

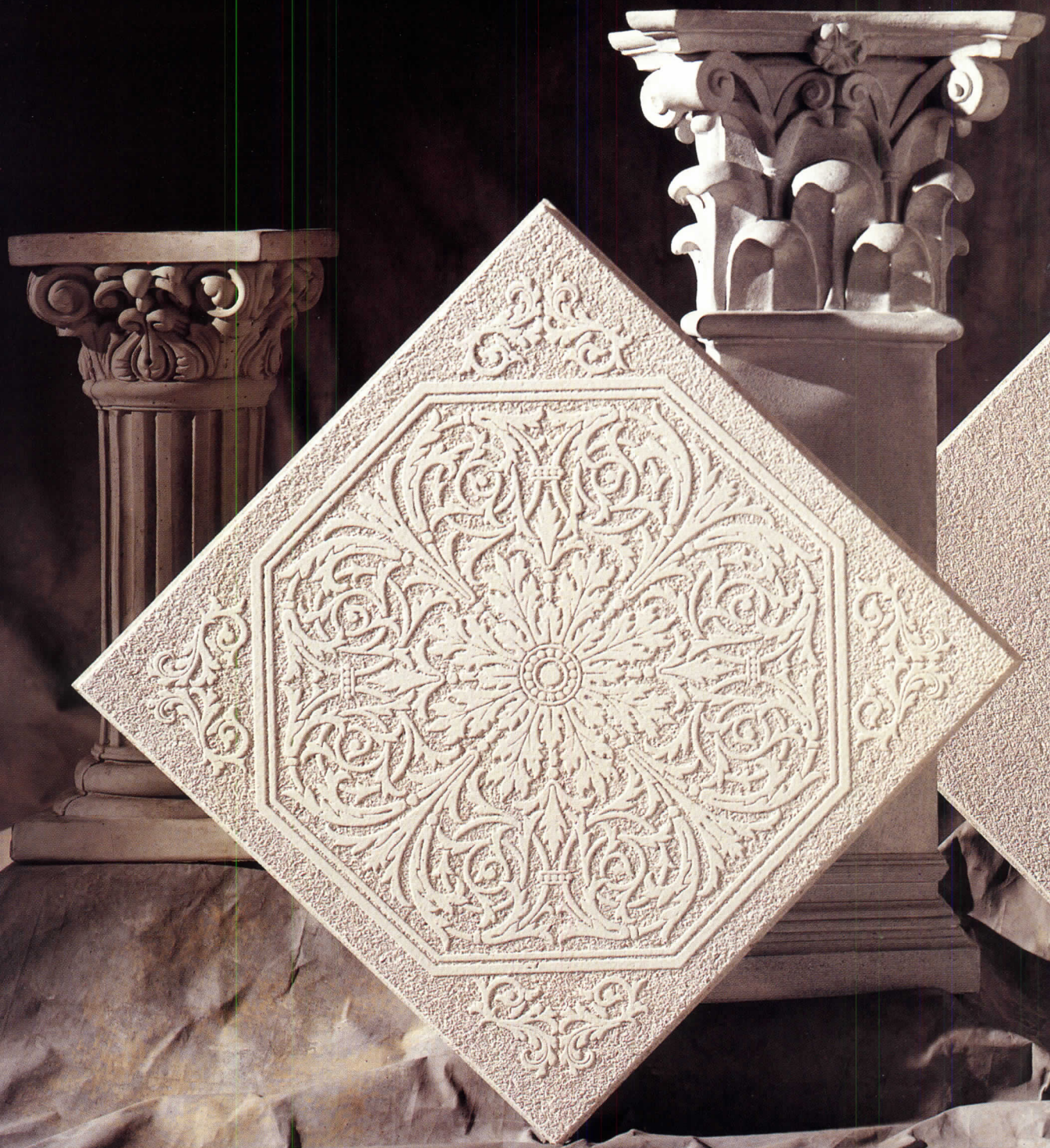
ARCHITECTURAL RECORD

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ALDO ROSSI IN JAPAN:
HOTEL IL PALAZZO, FUKUOKA

REGIONAL PORTFOLIO:
THE PACIFIC NORTHWEST

SYSTEMS/COMPONENTS:
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“Challenge?
We’re going to
need a shoehorn!”



The best approach, they decided, was to jury-rig an outside elevator. They took out a third-story bay window. Built a scaffold. And rolled a giant crane over from Kodak. Steelcase’s deliveries were coordinated so that as furniture arrived, it was unloaded, hoisted up to the scaffold, and moved in through the window.

Working together, Merkel-Donohue, Kodak, and Steelcase managed to deliver three huge trailers’ worth of furniture—Series 9000, plus chairs, files, the works. Enough for 40 offices and several conference rooms. In one day.

One long, late-November day.

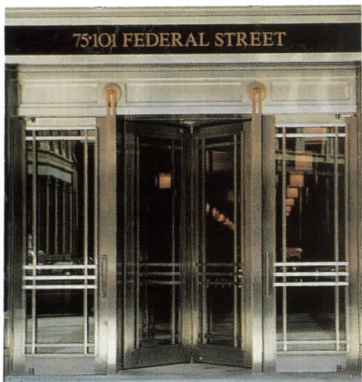
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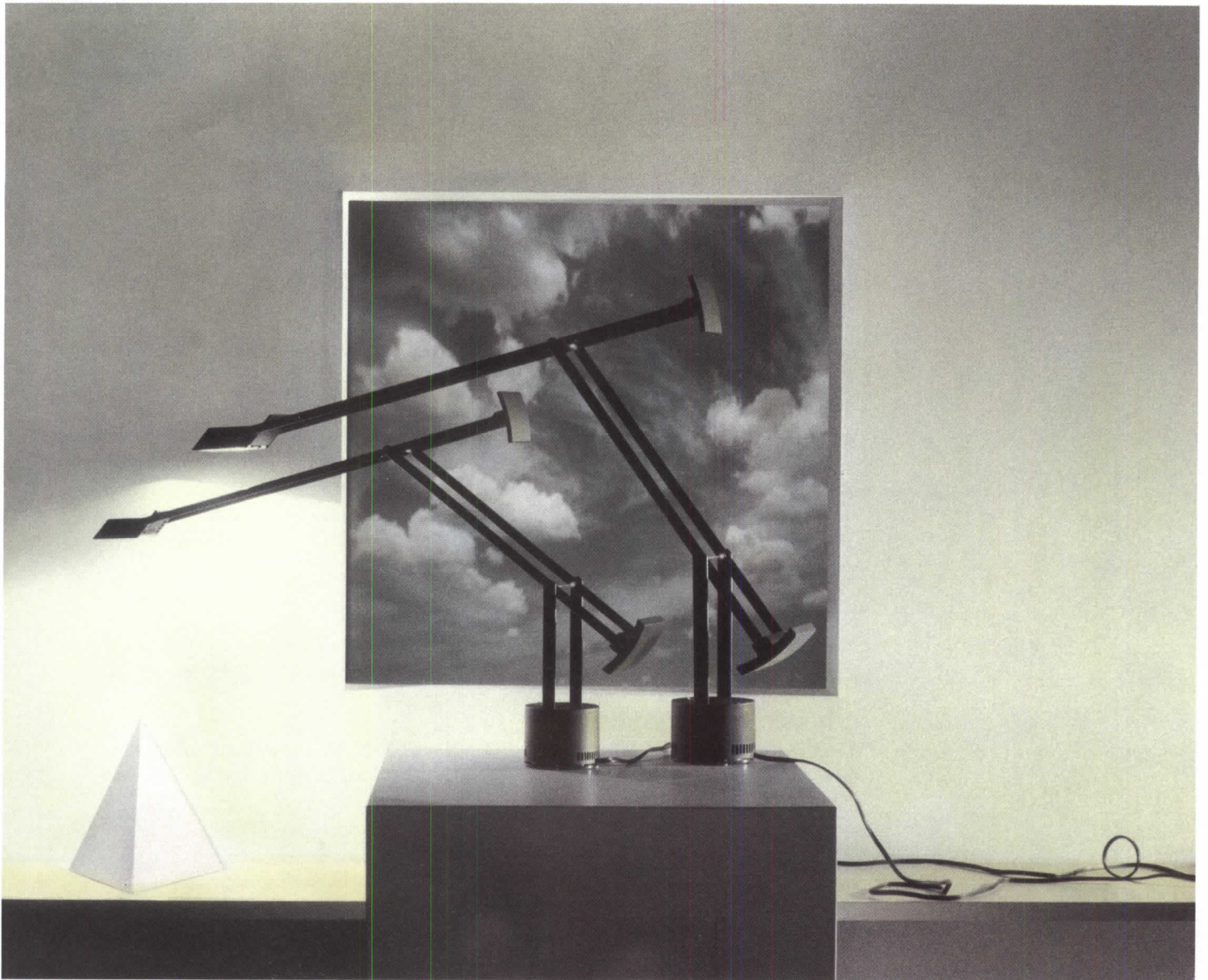
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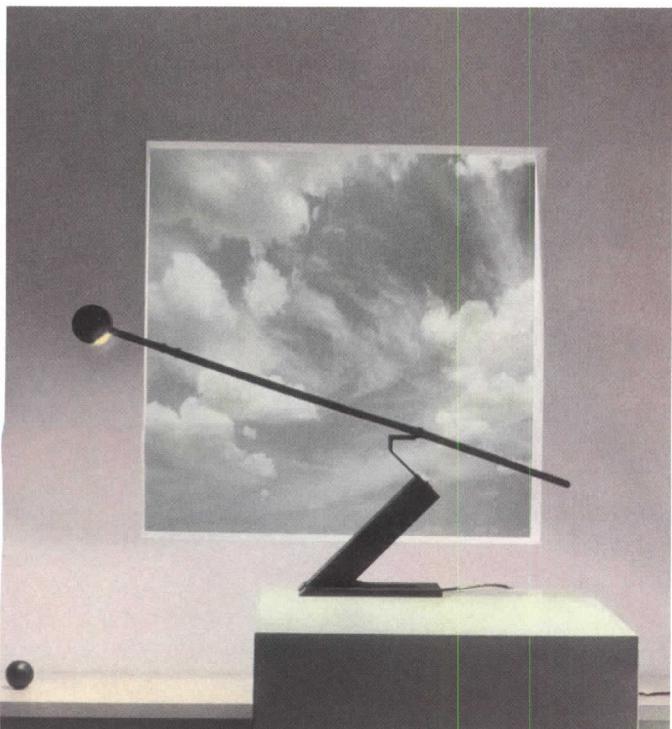
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and product literature

The new design analyzed

The design of the January and February issues of ARCHITECTURAL RECORD was a very positive improvement. The new format appears to help focus the magazine on the issues of primary importance to most of the architects that have discussed the design magazines with me.

Most of us look to the architectural magazines for design ideas, successful examples of building types relevant to our own practices, candid advice on business matters, knowledgeable reviews of key technical issues, and news items that keep us current with the major issues of the profession. The new format is both more readable and more directly focused on these primary areas of interest.

**BRADFORD PERKINS
PERKINS GEDDIS
EASTMAN, ARCHITECTS
New York City**

An editor heard from

Well, you did it! Even your cover has a postery "look at me" quality. Whether you get much reader response to your invitation to respond to the new look is doubtful. When the layout (all elements of graphic design) are good, the reader does not notice—which means it's a success. Which means the reader does not have to work at discerning what he wants to know.

I think it is a good idea to continue trying for covers that are posters—even though you don't have to compete on the newsstands. (At *House Beautiful*, I used to go over all color negatives for a given issue, trying to see if judicious cropping could produce a good cover.)

And the March issue is marvelous! Having Peter Blake and Donald Canty on board can only help.

**ELIZABETH GORDON
Adamstown, Maryland**

Elizabeth Gordon was formerly editor-in-chief of House Beautiful. Ed.

Corrections

The photographs of the Chicago River fountain [RECORD, March 1990, pages 92-95] should have been credited to Greg Murphey. The architect of the 19th-century Paris Opera, cited in William

J. R. Curtis's article on French Grands Projets [RECORD, March 1990, pages 76-83] was Charles Garnier.

On page 121 of RECORD's April 1990 issue, the photos and captions were inadvertently transposed. The bottom caption describes the top photo, and the top caption describes the bottom photograph.

Calendar

Through June 23

"Designed in Germany—Los Angeles 1990," an exhibition of German industrial design; at the Pacific Design Center, Los Angeles.

Through July 1

"Emilio Ambasz: Architecture, Exhibition, Industrial, and Graphic Design," a retrospective exhibition; at the Art Institute of Chicago.

Through September

"Money Matters: A Critical Look at Bank Architecture," showing U.S. and Canadian banks from the 1790s to the present; at the National Building Museum, Washington, D. C.

Through September 2

"Color, Light, Surface: Contemporary Fabrics," showing international fabrics, many of them selected from the museum's permanent collection; at the Cooper-Hewitt Museum, the Smithsonian Institution's National Museum of Design, New York City.

June 8 through October 14

"The Doghouse," an outdoor exhibit showing 24 "lively and amusing new doghouses" designed by architects, co-presented by Guiding Eyes for the Blind, Inc.; at the Cooper-Hewitt Museum, New York City.

June 17-22

"Growing by Design, the 40th International Design Conference in Aspen, exploring the relationship between design and children; in Aspen, Colo. For information: Deborah Murphy, IDCA, P.O. Box 664, Aspen, Colo. 81612 (303/925-2237).

June 21-22

"Neotraditional Town Planning," a two-day seminar sponsored by Planners Training Service, American Institute of Certified Planners; at Omni In-

Continued on page 179

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PRACTICE

The Upcoming A/E/C Systems Show; Looping The Electronic Loop

"More" could be the slogan for the A/E/C Systems show and conference in Atlanta, June 12-15. More exhibit space—some 20 percent more than in 1989—more exhibitors (over 500) showing the year's latest developments, and a full round of tutorials and seminars mean more to see and more to learn for architects, engineers, and those who own and build buildings.

While many specialized exhibitors will follow the recent trend of grouping with their own supplementary third-party suppliers that furnish expanded capabilities, the concepts of systems integration (the knitting together of graphic and alphanumeric functions so that changes in specifications and drawings are interdependent) and networked communications among different systems will be getting a bigger play than ever.

So big that show principals George Borkovich and Michael Hough are talking about the "electronic loop," by which the design, construction, production of as-built drawings, and rede-

sign will become one continuous electronic process. While this may leave out a few steps, such as site inspection, the basic process seems doable, say experts.

Hough and Borkovich say the three-hour tutorials will be conducted by industry experts who "come to you direct from user trenches; they don't waste your time with theories and speculation, but instead get right down to the real problems you face every day." These sessions are rated in the schedule by the degree of experience expected of participants and cost \$145 each with discounts for multiple sessions. Events of special interest to architects and designers include not only the tutorials—ranging from "Implementing your system" to "Managing the future of your capital-intensive

automated design practice"—but forums and conferences. Among them: the A/E/C Macintosh Forum, "Marketing automation" (cosponsored by the AIA and ACEC), and "Computer-assisted specifying" (cosponsored by the AIA, CSI, NIBS, and Sweet's). A number of related organizations will hold conferences in conjunction with



Systems. Some 25,000 building-industry professionals are expected to show up. For more information and/or to register, contact A/E/C Systems '90, P.O. Box 11318, Newington, Conn. 06111. Telephone: (800) 527-7943.

C. K. H.

Looking at People and Profits

"The biggest marketing challenge of the '90s for design firms is not getting work but hiring and retaining good people," said Charles Keller, marketing director of Black & Veatch, at a recent conference on human resources, "People and Profits," sponsored by the *Professional Services Management Journal* in Orlando, Fla.. Many architectural and engineering firms now caught in the East Coast slump and veterans of the Texas-Louisiana oil-price roller coaster might now dispute Keller's emphasis, but, in Orlando, no one disputed his long-term challenge.

To the point, several attendees confirmed that annual turnover in most firms hovers between 20 and 25 percent, and that each turnover costs about \$25,000 in lost productivity, advertising and search costs, training, and principals' time. Most compelling were assertions of those firms with aggressive human-resource programs that their turnover has been cut to between 5 and 18 percent.

One panel, moderated by conference chair and Breuer Consulting Group president Mary Breuer, revealed growing aggressiveness in the recruiting process. Paige Smith, an in-house recruiter for Heery International, said existing staff is her best source of new people. "We give cash rewards for referrals."

Dudley Lacy of O'Brien and Atkins in Raleigh, N. C., said he recruits in geographic areas with high living costs compared to his. He uses recruiters only to build a list of candidates and does the rest himself.

On the other hand, John Mahon of HOK does use executive-search firms. "They cast a wider net, keep confidentiality, help us be more objective, do 'deeper'

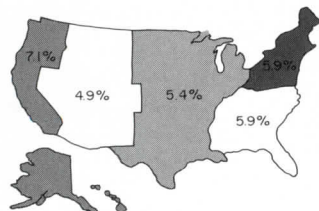
Projected Salary Rises for the Year

On a national basis, those in strictly architectural firms are expected to fare reasonably well with average increases of 6.3 percent (vs. 5.2 percent last year)—better than those in architectural and engineering firms (6 vs. 4.9 percent), engineering firms (5.9 vs. 5.5), and multidisciplinary firms (5.1 vs. 5.1). They will not do as well as landscape architects, however (7.0 vs. 7.5 percent) or interior designers (6.6 vs. 8.3) unless they take comfort in the fact that those others' raises are lower percentages than last year's.

This is according to the annual survey by the The Financial Managers' Group, an associa-

tion of managers in the design professions. It forecasts the ups and downs in the percent-of-salary increases that employees in different design jobs can expect during 1990 compared to those that they received last year.

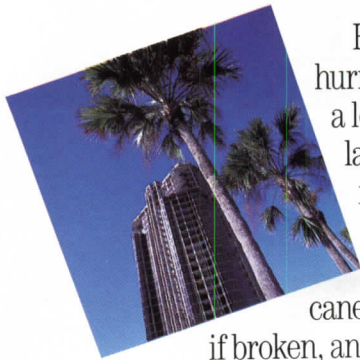
The prediction for the average architect with 6-to-10 years' experience working in an office of 34 people is a salary of \$36,982 in



the Northeast and \$38,019 on the West Coast. Are increases to go up in proportion to firm size? Not necessarily. They should go up the most in firms with under 30 people and least in firms with more than 150. The next to highest category? Firms with 76-to-150 people. For all design professions, there should be fairly sizeable geographic variations (see map) in average-raise percentages. Other survey results reveal an overhead percentage of 133.7 among respondent architectural firms—curiously, if the predicted raise rates are considered, well below the 161.1 percent for multidisciplinary firms.

C. K. H.

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Continued from page 17

reference checks, and give good advice on compensation levels.”

John McNichol, an executive-search consultant, stressed understanding your firm's corporate culture and who will fit in well. There are times that professional-search firms will not be the answer, he added: “When the job is too junior, the role un-

ward: “Offering opportunities for professional recognition and status are important. Flexible hours and benefits help.” Echoed EDAW's Faga: “People don't move for \$2,000; they move to correct situations in which they are unhappy and not challenged.” Added WAT&G's Howard Wolf: “We invest in training so our people don't leave to grow.”

As for training programs for recruiters, Black & Veatch's Keller warned that such investments can mean little without follow-up. “You are warm and fuzzy right after but it often fades under pressure.”

Unlikely to fade are the profession's personnel challenges explored during the conference. Perpetually difficult issues, like substance abuse, AIDS, and stress, are likely to further complicate matters. “Yet we need not take a back seat,” asserted HOK's Mahon. Most of his fellow speakers and the audience shared that aspiration and, in Orlando, also shared some good ideas to help them reach it.

LOUIS L. MARINES

Mr. Marines, the former executive director of the AIA, is now a management consultant in Corte Madera, Calif.



Panel from left to right: Breuer, Mahon, Smith, Lacy, and McNichol.

defined, or you need mass hires—in that case, you should use ads, employee networking, and pay-by-the-head recruiters.”

Barbara Faga, head of EDAW's Atlanta office, negotiates search-firm fees. “I can usually get a 33-percent fee down to 25 and a 25 percent fee down to 20,” she said.

Hiring is usually not speedy. “Expect it to take three-to-four months to find and move someone,” McNichol said. Heery's Smith told the conference that her department heads expect much faster service.

Said RTKL's Cynthia Wood-

More Lessons From the San Francisco Earthquake

Experts were fairly certain that there was a link between the damage done to structures in last October's earthquake in San Francisco and types of soils on which they were built [RECORD, February 1990, pages 144 and 148].

Now they have quantifiable proof. Maps of the city produced by the National Institute of Standards and Technology (sample, right) directly relate the areas, severity, and types of damage to “deep unstable soil deposits.” The direct link was found, in part, in a disturbing fact not noted at the time of the quake. Some buildings on such unstable sites up to 70 miles

from the epicenter that were built to current seismic design and construction practices suffered severe damage. Not surprisingly, NIST calls for a reassessment of requirements for buildings on unstable sites and, pointing to the damage done to bridges, gas lines, and elevated roads in the quake, for more concentration on the design and construction of infrastructures.

And, citing the surprising prediction that “earthquakes of similar or greater magnitude are expected to affect 46 of the 50 states, Puerto Rico, and the Virgin Islands” within an unspecified period in the future, it calls for much wider geographic application of stronger seismic-design standards—all adding fuel to passage of sweeping seismic-design legislation now before Congress [RECORD, January 1990, page 15].

Veterans Department, Growing Client

Having recently achieved cabinet-level status, the Department of Veterans' Affairs (formerly the Veterans Administration) is asking for more money than in the past for the construction and operation of its medical facilities in a new five-year development plan. And it is reasonably confident of getting it.

In a late-February meeting with several building community groups, the DVA reported it was asking for \$530 million for FY 1991 (vs. 420 million in 1990), plus \$100 million (vs. 48 million) for discretionary funding in local VA facilities. “We did badly in past years,” said project-management director James

DVA secretary Edward Dornwinski cautioned that the five-year plan is “an early planning document and not final.” Lawson said the DVA is considering design-build for offices and garages, but, for all hospital work, it will continue to give out conventional design commissions, which it expects to lean on more than in the past due to cutbacks of in-house personnel.

At the meeting, which was also attended by representatives of the Associated General Contractors and the AIA, there was discussion of seismic design and the metric conversion recently mandated for 1992. Lawson said the DVA's policy is to adhere to



The new DVA Outpatient Clinic in Los Angeles by architects Dobrow/Thomas & Associates.

Lawson, “and we have great needs. Now people are listening.” The administration is, but Congress may be another matter.

Still, noted American Consulting Engineers Council's William Sowers: “The new DVA has more clout than the old VA.”

local seismic standards if in doubt, but also to use its own standards, which can often be tougher. On metric conversion, there was no discussion: “Everybody is going to have to move to that,” Lawson said.

PETER HOFFMANN
Washington, D. C.

At the same time, the damage to elevated highways has offered San Francisco activists, including the local AIA chapter, a chance to do away with at least



Damage concentrations within unstable areas.

one result of what they consider the misguided results of planning in the '50s and '60s, the Embarcadero Freeway. While such structures have been criticized in many cities for segmenting neighborhoods and cutting off waterfronts in cities across the country, few efforts to demolish them (with such exceptions as those in New York and Boston) have been successful.

In 1986, the San Francisco chapter had issued a report calling for demolition of the Embarcadero to return the waterfront it isolated to downtown, but the proposal was defeated by referendum two to one. Recently, with the roadway seriously damaged, the chapter issued a new report to force another look, the state senate held hearings, and the city Board of Supervisors voted for demolition. C. K. H.

Coming to agreement.

Shepley Bulfinch Richardson and Abbott designed a multimillion dollar addition to a large medical facility. They specified a flooring they had used many times before for the operating rooms.

Shortly after installation, the floor began to bubble. The hospital was forced to close its operating rooms because of risk of infection, and was understandably upset at the loss of revenue. Although it was unclear what the problem was, the hospital wanted Shepley Bulfinch to side with it in a lawsuit against the contractor. The architectural firm was apprehensive that it would somehow get drawn into the suit, even though its relationship with the hospital was excellent. Shepley Bulfinch was also reluctant to line up against the contractor, since it felt the contractor had performed in a responsible manner and was actively seeking a solution to the problem.

Leo McEachern called Jim Raymond, DPIC's Eastern claims manager, and after some discussion of the situation, Jim asked if Shepley Bulfinch would be willing to try mediating the dispute. He explained the nature of the non-binding procedure. Leo said yes, and Jim put him in touch with a mediation firm DPIC has used successfully many times.

The mediation firm worked hard to assemble the parties to the dispute: Shepley Bulfinch, the hospital, the flooring manufacturer, the flooring subcontractor, and the general contractor. They met at 10:00 one morning in the architect's office. The mediator asked everyone to state his case individually in an open forum. He then met with each party in a private session.



