completed projects featured in this 22nd annual issue of RECORD INTERIORS, it is the way architects elect to use decoration in their work. A few years ago, the principals of the New York architectural firm Bentley LaRosa Salasky assessed the services they provide their clients and added the word "Decorators" to the firm's name (pages 116-121). "We offer clients more architecture than they get from decorators, and more decoration than they get from architects," explains Ronald Bentley. Roger Ferri's work (pages 80-87) displays a similar, if stylistically distinct, blend of architecture and decor, though Ferri eschews the word "decoration" in favor of "ornament," which he calls "a pillar of architecture" for its ability to "elucidate architectural forms." Partners Tod Williams and Billie Tsien also have an uncanny ability to use objects both for flights of fancy and as space-enhancing devices: witness the surfboard-like "coffee table" that has such a prominent role in their recently completed downtown Manhattan loft (pages 108-115). Perhaps the strongest union of architecture and decoration, though, is Josh Schweitzer's sleek renovation of a house in Los Angeles designed by Lloyd Wright (pages 126-133). There, Schweitzer has produced a residential interior that is both a fittingly glamorous *decorated* showcase for its current movie-star owner, and a restrained *architectural* homage to the structure's original 1926 design. *K. D. S.*

A neutral background” is not the typical architect’s dream commission, but it’s a charge Ross Anderson accepted with equanimity, if not cautious optimism. Anderson’s faith was due largely to previous social contact with his client, fashion designer Isaac Mizrahi. When Mizrahi decided to relocate his New York City studio and sales office from cramped downtown quarters to more spacious digs befitting his sudden popularity with the smart set, he turned to Anderson for his “great architectural taste.”

The space Anderson and Mizrahi selected for the company’s formal entrée into the high-profile world of fashion-editor studio visits and private fittings for special clients comprises the top two floors of a SoHo loft building, totaling some 12,000 square feet. For Mizrahi the choice was based on the availability of natural light—“In New York that’s what luxury is”—which is generous here thanks to industrial-size window banks along the building’s front. Anderson’s plan for the awkwardly shaped footprint called for inserting a perforated plywood and poplar wall that not only separates display and studio areas from semi-enclosed offices and conference rooms but also realizes the sought-after “neutral backdrop” for in-house fashion shows.

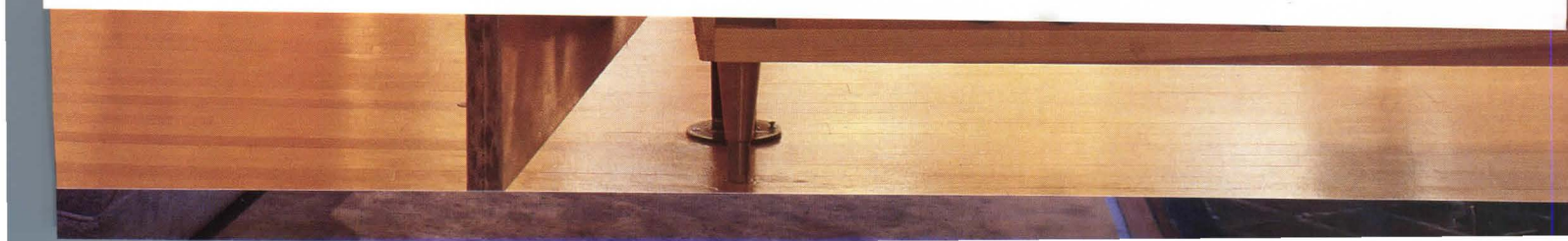
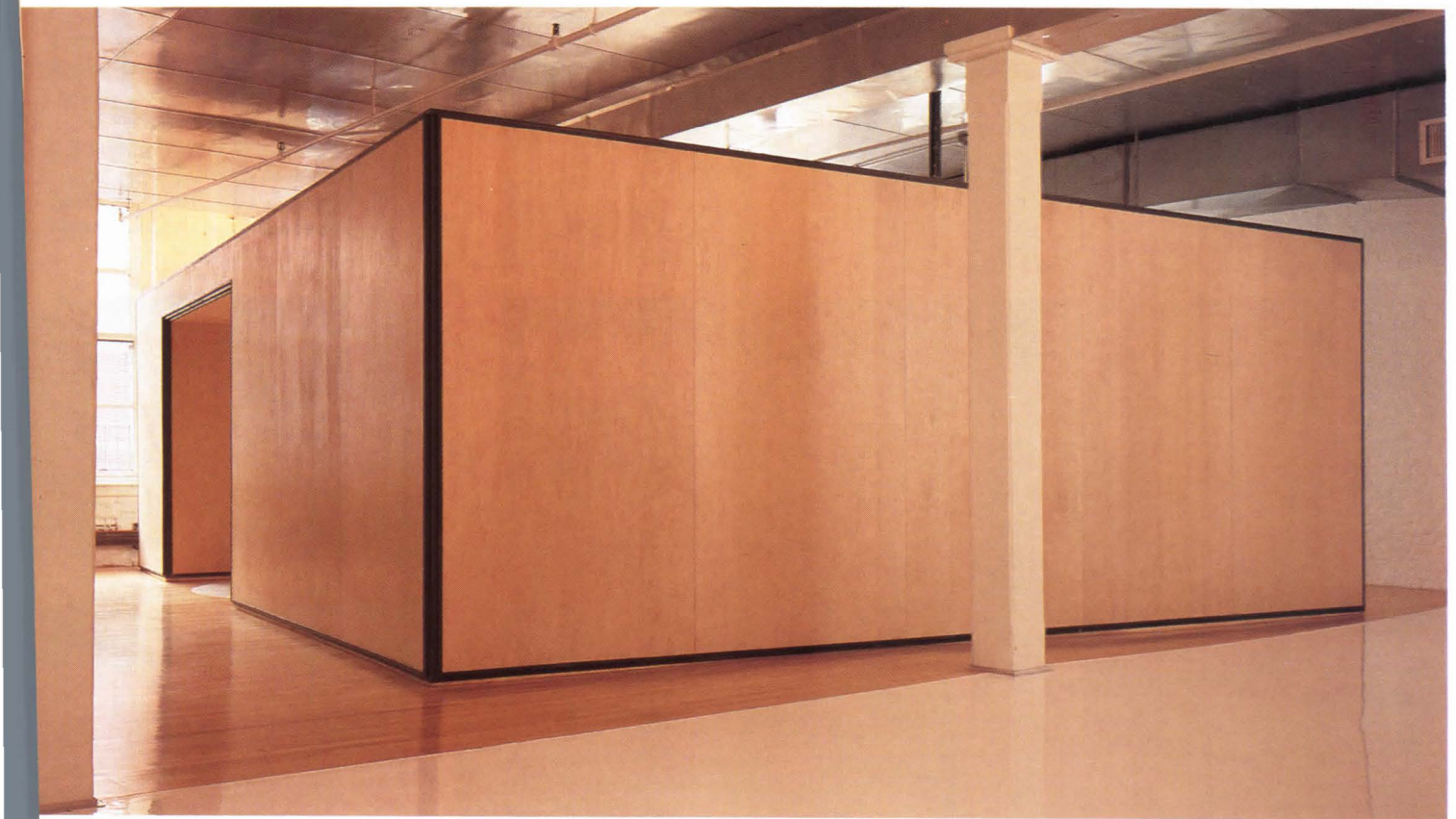
To minimize new construction, Anderson incorporated the existing hvac system and structural column grid. He removed existing dropped soffits to reveal 13-foot-high ceilings and, on the fifth floor, skylights, which he proudly fitted with wide, wood “collars.” Together, the partitions, which run the length of the space, and the ducts, which run crosswise, form a three-dimensional plaid—Anderson’s homage to a favorite Mizrahi motif. To further distinguish between public and private spaces on both floors, the architect specified corridors of poured white epoxy, which four or five times a year become a luminous fashion runway that models enter from slotted openings in the office wall.

Anderson took the couturier’s ritual of fitting and gave it its own fourth-floor space—a maple-veneer box with a curved door of shoji-paper. The door, which evokes an airplane wing, pivots on a concrete base, revealing an equally spare interior of sisal carpeting and wood stained a flesh tone. Here, as throughout the space, Anderson offers an elegant skeletal form that Mizrahi can dress up to suit any occasion. *Karen D. Stein*



Anderson’s plywood and poplar wall separates U-shaped blocks of offices from display areas on the fifth floor (top), and the fitting room and Mizrahi’s studio on the fourth floor (bottom). The fitting room (top and bottom opposite) is located next to the elevator so special clients can be whisked in to privately sample Mizrahi’s collection. The curved door is covered in fiberglass-impregnated paper.







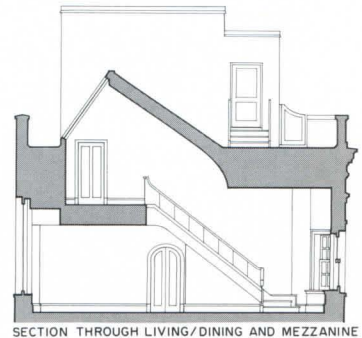
On the fourth floor, a corridor of poured epoxy separates Mizrahi's studio and the fitting

The qualities the words "Manhattan penthouse" are likely to conjure up include views of the New York skyline, natural light admitted from multiple exposures, and spacious, maybe even double-height rooms—all of which are amply evidenced in this recently completed pied-à-terre by Roger Ferri. But when the client, a landscape painter with a downtown studio, wants, in effect, to bring his work home, the architect has to abandon traditional notions of high-rise apartment living.

The owner commissioned Ferri after visiting a country house the architect had designed in Pennsylvania [RECORD, Mid-April 1987, pages 70-79]. Though he prefers to remain anonymous, Ferri's client is forthright in assessing the architect's skills, which, to his mind, include "an ability to incorporate evasive references to several architectural styles at once," and "a respect for tradition that also looks forward." What both client and architect share is a love of nature, which became the project's overriding theme.

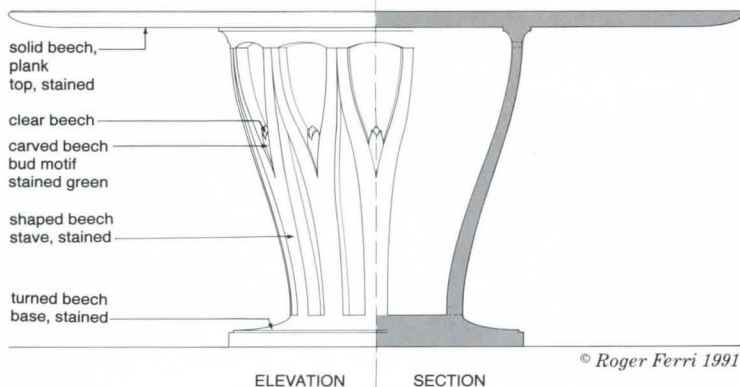
Ferri's structural modifications to the 1,800-square-foot space were few but critical. He removed duct channels that stepped across the living-room ceiling, effecting the transition from cozy sitting area to mezzanine-level study with a swooping soffit (overleaf) washed in a mix of violet, blue, and green paint applied with a technique used in Austrian Baroque churches. While Ferri calls the soffit's artistic overall effect "the spatial equivalent of fluid light," it has the more utilitarian function of concealing new hvac equipment. Ferri also raised the height of the mezzanine to match the level of the master bathroom and dressing room (section right). He reapportioned a former sleeping loft by lowering its floor and raising its ceiling, making the master bedroom into a rooftop perch (page 84).

Ferri then focused his attention on embellishing the various spaces—a pursuit he is careful to distinguish from what he sees as the superficial connotations of "decoration." Ferri uses ornament—"a pillar of architecture," in his words—to achieve a "fundamental continuity." The entrance hallway was painted an earthy brown to reinforce the sense of confinement (and as a backdrop for the owner's collection of black-and-white photographs), creating a contrast with the double-height living room. The garden theme was underscored in everything from furniture to fabrics: custom-made rugs evoke a forest floor covered in pine needles and moss (opposite), a "bouquet" of flower stems forms the base of a table designed by the architect (page 86), and foliage-patterned upholstery blends with the forest-green master bedroom (page 84). The client's own paintings are on display with his collection of American art. The overall effect, patrician and meticulous, is of no identifiable style. "A treehouse," concludes the occupant of this city refuge. Not the standard issue, but certainly a high-style equivalent. *Karen D. Stein*



Ferri removed an existing wood balustrade and staircase and replaced it with a more gradually inclined stair shielded by light-permeable steel and glass panels. The architect also raised the mezzanine slightly to smooth the transition to the master bathroom and dressing area. A north-facing skylight in the study illuminates the work area and living room below (opposite).





Part of Ferri's charge was to accommodate his client's collection of American art. To that end, the architect carved a niche next to the fireplace for a bronze sculpture by Robert Graham (top left). He also chose his paint and fabric colors accordingly (opposite). Ferri repaired an existing ceramic-tile fireplace, replaced the mantel, and designed his own andirons (bottom left). Pursuing his garden theme, Ferri incorporated floral motifs into his furniture.