Jim Raymond is manager of DPIC's Eastern Division office in Clifton, New Jersey. He has over a dozen years of experience in handling professional liability claims.

He suggested a settlement in which each of the parties involved contributed a proportionate sum toward the approximately \$200,000 the hospital needed to remedy the problem. By 3:00 that afternoon, agreement had been reached, all parties were satisfied, and all that remained was obtaining releases from all parties. No lawsuit was ever filed.

A handwritten signature in cursive script that reads "James Raymond".

Claims happen. It's what you do when they happen that shows the stuff you're made of.

DESIGN

In Washington's Burgeoning Franklin Square District



Though the visual composition of the facades of the building called Franklin Court may recall buildings constructed earlier in this century, the composition of materials belongs strictly to the end of the century. Designed by Arthur May of Kohn Pedersen Fox Associates for Washington,

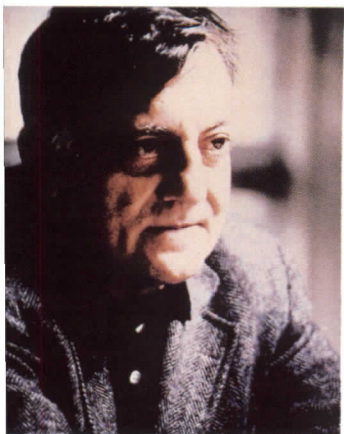
D. C., the exterior walls will incorporate granite (both plain and polished), architectural precast concrete, and glass-and-metal curtainwall.

The front of the 11-story building, which will face 14th Street and stand next to Franklin Park, will be marked by an

engaged tower above the entrance. On the side facade, pilaster-like verticals of curtainwall will intersperse shop fronts, which will be trimmed with bronze and granite.

The building's developers are Chubb Realty Inc. and the Evans Shure Partnership.

Aldo Rossi Wins 1990 Pritzker Prize



Aldo Rossi has been named 13th Pritzker Architecture Prize Laureate. In honoring the Italian architect and his increasingly international portfolio (cover and pages 70-77), the Pritzker jury singled out Rossi's contributions as a "theorist, philosopher, artist, and teacher." The formal citation reads in part: "Rossi has been able to follow the lessons of classical architecture without copying them . . . In a period of diverse styles and influences, [he] has eschewed the fashionable and popular to create an architecture singularly his own." The award will be presented June 16 in Venice.

Although Rossi's starkly formed but richly detailed buildings have established his presence worldwide on a monumental scale, Rossi, who turns 59 this month, remains more modest. A telling example comes from Bill Lacy, secretary to the Pritzker, who had the mixed assignment of notifying Rossi of the jury's decision. Following repeated ill-fated attempts to reach Rossi at his Milan studio, Lacy's persistence was rewarded with a response from the elusive architect. After he relayed the happy news, Lacy reports, there was a pause and Rossi's stunned reply: "Are you sure?" K. D. S.

Cast Stone Redefines Chicago's Masonry Tradition

In Chicago's Loop, Franklin Street is seen as a major financial corridor in development. A new office tower at One North Franklin Street, designed by Joseph A. Gonzalez of Skidmore, Owings & Merrill's Chicago office, will continue the process when it opens early next year.

The architects see the 38-story building as a primary element in the fabric of the downtown neighborhood, and they carried the building out to the edge of the sidewalk in order to enliven the ground floor with retail shops. The cast-stone tower itself was designed with assorted setbacks, punched windows, and a tall central motif consisting of a glass-and-metal curtainwall. The stores should gain special personality with their granite surrounds at pedestrian level.

The \$160-million building is being developed by Oxford Advisors, Ltd.



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Briefs

Taliesin preserved: the Getty Grant Program has awarded the Frank Lloyd Wright Foundation a \$50,000 matching grant for conservation and documentation at Wright's quarters in Spring Green, Wisconsin. The foundation hopes to raise 60 percent of the match from private donors.

Architecture observed: Columbia University has opened what it claims to be the first public gallery in New York City devoted exclusively to architectural exhibits. Named for an alumnus of the architectural school, Buell Hall, home of the gallery, is the oldest building at Columbia.

The Topaz Medal for Excellence in Architectural Education went this year to Raymond Kappe, founder in 1972 of the Southern California Institute of Architecture (SCI-ARC). The school, recognized as a "learning laboratory," stresses student autonomy and social and environmental issues. The medal is sponsored jointly by the American Institute of Architects and the Association of Collegiate Schools of Architecture.

Other awards: at its national convention, the AIA will also confer Institute Honors on the Association for the Preservation of Virginia Antiquities, Corning Incorporated, artists Jackie Ferrara and Mary Miss, photographer Timothy Hursley, mechanical engineer Marvin Mass, landscape architects Peter Roland and Emmet Wemple, model builder Joseph Santerno, and Taos Pueblo in New Mexico.

An ill wind blowing good? Bay Area architects have always hated the Embarcadero Freeway for cutting off San Francisco from the water. Thus when the 1989 earthquake damaged the elevated highway, the local AIA chapter seized the opportunity to update its 1986 Embarcadero Plan with a 32-page report to the State Senate advocating the freeway's replacement with a waterfront boulevard.

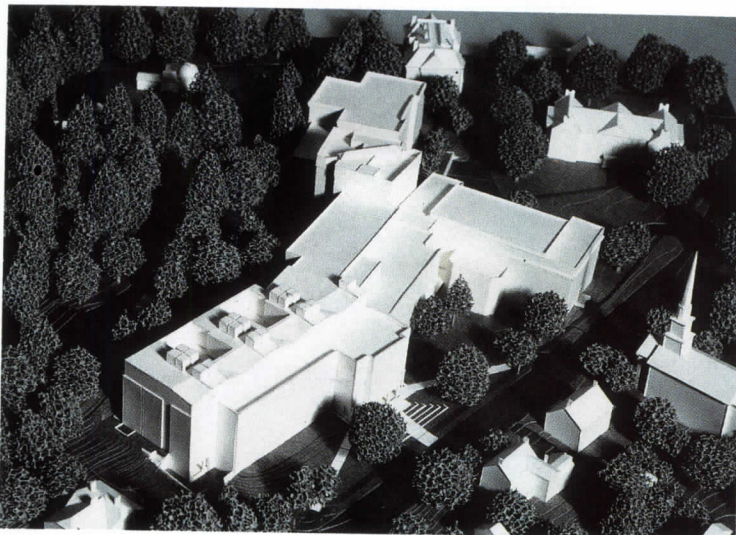
Architectural commissions: Richard Meier will design a \$200-million expansion of the Fox studio in Los Angeles; Lee Harris Pomeroy Associates will design 14 luxury suites for New York City's Plaza Hotel in attics once given to maids' rooms and the architect's own office.

Chemical Reaction at Dartmouth

Dartmouth College's science facilities occupy a large complex on the relatively small-scaled campus, and the complex already encompasses a number of styles, from 19th-century red brick to late-20th-century concrete with exposed aggregate. A new chemistry wing (lower left in model below) was designed by R. M. Kliment & Frances Halsband of New York City, in association with Ellenzweig Associates, Inc., of Cambridge, Massachusetts.

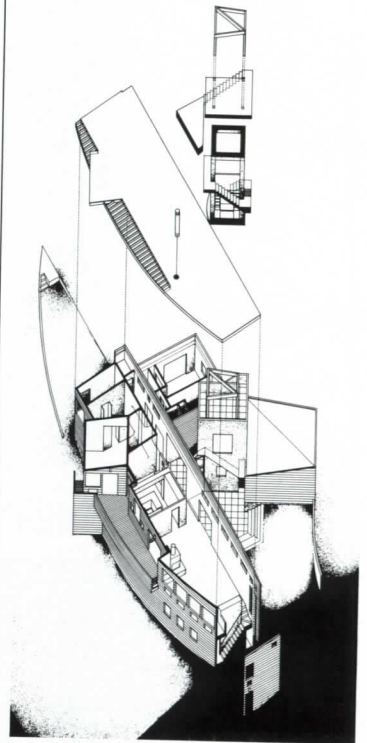
Though there was no way the architects could gainsay the building's size, they articulated

its component parts in an effort to reduce its impact. Moreover, the wing, which is sited next to a 1974 concrete component, had to mediate the complex's myriad styles. The projecting front entrance, faced with dark red brick, granite trim, and small-paned windows, accommodates offices and seminar rooms, while light red brick and plainer fenestration enclose laboratories. The aluminum panels of the large mechanical penthouse, which serves the labs, were designed with a roofline mimicking the gables and chimneys elsewhere on campus.



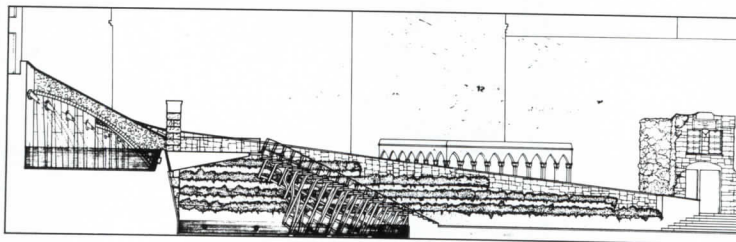
KLIMENT AND HALSBAND

On a Windy Hill



On a wildly romantic site, this house, by the San Francisco firm House + House, will be built on a windswept cliff overlooking the Pacific Ocean. The breakaway drawing describes a green-stucco tower impaling a curved wood house, designed to display collections of artistic and scientific artifacts.

Genoa Celebrates 1492



To honor the 500th anniversary of Columbus's discovery of America, his hometown, Genoa, commissioned a major renovation of its Piazza Dante. Boston architects Machado and Silvetti Associates, who won an international competition for the project, drew on Italy's well-known penchant for befountained plazas. The downtown piazza is bordered by contemporary commercial Genoa along one side, medieval Genoa at the top and along the other side.

A flying buttress will carry a stone stair leading to another stair of metal, built with what the architects call "structural curves of nautical origin." Water will splash from large jets into a pool beneath the buttress and then run silently to a quiet pool at the very bottom. Materials include granite for the wall and for the cantilevered walkway at midlevel, and marble for the platform leading to the door of Columbus's house.

D E S I G N

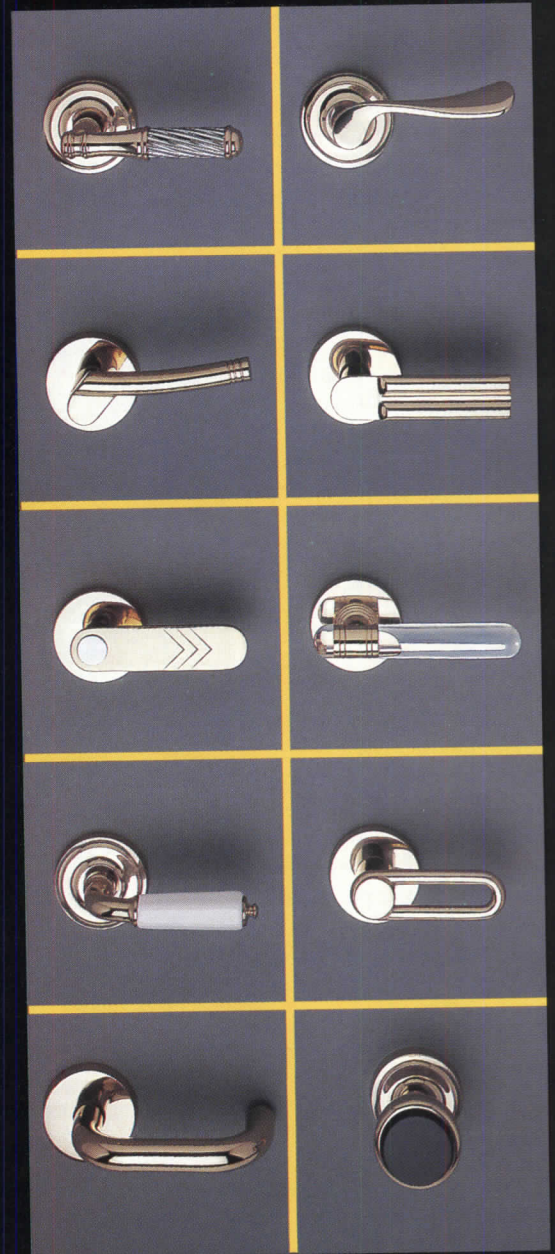
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NEOCON 22: The International Arena

The end of the 20th century witnessed rapid changes in cultural and international business spheres. Such changes and their effects will be the focus of NEOCON 22, the largest conference and exposition in the contract furnishings industry. It will run from June 12 to 15 at the Merchandise Mart in Chicago.

Architects Arata Isozaki, Norman Foster, and Hans Hollein will discuss trends in architecture in the 1990s at a symposium with Peter Blake moderating. The panelists will receive the 1990 Chicago Architecture Award, co-sponsored by the Illinois Council of the American Institute of Architects and ARCHITECTURAL RECORD.

"Trading Partners: Opportunities in the European Community" is expected to be a highlight of NEOCON. The focus of the seminar will be on the 12-nation European Community and its effects on business for corporate interior designers and architects. Heiko H. Thieme, senior consultant strategist for Deutsche Bank in Germany and the United States, will be the keynote speaker. New York City architect Richard Hayden will speak on working abroad.

The NEOCON exposition will feature product designs for contract environments, hospitality, health care, and education (see also pages 134-135).

SUSAN R. BLEZNICK

Competition Calendar

"Bridging the Gaps: Pedestrian Connections in the City" is a competition co-sponsored by Columbia University's School of Architecture and Building Arts Forum/New York. The problem: design a pedestrian connection between Manhattan's civic and commercial centers near the Brooklyn Bridge. At least \$2,000 in prize money will be awarded. Register by June 15. Contact: Bridging the Gaps, c/o Columbia University Graduate School of Architecture, 400 Avery Hall, New York, N. Y. 10027.

Anchors Aweigh

A national maritime center is being planned in Norfolk, Virginia. Nauticus, a \$43-million museum, was designed by Centerbrook, Architects and Planners, of Essex, Connecticut. The firm is collaborating with Charles W. Moore, a former partner at the Centerbrook firm.

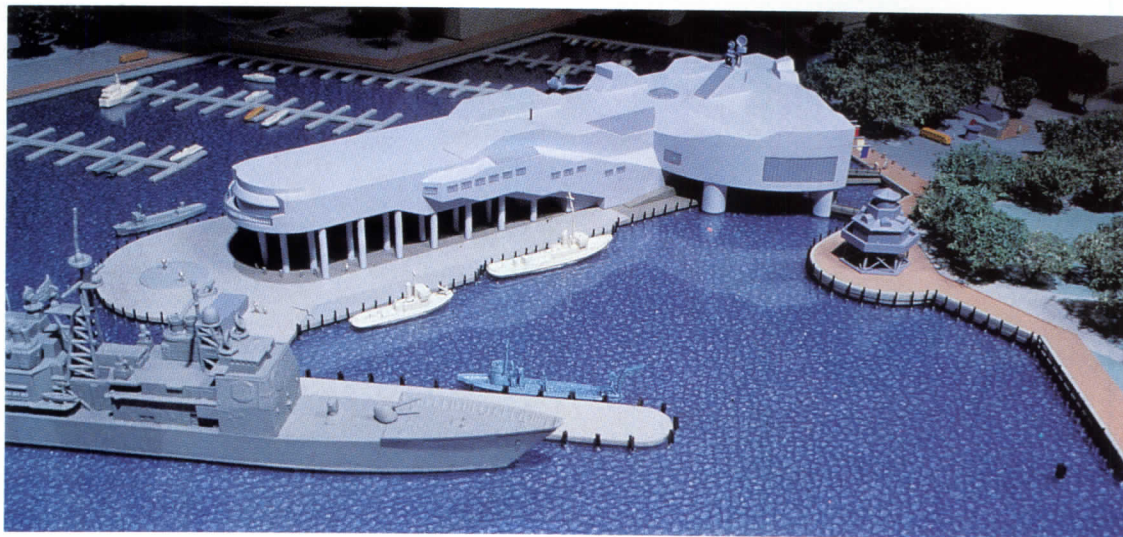
The museum's name fits its

function because it honors America's maritime heritage. Nauticus will be built on the historic Banana Pier on the Elizabeth River waterfront in downtown Norfolk. High-tech, interactive exhibits that explore the technology of the sea will be prominent. Among other features of the center will be a the-

ater, shop, restaurant, research laboratories, and the Hampton Roads Museum of Naval History. Various exhibit ships will be moored near the museum.

Preliminary sitework is planned for fall 1990, and the estimated date of completion is spring 1993.

SUSAN R. BLEZNICK



Long Island's Ambitious Courthouse

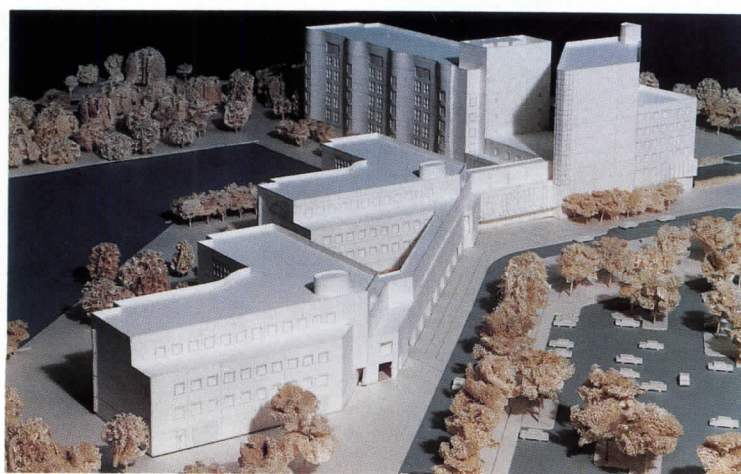
The Philadelphia office of MGA Partners has spent the last four years designing and refining its project for the Suffolk County (New York) Courthouse in Central Islip, Long Island—even though this design was the win-

ning entry in a 1985 competition (when the firm was still known as Mitchell/Giurgola Architects Philadelphia).

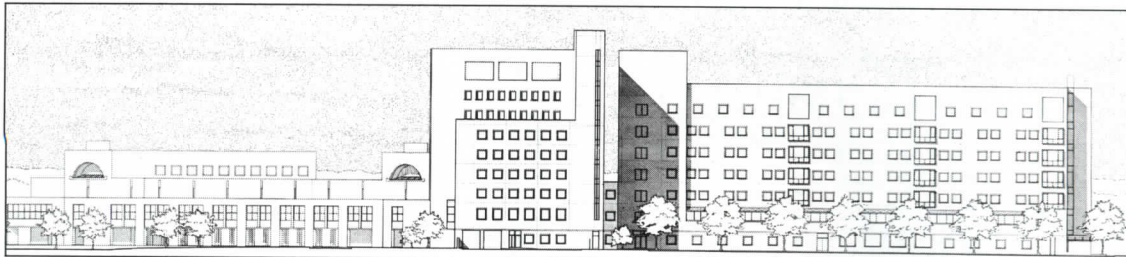
The long process of study and refinement becomes understandable when one realizes that

this group of buildings is not just the ordinarily complicated courthouse but is in fact three courthouses. The District Court has courtrooms and offices in the tall office building, the Supreme Court occupies the pavilion at the center of the compound, and the Family Court occupies the end pavilion—all encompassing 42 courtrooms. In addition, both the sheriff and the police have large suites in the office building, as does the Legal Aid Department. And there is a large law library planned for the fourth floor of the Supreme Court building.

Apart from their concern for complex circulation patterns, which required the organization of separate public, private (judges and jurors), and prisoner systems, the architects cared that users have places to sit and meet in a dignified manner.



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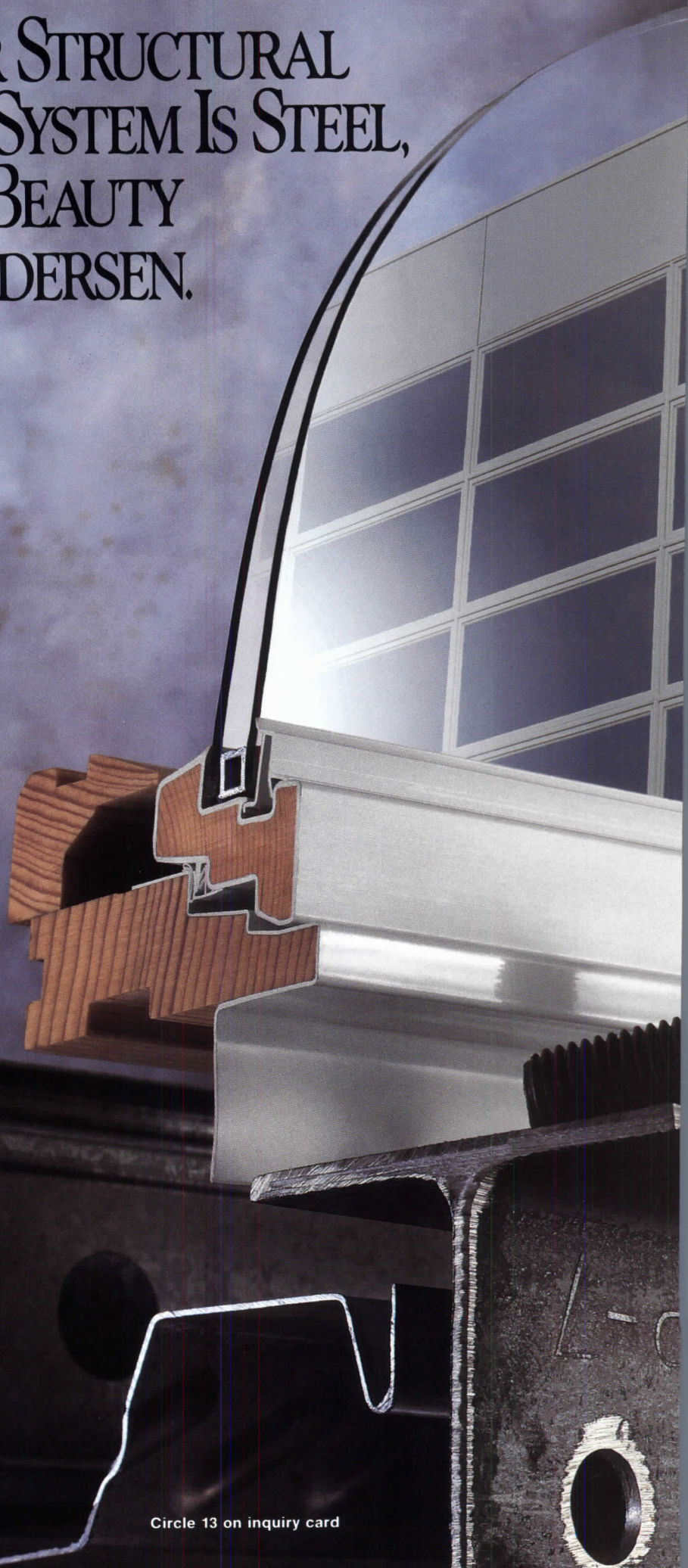
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Architect: Henning Larsen

shown in the upcoming June issue. In

Maine, architect Winton Scott drew on the vernacular architecture

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Architect: Winton Scott
Photo: Brian Vanden Brink

Coming in the June '90 issue...

Recent architecture in Los Angeles. Don Canty examines new work that's changing downtown.

Building Types Study: Hospitals. Examples of health-care models for the 21st century.

Volusia County Administrative Center (Florida). Evoked from classically-inspired buildings of the past.

Profile. George White, architect of the U.S. Capitol, discusses his long career.

Systems/Components. Three related articles on curtainwall construction.

Marketing. Another in the interview series on how firms get commissions.

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1989 WOOD DESIGN AWARDS PROGRAM

In this year's annual Wood Design Awards Program, sponsored by the American Wood Council, the jury praised the 15 winners—chosen from 305 entries—for “their appropriateness to [their] specific places . . . along with a clarity of intention and sense of restraint.”

Members of the jury included architects Walter F. Chatham of New York City, George Hoover of the Denver firm Hoover Berg Desmond, Margaret McCurry of the Chicago firm Tigerman McCurry, and Cathy Simon of the San Francisco firm Simon Martin-Vegue Winkelstein Moris, and ARCHITECTURAL RECORD executive editor Paul M. Sachner.

1. Lambing Shed, Paragonah, Utah; The Gardner Partnership, Cedar City, Utah (Honor Award). The low-tech shed, built of fir and spruce for \$3.50 per square foot, houses 600 ewes. “The profile of the roof . . . could go on forever,” said the jury, “and you’d happily let it.”