Credits

Central Park West Apartment
New York City

Architect: Roger Ferri
Architect—Roger Ferri, principal-in-charge; Maurice Saragoussi, project manager; Virginia Cornell, interior designer; John Pelligra, project team

Engineers: Robert Silman & Associates, PC (structural); Shelley Karten (mechanical)

Consultants: CHA Design (lighting); Beth Lochtefeld (code); Bergdorf Goodman (tableware)

General Contractor:
I. Mass & Sons

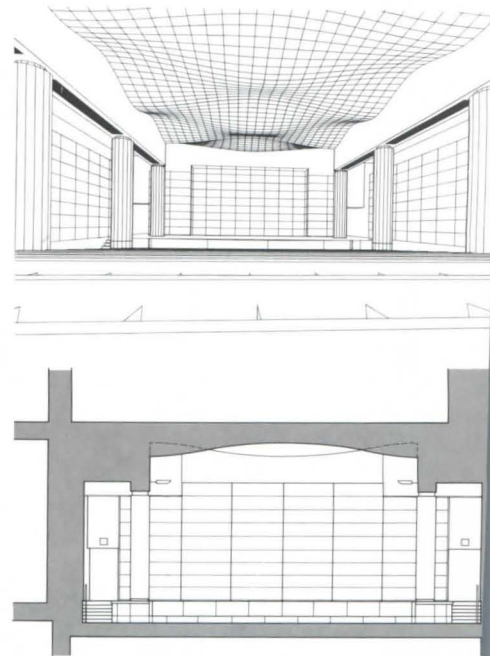


The Iris and B. Gerald Cantor Auditorium at the Brooklyn Museum, a 460-seat, 10,000-square-foot lecture, film, and concert hall, is the first public product of an ongoing collaboration there between the offices of James Stewart Polshek and Arata Isozaki. The team won a 1986 competition for a new master plan for the museum, an imposing but unfinished Neoclassical building designed by McKim, Mead & White in 1893. The team designed the auditorium after renovating 10,000 square feet of existing gallery space for art storage, and is currently working on the West Wing Galleries, 44,000 square feet of new exhibit and service space. According to members of both firms, the two principals' differing conceptual approaches meshed smoothly. "There are always residues of unspoken conflict," says Jim Polshek. "But those residues are what make things interesting." What's more, frequent consultation between Polshek in New York and Isozaki in Tokyo forestalled discord, recalls David Gauld, who manages the office Isozaki set up in New York to coordinate work on the project: "There were no independent decisions."

The auditorium itself occupies a concrete-and-steel shell on the third floor of a 1970s expansion wing designed by Prentice & Chan, Olhausen; originally intended as exhibition space, it was caught in the city's fiscal crunch and never finished. (In 1934, a 1,200-seat hall behind McKim, Mead & White's grand stair entrance was converted into the current lobby after the stair was removed.)

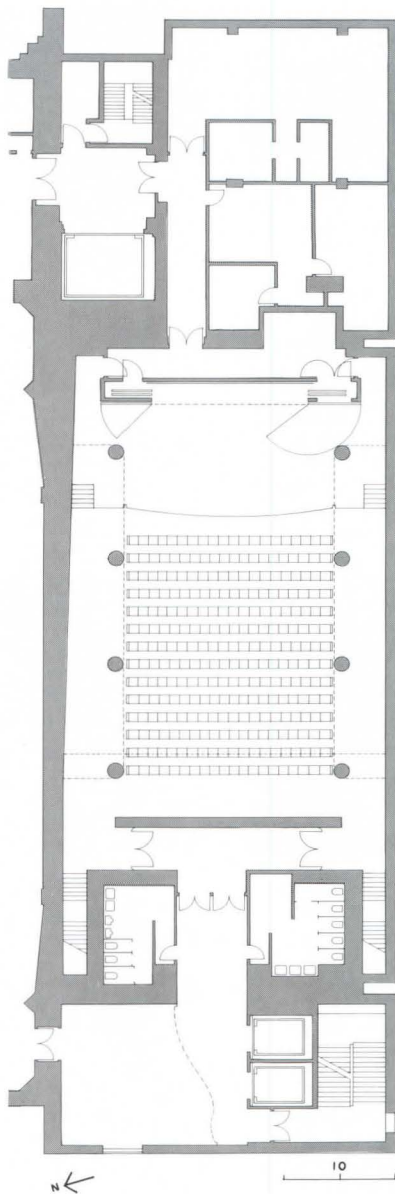
The new auditorium's one monumental gesture is Isozaki's undulating ceiling, a motif he has used in Japan. A plaster-on-wire-lath expression of intersecting sine waves, the ceiling is intended to create a sense that one is "beneath the surface of the sea," says Isozaki. The ceiling was designed mainly as an acoustically "neutral" visual element; its configuration was studied by acousticians here and in Japan to make sure it would neither focus nor trap sound in its curves. (Because the room was designed for amplified sound to serve its primary function as a lecture and film hall, acoustic measures—the rake of the floor, canting one wall slightly, absorptive seating and carpeting—were taken case-by-case.) To build the ceiling, the contractor employed a ship-hull construction technique. A drawing called a lofting plan was computer-generated; each point of the resulting grid was assigned a number showing its distance from a level plane (drawing, top right).

Polshek's hand shows up in the seamless integration of materials, such as the shot-peened stainless-steel stair and balcony railings and in the curving, 40-foot grille that covers the front of the stage. Across the rear of the hall, standing rows of perforated stainless-steel panels, lined with sound-absorbing fabric, echo the grille. The cool metal contrasts with 6,000 square feet of vertically slip-matched oak paneling, cut from a single tree, that clads the rear of the stage and the walls. The rhythm of the panels is reinforced by the stainless-steel reveals of the supporting grid. The paneling is further set off by a Portuguese marble base, which also appears in the stage steps and trim. Center-stage panels slide back to reveal a projection screen; wing panels on huge, custom-designed piano hinges fold forward as sound reflectors during musical performances (section, bottom right). The maple stage floor rests on a neoprene pad for resilience, and dark neoprene reveals divide the stage and its marble trim. Lighting, sound, and projection controls are concealed on stage in a bird's-eye maple podium. Stage-floor panels give access to wiring below, which, in turn, is linked to a glassed-in control room behind the balcony. "We were looking for something at once totally practical and stunningly beautiful," says museum director Robert T. Buck. "The architects delivered on both counts." *Peter D. Slatin*



The architects increased the rake of the floor to improve sight lines, and canted one wall slightly toward the stage. Perforated stainless-steel panels clad the rear of the auditorium. Air-conditioning ducts are concealed in soffits atop the columns.





Stainless-steel railings, trim, and grille were blasted with superfine glass beads for a shot-peened finish (photo bottom left). Isozaki designed the reflecting sconces that line the walls (top). Existing columns mandated wide aisles and an undivided field of seats.

Credits

The Iris and B. Gerald Cantor Auditorium, The Brooklyn Museum, Brooklyn, New York

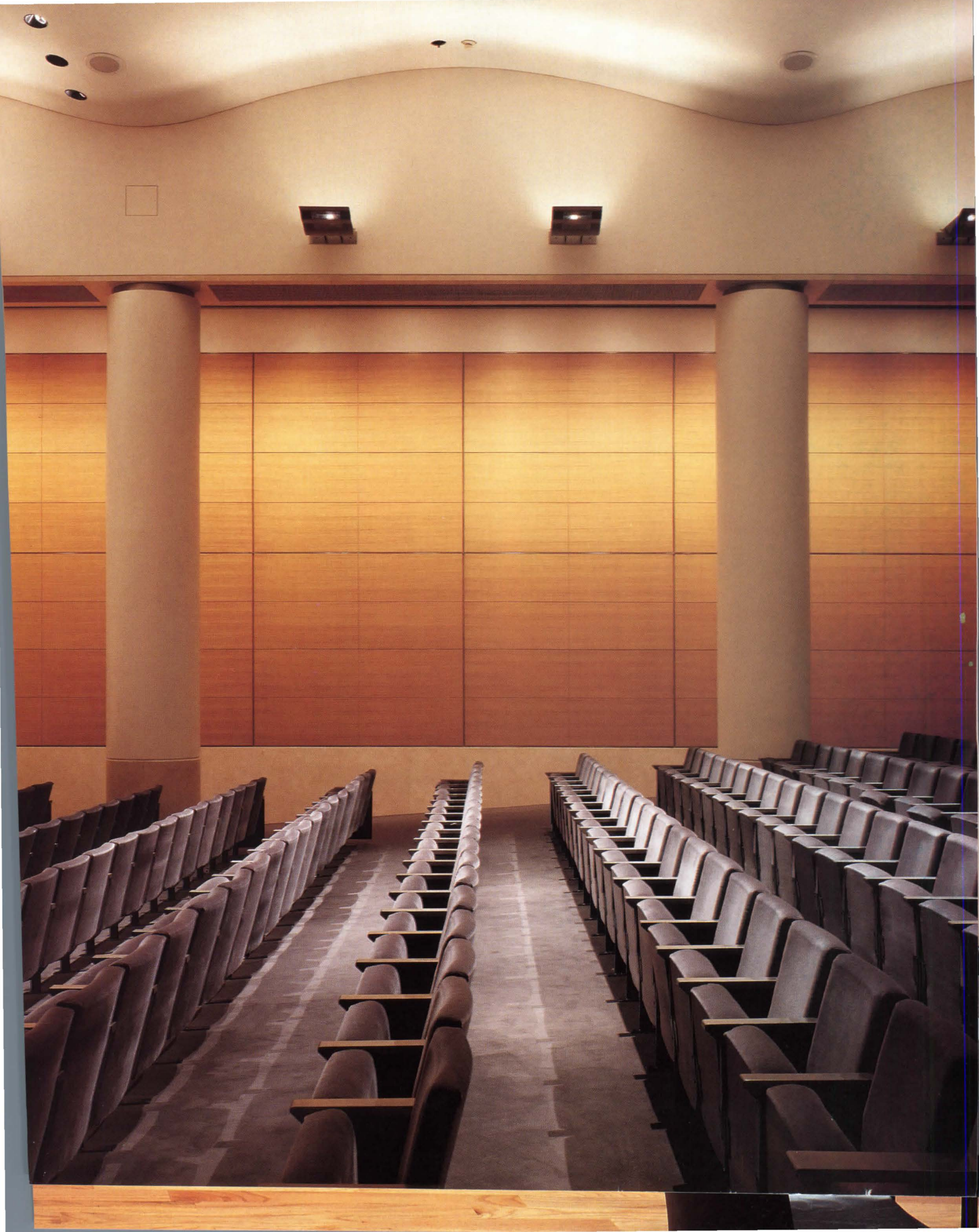
Owner: *The City of New York*

Architect: *Arata Isozaki and Associates and James Stewart Polshek & Partners; Arata Isozaki and James Stewart Polshek, design partners; Joseph L. Fleischer, Duncan Hazard, Mark Fisher, David Kurt Carlson, Janet Waterhouse, Don Weinreich (Polshek project team); Shin Watanabe, David Gauld, John O'Reilly (Isozaki project team)*

Engineers: *Robert Silman Associates (structural); Goldman, Copeland, Batlan, P. C. (mechanical/electrical/plumbing and fire protection)*

Consultants: *Fisher-Marantz (lighting); Peter George Associates (acoustical/audio-visual); Donaldson Associates (plaster); Tracy Turner Design (graphics); Robert Schwartz & Associates (specifications)*

General Contractor: *HRH Construction Corporation*



Just east of downtown Atlanta lies Little Five Points, a fast-gentrifying neighborhood where bungalows and big Victorians, boutiques and warehouses, offer haven for artists, designers, and others who need lots of space and have imaginations to match. Among them are the young graphic designer and his family at whose behest architect Anthony Ames has carved a derelict one-story warehouse into living quarters, an office and studio, and three rental apartments. From the street all you see of the L-shaped 11,000-square-foot structure is a narrow (70-foot) front leg of white-painted concrete-brick punctuated by the original industrial-style metal windows, a garage door, and a new vestibule. The left side is reserved for the owners' apartment (including garage), the right for the office/studio. Between the two a long corridor leads past the apartment's front door, then veers to a small separate lobby for the rental units, which occupy a large rear ell wrapped around the premises of the A-1 Electric Company next door.

Ames describes the office/studio and rental spaces as "relatively uneventful." Not so the owners' apartment. There he seized on the comparative complexity of even the minimal program outlined by the clients—living room, dining space, small kitchen, bedrooms, bathrooms, a study or gallery—to provide a remarkable variety of spatial experiences within the apartment's 3,300 square feet. With tongue-in-cheek solemnity Ames arranged the spaces in a formal progression from front door to roof deck.

The first stop is a rotunda with a domed skylight that kindles its yellow walls to liquid sunshine. Openings on four sides include, in addition to the entry door, a door to a small hallway—an example of Ames's penchant for usable *poché*—and a tall niche fitted with glass-block "window" and window seat. The fourth leads to the dining room, which also serves as a gallery for the owners' art collection. At the corners of the room the warehouse's original rough wooden posts meet the soffit of a shallow vaulted ceiling that is painted sky blue and pierced by a long gabled skylight. Again openings are rigorously symmetrical, even when false, as in the case of a second "door" in the bedroom wall. Lest the point be missed, the room's axes are traced in the red-oak flooring and marked with etched notches in the Ames-designed dining table, which is placed precisely at their intersection and bolted in place for good measure.