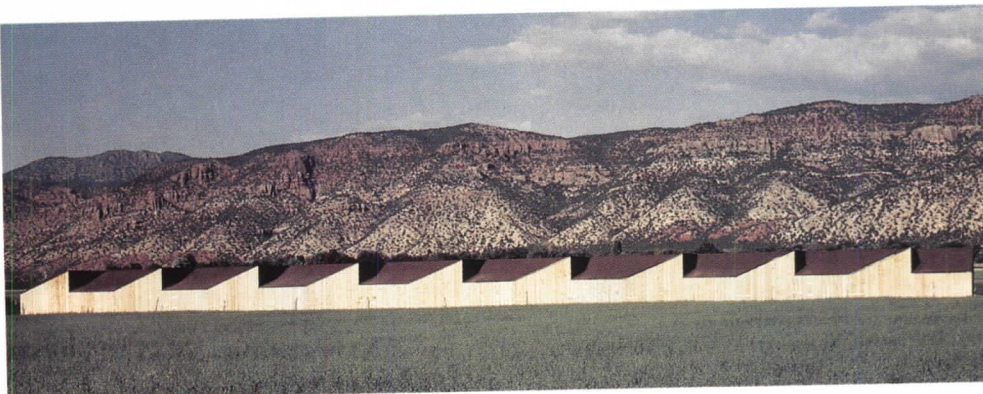
2. Ward House, Cranberry Island, Maine; Peter Forbes & Associates, Inc., Boston (Honor Award) [RECORD, Mid-April 1989, pages 82-87]. The simple geometric cedar buildings, sited to face coast and ocean, are “a very suitable response to a very particularized site.”

3. Camp Tweedale, Lower Oxford Township, Pennsylvania; Susan Maxman Architects, Philadelphia (Honor Award). The whitewashed activity building and cabins, of cedar and plywood with battens, house a year-round girls' camp. Jurors liked “the close indoor/outdoor relationship.”

4. Johnson Turnbull Winery, Oakville, California; William Turnbull Associates, San Francisco (Honor Award). Called by the jury “a beautifully proportioned, careful design achieved with apparently no means,” the no-frills timber building, with Douglas fir and redwood sheathing, expands an agricultural facility.

5. Berggruen House, Rutherford, California; Fernau & Hartman Architects, Berkeley, California (Honor Award) [RECORD, Mid-April 1989, pages 50-55]. Inspired by Napa Valley farmworkers' housing, the redwood compound is a “playful juxtaposition of different materials and shapes.”

6. Cooper Memorial Chapel, Bella Vista, Arkansas; Fay Jones + Maurice Jennings, Architects (Honor Award). Using redwood,



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TOM BERNARD



CHRISTOPHER IR

Winners in the American Wood Council's awards program "ranged from the heroic modern to unbelievably elegant vernacular," in the observation of its jury. They also ranged from the U.S. East Coast to the Canadian West Coast, and included examples of both residential and institutional buildings.



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steel, and glass to translate Gothic architecture, "the structure creates a spiritual environment without resorting to traditional stone and stained glass."

7. Lake Harriet Band Shell, Minneapolis; Frederick Bentz/Milo Thompson/Robert Rietow, Inc., Minneapolis (Honor Award) [RECORD, November 1989, pages 92-93]. The jury called the cedar-shake pavilion, designed to evoke exuberant and romantic 19th-century park buildings, "really fun and accessible."

8. The Bridge House, Bainbridge Island, Washington; James Cutler Architects, Winslow, Washington (Merit Award). The house, built of glue-laminated beams, spans a seasonal stream. "The image of a covered bridge is brilliant," said the jury.

9. Gates of the Grove Synagogue, East Hampton, New York; Norman Jaffe, Bridgehampton, New York (Merit Award) [RECORD, January 1990, pages 124-127]. Interior porticoes were built of Alaskan yellow cedar, and the jury found "the abstract geometry more effective spiritually than recognizable religious forms."

10. Poolhouse in Suburban Connecticut; Chad Floyd, Centerbrook Architects & Planners, Essex, Connecticut (Merit Award). When the architect extended the roof of an existing poolhouse and added a new facade, "a mundane building [became] a playful, delightful pavilion."

11. Bye House, Holicong, Pennsylvania; Jeremiah Eck, Boston (Merit Award). An 1,800-square-foot house, with 10-inch cedar clapboard siding, was seen by the jury as "a modern version of a Queen Anne cottage, with the same charm, warmth, and friendly presence."

12. St. Andrew's Episcopal Church, Hanover, Massachusetts; Ann Beha Associates, Inc., Boston (Merit Award). The exterior and the steeple of this 1810 church were replicated, "an authentic, rigorous restoration that beautifully reproduces the original," the jury commented.

The jury also gave three Citation Awards: Fama Restaurant in Santa Monica, California, by David Kellen Architect of Santa Monica; the Thom House in Bowen Island, British Columbia, by Thompson Berwick Pratt & Partners of Vancouver; and the Veverka/Kruse House by Massey + Veverka Architects of San Francisco.



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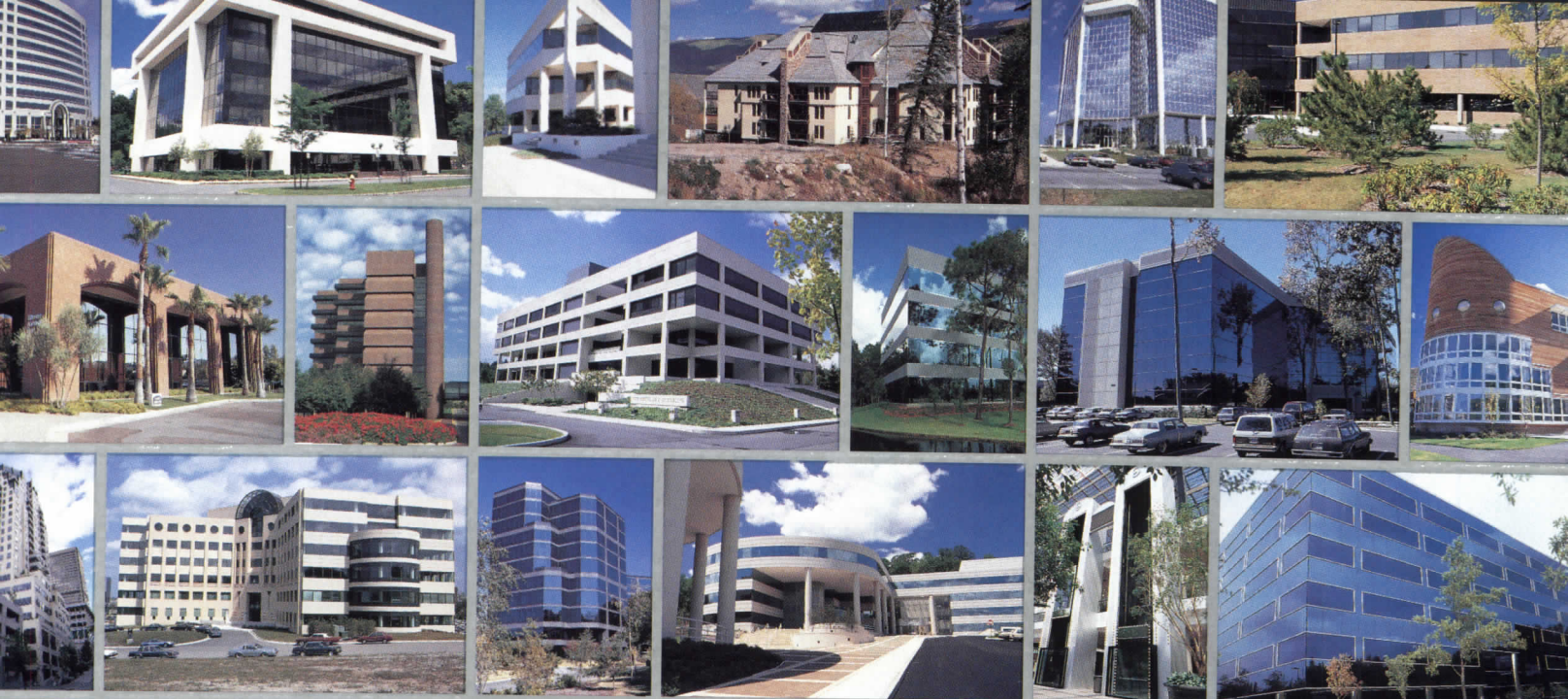
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HOW DO THEY GET THOSE COMMISSIONS?

Part three of a series. This month George and Laura Heery interview Dirk Lohan for the inside story of how architects find clients.

To date, [see RECORD January 1990, pages 34-41, and February, pages 48-50], the Heerys have interviewed two smaller firms with personal-but-not-comprehensive marketing approaches and two large firms that are much more organized in their efforts. The smaller ones succeed by dint of will (as well as exceptional design powers) and the larger ones by balancing will and technique. This month, we see another very large firm that differs from the others in the personal style of its principal. Dirk Lohan, sometimes seeming a self-effacing man, admits to a reactive approach to marketing. He may also be unique in his high degree of personal involvement in design in an era when marketing and design are becoming distinct functions in large firms. Still, over time, he has had to adopt many of the marketing techniques of his counterparts to maintain his large staff on a steady basis.

DIRK LOHAN

Lohan Associates

His firm has dwelt far more on completing a long list of impressive commissions than in gaining visibility through the press. Yet, he is descended from one of the most visible architects of all time—his grandfather, Mies van der Rohe. Does he rely on this to get work? It would be the “death knell,” he says.

Playing a new game

Lohan: I certainly didn't learn anything from Mies about selling architectural services. He was very proud of saying that he had never gone after a client in his life. In fact, he did—once. In the early '60s, his bank was planning to expand. Someone in our office suggested that he go to the president and tell him that he was interested in the project. He didn't get the job.



Lohan: I want to eliminate the ups and downs. If that means steady growth, so be it.

C. K. H.

Laura Heery: We find that even when architects say they don't market, there's usually some indirect way they do it.

George Heery: When Mies allowed his work to be published, and wrote and lectured, I wonder what he had in mind?

Lohan: I think that, in many ways, you could say that he was extremely effective in marketing and selling, although he would not have been aware of it. Simply being the personality that he was made a profound impact. When he entered a room full of people, he was the center of attention. Everyone knew they were in the presence of a great man.

There were three of us junior partners with Mies at the time he died. We simply continued in the office and finished projects. But they were all in construction or far along in development. I was 31 and realized that I did not have established relationships with people who hire architects and that I needed to do something to get jobs. And that is how I began to think about it. One thing I did was a brochure, which we never had before. We just had

loose photographs. Now, of course, you can buy many publications of Mies's work.

Heery: That doesn't hurt.

Lohan: We never made mass mailings, I have never believed in that. You send brochures to people you know or found were potential leads. We have a nice brochure now, all in color, but it began very shakily—without any marketing staff, just a few people in the office and a graphic designer.

More drive than organization

Lohan: To me marketing and selling are part of everything you do as a professional. Not only in your work, but also in your private and social life, your community involvement, your speaking engagements—in the stature you obtain by the conduct of your life.

Heery: Don't you really think that's because an architect wants so much to create, to design, and have his work built?

Lohan: I would say so. Our formal marketing efforts are frankly, even now, quite rudimentary. We are not very good at them. We are doing such things as getting published, and have a nice brochure and two marketing coordinators. But really, the effective effort is done strictly by architects or the principals of this office.

My office is divided into architecture and interior design, plus a very small planning office. Hence, two marketing coordinators—one for interiors and the other for architecture. Currently, they use the same methods, the same archives, and the same materials. But the two disciplines might grow a little more separate because, right now, we are in one office. It is a matter of evolution over time.

Heery: And that may be not just a service-delivery decision, but a marketing decision because, of course, they are really one and the same.

Backing into marketing

Lohan: The interiors side is gradually embarking on projects independent from our

architectural commissions. We have the staff and need that work to keep everyone busy. That is how you end up marketing.

I guess my underlying philosophy really is that I don't want to have the biggest office. I want to do good work at a consistent level and have a flow that keeps us flowing. I want to eliminate the ups and downs. If that means steady growth, so be it. Now we have grown from about 30 people to about 130.

I tried for geographic expansion with a branch office, for a while, never was happy with it, and closed it. I wasn't happy because of control. Somehow, the level of quality was down.

If you have branch offices, you spend an awful lot of time going back and forth. You know architecture. The ideas have to be debated. You must think about it. That is very hard to do when you are always on a flight schedule.

Fighting the ups and downs

Lohan: We've made a decision to rely on more than one market, such as developers. I know architects that almost exclusively do speculative office buildings, and they are very susceptible to ups and downs. We work in three markets—development, corporate, and institutional. You can really eliminate the ups and downs that way. At least I have. I've literally had no lay-offs other than one here or there.

Heery: I think it is important to recognize that it doesn't take that many different market segments to achieve balance.

Lohan: At minimum, you need two.

Developing the right rapport

Heery: What things have you done that were really effective in building such a large practice—and which ones weren't?

Lohan: The best marketing is doing the best possible work—and being recognized for it. If you don't have that it is very hard.

Heery: To be recognized is, in effect, some form of public relations?

Lohan: Yes, whether you do it actively or simply have satisfied clients. You do a building that the client is proud of and he shows it off. People come and visit it and put us on their short lists. Then you enlarge upon that by making it known. You have something to market.

But I have learned, also, over the years—that being a successful architect has a lot to do with the kind of person you are. People judge as much the individual as the technical ability. I've had one client come right out and say that he wanted to give us a commission, not because he liked our design, but because he thought he could work with us.

Keeping an ear to the ground

Laura Heery: How do you identify leads?

Lohan: In the early years it was simply professional or social contacts. There was

no one here in the office then—even all the way through the '70s—who would develop leads and find out where jobs might be. Later on we had a marketing director. He was an architect who simply had his ear to the ground and heard about the jobs. Anything you read in the newspaper was too late.

Now, things are easier. We can still have to come up with potential clients to approach, but we know a lot more people. When we hear from former clients about who has come to look at their buildings,



Lohan's Market Tower in Indianapolis, a 32-story office building for the Mansur Development Corp.

that is a nice lead. Anyone who comes to look is actually thinking of building something.

Breaking into new markets

George Heery: Suppose you were to decide to enter a new market?

Lohan: It is not simple and inexpensive. I would bring on board not only one, but a couple of people that have that experience and those contacts. The first step might be an association with another firm.

Heery: You don't start out marketing without the capability and experience?

Lohan: I am a believer in step by step.

Heery: You feel there is something to be said for a body of experience, if not heavy specialization, a degree of specialization?

Lohan: In terms of artistic architectural design and for certain aspects of a project, I don't think you have to be a specialist.

Heery: What about functional aspects?

Lohan: I think you have to know a lot more. A very good example is Helmut Jahn's [United Airlines] terminal in Chicago. He had never done an airport before. But, his firm, when it was C. F. Murphy, did the entire O'Hare airport and still had tremendous functional and technical know-how.

Laura Heery: If you formed a joint venture or an association to enter a new market, would you dissolve it after the job or would you continue it?

Lohan: It all depends on how successful and friendly it was. The association could go on a long time.

An example of not using a partner was when we were interviewed for a major expansion of the aquarium in Chicago. There wasn't a single architect around that had ever done one here. We ended up with the job and, now that the building is almost finished, we are experts. It would be much easier to get an aquarium now.

Heery: Did you use a consultant?

Lohan: Yes, we had various consultants—not for the architectural work, but for expertise. But, we got the commission before we had any experts aboard. We got it because the clients liked our positive attitude.

Cutting the hype

George Heery: Years ago, I attended a seminar for architects on public relations. The person conducting it said he would like to define public relations as first doing something good and then taking credit for it.

How do you see getting yourself published, writing articles, and giving talks as compared to direct marketing activities?

Lohan: They're equally important. But then, we are still beginning the learning stage in understanding how public relations work. We are not very good at it. We are more passive than proactive.

But, if you really look at what architects are doing, they're focusing on the personality. To what degree is one happy with that? I just am not as comfortable with my personality hype.

Let me give you an example. I've been asked repeatedly to be shown in papers, like weekend sections, sitting at home. People want to have my home. There was even somebody who wanted to write an article about my lifestyle. I turned them all down, completely. I am not comfortable with my home or me being shown to everybody.

On being your own person

Heery: What advice can you give to other firms in which the founder was important and famous and is gone, as in the case of your grandfather? How can you retain some of the magic of the founder?

Lohan: Have confidence in yourself and do your own thinking. Don't look back too much. You have to set yourself free and create a new practice. Architecture is not like manufacturing; it does depend to a great degree on the individual. For me to go to anybody today and say, "I'm the grandson of Mies van der Rohe," is the death knell.

It has a lot to do with principals' ages at the time the transfer happens. The older people might not be flexible enough to really establish themselves as new leaders. It is too late. So, if any architectural practice wants to survive in the long run, it is very important to pass on leadership at a fairly young age.

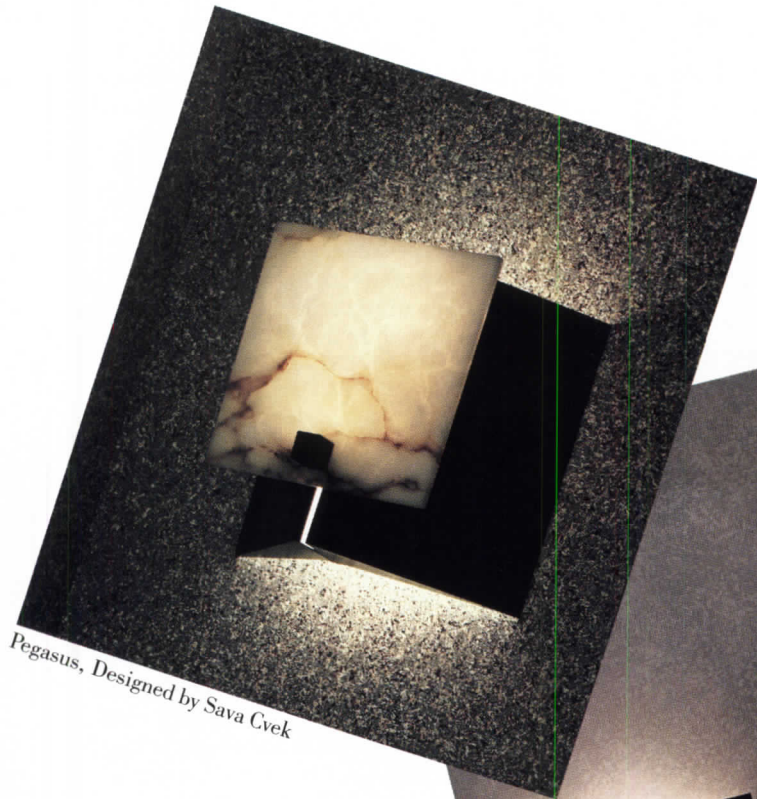
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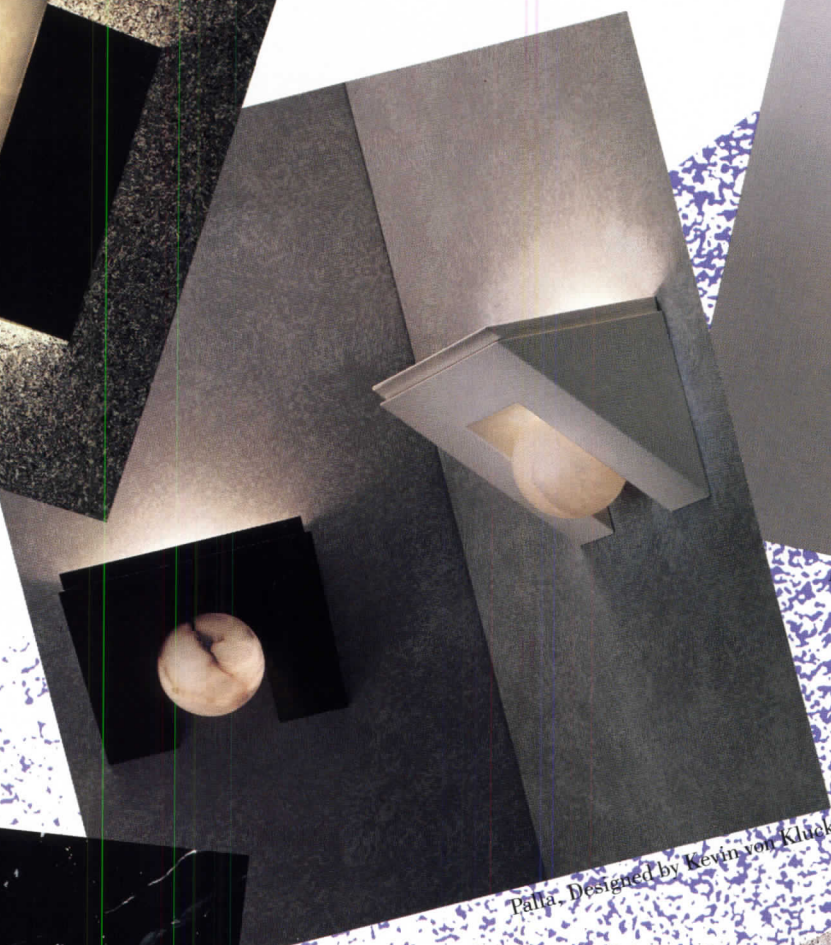
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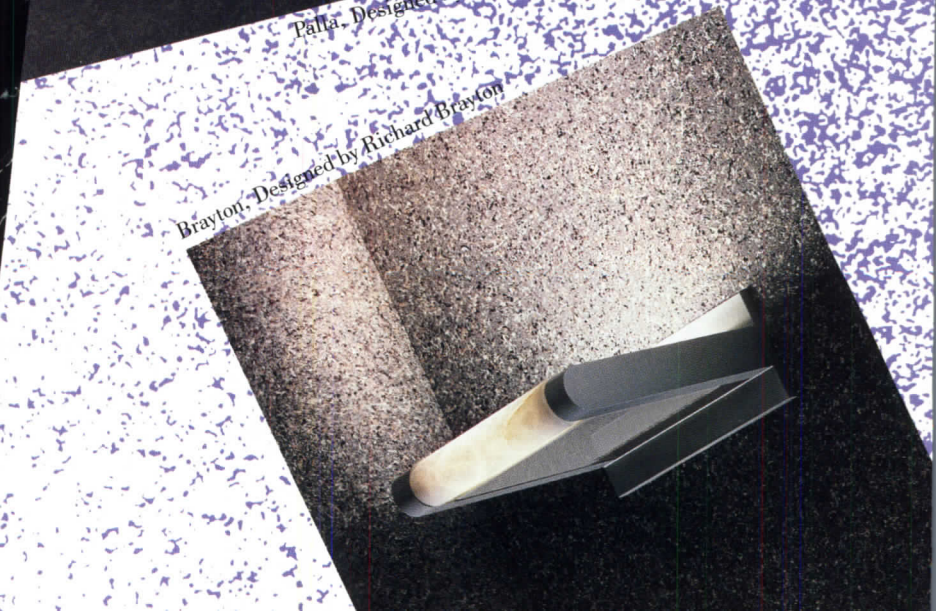
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HOW TO HIRE THE RIGHT PERSON FOR YOUR FIRM

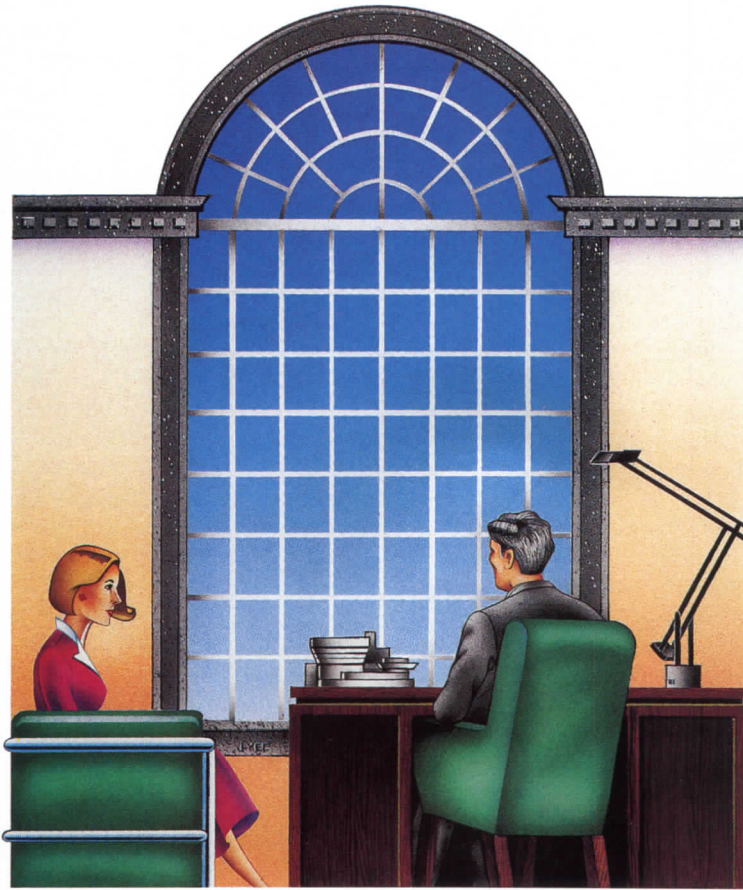
The vast majority of architectural firms are small businesses run by one or a handful of individuals who must attend to all the details of the operation in addition to trying to practice architecture. It should come as no surprise, then, that many firms are not particularly adept at dealing with most human-resource issues—the things large companies devote entire departments to managing. Human-resource issues can include hiring and termination of employees, benefits planning and administration, career development, and assistance programs, to name a few. Of these, the issue that most directly affects an architectural practice is employment—that is, deciding whom to hire when the need arises.

Even though most owners of small firms spend a miniscule amount of their time thinking about hiring policies and procedures, both they and their employees must live, often for years, with the end results of hasty, ill-considered hiring decisions. Obviously, an ounce of prevention in thinking carefully about whom to hire can prevent a lot of misery. What to consider?

1. Be honest

Every architect who wears a personnel hat should be honest with applicants about the opportunity. Many give courtesy interviews to young job seekers as a friendly gesture—even when they have no intention of adding to their staff. While there is nothing wrong with this practice and it can benefit aspiring interns with scant interview experience, you owe it to the applicant to state plainly that the interview is only a courtesy. This may save you trouble in the long run as you will be less likely to be pestered by repeated follow-up calls from the interviewee.

Likewise, if there is a real need in your office, don't be too coy about what the responsibilities will be. If you need someone



Ten ways to polish your interviewing techniques, plus some polite ways to ask prying questions.

to do drafting, don't talk about project management. If you need a project manager, don't wax eloquent about the design hothouse your office has become. Far too many architects will become unproductive complainers or simply leave after a short while because their real job bears little resemblance to the position described in the advertisement or the interview.

Every job in a firm has a future of some sort, but keep your focus on present requirements.

2. Avoid questionable questions

Since architects are not usually human-resources professionals as well, it is unlikely that you will be current on every nuance of employment and labor law. Questions that used to be interview standards are getting employers into deep trouble today. A little common sense will keep you out of a lot of scrapes.

Personal questions cause the most headaches. Most applicants won't mind telling you if they're married, but some consider even such routine inquiries an invasion of their privacy. So unless you're prepared to demonstrate (perhaps in court) why a person's age, health, marital status, or living arrangements are relevant to the position being discussed, don't ask.

Fortunately, many interviewees will volunteer this information without being asked or with oblique prompting ("So, did you grow up around here?"). Be particularly sensitive to the privacy concerns of female applicants. Any questions about impending marriage or pregnancy are an open invitation to a sex-discrimination complaint.

Does this mean that you can't ask any personal questions at all? No, but if your decision to hire or not hire someone is even partially based on a response to one of these questionable questions, you could be accused of employment discrimination, a problem that no employer wants to cope with.

3. Probe without prying

Despite the warning about personal questions, it is possible to learn a great deal about a potential employee by asking the right kind of open-ended questions. Unfortunately, busy principals seldom have time to dream up good questions to ask.

Some suggestions:

- How well do you think your professional education prepared you to work as an architect?
- When did you first decide on a career in architecture? What made you choose it?
- What hidden talent do you have that doesn't show up on your resumé?
- What career do you think you would pursue if you could not be an architect?
- What would you like to be doing in five

Continued on page 44

Continued from page 43
years? In 10 years?

- What would motivate you to excel?
- What's one good idea or suggestion you have for our firm right now?
- Describe your approach to problem-solving.

4. Look for the intangibles

Have you ever interviewed someone with impeccable credentials, awesome portfolio, and glowing references, only to have him or her turn into a disaster in your employ? Did you have a hunch he was too good to be true at the time you hired him? There are ways to validate your hunches in the interview. Ask questions intended to reveal *attitudes* rather than aptitudes.

For example: "What was the hardest job you ever had?" Or: "What do you consider the biggest challenge facing you in your career?" Questions that focus on the applicant's goals, ambitions, fears, and dreams will tell you more than reviewing their college transcript—if you pay attention.

A key intangible that should be self-evident, if you are looking for it, is communications' skill. An awkward, inarticulate youth may be a great resource for cranking out drawings, but what happens in five years when he becomes an awkward, inarticulate project architect? No firm can expect its principals to handle client contact exclusively or forever. Similarly, letters

and resumé are often more useful for what they say about the applicant's ability to communicate in writing than for any of their rather slanted content. Keep in mind, however that nowadays letters and resumé are not always original—or even the applicant's work.

5. Remember why you're interviewing

More times than you would believe, a firm principal, relieved to have the undivided and sympathetic attention of a job seeker, will spend the entirety of an interview holding forth on the perils of practicing architecture, the low pay, the lack of respect, the competition, the lousy clients, and so on until it's time to leave, at which time the prospect is congratulated on his skills, experience, and personality and dismissed.

Resist the temptation to impart your vast knowledge of the profession to a captive audience. Remember that the reason you are talking to a person is to determine their fitness for employment in your firm. So unless you are in the market for entry-level story listeners, skip the stories. Better yet, try to get the job seeker to tell his or her story to you.

6. Learn how to look at a portfolio

Looking at a job seeker's portfolio is a common ritual in the design profession—unfortunately one that often does little to further either party's determination of

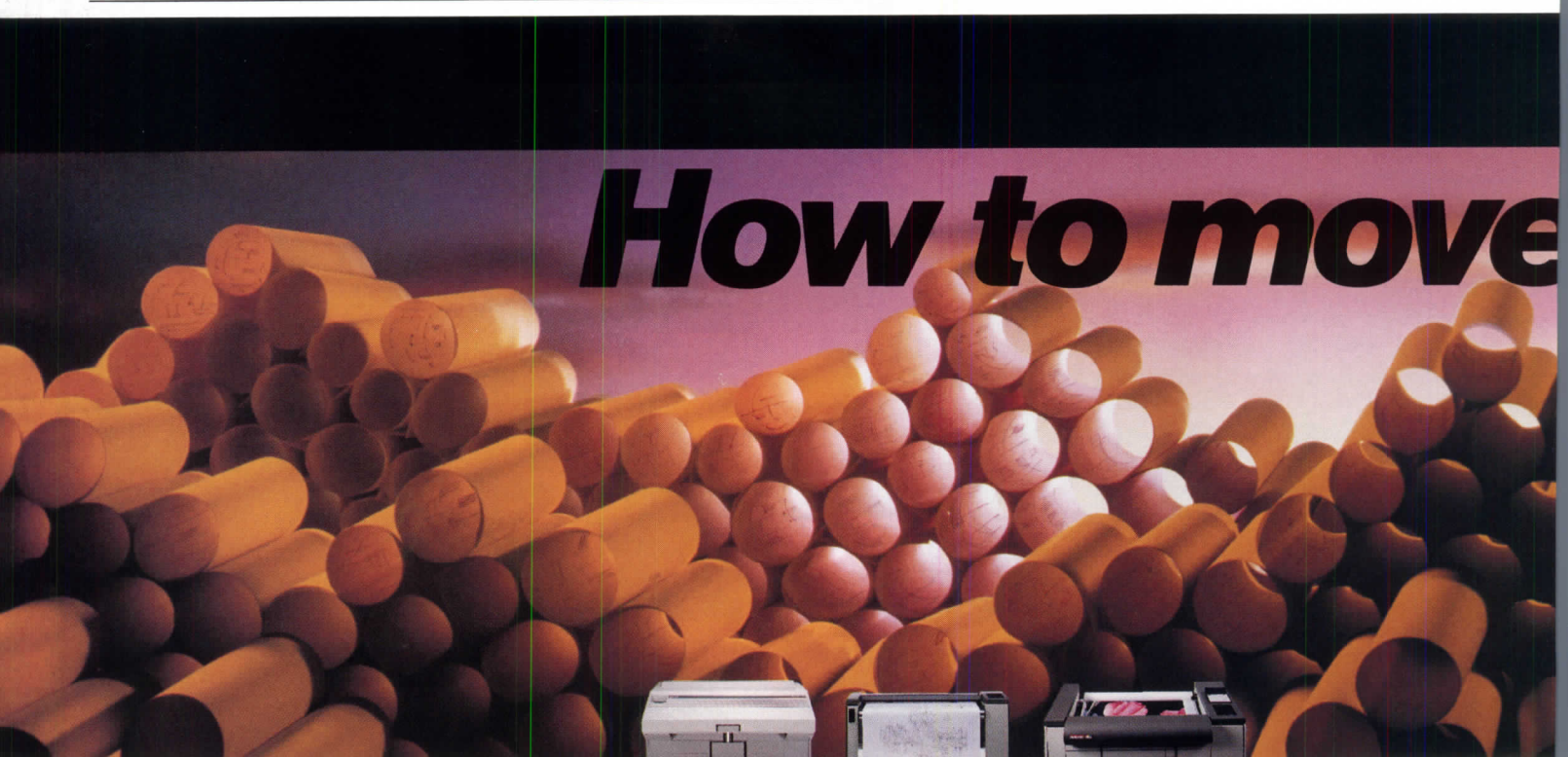
whether a good fit is possible. Most interviewers thumb through a portfolio the way a distant relative looks at baby pictures: a few grunts of acknowledgement, but little real interest. While graphic design and presentation skills are most obviously on display, look for the story behind the story in a portfolio.

For instance, ask the applicant about the program behind the projects in the portfolio. Try to get a comprehensible account of the problem-solving process employed. Ask about missing or incomplete information. Be alert for team projects and attempt to pinpoint the applicant's real contribution. You can offer constructive criticism; balance it with an equal portion of encouragement.

7. Spot a loser

The old cliché that good help is hard to find becomes painfully apparent when you have an immediate need to hire an experienced hand. Following are a few warning signs that the prospect at the door is not the answer to your problem.

A letter that doesn't directly respond to an ad is a sign that the applicant either hasn't read it carefully or is hoping you haven't. A nine-page resumé is a possible clue that the sender is either vastly overqualified (not likely), or simply unable to organize information concisely. Portfolios can mask talent as well as they can display

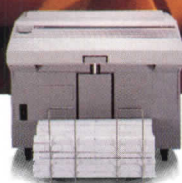


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it, but a portfolio of drugstore-processed snapshots could indicate a lack of seriousness or professionalism.

Look for large gaps (more than three months) in a work history and ask for more detailed information if you find them. References can be helpful if you keep in mind that the applicant is unlikely to give a reference that might be the least bit negative—if he can help it. Of course, a reference only has real meaning if you can use it. Don't be impressed by important names without phone numbers.

Finally, be especially alert for false or overstated claims. Consider whether an unlicensed job-seeker was really likely to have been project architect or designer on a large project. Imaginative applicants will usually admit to fudging their credentials if you inquire directly but not accusingly. At the same time, don't assume that because a job seeker claims to have achieved something of significance that it can't be true. Give the person the benefit of the doubt, unless the doubt is overwhelming.

8. Get essential information

Interviews that run short (or long) often end abruptly without the exchange of essential, if mundane, information. Where can the applicant be reached during the day? Is telephoning a problem with current employers? How soon can he or she be available to start? Are they a United

States citizen (or if not, do they possess the proper visa and work permit)? How soon do they need a response?

9. Ask what you'll wish you'd asked later

Everyone has been victimized at least once in their career as a human-resources amateur by the one question they forgot to ask. Is an older applicant a licensed architect? Is a younger one finished with academic training or merely looking for work experience before graduate school?

Be especially alert to references to outside commitments. Many people changing jobs, especially sole practitioners re-entering the job market, have personal or professional obligations to finish jobs at other offices, sometimes even during your regular business hours. Discuss this openly, and be prepared to take a firm stand, or you could end up with unexpected liabilities in productivity. Moonlighting is another issue which is more easily discussed before an employee is hired. While moonlighting is very common in the profession, it helps to be as clear as possible as to the extent it is permitted in your office.

Also inquire about outside interests that may impinge on office performance (but *only* if they might impinge on performance). Architects are a varied lot, and many are quietly pursuing alternative careers. Decide and discuss acceptable levels and types of outside commitments.

10. Play fair and act like a professional

By far the biggest complaint of veteran job seekers is how architectural firms treat the applicants they choose not to hire: letters not answered, phone calls not returned, etc. In this day of word processors, letters from unqualified applicants can easily be answered in an honest but courteous way. (And don't say you will keep their resumé on file unless you really intend to). Applicants who are interviewed deserve either a letter or a phone call, telling of your decision not to offer them a position. It is not necessary to give a reason unless you feel it might be helpful to them in the future.

While the consequences of failing to notify unsuccessful job seekers of their status may seem trivial to you, try to remember the anxiety and stress caused by letters which are never answered, and the ill will which results from such treatment. Don't leave a borderline applicant hanging indefinitely just to keep your own options open. Set a reasonable deadline for a response and stick to it. A polite "no" is worth more to an anxious would-be employee than a ream of noncommittal responses and nonresponses.

Mr. Gruesel is a project architect with Abend Singleton, Inc., in Kansas City, Mo., and has had extensive experience with hiring practices from both sides. Part I of this two-part series appeared in RECORD, April 1990, page 34.

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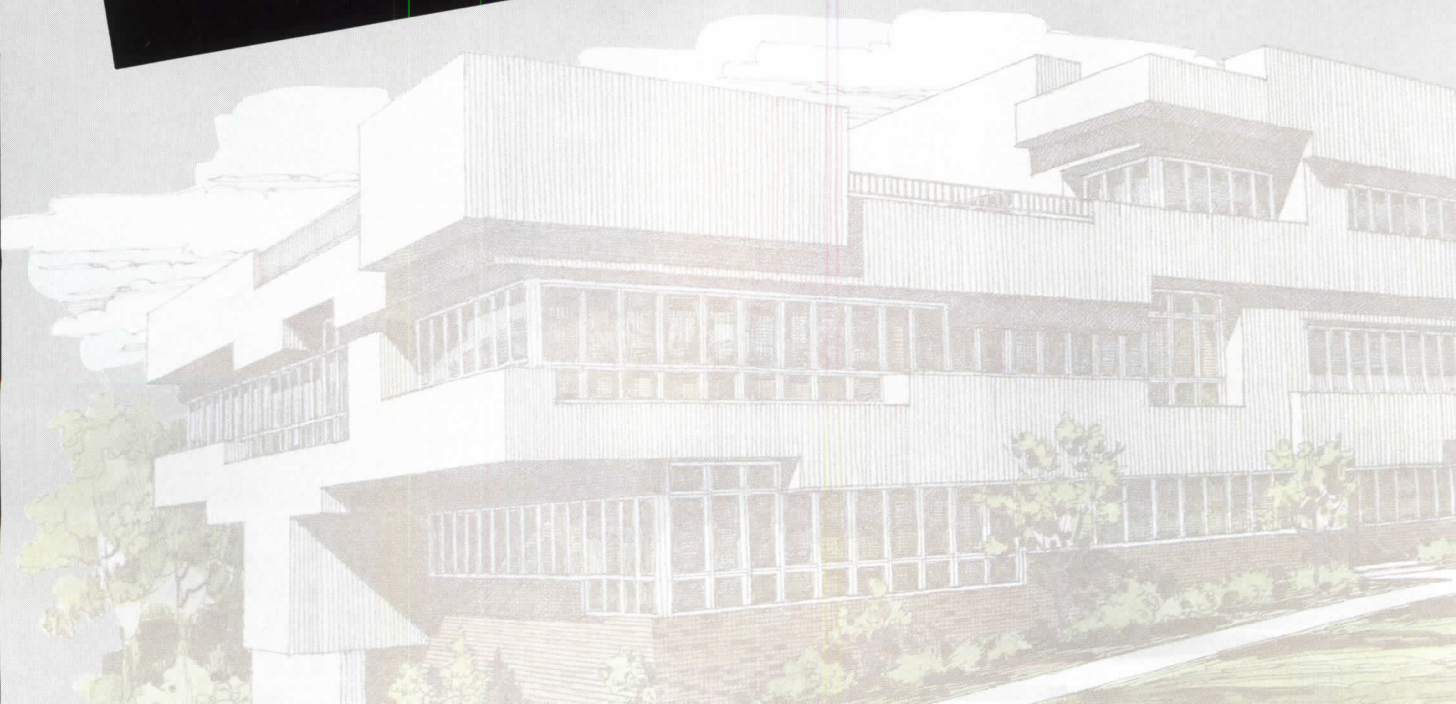


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ANOTHER YEAR ON THE PLATEAU

Reappraising and fine-tuning the annual forecast reveals a steady pace, about even with last year's.

Last October's Outlook for 1990 construction contracting was guardedly optimistic. It recognized the probability of a further decline of commercial building, as well as a tight lid on public funding for construction programs. This left only housing as the route to recovery of the stalled construction sector. With the expectation that single-family houses would respond in 1990 to last year's downward drift of mortgage rates, it was concluded that total construction-contract value would rise slightly above its recent plateau.

October's forecast stressed, however, that a broadly based recovery, involving commercial building and public-works construction, was two or perhaps even three years off.

The background of where we are now

Economic developments in the second half of 1989 left the construction market ambivalent at the start of 1990:

- By now, last year's economic "slowdown" is, in the words of Federal Reserve chairman Greenspan, "past its weakest point" and we should anticipate "moderate expansion" this year.
- In response to monetary restraint, inflation has receded to a more acceptable rate.
- Although mortgage rates have been edging up again, their current level (10.3 percent) is nearly a full point below the peak in 1989.

These are normally seen as signs of an improved environment for the building business, and would suggest that last fall's forecast is nicely on target. However, the construction sector just seems to be saying no, so far failing to respond to these favorable changes.

- House construction stubbornly resisted the quarter-by-quarter decline of mortgage rates through 1989, leaving single-family construction starts no higher than at the start of the year.
- Commercial building (offices, in particular) sagged during last year's closing months, and hasn't improved since.

At the end of the first quarter, it was becoming apparent that 1990 is not destined to be the year for breaking out of the "gridlock" of conflicting trends that has kept total construction static since 1987.

Reassessing the 1990 housing outlook

Last October's moderately bullish expectation of a rebound of housing starts to 1,525,000 units as mortgage rates declined to their lowest level in a decade no longer looks reachable. Opportunity still exists for an improvement in 1990 over last year's depressed 1,372,000 starts, but only to 1.4 million.

The greater number was based on a combination of favorable demographics and workable interest rates, together delivering slightly more than 1-million single-family housing starts. They actually did this in 1986, 1987, and 1988—but not in 1989 when rates temporarily shot up to 11 1/4 percent. Taken together with a conservative 450,000 multifamily units, 1.5-million total housing starts was not too ambitious a forecast.

So now that 1990 is here, mortgage rates are workable again. And the famous Fifties Generation is as eager for home ownership as before. But house building isn't responding in the same way as in the final years of the 1980s. Something has changed.

Two developments since mid-1989—banking reform and a regional recession—go a long way toward explaining why things won't be working as well as they did only a year or two ago.

Availability vs. cost of credit

The Financial Institutions Reforms, Recovery, and Enforcement Act of 1989 brings regulation and reform to the high-flying thrift industry, requiring savings associations to conform to stricter standards. Two features of the new law could inhibit house building in the near future:

- As of December, 1989, thrifts must maintain a stronger ratio of capital to assets (best accomplished by letting loans run off).
- No more than 15 percent of a thrift's capital can be invested in one project and/or with one developer (previously unlimited).

The financial community thinks that compliance with these new regulations will reduce the availability of construction loans to builders and developers during the thrifts' adjustment period (1990 and perhaps 1991). Although it is difficult to quantify these constraints, they can only

hurt building in the near term.

A regional recession

A regional look at house building in 1989 underscores the fact that mortgage rates were not the only (or even the most important) influence on last year's housing market. With only minor regional differences in mortgage rates, the volume of building in the regions varied widely.

Slowdown may be the term for what has been happening to the national economy, but for the the Northeastern real-estate market, it is spelled *recession*. Almost half of last year's decline of housing starts to 1,372,000 units was concentrated there. Whether the breakdown in this region's economy took the Northeast's building boom down with it, or the other way around, the deterioration of this regional housing market since mid-1989 has been swift and deep. Significantly, three regions—the North Central, the South Central, and the West—not only held close to their 1988 volume of building last year, but each reported a strong fourth quarter.

A re-evaluation of the 1990 housing outlook recognizes barriers to a fuller response to currently favorable mortgage rates. Thrift-industry reforms could temporarily curtail development funds. Multifamily building, still overshadowed by the glut of vacant units, will remain depressed and slip to an estimated 400,000 units this year (vs. 411,000 in 1989).

And while single-family building is generally expected to respond to lower mortgage rates, the Eastern part of the nation will not be participating in the recovery. With its slumping high-tech and financial services industries creating unemployment and uncertainty, house building in the Northeast is more likely to decline another 10 percent than to rebound. (If this region's rate of house building simply stabilizes at last year's fourth-quarter rate, its 1990 total would be lower by 15 to 20 percent.)

In 1990, gains of up to 10 percent in the Central and Western regions will be lifting the national total of single-family housing starts back up to 1 million units (plus 4 percent), but a small further decline of multifamily construction (also principally in the Northeast) will keep total housing starts

**1990 NATIONAL ESTIMATES
DODGE CONSTRUCTION POTENTIALS**

	1989 Preliminary	1990 Forecast	Percent Change 1990/89	
NONRESIDENTIAL BUILDINGS				
Floor Area (millions of square feet)	Office Buildings	226	- 16	
	Stores and Other Commercial	556	- 15	
	Manufacturing Buildings	148	- 5	
	Total Commercial and Manufacturing	930	800	- 14
	Educational	138	135	- 2
	Hospital and Health	71	68	- 4
	Other Nonresidential Buildings	143	137	- 4
	Total Institutional and Other	352	340	- 3
	Total Nonresidential Buildings	1,282	1,140	-11
Contract Value (millions of dollars)	Office Buildings	\$ 21,496	\$ 18,900	-12
	Stores and Other Commercial	25,280	22,300	-12
	Manufacturing Buildings	10,079	8,975	-11
	Total Commercial and Manufacturing	\$ 56,855	\$ 50,175	- 12
	Educational	\$ 14,347	\$ 14,525	+ 1
	Hospital and Health	8,679	8,475	- 2
	Other Nonresidential Buildings	14,149	13,850	- 2
	Total Institutional and Other	\$ 37,175	\$ 36,850	- 1
	Total Nonresidential Buildings	\$ 94,030	\$ 87,025	- 7

RESIDENTIAL BUILDINGS

Dwelling Units* (thousands of units)	One-Family Houses	961	1,000	+ 4
	Multifamily Housing	411	400	- 3
	Total Housekeeping Residential	1,372	1,400	+ 2
Floor Area (millions of square feet)	One-Family Houses	1,663	1,730	+ 4
	Multifamily Housing	440	422	- 4
	Nonhousekeeping Residential	74	67	- 9
	Total Residential Buildings	2,177	2,219	+ 2
Contract Value (millions of dollars)	One-Family Houses	\$ 93,272	\$ 99,775	+ 7
	Multifamily Housing	22,394	22,200	- 1
	Nonhousekeeping Residential	6,469	6,150	- 5
	Total Residential Buildings	\$122,135	\$128,125	+ 5

NONBUILDING CONSTRUCTION

Contract Value (millions of dollars)	Transportation Construction	\$ 24,738	\$ 24,350	- 2
	Environmental Construction	19,422	19,525	+ 1
	Total Public Works	\$ 44,160	\$ 43,875	- 1
	Utilities	\$ 4,051	\$ 4,000	- 1
	Total Nonbuilding Construction	\$ 48,211	\$ 47,875	- 1

ALL CONSTRUCTION

Contract Value (millions of dollars)	Total Construction	\$264,376	\$263,025	- 1
	Dodge Index (1982 = 100)	168	167	

*F.W. Dodge basis.

from advancing much beyond 1.4-million units (plus 2 percent) this year.

Nonresidential building: still unwinding

As expected, 1989 brought another step downward along a declining cyclical path from the 1985 peak of 1,427-million square feet of newly started commercial, industrial, and institutional buildings. For 1989, square footage totaled 1,262 million (930-million square feet of commercial and industrial buildings; 352-million of institutional and other nonresidential structures).

The quarter-by-quarter pattern of 1989 contracting that led to the year's total of 1,282-million square feet of nonresidential building was anything but a smooth downward path. A surge of contracting in the third quarter produced a "spike," only to be followed by a sharp decline (to an annualized rate of 1,195 million square feet). Fourth quarter weakness of nonresidential building was evident in most regions—not just in the troubled Northeast—and coincided with a rash of gloomy economic news at year-end. The first quarter of 1990 brought no improvement.