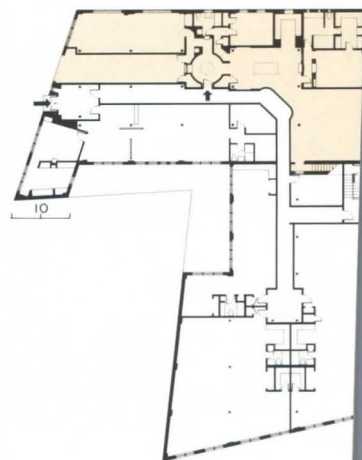
When one enters the dining room, the eye at once fastens on the windows that open the space to outdoor vistas. The apartment's *pièces de résistance*, both windows and views are illusory: the product of Ames's meticulous draftsmanship and subtle wit, Le Corbusier's graphic legacy—and Pratt & Lambert's palette of flat latex-acrylic paint. The dining-room "window," a square double-hung above a marble shelf, looks out on a landscape dotted with poplars. Across from it, the inner surface of the lozenge formed at the outer corridor's right-angle turn becomes a long ribbon window overlooking water and distant hills. Wine waits on a serving counter, a Tod Williams/Billie Tsien Tavern Island dining chair stands ready to pull up to its three-dimensional counterparts around the table, curtains to match the seat cushion in the rotunda's niche blow in the wind.

The mural also marks the shift to a new axis through the more relaxed modern space of the living room to an outer stair and roof deck that overlooks the Atlanta skyline. A second set of big industrial windows (real ones) brings in light from a narrow garden at sill level. On the exterior walls the original warm-gray concrete brick provides a rough foil for furniture and art, including an Ames-designed rug based on the room's golden section. *Margaret Gaskie*

© Toby Abrams photos



Neat and unassuming, the narrow white-brick face the warehouse turns to the street conceals most of its space and all of its complexity. In addition to the client's own living quarters (shaded area in plan below), the L-shaped structure houses his graphic-design studio and three rental apartment units. In the dining room (opposite) original 8-in.-square timber columns are set off against the formal plan.







Among the varied spaces carved into the owners' 3,300-square-foot apartment are a domed entry rotunda (opposite) and a vaulted dining room/gallery (left) that flows into the main living area and leads to the kitchen and master bedroom. Though both are inside spaces, they are brightened by natural light from skylights and by pretend vistas through "windows" painted by the architect.

Credits

*Warehouse Renovation
Atlanta, Georgia*

Owner:

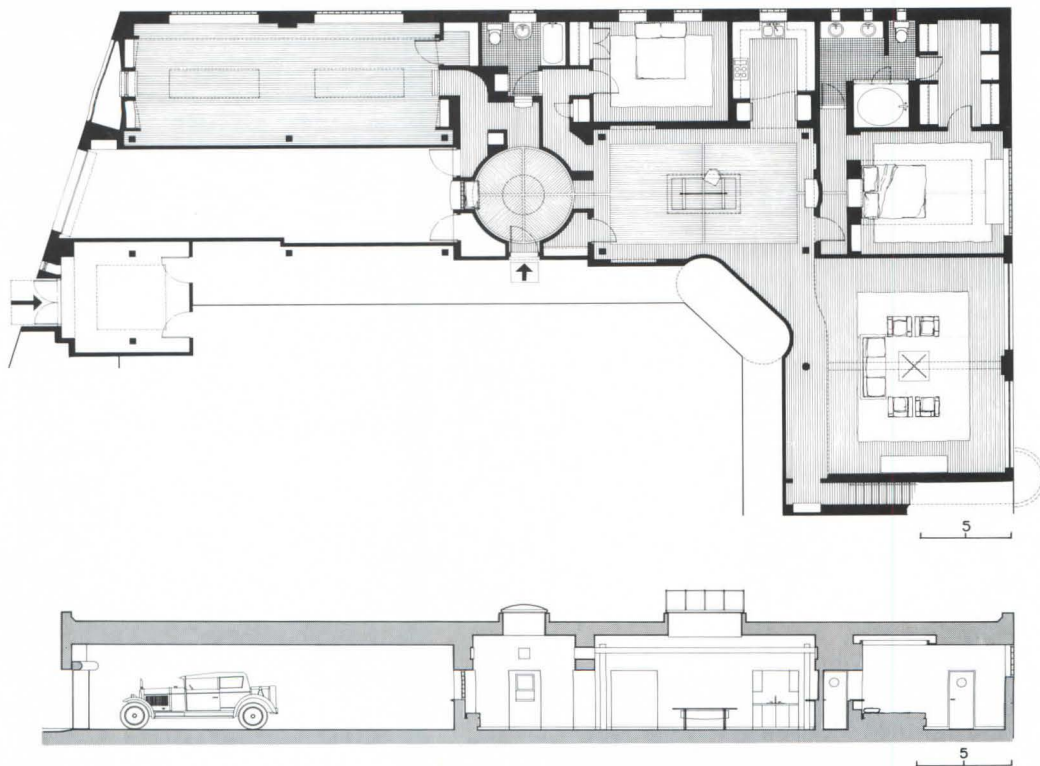
Deborah and Mike Melia

Architect:

*Anthony Ames Architect—
Anthony Ames, Clark Tefft,
William Pantsari, J. James
Strange, Alan Brown,
Denise Dumais*

General Contractor:

S & S Contractors





Ad Hoc

A design collaboration gives form to an advertising agency's unique working method.



*Offices for Chiat/Day Advertising
London, England
Stefano de Martino, Architect
with Rem Koolhaas; DEGW Ltd
Associated Architects*



gnorant of the workings of advertising agencies, I asked Stefano de Martino exactly what people do in the offices he designed for Chiat/Day in London. His succinct reply: "They generate ideas." Still, to make a place where ideas flourish is both liberating and frustrating. How do you judge when you've succeeded? There are plenty of offices (not just for advertising, but for other image-conscious businesses) that look "creative"—they have snappy imagery—but don't support the unique working method these endeavors require.

Chiat/Day has positioned itself (as they say in advertising) as a firm young in spirit—less in the corporate mold than their larger brethren and less formal in their interactions with clients. "Large corporate firms send you round to different departments," explains Jerry Wales, the office's finance director. "We bring together creative people, account managers, and planners as a team." Translating this method into physical reality was at first the responsibility of Rem Koolhaas, who had been recommended to Jay Chiat by Frank Gehry, architect of the firm's ambitious Santa Monica headquarters. With other obligations pressing, Koolhaas worked out the concept with Stefano de Martino (once an associate partner at Koolhaas's Office of Metropolitan Architecture) who now has an office of his own. De Martino completed the design, including most of the furnishings.

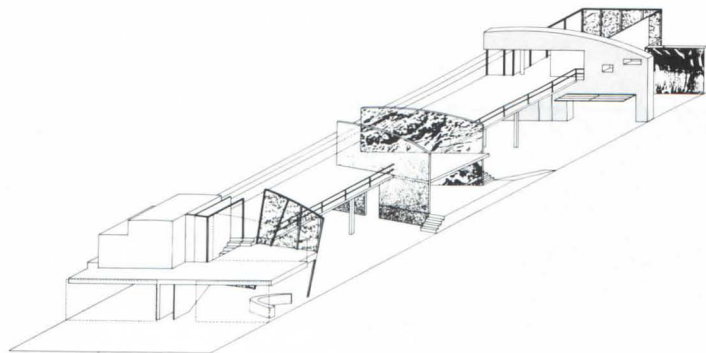
"In discussions with Chiat/Day," recalls de Martino, "we learned that what they essentially required, aside from the workstations, was a great number of diverse meeting places—from very small to full conference rooms." From this came a simple parti: tall screens divide the long, relatively narrow space (a full floor with a mezzanine), and, by their skewed arrangement, enclose meeting spaces for from two to two dozen people (axonometric below). Because, as de Martino explains, "people work in pairs and groups," he provided open workstations to allow easy interaction among teams. "We don't usually take a client into a separate environment" adds Wales. "They come and sit in the work areas with the team." With a meeting room always just a few feet away, a group can quickly duck into one.

There is a casual, ad hoc quality to the unfinished particleboard partitions and raw-metal furniture that owes a debt to the temporary office Gehry designed for the firm in Santa Monica. The skewed patterns in turn recall Koolhaas's retro-Modernism, but the theatrical choice of materials—velvet curtains, dyed rush matting, fuzzy seating "blobs"—are pure de Martino. Wales calls the working method engendered by this environment "quite radical in the U. K." Though Chiat/Day offices elsewhere have been done with a similar charge to the architect, Wales describes the London project as "possibly the purest form of how the firm's offices work." *James S. Russell*

© Richard Bryant/ARCAID photos except as noted



What Stefano de Martino describes as "slices" are steel-framed, fiberglass-paneled screens that enclose casual meeting places. One of these rooms is large, open, and double-height (opposite). Others are intimate (top) with sliding doors. A conference room (above) located at the north end of the mezzanine has doors made from cellular plastic sheets. Overleaf: The view through layers of screens to the reception area.





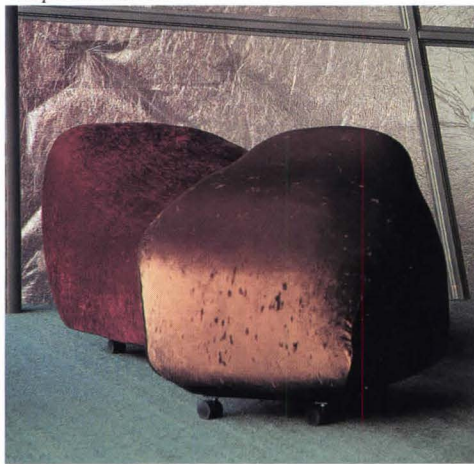
© Sophie de Martino



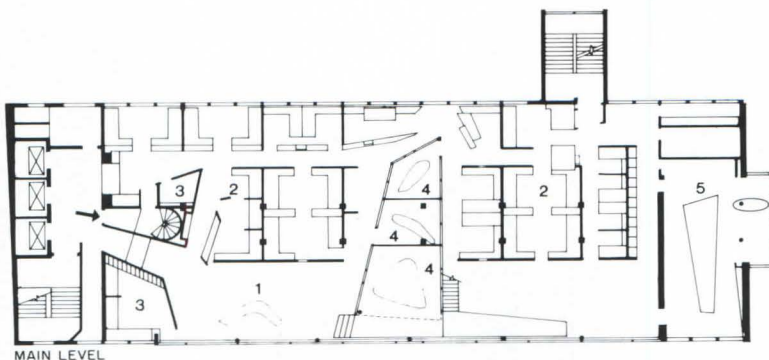
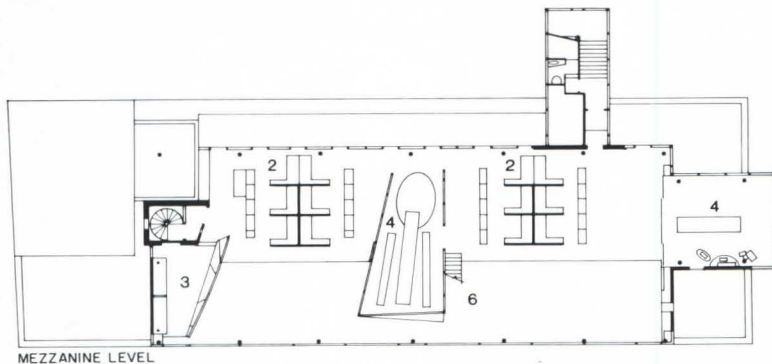
© Sophie de Martino



© Sophie de Martino



1. Reception
2. Workstation
3. Production
4. Meeting room
5. Presentation room
6. Open to below



De Martino explains his material choices thus: "Rather than apply decoration, I chose to use raw materials in a natural state." Screens are made of molded fiberglass (the patterns are by artist Terry Flowers) with frames of sandblasted steel that has been sealed. The mottled table tops (top right) were made by mixing copper powder with fiberglass. A conference table is supported by legs of perforated metal (bottom left), a material also used to filter sun from skylights and as a screen for mechanical equipment that could not be moved. In the reception area, seating resembles fake-fur rocks—one has a disconcerting sense that they are about to scuttle away (bottom right). On the mezzanine, a hinged table with molded bench seating (opposite) swivels over a kidney-shaped sunken pit for even greater informality. To swim in this "pool," carpetlayers considerably left behind starfish and other "shellfish" made from trimmings.

Credits

Offices for Chiat/Day Advertising
London, England

Architects: Stefano de Martino, Architect with Rem Koolhaas—Nick Boyarsky, Nicola Murphy, Simon Steel Hart, project team

Associated Architect: DEGW Ltd.