In the remaining quarters, nonresidential building will be buffeted by two opposing forces. If the national economy is on the threshold of reversing its "slowdown," expect a minor rebound from the recent low rate of contracting. Before year-end, however, the decline of commercial construction will again take over.

By structure type, these revised estimates of 1990 nonresidential building still look quite like last October's forecast, even though their total is a bit lower than before. The most vulnerable nonresidential building markets continue to be offices and retail facilities. In the case of offices, correction for mid-1980's overdevelopment has been underway for several years. Retail building, by contrast, has been slower to adjust.

Since reaching a peak of 350-million square feet in 1985, contracting for office building has declined steadily, passing through 225 million square feet in 1989. This volume of building is sufficiently below the current requirements of the white-collar work force to bring down the national vacancy rate (still at 19 percent), but only slowly. Supply/demand equilibrium and the subsequent recovery of office building will not soon happen unless new construction is further reduced. A cutback of another 16 percent, to 190-million square feet, is estimated for 1990, with lower numbers to follow.

Retail construction (shopping centers, stores, and warehouses) also reached a peak in 1985 at just under 600-million square feet, but so far has shown little inclination to settle back to normal. As for shopping-center development, "normal" is a volume of construction that maintains parity with homebuilding. Since the mid-

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1990 REGIONAL ESTIMATES
DODGE CONSTRUCTION POTENTIALS

Contract Value (millions of dollars)

NORTHEAST

	Percent			Percent		
	1989 Pre- liminary	1990 Forecast	Change 1990/89	1989 Pre- liminary	1990 Forecast	Change 1990/89
CT, ME, MA, NH, NJ, PA, RI, VT						
Nonresidential Building						
Commercial and Manufacturing	\$10,723	\$8,925	- 17	\$13,325	\$12,275	- 8
Institutional and Other	7,939	7,300	- 8	5,770	4,900	- 15
Total	\$18,662	\$16,225	- 13	\$19,095	\$17,175	- 10
Nonbuilding Construction	\$11,169	\$10,700	- 4	\$48,926	\$44,100	- 10

NORTH CENTRAL

	Percent			Percent		
	1989 Pre- liminary	1990 Forecast	Change 1990/89	1989 Pre- liminary	1990 Forecast	Change 1990/89
IL, IN, IA, KS, MI, MN, MO, NE, ND, OH, SD, WI						
Nonresidential Building						
Commercial and Manufacturing	\$13,854	\$13,075	- 6	\$17,991	\$20,200	+ 12
Institutional and Other	8,047	8,100	+ 1	5,608	5,750	+ 3
Total	\$21,901	\$21,175	- 3	\$23,599	\$25,950	+ 10
Nonbuilding Construction	\$10,319	\$10,400	+ 1	\$55,819	\$57,525	+ 3

SOUTH ATLANTIC

	Percent			Percent		
	1989 Pre- liminary	1990 Forecast	Change 1990/89	1989 Pre- liminary	1990 Forecast	Change 1990/89
DE, DC, FL, GA, MD, NC, SC, VA, WV						
Nonresidential Building						
Commercial and Manufacturing	\$11,866	\$10,350	- 13	\$22,476	\$23,850	+ 6
Institutional and Other	8,048	7,825	- 3	7,507	7,400	- 1
Total	\$19,914	\$18,175	- 9	\$29,983	\$31,250	+ 4
Nonbuilding Construction	\$ 8,483	\$ 8,500	--	\$58,380	\$57,925	- 1

SOUTH CENTRAL

	Percent			Percent		
	1989 Pre- liminary	1990 Forecast	Change 1990/89	1989 Pre- liminary	1990 Forecast	Change 1990/89
AL, AR, KY, LA, MS, OK, TN, TX						
Nonresidential Building						
Commercial and Manufacturing	\$ 7,084	\$ 5,975	- 16	\$10,478	\$11,675	+ 11
Institutional and Other	5,422	5,550	+ 2	1,541	1,725	+ 12
Total	\$12,506	\$11,525	- 8	\$12,019	\$13,400	+ 11
Nonbuilding Construction	\$ 8,130	\$ 8,075	- 1	\$32,655	\$33,000	+ 1

WEST

	Percent			Percent		
	1989 Pre- liminary	1990 Forecast	Change 1990/89	1989 Pre- liminary	1990 Forecast	Change 1990/89
AK, AZ, CA, CO, HI, ID, MT, NV, NM, OR, UT, WA, WY						
Nonresidential Building						
Commercial and Manufacturing	\$13,328	\$11,850	- 11	\$29,002	\$31,775	+ 10
Institutional and Other	7,719	8,075	+ 5	8,437	8,575	+ 2
Total	\$21,047	\$19,925	- 5	\$37,439	\$40,350	+ 8
Nonbuilding Construction	\$10,110	\$10,200	+ 1	\$68,596	\$70,475	+ 3

1980s, retail building has exceeded this historic norm by approximately 25 percent, and although specific vacancy data are not available, there is an admitted glut of shopping space. Partly in response to last year's weak volume of housing starts, but more due to overcapacity, construction of retail facilities is headed for a decline of as much as 15 percent this year.

With most other types of nonresidential building—industrial, educational, health-care, etc.—holding close to last year's square footage in 1990, total volume will be down an estimated 11 percent. The contract value of this year's nonresidential building projects will slip \$87 billion, down 7 percent from 1989.

From a regional perspective, the softening of the Northeastern economy will not affect nonresidential building as much as housing. Due less to regional economics than to over building, commercial construction was forecast to decline in most areas again this year, and a sizeable portion of that decline will occur in the recently booming Northeast.

Stability is not stagnation

Six months ago, 1990 offered the promise of lifting the Dodge Index of construction-contract value off its 1987 plateau of 165. Owing to the collapse of a major building market during the second half of 1989, that prospect has evaporated. It now looks as though the construction/building-materials industry will be spending another year on the plateau.

Stability is an unnatural state for the construction sector, and to focus on the bottom line of total construction activity can be deceptive.

Just below the placid surface of total construction lie cross currents where the real action can be found. At the national level, three distinct movements are forming: down for commercial building, sideways for public-works construction, and up for housing. At the regional level, more cross currents: down in the Northeast, steady in the Southeast and the South Central, and up in the North Central and the West.

Subtle, rather than sweeping change, but hardly stagnation.

*Prepared by the Economics Department
Construction Information Group
George A. Christie
vice president and chief economist*

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BEYOND BARRAGAN: MEXICAN ARCHITECTURE TODAY

The current generation of Mexican architects continues to adapt Modernist doctrines to local realities.

What is "the Mexican" in the architecture of Mexico? This was the central question of a recent symposium, "Mexican Architecture: New Directions," sponsored by the Los Angeles chapter of the AIA and the School of Architecture of the University of Southern California. Seven architects representing the full spectrum of contemporary practice south of the Rio Grande displayed their work in a sometimes exhilarating, sometimes disappointing attempt to prove that Mexico has developed a distinct, coherent, and self-sustaining architectural language. As the seven ranged from young techno-turks to the form-givers of massive ministries, the one thing that seemed to tie them together was a use of Modernist forms made more massive and primitive either by their importation or in response to local climate and building practices.

In a country that has been dominated for the last five centuries by first Spanish and then American influences, how does one respond to the layers of colonial importations? Is the Spanish heritage part of "the Mexican?" Is there relevance to the application of Modern forms to 20th-century office buildings? Does concrete have a place in the vernacular? In the end, the symposium became a case study in the adaptation of Modernist doctrines to local realities.

At its worst, this process produces monumental gestures that are alien both in their Modern abstraction and in their attempts to revive archaeological forms. Such use of the grand scale marks the

work of Teodoro González de León, one of the most established architects at the symposium. The vast expanses of concrete that characterize his Tomás Garrido Canabel Park and Zoo in Villahermosa (below left), for example, are cut at the center to form giant abstractions of Mayan gateways. When González de León uses great forms to house government bureaucracies such as the central mining ministry, the references to an overwhelming power may be appropriate. But the imposition of such a scale is less understandable when applied, for example, to a tourist office near the heart of Chichén Itzá.

A more interesting response to the problem of the relationship of Modern forms to peculiarly Mexican problems was shown in the work of Félix Sánchez Aguilar. Younger than González de León, he admitted struggling throughout his career with foreign influences, "revolting, adapting, read-

ing, trying to find an architecture that would celebrate and enhance life."

What sets Sánchez apart is his deep commitment to the most pressing problem of his country, the need for social housing. Early experiments in self-help housing, which tried merely to find an order in the *favelas* or slums that house 40 percent of Mexico's population, led to his work on the reconstruction of Mexico after the 1985 earthquake.

Magic realism in housing

One project he worked on is a series of densely packed urban houses, built very cheaply, but painted in electric colors and making use of both the compaction and the simplicity of their building forms to create a rich, fragmented, and at times almost surreal urban environment. The effect is not unlike that of magic realism, though the thinness of the structure does show through the evocative forms.

The most disturbing and fascinating of all the architects assembled at the conference was no doubt Augustín Hernández. Clearly influenced by the later work of Frank Lloyd Wright, his early houses took off in directions similar to those of such Wright acolytes as Bruce Goff and John Lautner: circular forms grouped around combinations of pools and fireplaces, daring cantilevers and expressive concrete slabs. Yet there is a strangeness about even these early works that goes beyond anything to be found north of the border: the interiors are molded and shaped, cut through by single light sources, and sensu-

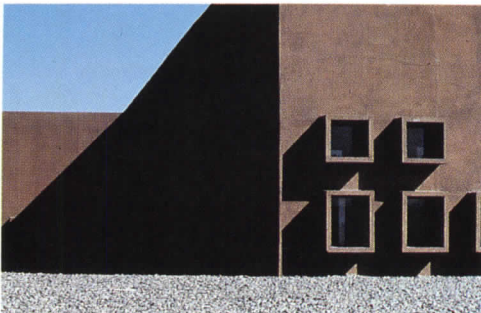
PHOTOS COURTESY OF FRIENDS OF MEXICO



A house by Félix Sánchez Aguilar encloses a patio.



Tomás Garrido Canabel Park (above left) by Teodoro González de León and a Renault factory (center) by Ricardo Legorreta both rely on simplified Modernist forms, while Augustín Hernández's house for himself (right) employs a more sci-fi esthetic.

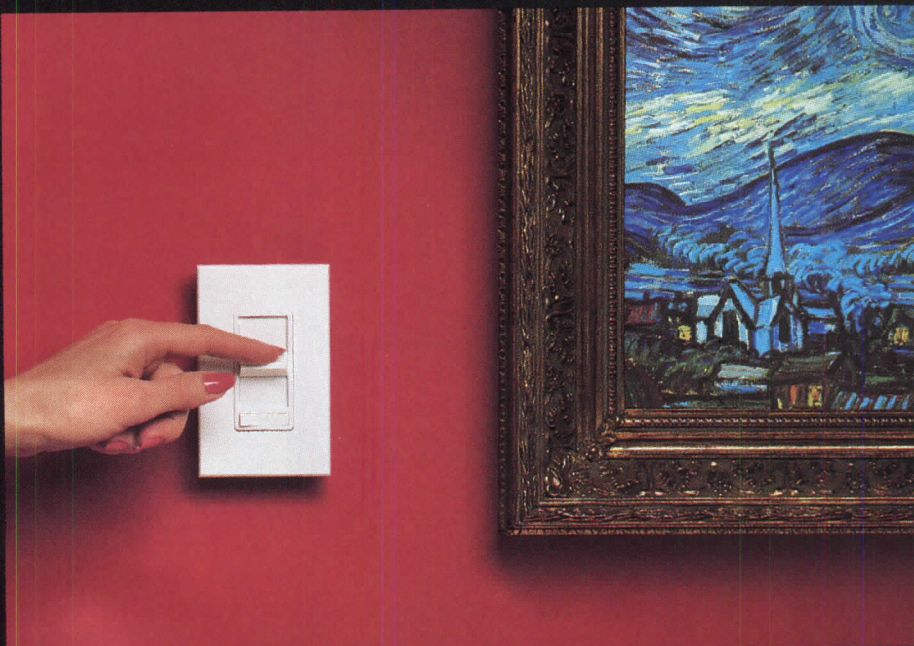


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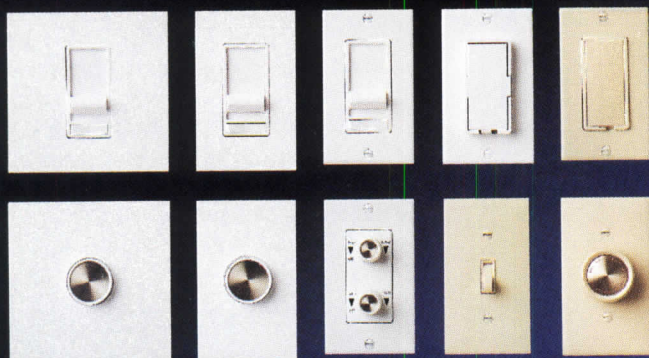


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alized until they resemble sets for the movie "Barbarella." In later years, his work has become more technologically oriented. His own house is a set of triangular metal shapes pumping through a concrete slab erected on a steep hillside (page 59 right), while his office is two cut-off pyramids, one reversed and placed on top of the other, crowning a slender pole on a similar site. The result is fantastic, disturbing, and evocative both of science-fiction films and of a sense of terror or passion that many of the participants (though not Hernández) defined as lying at the essence of "the Mexican."

Aztec modernism for the military

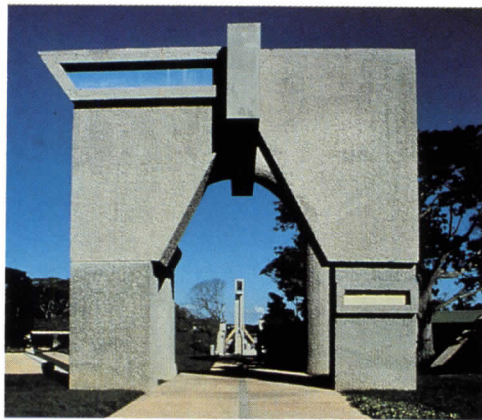
That terrible power reached its logical conclusion in Hernández's masterful Heroico Colegio Militar, the central military school of Mexico. Here is truly an Aztec modernism; the pyramids have become arsenals, while the vast ceremonial plazas resound with the parade march, and the central administration watches over the whole through two concrete tubes that form the eyes of a giant preying beast.

The humanist alternative to this tradition is, of course, to be found in the legacy of Luis Barragán, and several of the participants paid direct homage to this one internationally known Mexican architect. The simple creation of defined spaces, often cool and dark, the marking of moments in this cellular world with carefully cut windows and skylights, and the transformation of the three-dimensional cages of construction into billboards of saturated color have become a vocabulary recognized as uniquely Mexican and yet Modern by almost all of the participants.

A former pupil of Barragán, Bosco Gutiérrez Cortina used this new vernacular with great success in a series of residences for the wealthy of Mexico City. Recalling "the wisdom of craft, the richness of internal space, the wall, and the monumental presence of a pre-Hispanic and Hispanic architecture," he claims to have found in his elaboration of Barragán's work "a simple and natural Mexicanness." The deep blue walls, heavy timbers, sheltered courtyards, and deep-set windows do indeed cre-



A house by Bosco Gutiérrez Cortina carries on the Barragán tradition.



An arch at Garrido Canabel Park was inspired by Mayan forms.

ate a sensuous and recognizable world, though Gutiérrez's commercial work raises the question whether such a vocabulary could be extended beyond the domestic sphere.

Luckily, that question was answered in the work of Ricardo Legorreta, the best known of the Mexican architects. Legorreta alone showed work of a monumental scale and a Modernist abstraction that seemed to incorporate a particular re-

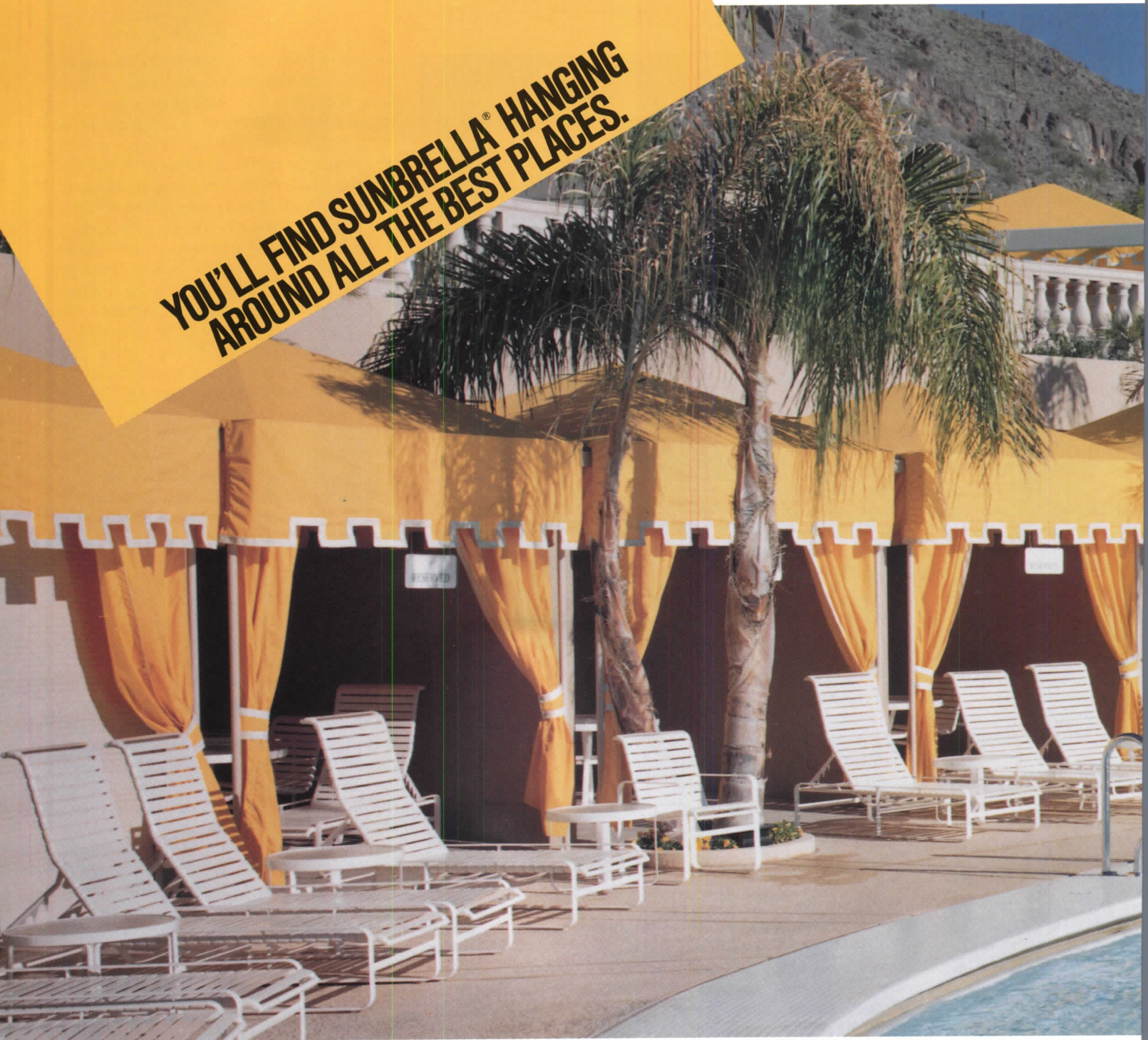
sponse to such direct contextual issues as climate and the nature of building practices. Moreover, the work is informed by a vague sense of mystery, emptiness, internalized richness, and the ornamentalization of simple surfaces that seem to be undeniable parts of the traditions of Mexican architecture. The most astounding application of this working method is Legorreta's Renault factory in northern Mexico (page 59 bottom center), where the desolation of the desert meets the scale of mass production and is shot through by a rhythmic application of vernacular elements abstracted into fragments of vibrant color and surreal form. Legorreta is now building in the U. S. as well as in Mexico, and his office complex for the Maguire/Thomas Partnership in Solana, Texas, seems to prove that this working method can, in fact, be exported and applied both to a landscape not much different from that of Mexico and to a program as generically modern as any to be found.

To ask for a Mexican architecture now is a little like asking for an American architecture now, and the seven architects invited to the Los Angeles symposium were about as representative of that country's practice as seven architects chosen by the AIA to represent the U. S. in Mexico might be. But the more fundamental question of colonialism remains. Most of the architecture presented at this event appeared as watered down versions of forms and theories developed elsewhere. The use of vernacular elements to domesticate these forms seemed often as artificial as the original importations. Only one architect, the young Enrique Norten, argued against attempts to try to discover "the Mexican" and for a realization that, though problems and therefore forms will be particular—local and not national—the parameters for architecture reach far beyond national boundaries. Beyond the Barragánesque, the plurality of Mexican architectures deserves attention and development, not the pigeonholing of colonizing practice and criticism. □

Aaron Betsky is a Los Angeles-based freelance writer.



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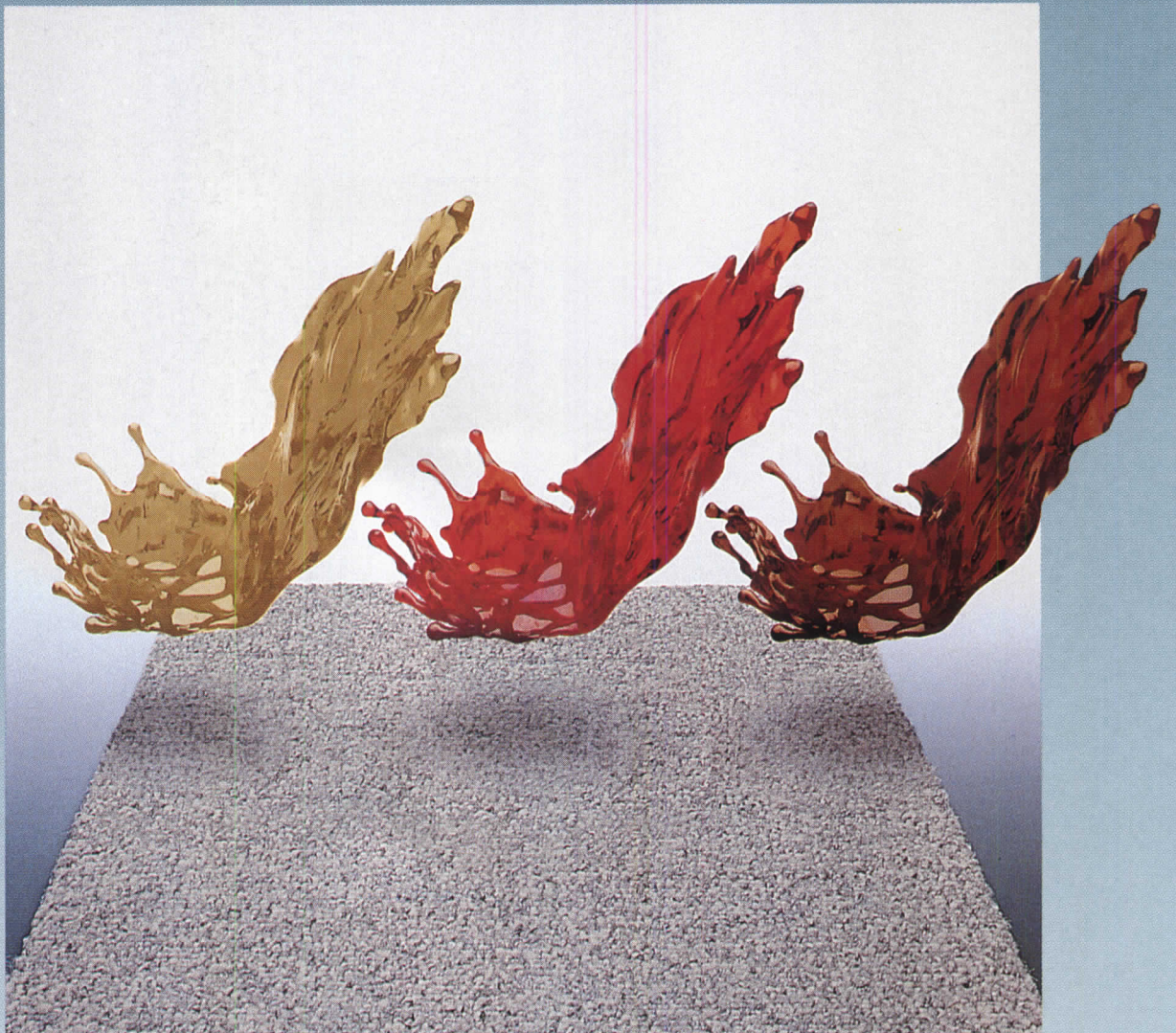
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ARCHITECTURE IN A GLOBAL VILLAGE

The 1990 winners of architecture's most prestigious awards underscore how truly international the profession has become.

When RECORD's editors decided to make Aldo Rossi's Hotel Il Palazzo, in Fukuoka, Japan, this month's cover story, we had no idea that the Milanese architect was about to be named the recipient of architecture's highest honor, the Pritzker Prize (see Design News, page 25). That bit of journalistic good luck aside, Rossi's most recent completed building—a Japanese hotel designed by the American office of an Italian architect—struck us as a notable, but by no means unique, example of the cultural cross-fertilization that characterizes late 20th-century practice. With projects under construction in France, Great Britain, West Germany, and the United States, as well as his native Italy, Rossi continues to produce a world-wide body of work whose design “captures the essence of purpose,” according to the Pritzker jury's citation, and whose forms “have a universal, haunting quality” that defies national and stylistic boundaries.

Like Rossi, the three architects recently tapped as winners of this year's Chicago Architecture Award—Norman Foster of Great Britain, Hans Hollein of Austria, and Arata Isozaki of Japan—exemplify the profession's growing internationalism. The Chicago Award is co-sponsored by RECORD and the Illinois Council of the AIA, and is administered by the Chicago Merchandise Mart in conjunction with the annual NEOCON contract-furnishings show and design conference. The award was instituted in 1984 to recognize Chicago's long-acknowledged architecture tradition by honoring individuals who have “contributed the highest standards of architecture for cities throughout the world.”

This year's winners admirably satisfy the award's primary stated goal. Throughout his career Foster has successfully sought to elevate structure and mechanics to high art, and his Hong Kong and Shanghai Bank tower is perhaps the most exciting urban building erected during the last decade. Hollein, himself the Pritzker laureate in 1985, has brilliantly integrated Vienna's Modernist and arts-and-crafts traditions, producing a marriage of sensibilities best seen in the architect's Städtisches Museum in Mönchengladbach, West Germany. Isozaki, like Rossi, has been able to follow the lessons of history, both Eastern and Western, to create an architecture of universal synthesis. Foster, Hollein, and Isozaki will receive their awards next month in Chicago, where they will be the focus of a NEOCON symposium moderated by Peter Blake on June 15. The work of all three appeared first in this country in the pages of RECORD. We honor them now as recipients of the Chicago Architecture Award. **PAUL M. SACHNER**

TOWER OF POWER



KAZUO NATSURI PHOTOS, EXCEPT AS NOTED

Aldo Rossi's reinterpretation of basic architectural forms continues to elude stylistic classification. At once familiar and highly original, the Hotel Il Palazzo in the Japanese port city of Fukuoka is the latest instant monument by this year's Pritzker Prize-winning architect.

Amid the visual cacophony that is Fukuoka stands Aldo Rossi's Hotel Il Palazzo—a serene tower of orthogonal grids surrounded by demountable bamboo shacks, inscrutable geometric behemoths (mostly pay-by-the-hour “love hotels,” one answer to domestic overcrowding), and a mind-boggling array of neon-flashing marquees. Not unlike the Milan-based architect's own stature within the profession, the building presides over this urban mélange with a constancy and sobriety that shocks partly because of its contrast to its international port-of-call context. Designed by Rossi with Morris Adjmi, his American partner and principal in Studio di Architettura's New York City office, Il Palazzo, or “the palace,” is aptly named. The structure's deep windowless facade projects the seeming impenetrability of a castle, and its position atop a stepped plinth reinforces an image of lofty inaccessibility.

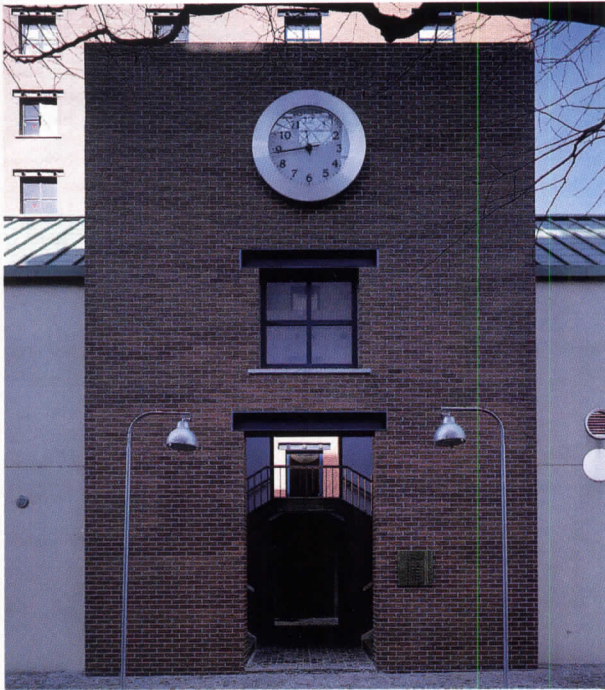


LUCY CHEN

But for all its apparent aloofness and self-possession, Il Palazzo is remarkably civic-minded. The squat slab of guest suites that rises above Alfredo Arribas's state-of-the-art subterranean discothèque and a pair of gable-topped side pavilions, which contain four high-styled bars by a roster of design luminaries (plans page 75 and photos pages 76-77), form a cozy urban enclave in a city where the notion of town planning is complete anathema to more ad hoc local policies of new construction. “Japan is looking for something real, not imitation,” says Mitsuhiro Kuzuwa, the internationally minded developer who commissioned the Italian architect at the recommendation of project art director and interior designer Shigeru Uchida, “And Rossi is building culture.”

To be sure, the pace at which Rossi has been doing just that has accelerated in recent years [RECORD, August 1988, pages 74-89], while the unabashed monu-

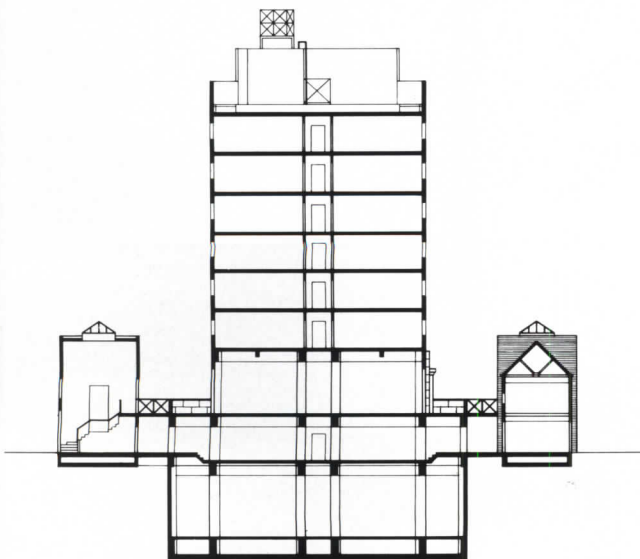
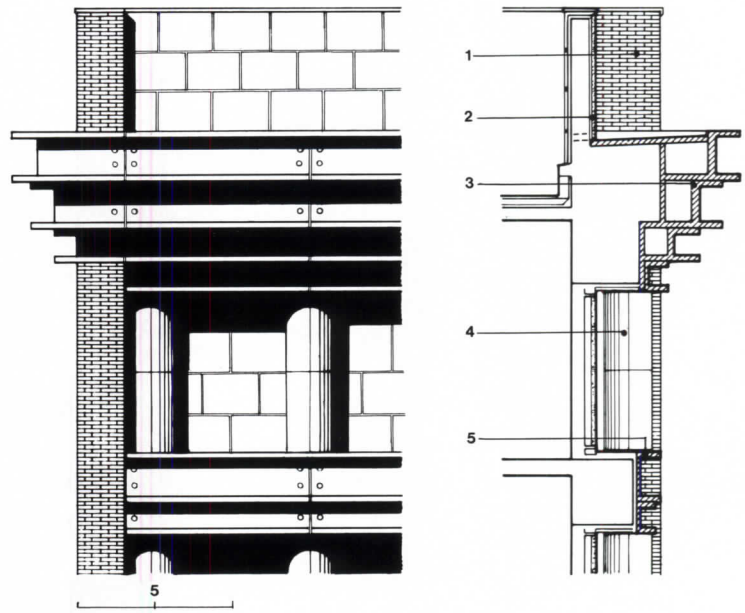




Four bars are reached via two alleys that flank Hotel Il Palazzo (bottom). Brick-fronted pavilions punctuated by signature Rossi clocks (top) mark the cross axes of twin gable-roofed bunkers, which are connected to the main building by pedestrian bridges (section below).



1. Brick fin wall
2. Travertine
3. Copper cornice
4. Solid travertine column
5. Copper lintel

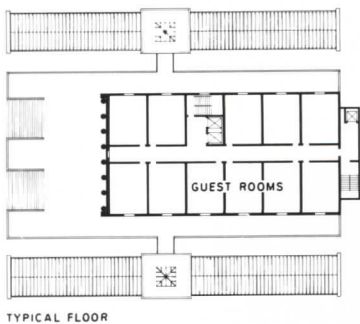


mentality of his architecture has remained consistent, even while many of his colleagues have been producing more deferential buildings. If Rossi's relentless refining of architecture to its most basic geometric forms gives his buildings a certain timelessness, it is the serendipity of place and time, and, on a more prosaic level, construction techniques and generous budgets that breathe fresh life into each new combination. In Fukuoka, for example, Rossi used solid Iranian travertine and copper, chemically treated to speed the patina of age, to transform the potential tedium of repetitive grids into a matrix of lustrous amber columns and green lintels. From afar, the superstructure provides the wandering eye with a welcome sense of order; up close, sensuous materials form a lively collage of surface and shape.

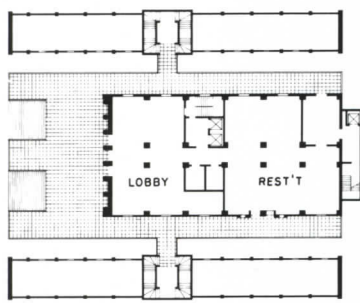
Much like Rossi's habit of repeating oft-told tales, each time with a slightly different emphasis, his buildings incorporate a choice selection of design elements from his storehouse of previously used forms—exposed steel beams spanning openings in a masonry facade, for instance, or cornice fragments that seem to have slipped down the parapet to bracket the corner of a brick wall (page 73). It is not surprising, then, that Il Palazzo exhibits a certain familiarity on first view, which initially distracts from the structure's most startling aspect: the absence of windows in its riverfront facade. As Rossi is quick to point out, this bold strategy still gives front rooms on either side of the double-loaded corridor views, albeit oblique ones, of the water, without compromising the dramatic public face of an ambitious client



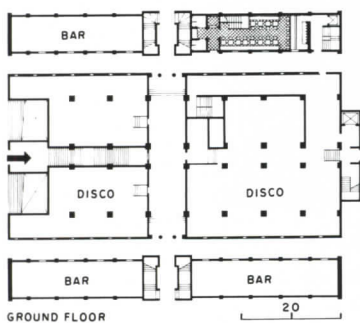




TYPICAL FLOOR



PIAZZA FLOOR



GROUND FLOOR

Shigeru Uchida's allée of treelike terrazzo columns in the lobby and restaurant draws on the bold verticality of Rossi's exterior, while his reception desk interrupts the cross axis to adjacent pavilions (opposite and top right). Mahogany-colored cabinetry (bottom right) is a darker hue of the travertine on exterior columns. The 62 guest suites by Ikuyo Mitsuhashi include Western- (not shown) and Japanese-style (below) rooms, which feature traditional tatami mats and shoji screens in spruce frames.



LUCY CHEN



eager to make his mark on the city.

As for Rossi, he continues to make his own highly distinctive mark not only on Japan, where he has several large-scale commissions, but also in Europe and the United States. And if the architect's past is any indication (and in Rossi's case it surely is), his work will continue to synthesize old and new.

KAREN D. STEIN

*Hotel Il Palazzo
Fukuoka, Japan*

OWNER: Mitsuhiro Kuzuwa/JASMAC

ARCHITECT: Aldo Rossi, Studio di Architettura/New York—Aldo Rossi and Morris Adjmi, principals-in-charge

ASSOCIATE ARCHITECTS: Studio 80—Daidoji Shoji, project manager; Toyota Horiguchi, project coordinator; Dan Sekkei Architects—Mitsuru Kaneko, principal-in-charge

ENGINEERS: Yoshitaka Tsuboi—Yoshitaka Tsuboi Laboratory (structural); Sumio Asaka—JET Kikaku Sekkei (mechanical)

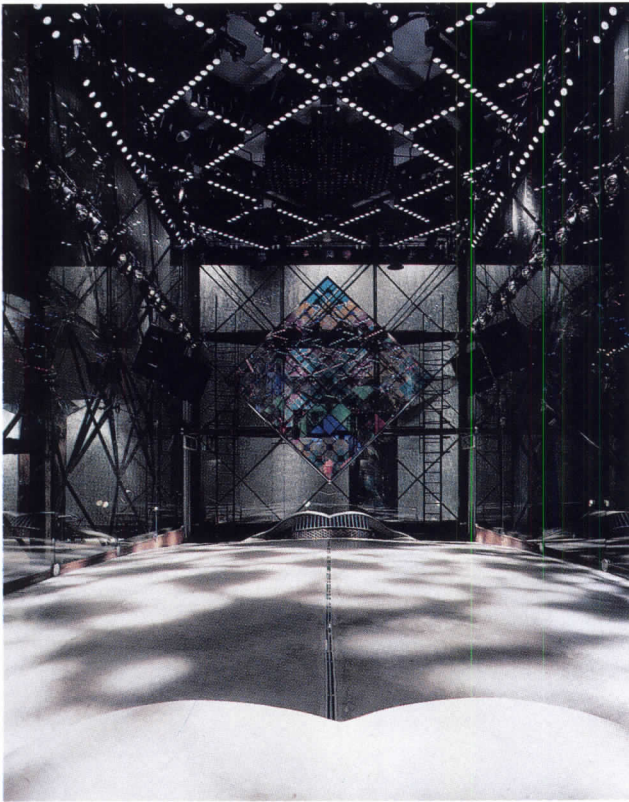
CONSULTANTS: Shigeru Uchida, Studio 80 (art director); Harumi Fujimoto (lighting)

INTERIOR DESIGN: Shigeru Uchida (lobby, hotel restaurant); Ikuyo Mitsuhashi (guest rooms); Aldo Rossi, Morris Adjmi (El Dorado bar); Ettore Sottsass (Zibibbo bar); Gaetano Pesce (El Liston bar); Shiro Kuramata (Russian bar); Alfredo Arribas (The Barna Crossing discothèque)

GENERAL CONTRACTOR: JASMAC and Tatsumura Gumi, joint venture

Opposite: The centerpiece of Rossi and Adjmi's El Dorado bar is a 20-foot-high gold-leafed model of Il Palazzo's facade.

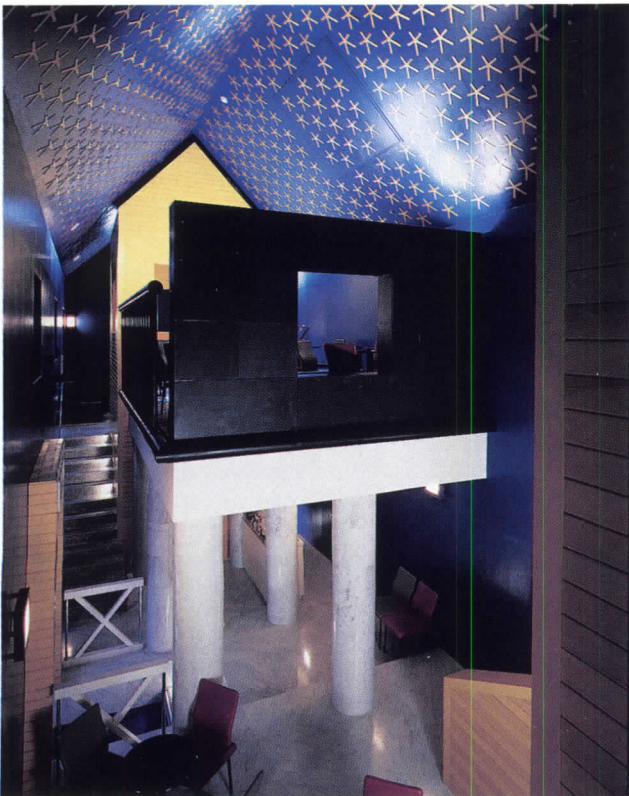
LUCY CHEN



The Barna Crossing's dance floor, by Alfredo Arribas, of Barcelona, is caged in glass and steel.



The mottled surfaces of Gaetano Pesce's El Liston give the bar a post-apocalyptic appearance.



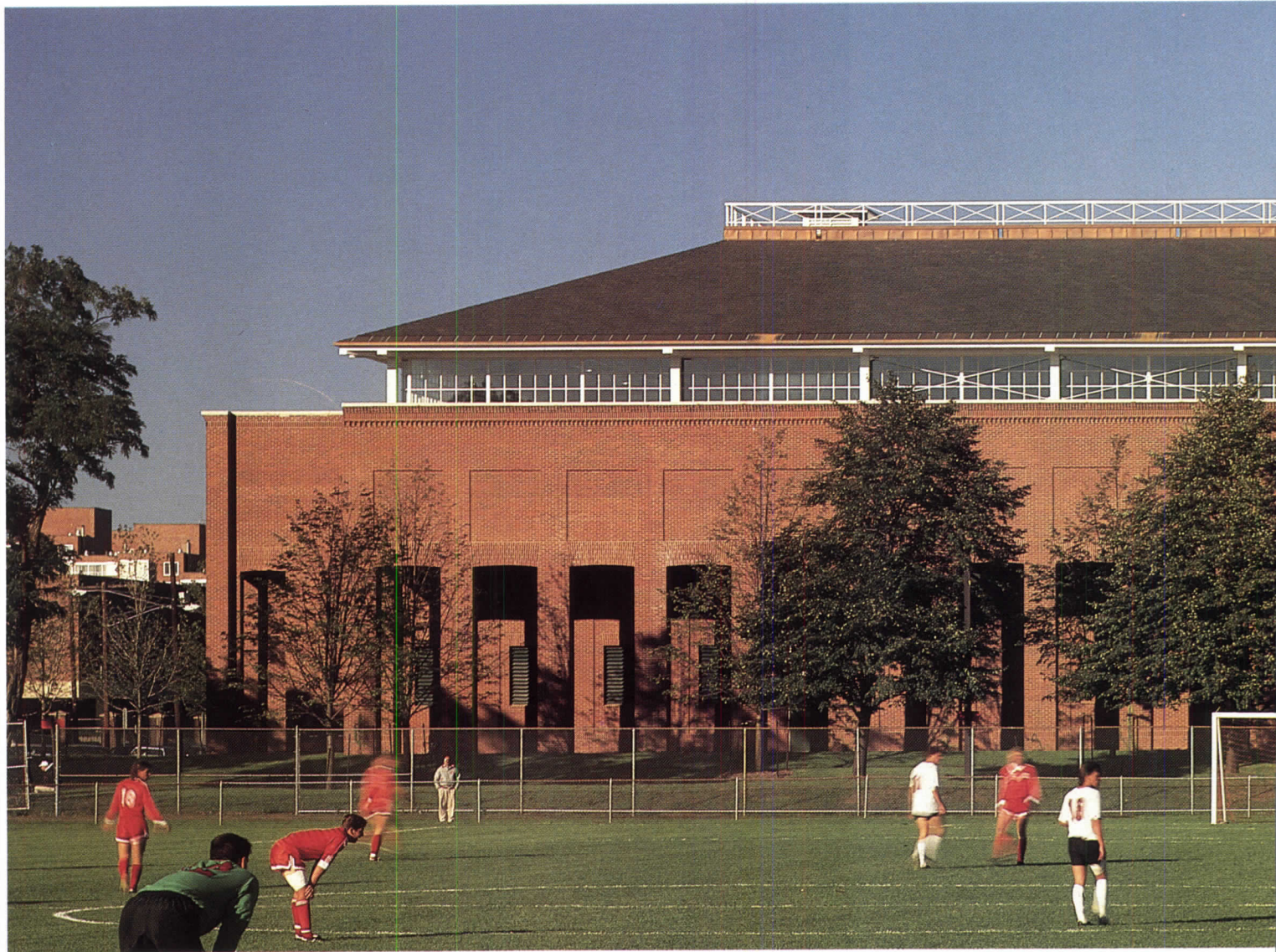
The ceiling of Ettore Sottsass's Zibibbo bar is dotted with wood hieroglyphs covered in gold leaf.



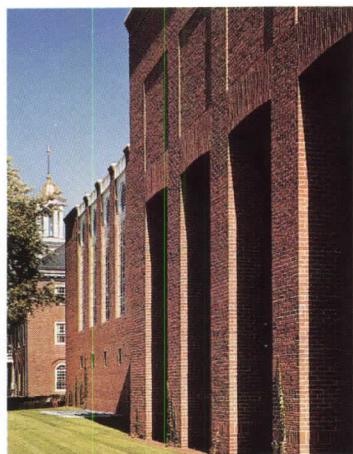
High-keyed colors, fabric roses in acrylic poles add a surreal air to Shiro Kuramata's Russian bar.



A Gym Shapes Up



The arcaded brick exterior of Shad Hall (above) recalls the monumental arched ambulatory of Harvard's stadium across the street, while establishing a proportion appropriate to its own mass and a scale sympathetic to adjacent neo-Georgian buildings (right).



Shad Hall, erected by Harvard's Graduate School of Business as a fitness center for students, faculty, and returning alumni, could not be more different than the last major athletic facility built by Kallmann, McKinnell & Wood—a windowless volume, suspended from external weathering-steel trusses, at Phillips Exeter Academy (1970). Exemplifying the architects' current direction, Shad Hall eschews such techno-exhibitionism and tilts toward traditional—if not exactly domestically scaled—elements. What the firm has not left behind is a powerful sense of the tectonic quality of materials and a sure handling of primary geometries, which here reach across acres of playing fields (above).

A product of the keen competition that currently exists among this country's top business schools, the facility (together with a well-appointed new executive education center) is intended to induce successful graduates to return and share their experience with current students. Harvard asked the architects to pick up the prevailing neo-Georgian character of the original business school complex, an arc of residentially scaled quadrangles (car-

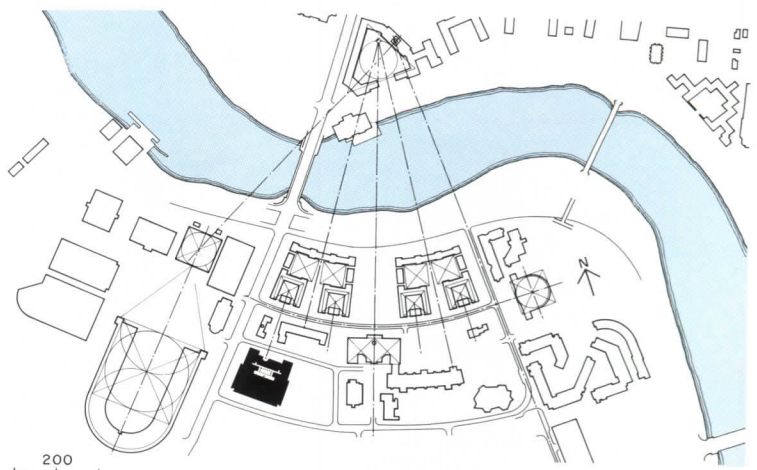
Set between a stadium and a residential quadrangle, Kallmann, McKinnell & Wood's new fitness facility for Harvard's Graduate School of Business straddles the fence—with broad gestures and finely grained details—between abstraction and historicism.



©STEVE ROSENTHAL PHOTOS

ried through in the late '20s according to plans prepared by (McKim, Mead & White) that extends the main campus pattern across the Charles River into Boston. Kallmann McKinnell & Wood linked Shad Hall to this system by following existing building alignments and focusing the entrance through an adjacent courtyard to Harvard Way, the curving cross street that is the school's main artery (site plan right).