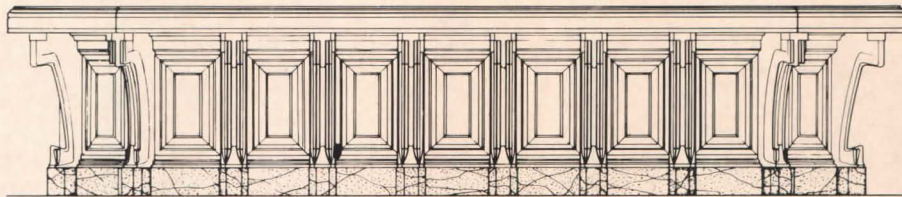
Engineers: Carter Clack Partnership (structural); Pete Hazard Design Associates (mechanical)

General Contractor: Quickwood Ltd.

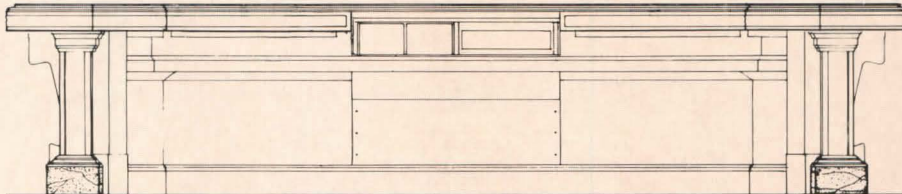


Extra! Extra! Chicago Tribune Lobby Restored!

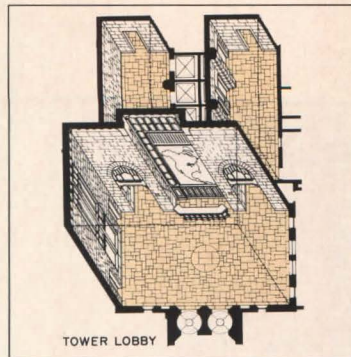
Turning the clock back to 1925, the year Howells & Hood's Chicago Tribune Tower opened, restoration architect John Vinci peeled away decades of unsympathetic accretions to the building's lobby and returned the 47- by 28-foot space to its former glory. After removing insertions, such as a 1940s WPA-style mural and a 1956 freestanding marble wall, Vinci retrieved the lobby's original centerpiece, a papier-mâché bas-relief map of the Western Hemisphere (1), from Chicago's Field Museum, and repainted it in its original colors. The Gothic-inspired woodwork that once framed the map and the imposing reception desk (drawings below) had long been lost, so Vinci recreated them in quartersawn white oak, using old photographs and original shop drawings as guides. The architect also cleaned and backlit the limestone "Aesop's screen," named for the Greek fables it depicts, and repaired the clock at its center (2). To enliven the once-somber lobby, Vinci opened up narrow windows on the north and south walls (3) and brought more artificial light to the upper portions of the 29-foot-high room. *Clifford A. Pearson*



ELEVATION - FRONT OF DESK



ELEVATION - REAR OF DESK



TOWER LOBBY

Credits

Chicago Tribune Lobby

Chicago, Illinois

Owner: Tribune Properties

Architect: Office of John Vinci—John Vinci, principal; Philip Hamp, project architect; Rocco Tunzi, Larry Lasky, Tom Conroy, project team

Engineer: Gavlin & Reckers (structural)

General Contractor: Tribune Properties



2



4

Balancing Act

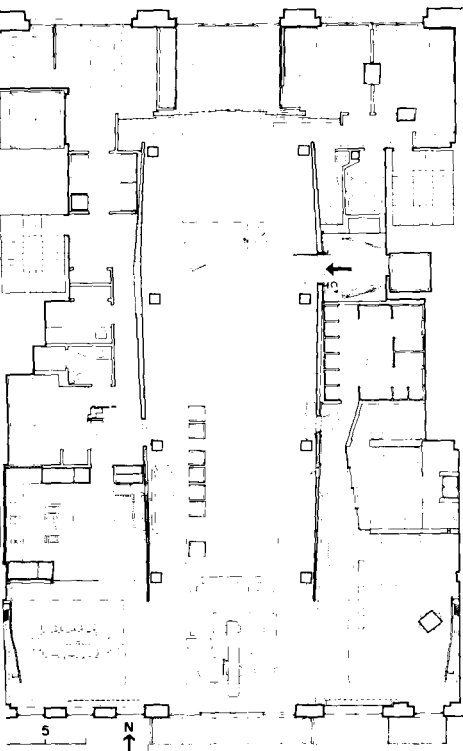
*A New York loft by Tod Williams
and Billie Tsien carefully
balances opposing forces.*



*Loft
New York City
Tod Williams Billie Tsien
and Associates, Architects*







cantilevered arm holding a glass vase in the entry foyer and a faceted plywood partition hung on a metal pole in the living area (opposite) introduce the theme of motion, while black-plywood bookcases rotating in the generous living room (top) underline a sense of repose.

The key to the 5,000-square-foot loft in New York City's Greenwich Village, designed by Tod Williams and Billie Tsien, is its balance of motion and repose. Like most of the work of this husband-wife design team, the loft embodies an almost Zen-like combination of opposites: warm and cool, strict and informal, elegant and casual. But instead of creating a sense of tension, these opposing character traits seem to be in harmony with each other, as if one would be incomplete without the other. While many architects today revel in expressing violence and conflict in their designs, Williams and Tsien stand out for their ability to establish equilibrium.

In the 1970s and early '80s, New York City lofts were wide-open spaces where level changes replaced walls as interior partitions. Williams and Tsien's design for this residence retains those lofts' generous use of flowing space, but provides greater privacy with a series of sliding—and even spinning—partitions. Pigmented-plaster walls hung from the ceiling move to either close off or open up the master-bedroom suite and the dining-room-kitchen wing from the central living area, while a wood and translucent-glass wall runs between the dining room and the kitchen. More unusual is the banner-like plywood partition 12 feet long and from four to five feet high that rotates around a metal pole near the apartment's entrance. Faceted like a jewel and painted white and grey on one side and copper-leaved on the other, it helps divide the expansive living area into a public realm to the south and a more private one to the north. The architects echoed this form with a small purple-tinted resin "window" that rotates 180 degrees and is set in the wall between the master-bedroom suite and the living area.

The loft's basic plan is deceptively simple: a central terrazzo-floored living space encircled by more private areas. What might have been a static arrangement, however, is set in motion thanks to a series of subtle gestures. The long walls of the living area, for example, pinch in toward the north and south ends of the loft where natural light enters, and a row of black bookcases seems to slide past built-up square columns. Varying the hues of the walls, from mauve on one side to beige on the other, also creates a sense of movement, explains Williams. At the same time, bookcases and columns seem to float above slender reveals, while two 75-foot-long steel lighting fixtures hover below ceiling beams. Even the furniture seems to be on the move: a pear-wood sidebar in the dining room, for example, takes flight with a cantilevered aluminum countertop.

To heighten the sense of movement and expansion in the major spaces, the architects compressed space in transitional and secondary areas. For this reason, the entry foyer is a vault-like room packed with angled black-plywood closets on either side, a long and narrow mirror, and a cobalt-blue glass vase dropped into a cantilevered metal arm. A steel-and-laminated-glass door offers a glimpse of what's inside—an effect the architects repeat with small cut-outs in walls in the main living area. "We like to either open things up or give just a hint," says Williams. As they did in their "Domestic Arrangements" exhibit at the Walker Art Center [RECORD, March 1990, page 49], Williams and Tsien used inexpensive materials in elegant ways. The dining table, for example, is alternating layers of masonite and barra board, and the coffee table is built from the same resin as surf boards.

With its sliding partitions, its large central room adaptable to several uses, and its subtly hued walls changing character as sunlight moves through the space, the loft is a place where, as Williams explains, "many transformations are possible." *Clifford A. Pearson*







By incorporating movable elements, the architects created the opportunity for a series of transformations. For example, a sliding partition separates the master bedroom from the living area (top), and a colored-resin "window" spins on a pole set in a wall (left, center). An accordion wall unfolds to open the bathroom to the master bedroom (right, center). A sliding wall of translucent-glass panes runs between the dining room and the kitchen (bottom).

Credits

Loft

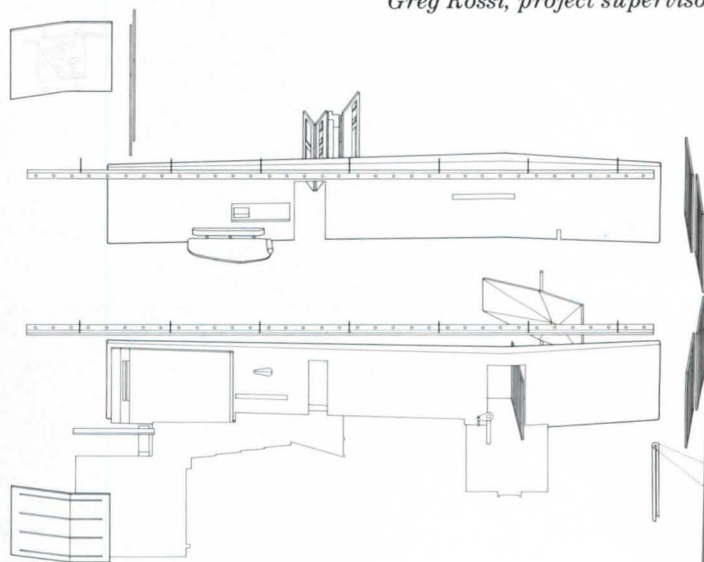
New York City

Architect: *Tod Williams Billie Tsien and Associates—Tod Williams, principal-in-charge; David van Handel, project architect; Billie Tsien, Marwan Al-Sayed, design team; Kim DePole, Reenie Elliot, Brett Ettinger, Rick Gooding, Erica Hinrichs, Johannes Kaferstein, Alexandra Yanacopoulos, design assistants*

Engineers: *Superstructures (structural); Ambrosino, De Pinto & Schmieder (mechanical/electrical/plumbing)*

Consultant: *Rick Shaver (lighting)*

General Contractor: *Clark Construction—Frank D'Amico, project manager; Greg Rossi, project supervisor*





Portrait Making



Bentley LaRosa Salasky combines traditional forms with modern details for the Boston outpost of fashion designer Joseph Abboud.

*Joseph Abboud
Boston, Massachusetts
Bentley LaRosa Salasky,
Architects & Decorators*



Bentley LaRosa Salasky (BLS) describes its work as a kind of portraiture—an attempt to embody, in each project, the spirit of the client. The New York City firm, whose clients have included Steuben Glass and Charivari in Manhattan and the Vivre 21 department store in Japan, has recently applied the partners' portrait-making talents to the Boston boutique of clothing designer Joseph Abboud. Born in Boston and based in New York, Abboud started his own line four years ago, after working for, among others, Ralph Lauren. Since then the designer has earned praise for clothes that combine tradition and high style, without committing the classic couture blunder of obscuring the wearer. For this three-level, 7,500-square-foot store, he envisioned spaces at once inventive and accessible, elegant and comfortable; in short, an upscale boutique that would not upstage the merchandise.

BLS, which had earlier designed Abboud's Manhattan showroom, has responded to its client's mix of old and new by working its own variations on tradition. A stroll through the store, each of whose three floors have been given a distinct character, recalls a variety of images: the well-appointed rooms of a rambling country house, or a men's club, or one of those English emporia that cater to the gentry. Yet the architects use these images simply as points of departure. Influenced by styles ranging from late Victorian to Art Deco to 1950s-style Modern, these interiors clearly reflect what Abboud calls the architects' "young, downtown sensibility." The men's floor, for example, with its casework of cherry, ash, and anigre, seems, at first glance, dark-hued and serious enough to reassure an old-line banker. A closer look, however, reveals quirky, unexpected details (such as wood casing shaped into an inverted scallop) and unusual furniture (like the Pakistani onyx-topped table attached to a column, seeming to emerge from the building itself).

BLS calls itself "Architects and Decorators." Or, as partner Ronald Bentley explains, "We offer clients more architecture than they get from decorators, and more decoration than they get from architects." For Joseph Abboud this approach has produced a design both sensuous and intellectual. Collaborating closely with fabricators, the architects designed almost everything in the store, from furniture and display racks to pendant lamps and pants hangers. And these objects have been fashioned from a rich array of materials, including eight species of wood, three types of stone, ornamental iron and brass, and several Abboud-designed fabrics.

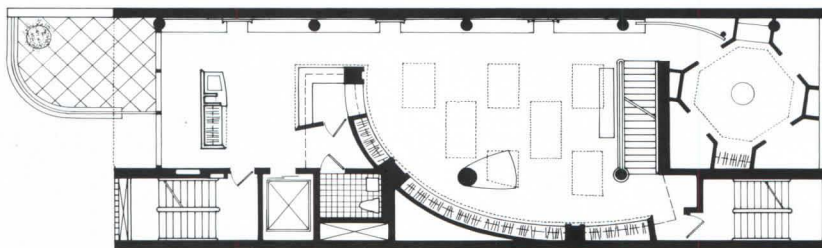
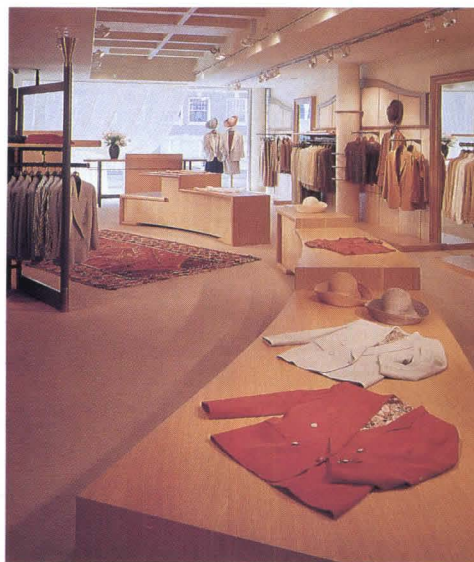
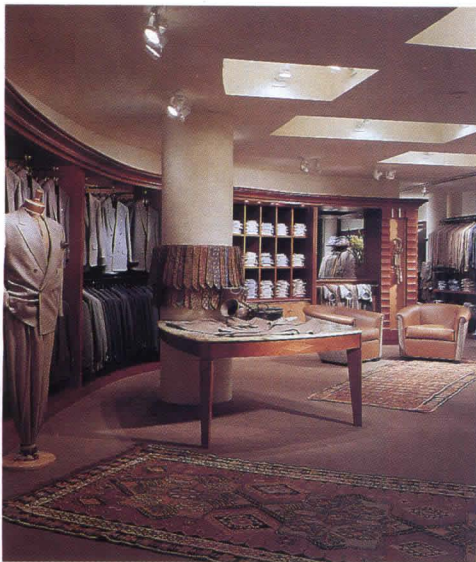
Giving structure to this profusion are thoughtful planning and strong architectural forms. Abboud's shop is located in a 1978 Gwathmey Siegel building, originally a Knoll showroom and still one of the few frankly contemporary structures on Boston's elegant, somewhat staid Newbury Street. Into this Modernist design, which was stripped to its poured-concrete structure, BLS has fitted a deliberately relaxed geometry. In plan, clothes racks form segments of circles; the men's dressing room is a skewed octagon, the women's a faceted oval. Linking two spaces on the first floor is an ellipse cut into a shear wall. Throughout, display cases and furniture describe grand-gesture curves, leading the shopper on a nonorthogonal tour of the merchandise. This play between architectural content and context, of course, echoes the store's old-and-new theme, and neatly rounds out the architects' portrait of Joseph Abboud.

Nancy Levinson

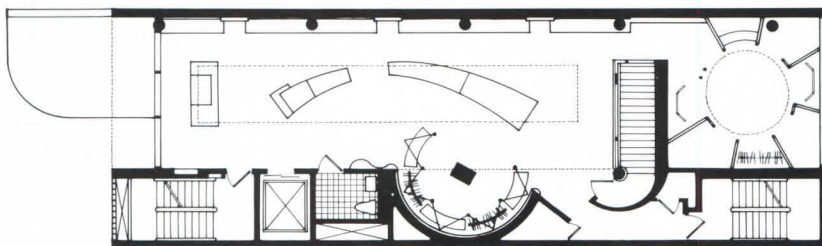


Like the rest of the boutique, the men's dressing room evokes a variety of images. Here, the well-appointed formality one associates with gentlemen's clubs is loosened up with inventive, Deco-style detailing, such as the inverted-scallop casing around the mirror (opposite). A pendant lamp seems late Victorian by way of the 1950s. The table is topped with honed Juperana granite; where the apron meets the legs, one finds Abboud's diamond-shaped logo.

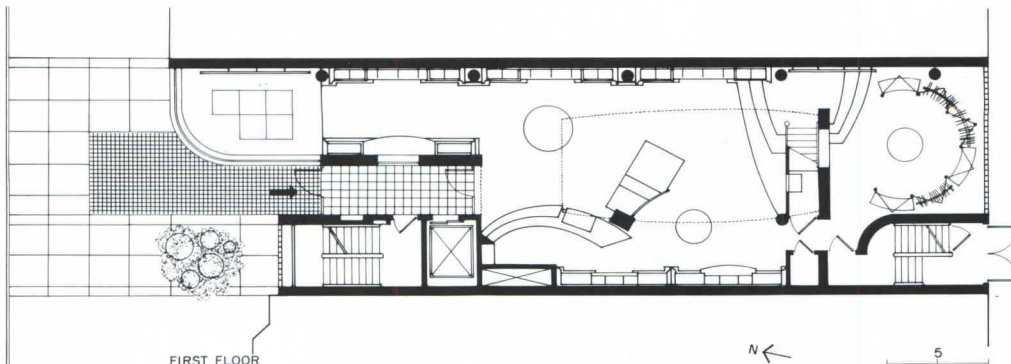




THIRD FLOOR



SECOND FLOOR



FIRST FLOOR

Using combinations of materials, colors, shapes, and textures, BLS gave each of the store's three floors its own mood. On the ground level (pages 116-117)—conceived as an eclectic introduction to Abboud's designs—the case-work is made of rift-sawn white oak, with holly and poplar trim; the herringbone-patterned floor is maple. On the men's floor, a clublike atmosphere is achieved with dark cherry cabinets and furniture, accented with ash trim and anigre-veneer panels (far left). Light hues and smooth surfaces give the women's level the look of a boudoir (near left). Indeed, the fabric-covered, oak-trimmed wall panels resemble oversized headboards. The tops of the curving display tables are veneered in oak, the sides in sycamore. The ivory curtain (opposite), which seems almost sculpted, consists of strips of chiffon and pleated polyester. Into a stripped-down poured-concrete structure, BLS has fitted a relaxed geometry of implied curves. This play between context and content is another instance of the architects' knowing mix of old and new.

Credits

Joseph Abboud
Boston, Massachusetts
Owner: J. A. Apparel Corp.
Architect: Bentley LaRosa Salasky, Architects & Decorators—Franklin Salasky, Ronald Bentley, Salvatore LaRosa—partners-in-charge; J. Robert Vogel, Dean Maltz, Jylle Menoff Dui project team
Engineers: Souza True and Partners, Inc. (structural); ADA Associates (mechanical)
Consultants: Ray Porfilio (code); Grenald Associates—Sandra Stashik (lighting); Mary Bright (draper); Mark Tamayo (photo styling)
General Contractor: Shawma Design & Construction—Elizabeth Coburn, project manager; Scott Shear, project supervisor



Mellow Yellow

*Offices for The Melchor Corporation
Palo Alto, California
Brayton & Hughes Design Studio,
Architect*



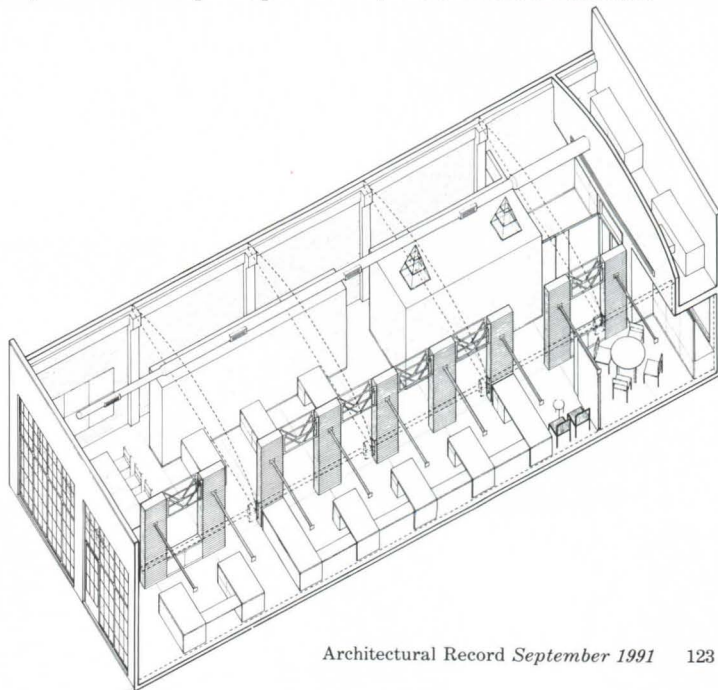


Brayton & Hughes preserved the red-and-white glass-tile facade of the former Acme Glass Company plant in downtown Palo Alto (above). In converting the interior into the headquarters of an asset-management firm, the architects combined custom plastic-laminate workstations and a bright-yellow wall system with the building's original concrete and wood elements (opposite).

Junk-bond investments aside, asset-management companies usually stick with the tried and true. But when Gregory Melchor sought new quarters on the San Francisco Bay Area peninsula for his small financial-management firm, he turned not to one of the midrise office buildings that line the U. S. 101 freeway corridor, but to a one-story former glass-fabrication plant located amid the shops and restaurants of downtown Palo Alto. His charge to Brayton & Hughes was simple and direct, recalls project architect Timothy Gemmill: "He asked for something exciting, fun, unique, colorful, and unpretentious." Although Melchor's program for a combination of open-plan and semi-enclosed offices for eight employees was likewise straightforward, a city mandate to seismically upgrade the building while preserving its Streamline Moderne character raised challenges that went beyond interior décor.

The architects responded by tying inverted V-shaped steel tubes into the building's poured-concrete and wood-truss structure, and by leaving its original red-and-white glass-tile facade largely intact, complete with 1939-vintage Acme Glass Co. sign. Inside the 2,400-square-foot concrete shell, they devised a semitransparent 10-foot-high wall system of one-by-two-inch wood lath nailed to a frame of two-by-fours, all painted bright yellow. Together with two boxlike elements that enclose restrooms and other back-of-the-house functions, the yellow wall forms the principal circulation axis while defining a series of white plastic-laminate workstations, a conference room, and a reception area.

Though freestanding, the yellow wall is structurally reinforced by steel channels that double as housing for incandescent task and uplighting. (The offices enjoy additional natural light through a central clerestory, which Brayton & Hughes created by enlarging the building's tiny original skylights.) Throughout the interior, the architects sought to preserve, and in some cases enhance, the building's industrial character. For example, light spray-painting produced a whitewashed effect that reveals the wood grain of the structure's bowstring roof trusses, while a new topping slab laid over the existing floor is finished with hand-rubbed concrete stain. "We especially liked the quality of the factory's walls," Gemmill observes; accordingly, while most of the workstation areas are clad in conventional gypsum board, the architects elected to leave one concrete wall as they found it—old paint, pockmarks, and all. *Paul M. Sachner*





In contrast to gypsum-finished workstations (top left and right), the concrete wall of a back-of-the-house corridor remains exposed (bottom left). A conference room (bottom right and opposite) features a sheet-steel magnetic display board and a custom-designed table with zinc top and black-painted wood base.

Credits

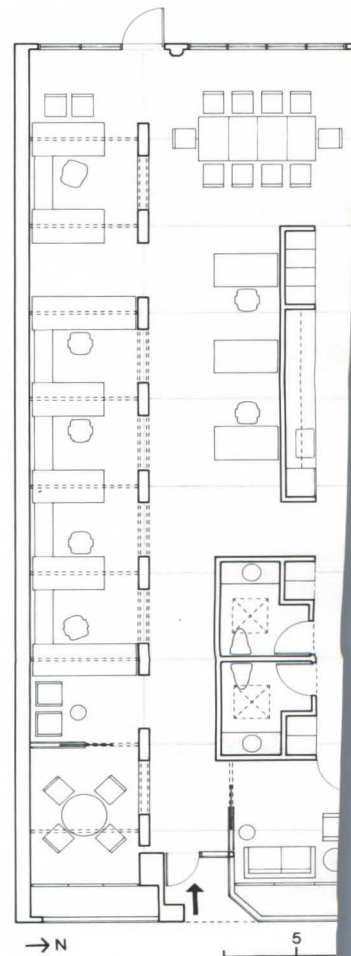
*Melchor Corporate Offices
Palo Alto, California*

Owner: *The Melchor Corporation*

Architect: *Brayton & Hughes Design Studio—Richard Brayton, Timothy Gemmill, David Darling, project team*

Consultants: *Mardi Burnham (art); H. J. Pegenkolb Associates (structural engineering)*

General Contractor: *Jack & Cohen Construction*





Lloyd Wright Recast



*Josh Schweitzer brings high
drama back to Lloyd Wright's
landmark Samuel-Navarro house.*

*Keaton House
Los Angeles, California
Schweitzer BIM, Architect*



Faced with the task of renovating a much-altered, idiosyncratic 1926 house by Frank Lloyd Wright's son, Lloyd, into the Hollywood Hills home of actress Diane Keaton, Josh Schweitzer made gestures that are larger than life, modifying the original design by meshing it with his own architecture. By stripping down the existing structure to its barest spatial relationships, Schweitzer created a spare stage set for his actors: a giant clock, oversized furniture, six-inch-square handrails and glowing, building block-like soffits. The result is Lloyd Wright with a twist.

The original Samuel-Navarro house was strong on image, short on real space, and lacking internal logic. The bulk of the house consisted of foundations and a mechanical room, on top of which Wright arranged a few modest-sized rooms. Terraces carved into the hill were tied to the house with pergolas and block walls. Only the top level, a studio, seemed airily liberated, floating above the massive structure and the sprawl of Hollywood below.