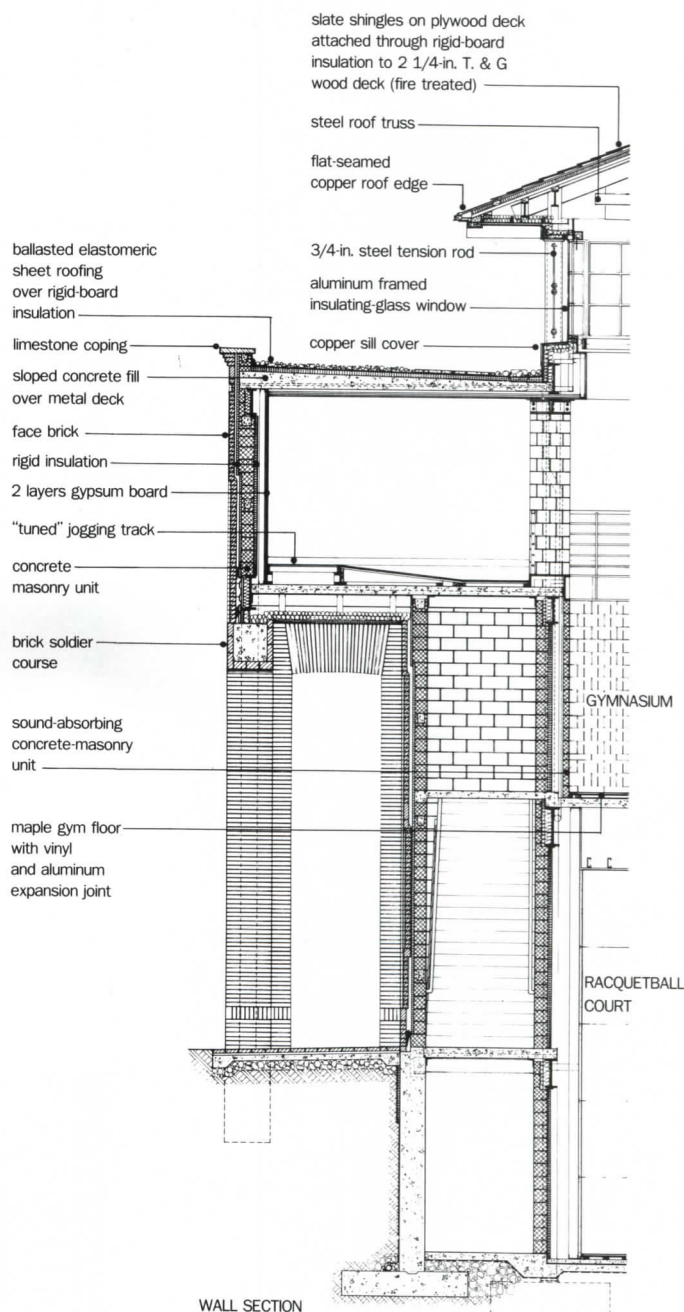
The great sweep of the building's low-sloped hip roof and its firmly rooted, arcaded brick mass are gestures familiar from recent projects by the architects such as the American Academy of Arts and Sciences, and the Becton-Dickinson corporate headquarters [RECORD, January 1988, pages 62-73]. In deference to client wishes, though, some details—the diagonally fretted rooftop balustrade, the band of "attic"-story windows—evoke the existing campus buildings. Kallmann, McKinnell & Wood has suffered no awkward appliqué, however. These classical devices have instead been artfully integrated to articulate the project's ungainly program (wall section page 81).



Shad Hall's massing reflects the character of adjacent buildings in the alternation of red brick and white stucco. Historic details are evoked in the use of corbeled brick courses at the cornice and vertical bands of aluminum-



framed windows (mullions were custom-made). The entrance is overscaled to reach out to Harvard Way (bottom). Disparate architectural parts are revealed in a classically didactic way at the arcade's re-entrant corners (below).



The architects have pulled mundane functions apart to create a rich procession of interior spaces. The double-height hemispherical porch is let into a residual mud-room/vestibule, which leads through a low, apsidal lobby to an airy, arcaded atrium (page 82). From this central meeting place, a stair descends to squash and racquetball courts; vestibules open east and west into locker rooms, and top-lit stairs draw patrons to upper-level facilities (section opposite).

Though there are some surprisingly luxe notes in the striated Burlington slate paving of the atrium and the handsomely detailed red oak (stained black) woodwork in the clubby galley/pub, nothing in this presumably well-budgeted project is gratuitous: "historical" diagonal frets in the clerestory windows, for example, do double duty as stiffening tension cables. There is a studied generosity in the way each programmatic and architectural element is interpreted. Shad Hall is clearly not the split-faced-block hulk so often seen on campuses. It is, instead, Harvard's most welcoming recent building. **JAMES S. RUSSELL**

Shad Hall

Boston, Massachusetts

OWNER: *Harvard University*

ARCHITECT: *Kallmann, McKinnell & Wood, Architects—Gerhard Kallmann, Michael McKinnell, Henry Wood, principals-in-charge; Theodore Szostkowski, project designer; Ron Steffek, project manager; Deborah Collins, Ken Cooper, Vincent Cortina, Marsha Cuddeback, Kenneth Harfiel, project team*

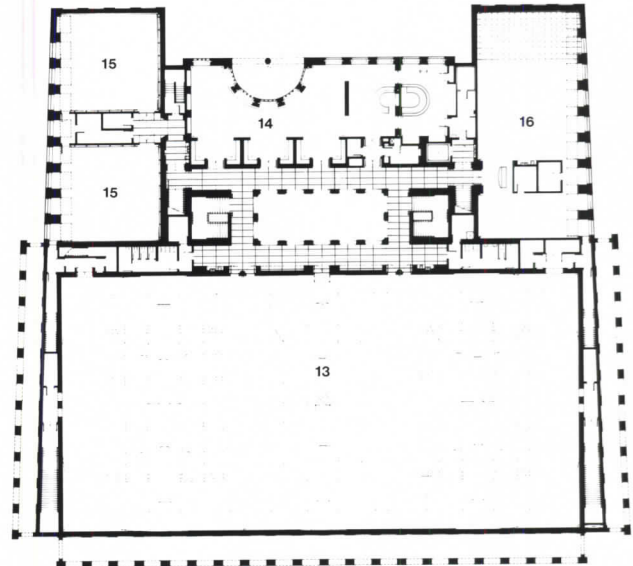
ENGINEERS: *LeMessurier Consultants (structural, mechanical, electrical, plumbing, fire protection), Fay, Spofford & Thorndike (civil), Haley & Aldrich (geotechnical)*
CONSULTANTS: *Stephanie Mallis (interiors), William A. Rae (landscape), Cambridge Acoustical Associates (acoustics), Terry, Chassman & Associates (lighting), Cini-Little Associates (food service), Todisco Associates (specifications), Hal Cutler (code compliance)*

GENERAL CONTRACTOR: *George B. H. Macomber Company*

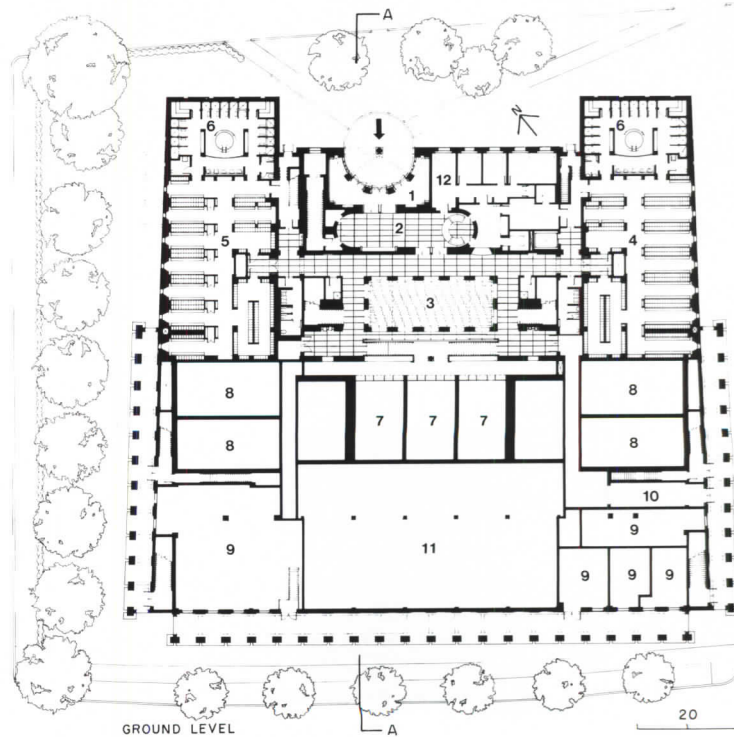


East and west walls are skewed, extending existing building alignments (plans). A diaphanous fretwork of trusses supports the hipped roof over the gymnasium, the walls of which are articulated by a band of glazing, a recessed running track, and a "solid" lower wall of sound-absorbing block (top). The skylit atrium (bottom) is paved in Burlington slate; a snack-galley-cum-pub looks out through the porch to the campus beyond (opposite).

1. Mud room
2. Lobby
3. Atrium
4. Men's locker room
5. Women's locker room
6. Showers/whirlpool
7. Squash courts
8. Racquetball courts
9. Mechanical
10. Receiving
11. Future expansion
12. Office
13. Gymnasium
14. Pub/galley
15. Aerobics
16. Fitness conditioning



SECOND LEVEL



GROUND LEVEL



Northwest Passage



In the Pacific Northwest, the architectural action has shifted from the forest to vertically expanding cities and their horizontally spreading suburbs. A portfolio of six recent projects in the region begins with three major additions to the Seattle skyline.

Not long ago anyone searching for architecture in the Pacific Northwest would have headed for the region's fabled woods and mountains. Here one would find buildings—most often built of wood—that blend naturally with their surroundings, exhibiting forms that evoke barns and other indigenous building types, with perhaps a trace of Japanese influence. Particularly during the last decade, however, the region has grown both upward and outward, and with that growth has come change. Although public-opinion polls continue to proclaim the region's celebrated livability, many residents of the Northwest are not altogether certain they like what is happening.

To be sure, there are still the forests, the mountains, the lakes. And architects in Washington and Oregon are still building rustic, respectful buildings that defer to their natural surroundings. Several such structures have appeared in these pages during the past 12 months, and a ski house in Idaho, by Seattle architect Arne Bystrom, was among this year's national AIA Honor Award winners. A case might still be made that the best architecture coming out of the Northwest is small work.

Yet increasingly, the action is focused in the region's cities and their spreading suburbs. Urbanization has hit the Northwest with a bang, and there seems to be a real danger that this once-distinctive part of the country is becoming more and more like the rest of the world. The most striking symbol of this

trend toward homogenization is Seattle's new skyline (left). Until recently the Washington metropolis was somewhat isolated in the upper left-hand corner of the country, hardly touched by the winds of change that were sweeping architecture elsewhere in the past two decades. Many Seattle architects, moreover, liked it that way. They are proud of the Northwest's architectural heritage and of the fact that it is rooted in nature and history. They are suspicious of fashion, particularly of that emanating from the Eastern seaboard or Southern California.

All of this was reflected in the profile of downtown Seattle—until the last few years, that is. Even well into the 1980s the city's new tall buildings were primarily

Modernist boxes, designed mainly by local architects. But then some new shapes and more-embellished surfaces began to appear on the skyline. The three tallest and most striking of the city's new downtown towers are shown on the following three pages. Though two are by local firms—The Callison Partnership and The NBBJ Group—the third brought a big-name New York City firm—Kohn Pedersen Fox—to Seattle, along with KPF's signature Postmodernist style.

Now that the gates are open, many more national firms are coming. A new downtown art museum by Venturi, Rauch and Scott Brown is under construction, and projects at the University of Washington bear such names as Barnes, Moore, and Pelli. Some of the firms that have dominated the local scene resent this "invasion," but other Seattle architects, particularly younger ones, see in it the promise of a leavening.

This survey of Northwest architecture continues past the Seattle towers to examine three diverse projects: a set of college art studios that exemplifies the hunger for light in this gray climate, and two examples of sensitive design in the burgeoning suburbs of Seattle and Portland, which, like suburbs everywhere, can use a good deal more of it.

Although there is resistance to urbanization in the Pacific Northwest, the changes occurring here are inexorable. The challenge to the region as it undergoes its rite of passage is not just to limit growth, but to shape it. For while urbanization brings with it a host of all-too-familiar problems, it can also be the generator of architectural excellence. **DONALD J. CANTY**

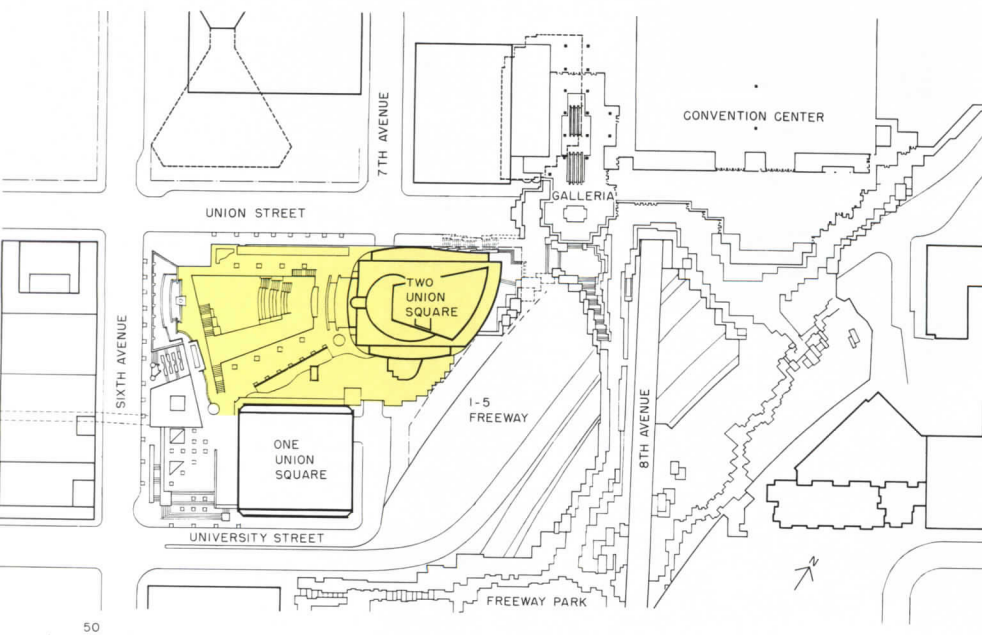
Two Union Square
Seattle, Washington
The NBBJ Group, Architects

The new centerpiece of Seattle's skyline, this 56-story tower is a difficult building to pigeonhole stylistically. It is essentially a Modernist glass tube, topped by a futuristic mechanical penthouse and an American flag, both of exaggerated scale. Yet Two Union Square is hardly an ordinary box: its footprint is a wedge with a curved back wall that follows the site's boundaries. What is more, The NBBJ Group felt free to apply decoration in a way that would dismay a hardcore Modernist. Blue reflective-glass walls bear white metal stripes in reference to the horizontal fenestration of the building's neighbor and sibling, One Union Square (left building in photo left). The tower's four faces exhibit four variations of these elements. On three sides the stripes go almost to the top; on the curved east wall (left), they rise only 14 stories.

The architects claim for the building a new kind of Northwest regionalism that relates to sailboats, ocean liners, and the locally dominant aerospace industry. They even cite a link between the penthouse and nearby mountain peaks. While these relationships may have more to do with intent than result, the tower is a bright presence on Seattle's brooding skyline. Even so, the building is perhaps most successful at ground level, where a block-long plaza is surrounded by shops and restaurants. The plaza features boulders and a water course (more regional references?), and the tower is sited so that the open space catches whatever sun is available. **D. J. C.**



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Washington Mutual Tower
Seattle, Washington
Kohn Pedersen Fox Associates and
The McKinley Architects

This is the tower that brought Kohn Pedersen Fox's distinctive brand of Postmodernism to the Seattle skyline. After initially engaging The McKinley Architects, developer Jon Runstad added KPF to the project team in recognition of the city's growing national stature. Washington Mutual's timing caught KPF in its New York skyscraper phase. Two subsequent designs for the same developer for towers in Portland and the Seattle suburb of Bellevue are more akin to Two Union Square, mixing Modernism with gestures vaguely recalling Russian Constructivism.

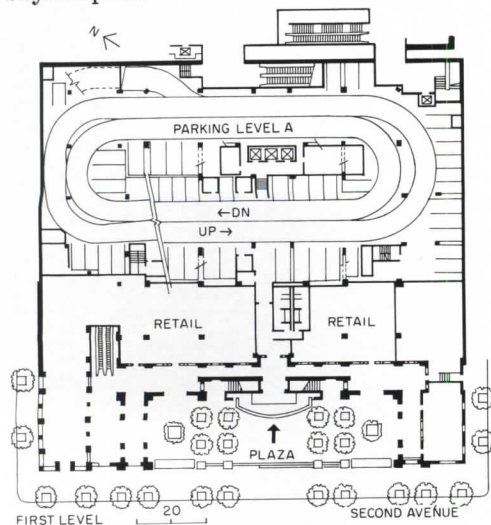
Washington Mutual is a true skyscraper, reaching upward toward the heavens. Its pyramidal top, more than just a flat terminus, is the climax of an intricate, strongly geometrical composition. The tower sits on a square podium that occupies an entire city block. On two sides the podium follows the street line, on a third it incorporates a remodeled and partly reconstructed historic building, and on the fourth it is cut away to create a bilevel plaza (bottom right). The four faces of the tower itself are identical: elongated central bays of blue glass and square corner towers of beige stone rise 47 stories. The palette is deliberately cheerful, if more solid and less reflective than Two Union Square. Bands of stamped metal panels run vertically up the center of the bays; their pattern is repeated in a horizontal band as the tower reaches its first setback at 45 stories.

Just above this point the corner towers end and the central facades turn flat. The plan shifts from an interpenetrating circle and square to a stubby cross. The central facades terminate in arches, and above them is the building's distinctly Seattle crest: a pyramid that pays homage to the crown of the nearby Smith Tower, the city's first, and one of its most beloved, skyscrapers.

D. J. C.



CHARLES KREBS PHOTOS



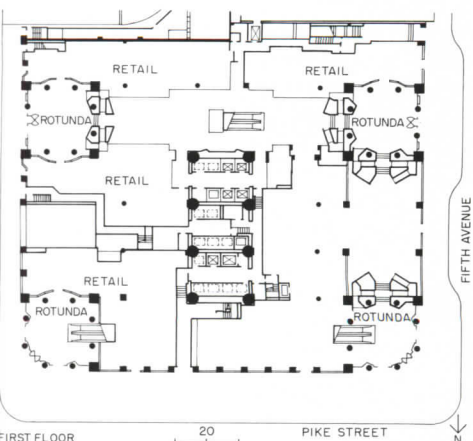
On Washington Mutual's western side, a ground-floor plaza and second-level terrace adjoin a restored historic building (left). The building's three remaining flanks extend to the street lines, offering no particular amenity or welcome to passers-by.

Pacific First Centre
 Seattle, Washington
The Callison Partnership, Architects

The palette of colors and materials that The Callison Partnership chose for Pacific First Centre is similar to that of Washington Mutual, if somewhat more subdued. Here, too, the architects carved away boxiness while introducing varied geometries and a distinctive top. The similarities, however, end there. While Washington Mutual is tall and slender, the Pacific First tower is stocky. From certain vantage points it has the look of a broad-shouldered robot.

The 44-story building's basic shape and structure were preordained. Another developer-architect team had fashioned a building for the site and obtained a precious document from the city called a master-use permit. Any major change in the building's size or envelope would have meant waiting a long period for another such permit. While accepting these givens, the architects set out to make the successor building very much their own, taking cues from the older structures around the site. Gerry Gerron, Callison's partner-in-charge of the project, speaks of these buildings' "exuberance" and says he tried to reflect their spirit rather than any specific details. One form he did take directly was the curving corner of the vintage Coliseum Theater across the street, echoing it in a series of rotundas around the building's three-story base. Encased here is a generous array of shops and restaurants, some in a soaring atrium. (Gerron wisely chose to put the major public space indoors in deference to Seattle's climate.)

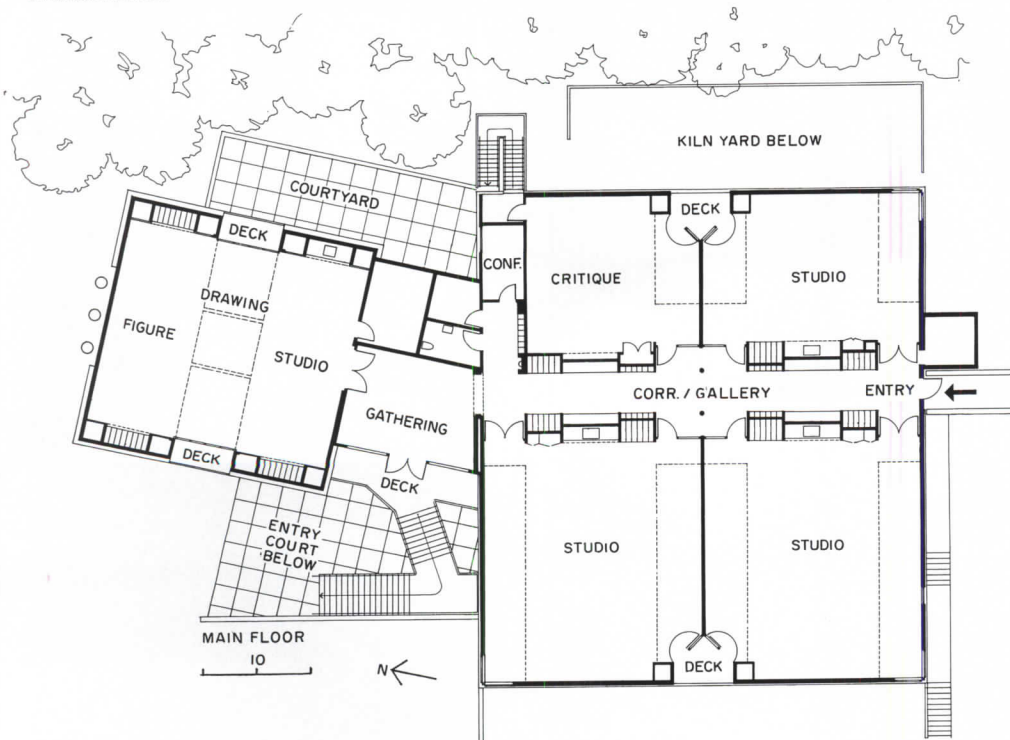
The tower above this welcoming base features a brace of angled prows running up its broad facades; notched corners yield 18 corner offices on typical floors. The shaft steps back once at the level of its smaller neighbors and again as it nears the top, where rectilinearity yields to a curved prow topped by a large beaklike crown. The final touch is a diamond-patterned bronze ship roof with 12-foot corner spires. **D. J. C.**



JOHN STAMETS



JAMES FANNING PHOTOS



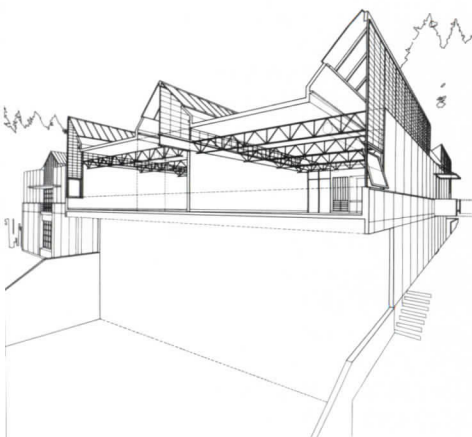
Miller/Hull's new studio building (left in top photo) is linked to the original building (small photo above) by a generous lobby/gathering space.

Evergreen State College Studio Addition
Olympia, Washington
The Miller/Hull Partnership, Architects

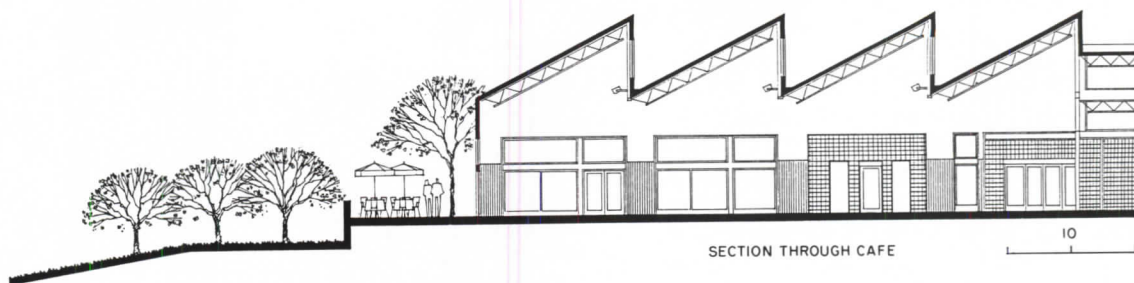
Evergreen was built from scratch as an experimental state college. Its campus is a 1960s-70s period piece of blocky forms and exposed concrete. The art building was no exception. So when the time came to expand it, The Miller/Hull Partnership eagerly seized the opportunity to brighten this corner of the campus. Atop the original building they built a sprightly, angular structure clad in white metal and panels of clear and translucent glass. Adjoining it, they built a new two-story building that repeats the contrast of concrete below and bright, canopylike construction above.

Upper levels of the new and existing buildings mainly hold studio spaces. Walls are of steel studs, the roof system exposed bar joists supporting perforated metal decking. Ducts are exposed, interior walls gypsum board, studio floors are concrete. Fluorescent fixtures are laid upside down in cable trays and reflect off the white metal deck. Architect David Miller says that "we tried to create an informal warehouselike environment on the interior." It is clearly a place for serious work and an environment all but impervious to the students' best efforts to destroy it. Walls and floors are splashed with paint, and all manner of objects hang from walls and fixtures.