For all his alterations, Schweitzer treated the original building with more than respect: he revealed it. After floors were stripped down to concrete, a local scenic artist was called in to artificially weather them. Aluminum sliders added over the years were replaced with windows and doors based on Wright's original designs. Lighting and air conditioning were hidden in troughs, and existing faucets were sanded and sealed. The arrowhead motif Wright used for copper fascias was copied for lightweight concrete screens in the showers and over the mantle, while lights were inserted into some of the original fascias to make them glow. "We had some difficult choices about what to restore," recalls Schweitzer. "The house kept changing from the moment Wright designed it. I thought the most important thing was to understand his sense of space. It was a small house, but by making things tall and narrow, he gave it grandeur."

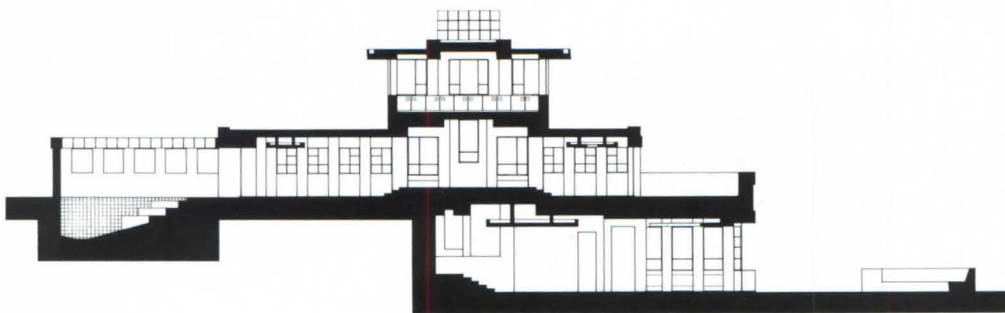
Having recovered Wright's drama, Schweitzer then added some of his own. The entry hall, where a split staircase ties the levels scaling the hill, was punctuated through the insertion of a giant clock. A giant lamp faces the restored fireplace in the living room, and the requisite "entertainment center" becomes a geometric snakelike cabinet slithering through the split-level living areas. A similar object filled with secret storage compartments organizes the awkwardly shaped studio carved into the base.

There's no mistaking what is old and what is new, and both share what Schweitzer calls a "slightly perverse sense of scale." For Schweitzer, that perversion hints at another world—a world where the traditional relationship between objects and scale is called into question. That, says Schweitzer, is what architecture is all about, and that is the plot of this Hollywood drama. *Aaron Betsky*

© Ronald Pollard photos



Schweitzer reorganized the former Samuel-Navarro house, designed in 1926 by Lloyd Wright, into stacked working and living areas. Living-room soffits (opposite) repeat the horizontality of a reconstructed outdoor pool, stressing Schweitzer's attempt to add grandeur to Wright's constricted original interiors. Throughout, the architect mixed boldly scaled furnishings with vintage pieces.



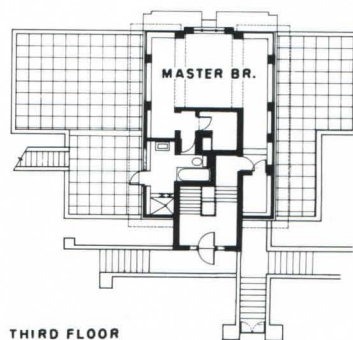




Faced with a vertical labyrinth of spaces, Schweitzer clarified the plan by stripping the lower level of the new home-office to its structure (top and bottom), emphasizing the horizontality of the main level, and turning the top level into the master bedroom (following pages). None of the original structure was removed or hidden. Instead, elements such as Schweitzer's giant clock (middle right) and the Wright motifs over the fireplace (middle left) were used to focus various spaces as necessary, creating a contrast between the modestly scaled rooms and oversized decorative objects. The arrowhead motif reappears in original copper fascias (opposite), which Schweitzer repeated on the exterior of the master bedroom.

Credits

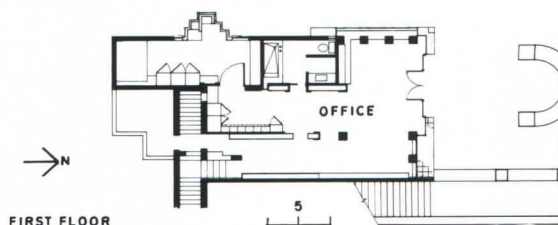
Keaton House
 Los Angeles, California
Owner: Diane Keaton
Architect: Schweitzer BIM—
 Josh Schweitzer, principal-in-charge; Patrick Ousey, project architect; Scott Prentice, Lee Ann Fleming, project team
Consultants: Cavallo Furniture Refinishing, Inc; Carl Eaves (special finishes, wood cabinetwork)
General Contractor: Nick Such



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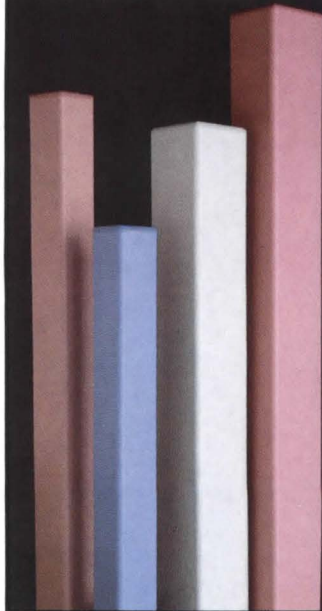
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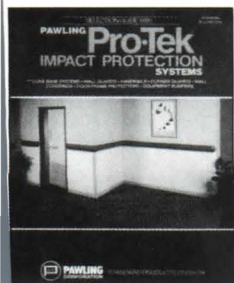
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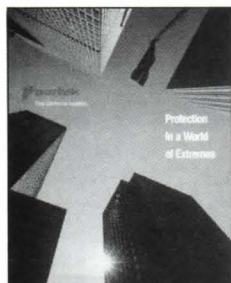
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Catalog features railings, guards, bumpers, and wall panels to decorate impact-prone surfaces. Colorways, materials, and mounting options shown in photos and detail drawings. Pawling Corp.
400



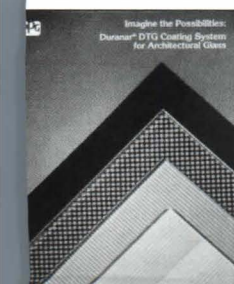
Rockwool Insulation
Outlines the performance and installation benefits of Paroc batt and board products for curtain-wall, sound-attenuation, and fire-safing insulation. Partek North America, Inc.
404



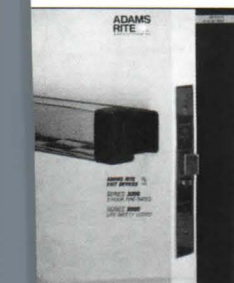
Partitions
Brochure illustrates room dividers, storage, and ceilings installed in five Swiss projects. Storage modules may be relocated as a single unit. Dividers may be glazed or fabric-finished. Clestra Hauserman Inc.
405



Dry-set Glazing
Guide specifications detail industry-standard applications of Santoprene and Vyram thermoplastics in expansion joints, glazing assemblies, and curtain walls. Advanced Elastomer Systems.
401



Opacifier
Duranar Direct-to-Glass coatings can be applied as a solid color or screen printed in decorative patterns, on any glass surface, even over metallic coatings. PPG Industries.
402



Exit Devices
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PPG Place, Pittsburgh, PA.
Architects:
Philip-Johnson & John Burgee.

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Continued on page 153

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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 74-79

Isaac Mizrahi and Company
Anderson/Schwartz Architects
Sectional door, welded-steel chairs and tables: custom by architects, fabricated by Solo Metal Works, Ltd., and Klesco Builders. Pivot-door hardware: Dorma. Wallcovering: Homasote. Laminate surfaces: Formica. Floor grates: McNichols. Plywood shelving wall: Louisiana-Pacific. Banquette upholstery: Isaac Mizrahi. Sisal carpeting: Alison Seymour. Desk lights: Artemide. Bay-type lighting: Hubbell.

Pages 80-87

Central Park West Apartment
Roger Ferri Architect

Pages 80-83—Double-hung windows: Pella/Polyscreen. Skylight: Lynbrook. Security grilles: Roll-A-Way. Locksets and cabinet pulls: Baldwin. Paints: Benjamin Moore. Fabric wallcovering: C. Landa. Carpeting: V'Soske. Wallwash fixtures: Lightolier. Dining chairs, upholsteries, bed coverings, and window shades: Jack Lenor Larsen. Lamps: Jerome Sutter. Pillow fabric: Portunty/Clarence House.

Pages 84-85—Side chair: Brickel. Pillow fabric: Pollock.

Pages 86-87—Desk lamp: George Kovacs. Chair: Dakota Jackson. Andirons: custom by architect. Tile: American-Olean.

Pages 88-93

Chris and B. Gerald Cantor Auditorium
Brooklyn Museum
Yurata Isozaki & Associates/James Stewart Blshek & Partners, Architects
Plaster ceiling: Donaldson Acoustics. Stainless-steel panels and railings: Melto Metals. Oak paneling: Custom Interiors. Carpeting: Bloomsburg Carpet. Seating: JG Seating. Upholstery: Maharam. Sconces: custom by architects.

Pages 94-99

Warehouse Renovation
Anthony Ames Architect
Dining chairs: ICF (Tod Williams, Tavern Island Chair). Table: custom by architect, fabricated by Mark Schweitzer Studios. Area rug: V'Soske (custom). Paints: Pratt & Lambert. Upholstered chairs: Atelier International. Sofa: Nienkamper.

Pages 106-107

Chicago Tribune Lobby Renovation
The Office of John Vinci, Inc., Architect
Security desk, doors, reredos: The Dettmers Co. Carving: James Lohmann. Cast-iron restoration: Hart-Dean. Recessed and track lighting: Halo; S. I. Chandelier restoration: Wilmer S. Snow Co.

Pages 108-115

Residential Loft, New York City
Tod Williams Billie Tsien and Associates Architects
Window and casement windows, pivot doors: Line. Translucent laminated glass: Flachglas. Laminated glass: Asahi. Wood and glass folding doors: Werner. Steel sliding doors: Torrance. Locksets: Metric. Dining chairs: ICF. Leather upholsteries: Meybeck. Sofa: Dema. Draperies: Gretchen Singer. Metal lighting shields: Hand.

Pages 116-121

Joseph Abboud
Bentley LaRosa Salasky Architects & Decorators
Display cases and tables: Walter A. Furman Co. Paints: Benjamin Moore. Metalwork and special lighting: Brassworks. Carpeting: Bentley Mills. Lounge chairs: Brickel. Fabric wallcovering: Portunty. Track fixtures: Halo. Recessed lighting: Lightolier. Other lighting: Norbert Belfer; Elliptipar; Prescolite.

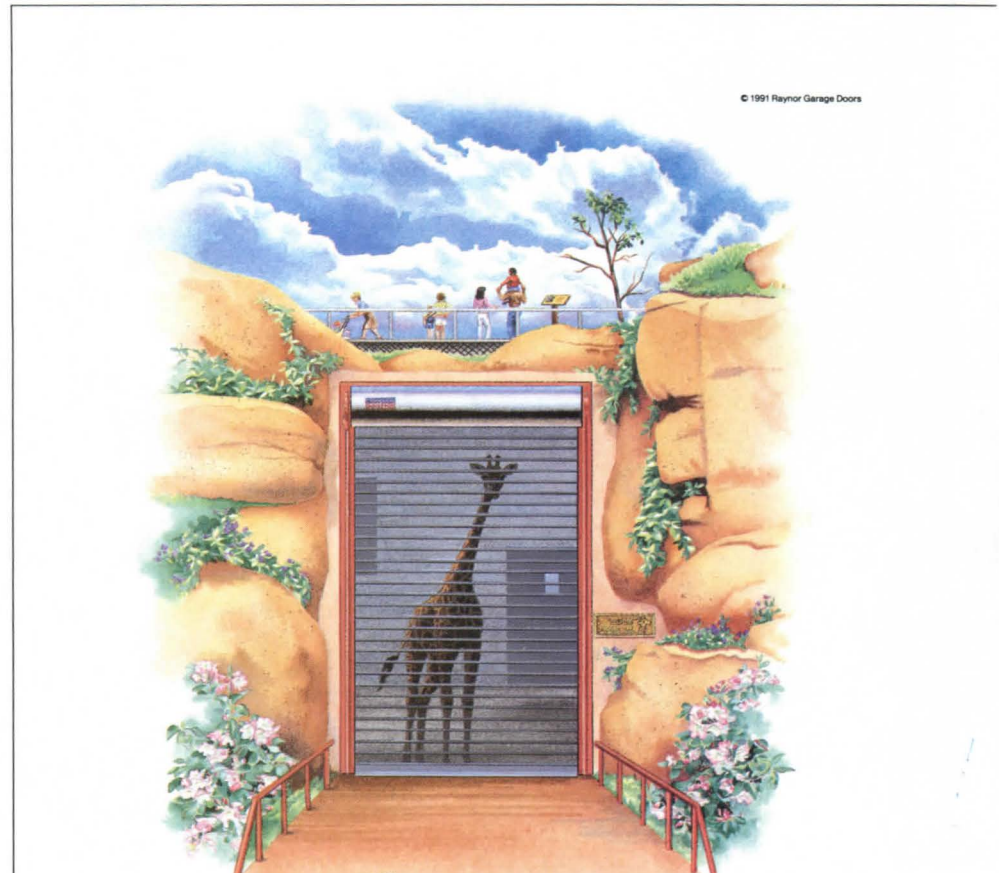
Pages 122-125

Offices for the Melchor Corporation
Brayton & Hughes Design Studio, Architect
Workstations: custom by architect, fabricated by Denning Cabinetry. Laminate: Laminart. Task

lighting: Artemide. Desk chairs: Knoll. Stained-concrete floor: Michael Miller. Track lighting: Lightolier. Conference table: custom by architect, fabricated by Paco Prieto/Pacassa Studios. Pendant lighting: Louis Poulsen & Co.

Pages 126-133

Keaton House
Schweitzer BIM, Architect
Cabinetwork, bed, desk, and lamp: custom by architect, fabricated by Modo. Lightweight-concrete structures: Cameron Aston Designs. Flooring: Magstone. Finish: Gayle Wurthner (custom). Chairs, couches: Paul T. Frankl. Leather upholstery: Spinneybeck.



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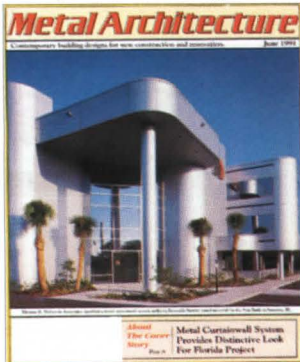
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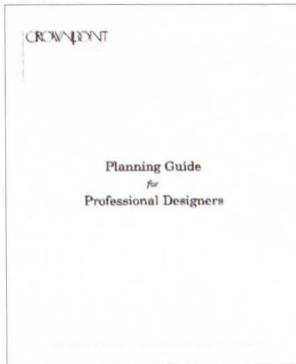


Metal Architecture magazine featured Reynobond® material in a cover story, "Smooth-faced Standout." The Sun Bank Building in Sarasota, with 70% KYNAR® Colorweld® 300XL Bright Silver Metallic coated panels, is explained from the developer's & architect's perspective. Reprints available with supporting product data. Specify on request. Reynolds Metals Co., P.O. Box 27003, Richmond, VA 23261. 804-281-3629.

Reynolds Metals

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Crown Point Cabinetry Specification Manual

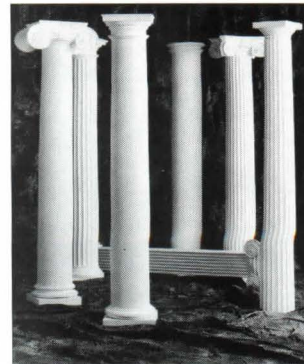


Crown Point Cabinetry announces publication of their *Planning Guide for Professional Designers*, a 156 page specification catalog for architects. This guide details over 2,500 cabinets, options and accessories available from this family owned custom cabinet maker. Architects are entitled to this publication at no charge. To receive your copy, call Brian Stowell at (603) 543-1218.

Crown Point Cabinetry

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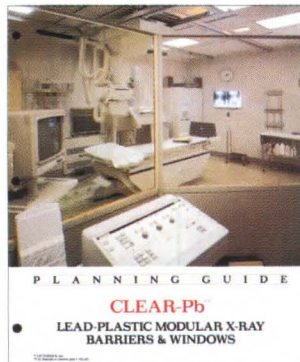


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FREE X-Ray Room Planning Guide

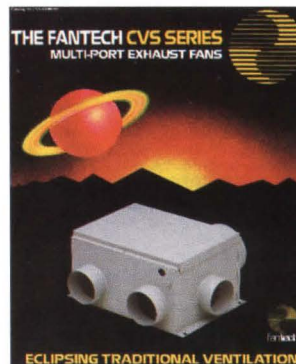


New guide illustrates userdesigned installations of CLEAR-Pb Lead-Plastic Modular Barriers and Windows in hospitals, radiation therapy centers. CLEAR-Pb is a transparent, lead-impregnated plastic sheet in lead equivalencies from 0.3 to 2.0 mm, over 200 stock sizes up to 6 x 8 ft. (larger on special order.) Nuclear Associates.

Nuclear Associates

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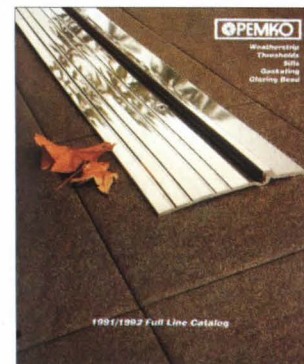


Fantech introduces it's new addition to their "remote fan" family, the CVS Series. These Central Ventilation Systems are made to ventilate 2, 3 or 4 different venting points with a single fan. Manufactured in a variety of C.F.M. ranges, and are available through quality minded H.V.A.C. and electrical distributors nationwide. For a full catalog, call 813-351-2947 or fax 813-355-0377.

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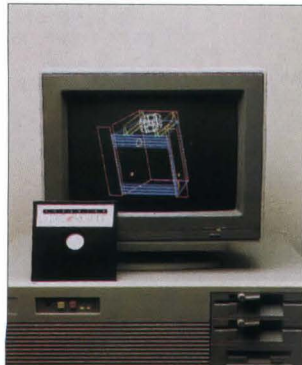
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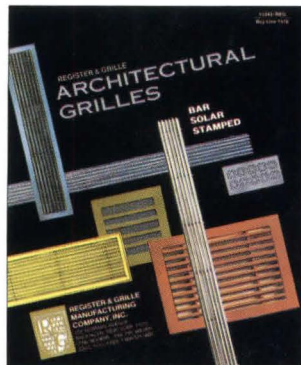


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Superior Fireplace Co.

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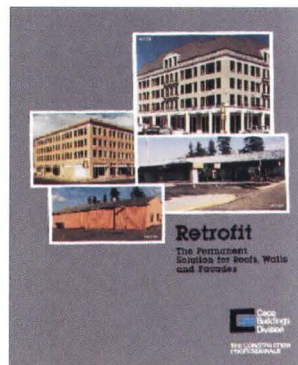


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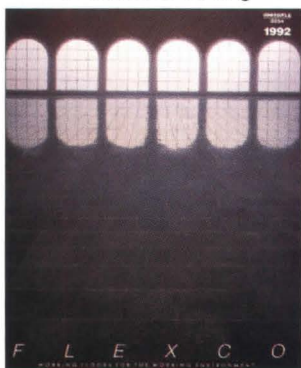


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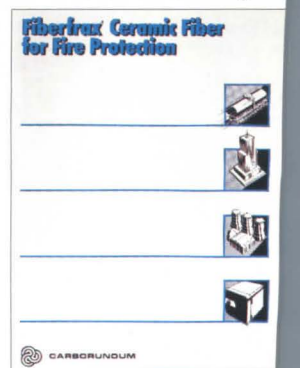


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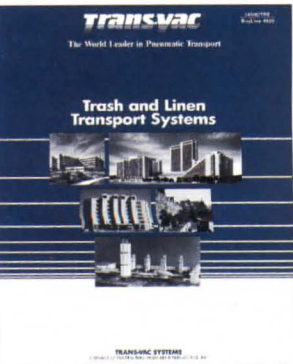


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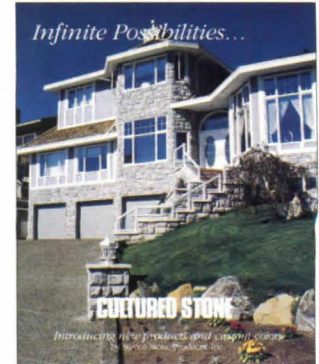


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Louisiana-Pacific

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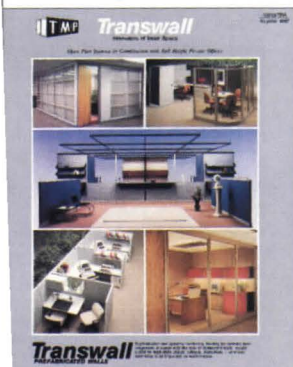


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New Roofing Manual For Architects

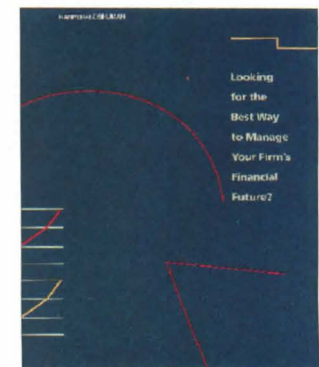


Roofing manufacturer U.S. Intec's new specification manual uses a Construction Specification Institute format to outline application procedures for its line of modified bitumen roofing products -- including Brai APP and SBS membranes and MWeld prefabricated and pre-flashed roofing accessories. U.S. Intec is a leading manufacturer of modified bitumen and built-up roofing products and accessories. For more info call 1-800-62-INTEC.

U.S. Intec

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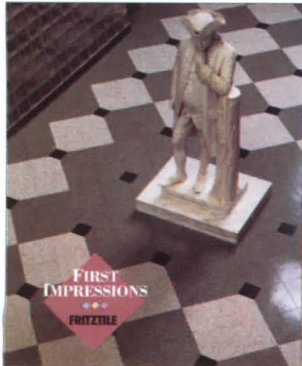
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PRODUCT LITERATURE SHOWCASE

Fritztile: "First Impressions"



The Fritztile 1991 catalog uses a combination of style, brilliant color & useful information to leave the reader with a positive first impression. This Fritztile piece features pictures of the individual Fritztile lines and installations where they've been best used to help the architect achieve his vision. For specifiers, the catalog features extensive technical info. For quality and style, it's Fritztile. P.O. Drawer 17040, Dallas, TX 75217 (800)955-1323.

Fritztile

Circle 522 on the PRODUCT LITERATURE SHOWCASE inquiry card.

Ceramic Wall & Floor Tile



United States Ceramic Tile Company, East Sparta, OH, offers a complete variety of domestic glazed and unglazed floor and wall tiles with sizes ranging from nominal 1" unglazed tiles up to 8" glazed tiles, with a wide variety of finishes, textures, and sizes in between. Phone toll free 800-321-0684 for more information or literature.

United States Ceramic Tile

Circle 523 on the PRODUCT LITERATURE SHOWCASE inquiry card.

Warmth and Beauty: Buff Cement Concrete



TXI Buff cement is a light tan-colored portland pozzolan cement that is exceptionally uniform in color, physical and chemical characteristics. TXI Buff cement enhances the beauty and creates a warm aesthetic environment with consistent, natural color. For more information, call Texas Industries, Inc. (800)-366-4894. Texas Industries, Inc., 7610 Stemmons, Dallas, TX 75247.

Texas Industries, Inc.

Circle 524 on the PRODUCT LITERATURE SHOWCASE inquiry card.

Responder III Plus Touch- screen Nurse Call System

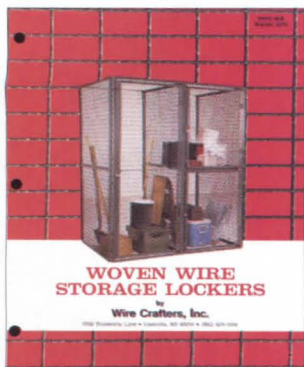


The system features an easy to use full English touchscreen nurse master which guides staff through different functions and displays patient calls on remote television sets. Local systems can be networked together to transfer control between systems and also be interfaced to a pocket page system to instantly notify staff of incoming calls.

Rauland-Borg Corporation

Circle 525 on the PRODUCT LITERATURE SHOWCASE inquiry card.

Storage Lockers

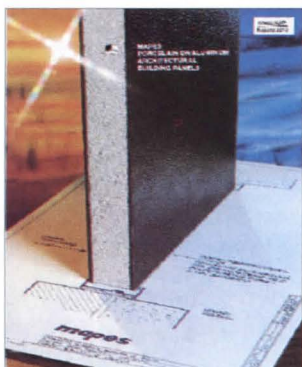


A heavy duty, all steel woven wire locker for storage areas in multi-family buildings. Choice of single or double tier units, in stock or custom sizes. Easy to install. Many advantages over solid wall lockers. Send for free brochure or call 1-800-626-1816.

Wirecrafters, Inc.

Circle 526 on the PRODUCT LITERATURE SHOWCASE inquiry card.

Insulated Porcelain on Aluminum Window Panels

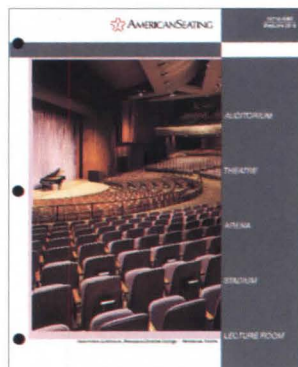


Mapes porcelainized aluminum panels are ideal for window retrofit, curtainwall and fascia applications. Porcelain on aluminum is warranted for 25 years against crazing, cracking or fading. Panels are available in 1/4" and insulated up to 4". For more information and a free sample, please contact Mapes Industries, P.O. Box 80069, Lincoln, Nebraska 68501 - Phone - (800)-228-2391.

Mapes Industries

Circle 527 on the PRODUCT LITERATURE SHOWCASE inquiry card.

Seating Elegance for the 90's

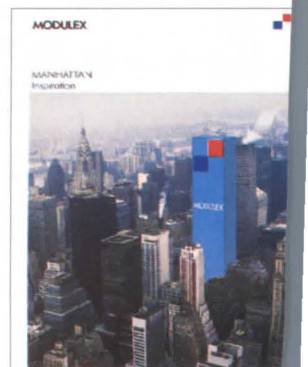


American Seating's Centrum 3® auditorium chair offers contemporary style for a variety of facilities. Centrum 3 blends form with function to provide elegant appearance and efficient operation with many specialized accessories for varying applications. Centrum's automatic articulating back permits maximum seating capacity while beam mounting of modules eliminates clutter, facilitates maintenance and provides custom sizing flexibility.

American Seating Co.

Circle 528 on the PRODUCT LITERATURE SHOWCASE inquiry card.

New Exterior Sign System by MODULEX

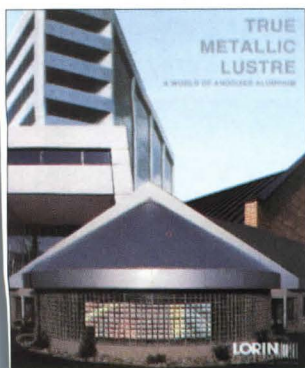


"MANHATTAN" - a new unique and elegant exterior sign design has been introduced by MODULEX. The monolithic sign has a self-supporting construction. With modular aluminum panels you can build over 70 different sign designs. More than 50 standard colors available. Easy to specify, easy to assemble on location. For more information call 1-800-632-4321.

Modulex Inc.

Circle 529 on the PRODUCT LITERATURE SHOWCASE inquiry card.

True Metallic Lustre



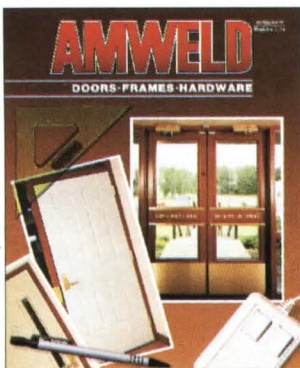
For virtually every facet of building construction -- roofing, exterior and interior panels, space bar, lighting sheet and signage -- *Coil Anodized Aluminum* offers a dramatic variety of colors and finishes, the right product for every application. Lorin Industries' brochure is filled with ideas and information on this lightweight, recyclable, and incredibly durable material.

Lorin Industries (800) 654-1159.
MI (616) 772-1631.

Lorin Industries

Circle 530 on the PRODUCT LITERATURE SHOWCASE inquiry card.

Steel Doors and Frames Standard and Custom

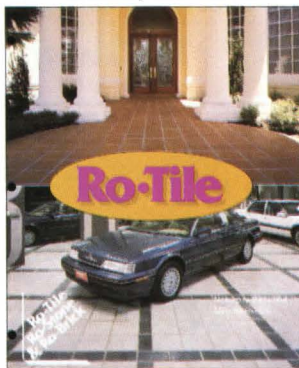


For commercial and industrial use. 6 and 8 panel embossed doors, full glass entrance doors. UL-FM Label. Security and bullet resisting doors. Sound doors with STC rating of 42 or 45. Polystyrene core. Custom doors and frames to meet your needs.

Amweld

Circle 531 on the PRODUCT LITERATURE SHOWCASE inquiry card.

Slip Resistant Ro•Tile is Naturally Beautiful



Ro•Tile is a cement-bodied tile that combines beauty and durability in a low maintenance floorcovering. This 12-page full color catalog contains design ideas and technical data, together with available colors, sizes and shapes. Ro•Tile is ideal for both residential and commercial projects, new construction or remodeling.

Ro•Tile, Inc.

Circle 532 on the PRODUCT LITERATURE SHOWCASE inquiry card.

Duraflake FR

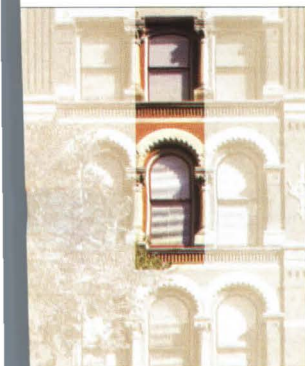


DURAFLAKE FR is a smooth, grain-free, Class I fire-rated particleboard panel designed to meet fire code regulations. It is an excellent substrate for fine wood veneers, high and low pressure laminates and vinyls in all wall systems, furniture and fixtures applications where fire codes and public safety are critical. Contact Willamette Industries, Inc., P.O. Box 428, Albany, OR 97321 or call (503) 928-5866.

Duraflake

Circle 533 on the PRODUCT LITERATURE SHOWCASE inquiry card.

Marvin Windows' New Commercial Catalog

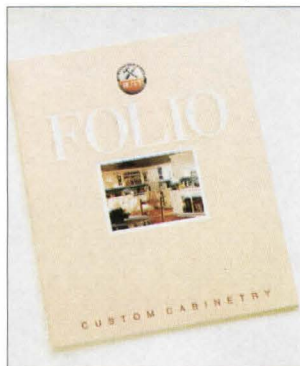


describes the commercial capabilities of Marvin's entire line of wood and clad wood windows and doors. The catalog provides information on product styles, performance and design capabilities as well as Marvin's Architectural Support Department and non-residential services. Also included is the Magnum Series, Marvin's premiere products for commercial applications. 8043 24th Ave. S., Minneapolis, MN 55425. 800-838-0268.

Marvin Windows

Circle 534 on the PRODUCT LITERATURE SHOWCASE inquiry card.

Rutt's 70-page "Folio of Custom Cabinetry"

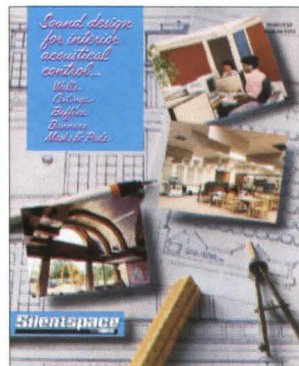


RUTT CUSTOM CABINETRY'S "Folio" demonstrates a wide selection of traditional, transitional, and contemporary styles, and the latest in custom design and decorating ideas for rooms throughout the home. Send request on company letterhead and also receive free our 270-page Specifications Guide. Enclose \$7.00 - Rutt, Dept. AR, P.O. Box 129, Goodville, PA 17528.

Rutt Custom Cabinetry

Circle 535 on the PRODUCT LITERATURE SHOWCASE inquiry card.

Silentspace™

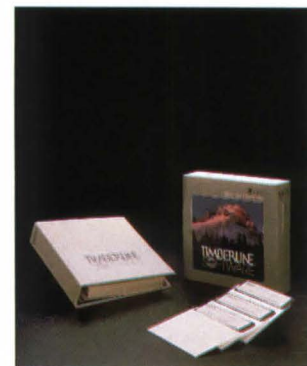


This full-color brochure describes a wide range of interior acoustical products for applications from industrial plants to board rooms. Included is the entire Silentspace™ products line of wall panels, baffles, banners, ceiling panels and encapsulated masks and pads. Essi Acoustical Products, Box 643, Cleveland, OH 44107-0643. (216) 521-8900.

Essi Acoustical Products

Circle 536 on the PRODUCT LITERATURE SHOWCASE inquiry card.

AEasy



AEasy, management software for the busy design professional, reduces clerical time, virtually eliminates billing errors, helps you spot budget overruns early and dramatically improves your staff utilization. All using less of your valuable time. AEasy interfaces with Timberline's Medallion Payroll, Accounts Payable, General Ledger and custom report programs.

Timberline Software Corp.

Circle 537 on the PRODUCT LITERATURE SHOWCASE inquiry card.

PRODUCT LITERATURE SHOWCASE

Architectural Glass Skylights



Skywall Architectural Glass Skylights add aesthetic appeal to enhance special projects, while offering strength, safety and durability. Choose clear, tinted or reflective in monolithic or insulated glass. A wide choice of styles — Lean-To, Ridge, Hip Ridge, Pyramid, Polygon and Segmented Barrel Vault. Factory-tested and assembled to assure proper installation and performance. Custom engineered to meet specified load requirements. Free color brochure. 1-800-251-3001.

Skywall, Inc.

Circle 538 on the PRODUCT LITERATURE SHOWCASE inquiry card.

Cedar's Luxury Made Practical



CEDARPLY® is natural western red cedar-faced plywood for exterior cladding or interior paneling. Available in six appearance grades, three surface textures, panel sizes to 4 ft. by 10 ft., eight groove profiles and thicknesses 1/4" through 1-1/8". Versatile, lightweight, easily installed and beautifully holds a finish. CEDARPLY combines cedar's many qualities with plywood's economy.

K-Ply, Inc.

Circle 539 on the PRODUCT LITERATURE SHOWCASE inquiry card.

Classic Illumination Inc. Handcrafted Lighting



Classic Illumination, Inc. Hand Crafted Fixtures of solid brass. Our designs range from authentic Victorian reproductions to the contemporary. Each fixture is made to order with your choice of finish, height and shade. Our finishes include polished brass, three degrees of antiqued brass, verdigris, classic bronze, antiqued silver and chrome. We specialize in custom work. 2743 9th St., Berkeley, CA 94710. 415-849-1842.

Classic Illumination, Inc.

Circle 540 on the PRODUCT LITERATURE SHOWCASE inquiry card. *

Best Buy: Ruegg Prisma



The zero-clearance, high-end fireplaces from Ruegg Switzerland offer limitless design possibilities and energy efficiency for the discriminating homeowner. A filtered air exchange system, unique retracting glass door and 38,000-55,000 BTU heat return earned the Prisma fireplace a "Best Buy" award from Consumer's Digest magazine, September 1990.

Ruegg Fireplaces

Circle 541 on the PRODUCT LITERATURE SHOWCASE inquiry card.

Vulcraft Steel Joists, Joist Girders & Steel Deck

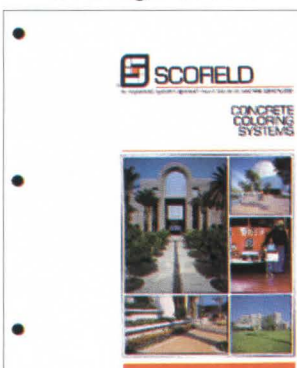


Colorful new 22-page brochure from Vulcraft, the largest producer of steel joists in the country. Brochure details the advantages of steel joists and joist girders. It also presents interesting case histories from across the country that document the use of Vulcraft joists, joist girders and steel deck in a wide range of buildings.

Vulcraft

Circle 542 on the PRODUCT LITERATURE SHOWCASE inquiry card.

Architectural Concrete Coloring Products

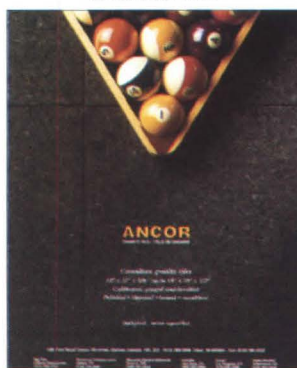


Limitless design options are possible using L.M. Scofield's quality products to color-condition and harden concrete. CHROMIX Admixture and LITHOCHROME Color Hardener are designed to permanently and cost-effectively beautify architectural concrete. Charts show standard and new designer colors. Literature details applications and cost. Call (800) 800-9900, (213) 723-5285, (404) 920-1200.

L.M. Scofield

Circle 543 on the PRODUCT LITERATURE SHOWCASE inquiry card.

Ancor Granite Tile



produces over a dozen granites in a variety of finishes for residential, commercial and institutional use. Standard format is 12 x 12 x 3/8"; other sizes up to 18 x 18 x 1/2" available. Polished and honed tiles are fully calibrated for economical thin-set installation. Ancor's honed finish tile is particularly suitable for high traffic commercial areas. Ancor Granite Tile, 435 Port Royal West, Montreal, Quebec H3L 2C3 Canada. Phone: (514) 385-9366, Fax: (514) 382-3533.

Ancor Granite Tile Inc.

Circle 544 on the PRODUCT LITERATURE SHOWCASE inquiry card.

Floor and Stair Coverings Brochure



Contains helpful illustrations and specifications on floor and stair tread systems featuring many different marbled or plain raised and surface designs in all decorative colors. Included are rubber landing and riser material vinyl treads and risers, floor cord and traffic tiles along with recommended adhesives. Musson Rubber Co., P.O. Box 7038, Akron, OH 44306.

Musson Rubber Co.

Circle 545 on the PRODUCT LITERATURE SHOWCASE inquiry card.