But the quality of natural light is not what one would find in a warehouse. In the process of design, the University of Washington's excellent daylighting laboratory performed a series of year-round studies using large models. The result is a system of skylights and clerestories that admit what the architects optimistically term "a vast amount" of natural light. Clear-glass skylights are combined with translucent skylights along two parallel side walls in the multipurpose studios and critique space. In the new building's main studio, a central clear-glass skylight was placed over a still-life podium. There are small balconies off of each studio, and those off the main studio are reached through glazed garage doors. **D. J. C.**



The new studio building (above) features generous clear-glass skylights. In studios added to the original building (left), skylights are a combination of clear and translucent glass. Exposed industrial fixtures give a workmanlike look.



Larry's Market
Kirkland, Washington
Carlson/Ferrin Architects

The problem facing Carlson/Ferrin Architects, in their own words, was "to create a landmark, and a nice place to visit, out of a typically bland building type in a banal suburban landscape." The building type is a supermarket, and banal might be too kind a word for the surroundings. The site is next to a major highway interchange. On one side is a freeway, on another a motel, on a third a gas station. Beyond, suburbia extends to seeming infinity.

Carlson/Ferrin's building is as cheerful as the landscape is dispiriting. The entry side (above) has large glazed areas revealing the culinary delights inside. On one side is a café under a sawtooth roof. Next to it is a flat-roofed element, the bulk of the store, with a canopy bearing five wind vanes (opposite). These not-quite-Palladian figures depict in silhouette a hunter, a fisherman, a sower, a reaper, and a shop-

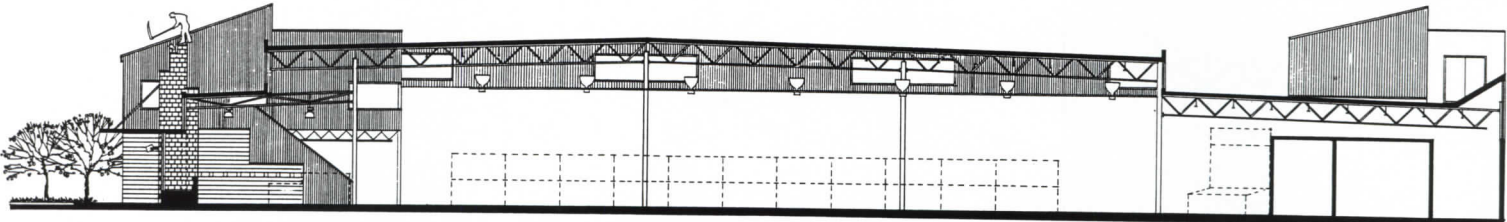
per, complete with basket. Along the potentially deadly freeway side of the market are colorful sheds housing mechanical and refrigeration equipment, with a line of eight-foot-high windows along the parapet that "pop up like crenellations," according to the architects. The windows not only bring additional light into the market by day, they also glow from within at night to announce the market's presence. Walls are patterned block, and downspouts are used effectively as another element enlivening the freeway elevation.

This is Carlson/Ferrin's second successful store for the client that is based on the metaphor of a "food factory." The materials, structure, and lighting are industrial, but used with a light, deft touch. Materials are gray, reinforced smooth and split-faced concrete bearing walls, with natural galvanized and colored corrugated-metal roofing and siding. The structure is composed of steel columns, lightweight steel joists, and metal decking. The structure and decking are painted white and left exposed, seemingly floating high overhead.

They are lit from below, and rows of industrial-metal halide fixtures are hung along the walkway defining the market's central area from the perimeter. There are generous clerestories.

The central area is literally a food warehouse containing rows of industrial shelving for canned and packaged items. This is the area for no-nonsense, let's-get-out-of-here-quickly shopping. Around the perimeter are alluring displays of more discretionary items, a wine shop, a smoke house, a bakery and delicatessen, plus fish, meat and produce departments. Artful graphic lure shoppers to these areas, lighting and ceiling heights change to give them special character, and there are frequent bursts of accent colors. It's all very nearly enough to make shopping a pleasure rather than a chore. Certainly it's a satisfying visual and spatial experience. On the mezzanine there is a test kitchen that is used as a community cooking school, and just outside the entry, a newly planted demonstration apple orchard provides both edible and instructional landscaping.

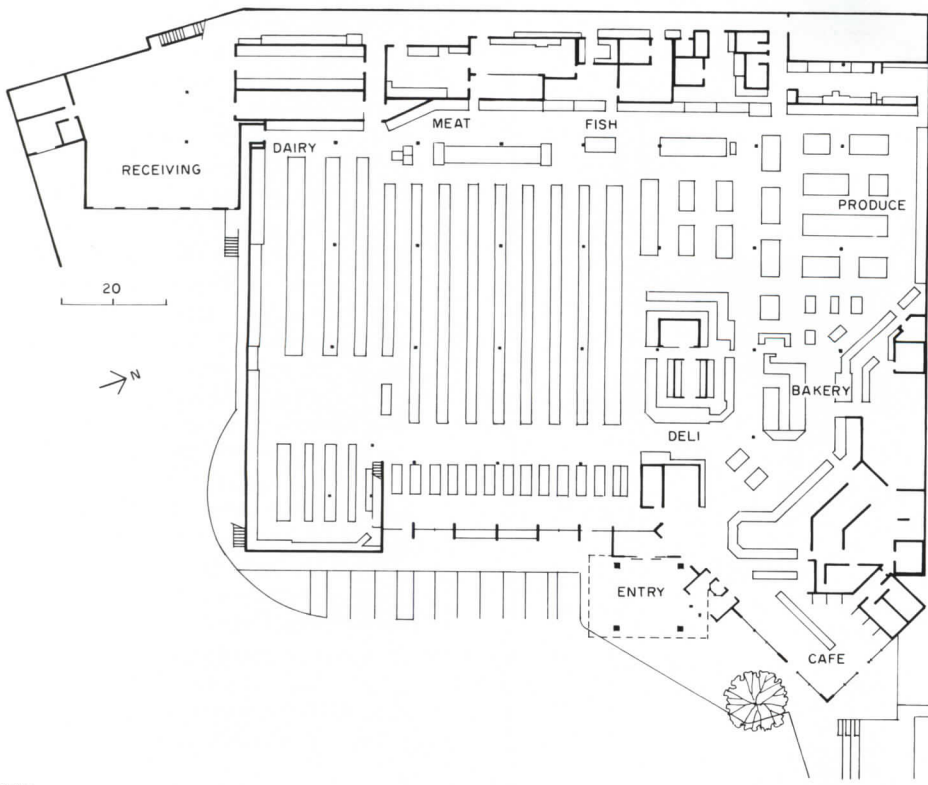
D. J. C



SECTION LOOKING SOUTH



©JAMES HOUSEL PHOTOS



Artist Buster Simpson created the five silhouetted figures, representing “food providers and a shopper,” that crown Larry’s facade piers (top). Interior designer Suzi McKinney is responsible for the store’s airy interior (above), which is bathed in light from clerestories and large expanses of glass.



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Andover Park
Beaverton, Oregon
Fisher-Friedman Associates, Architects

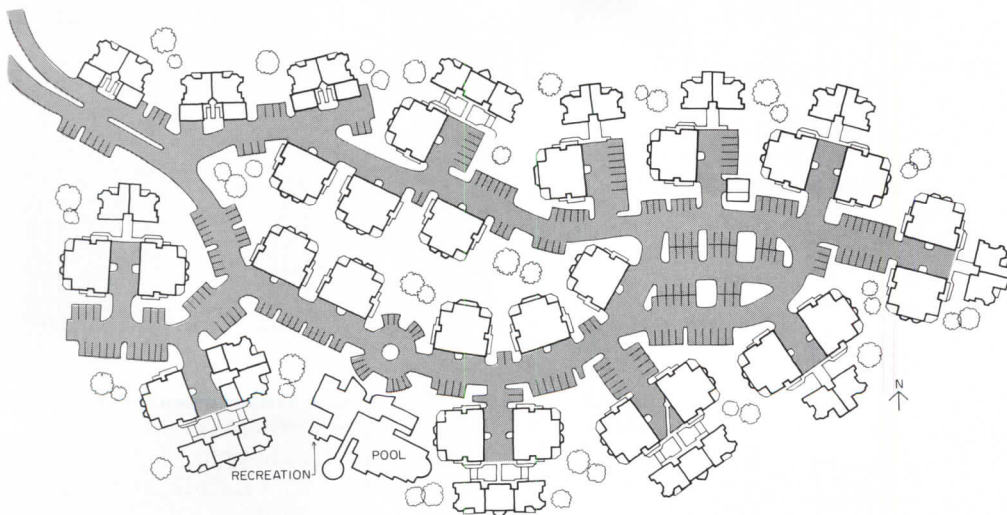
Although this multifamily rental project by San Francisco architects Fisher-Friedman Associates departs from the Northwest idiom, it remains true to the region's traditional respect for nature. In a place where the forest long preceded the suburb, it successfully addresses the challenge of designing high-quality housing without destroying the environment.

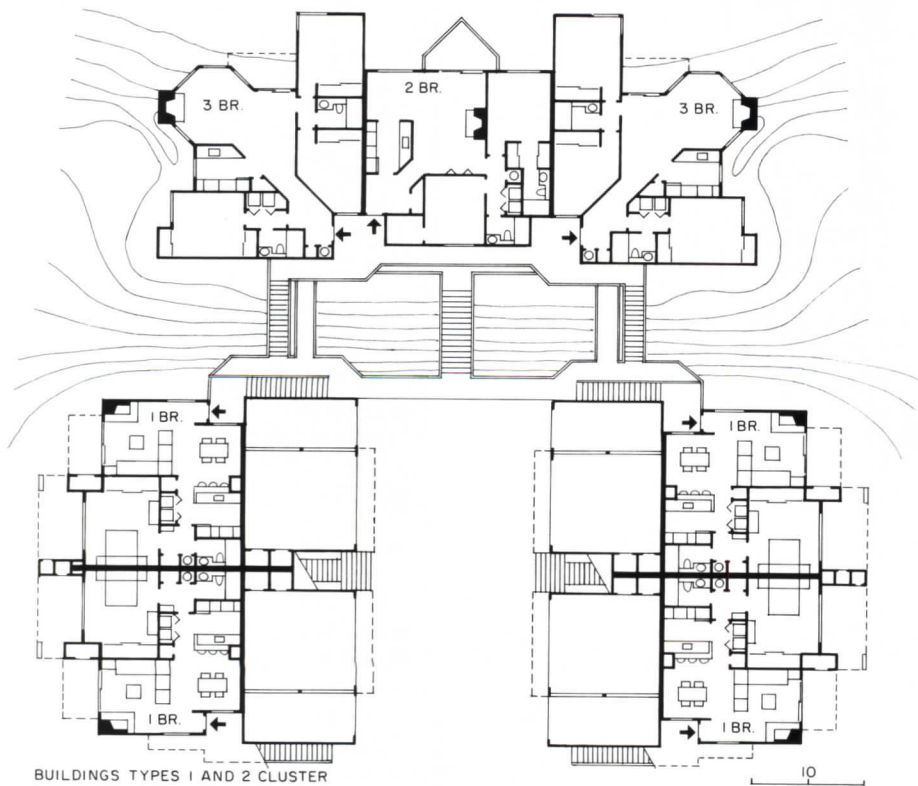
Beaverton is a growth center immediately west of Portland, and Andover Park is Fisher-Friedman's fourth rental-housing development for GSL Properties, a developer that seems to have a genuine interest in architectural quality. At Andover Park, the architects eschewed many of the devices—overhanging roofs, soft colors, and generally familiar forms—that had made their other projects in the area popular. However, they did carry over skillful site planning and a canny balancing of developers' and dwellers' needs. Here the buildings are hard-edged, angular, and plain-spoken, almost to the point of starkness. They are bright white with equally bright red chimneys, their roofs flat, their windows rectilinear, their balconies shiplike.

The project's 24 two-story and 14 three-story buildings are interspersed with trees up to 180 feet tall, a condition that was the prime determinant of both site planning and design. From the outset, the large groves were deemed sacrosanct, especially at the edges and the crest of the hilly 17-acre site. Footprints of the two- and three-story buildings were kept as tight as possible to avoid site disruption, and some parking was placed under buildings to minimize ground coverage.

Andover Park's bold colors and simplicity of form were part of a deliberate effort to create a contrast between buildings and nature, while the absence of roof overhangs permits as much light as possible to enter the buildings. The red chimneys are a unifying visual counterpoint to the tall trees. The overall effect is decidedly Scandinavian, a tradition that has had considerable influence on the Northwest.

The architects speak of the buildings' dominant and subordinate sides. The latter face parking and auto courts, the former are oriented toward downslopes and views. Approximately 92 percent of the 240 rental units have unimpeded views, many with corner apartments that enjoy two, or even three, vantage points. Some of the three-story buildings are given additional character by hexagonal bays. The most complicated forms are found in the artfully composed recreation center, a 6,000-square-foot complex comprising a pool, spa, exercise room, racquetball court, and a variety of community facilities. D. J. C.





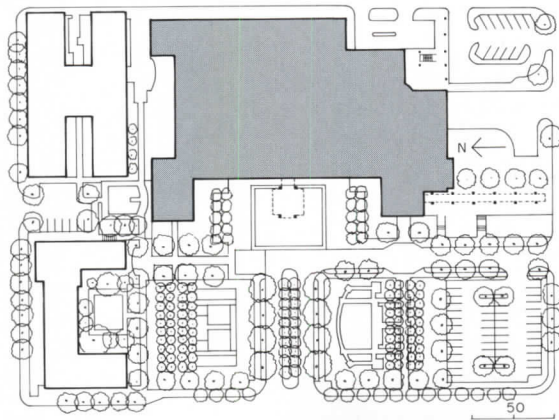
BUILDINGS TYPES 1 AND 2 CLUSTER



The architects call Andover Park's recreation and administration building (above) "relief from the rigorous requirements of the residential units' design program." As the public's first point of contact, the building introduces visitors to the project's architectural character.

SERIOUS PLAY

For a children's hospital, architect David Schwarz prescribes comfort, delight—and a big surprise.



From a distance the first glimpse of the new Cook-Fort Worth Children's Medical Center is a high-profile cluster of true-blue rooftop pyramids, outlined at night in blue neon—a blend of prominence and playfulness appropriate to a hospital building that everywhere balances a manifest seriousness of purpose with a lighthearted welcome for its young patients.

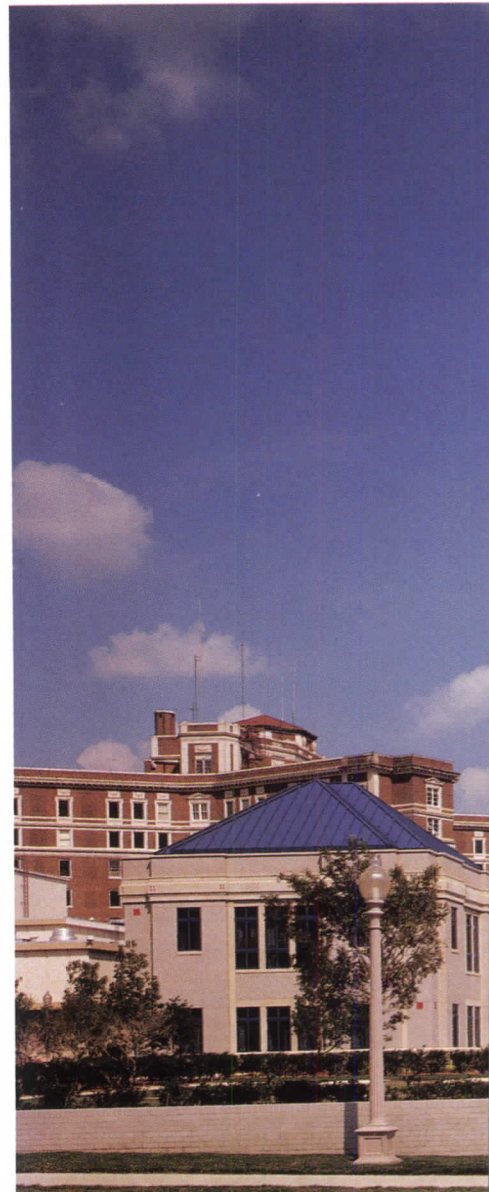
To suggest the image sought, the client referred architect David M. Schwarz to the small Neoclassical building that formerly housed one of the two hospitals merged to create the new center. His response transmutes the client's nostalgia—and his own delight in architecture's attics—into a building that is dignified, even imposing, in its formal symmetry and recall of traditional values. Centered on a two-block site, the hospital's main entrance is approached by way of a strongly axial progression through a landscaped drive to a broad courtyard furnished with a fountain and a porte-cochère roofed with a jaunty white-glass canopy. On either side, low pavilions pulled forward around the court reinforce the sympathetic scale of the entry and underline the hospital's organization into a two-story podium housing major clinical departments (outpatient, surgery, and intensive care) and public areas, and a four-story tower containing patient rooms.

While extending the insistent horizontal of the podium's balustraded cornice, which reappears at the uppermost floors, the pavilions also introduce the rhythmic motif of broad vertical piers and setbacks that, modified and repeated at the base, central bay, and towerlike corners, break the long facade into smaller elements. To achieve a graceful balance of solids and voids de-

spite the awkward floor-to-floor height resulting from deep interstitial spaces, the close-ranked windows of the infill bays stretch from floor to ceiling. Even the cladding of warm white and gray glazed brick interspersed with limestone bands contributes to a reassuring air of stability.

Happily, though, the exterior dignity lapses to festivity in such touches as bright flecks of red glazed tile inset in the neutral masonry, and the vivid contrast of metal window frames and occasional trim—including balconet railings in a tic-tac-toe pattern—that repeat the brilliant blue of the peaked roofs. The same blue metal frames the reflective-glass curtainwalls that mark paths for planned expansion, and covers the walkway that links the hospital with a parking garage in the guise of a castle complete with crenellated parapets. At the rear of the building, which lacked room for trees to soften the blankly utilitarian wall of the emergency department, Schwarz instead "planted" a row of mosaic trees against the glazed brick. At the front, an equally notable planting occurs along the entry allée, where topiary figures of Winnie the Pooh and all his friends line up to cheer children as they enter or leave the hospital.

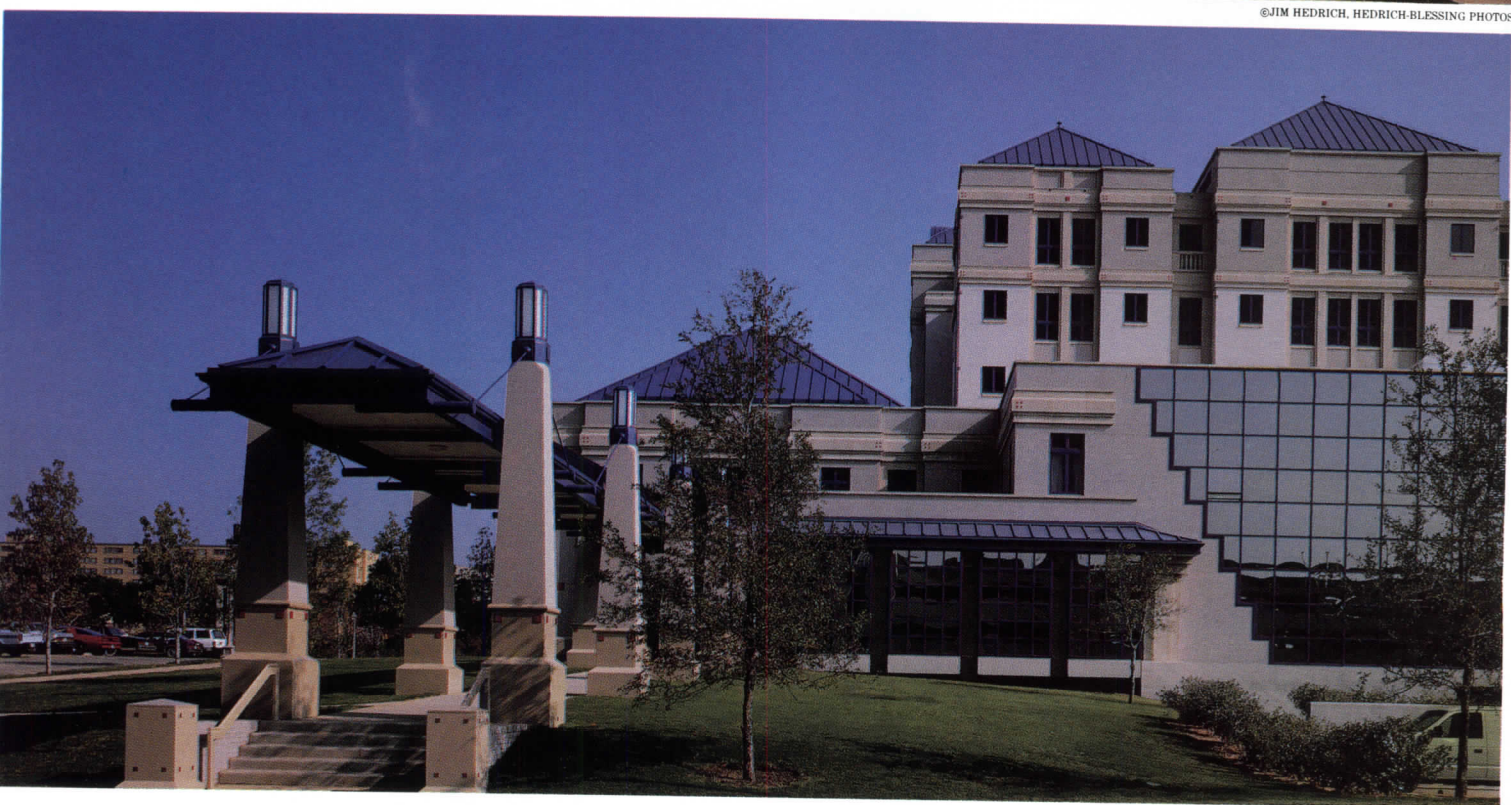
The flights of fancy that brighten the building's face, however, are but whispers of the fantasy extravaganza released inside. The entrance opens directly to a restrained and elegantly detailed two-story vestibule (left) in which visitors' elevators flank an information desk that foreshadows in its kinship with a child's block construction the wonderland beyond. At the heart of the hospital, an atrium that serves as the main lobby assumes the added roles

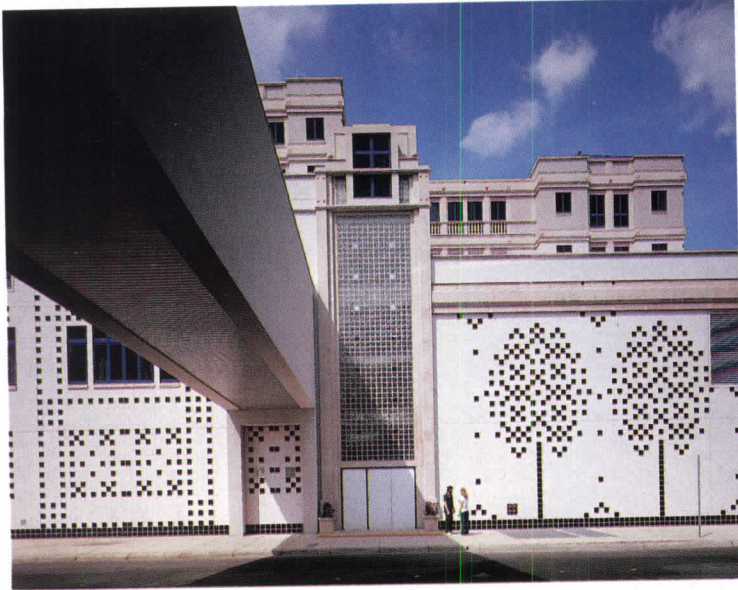


A strongly articulated facade and low pavilions (detail above) counter the hospital's monumentality; bright blue roofs and trim, repeated in a walkway and curtainwall on the south (opposite), enliven its gray brick and limestone skin.



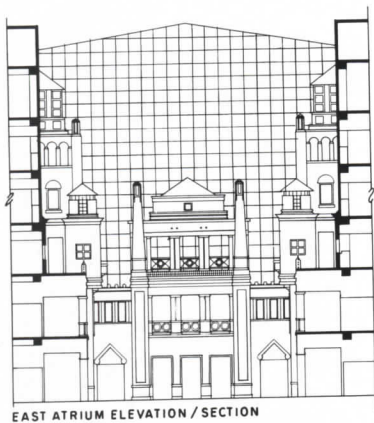
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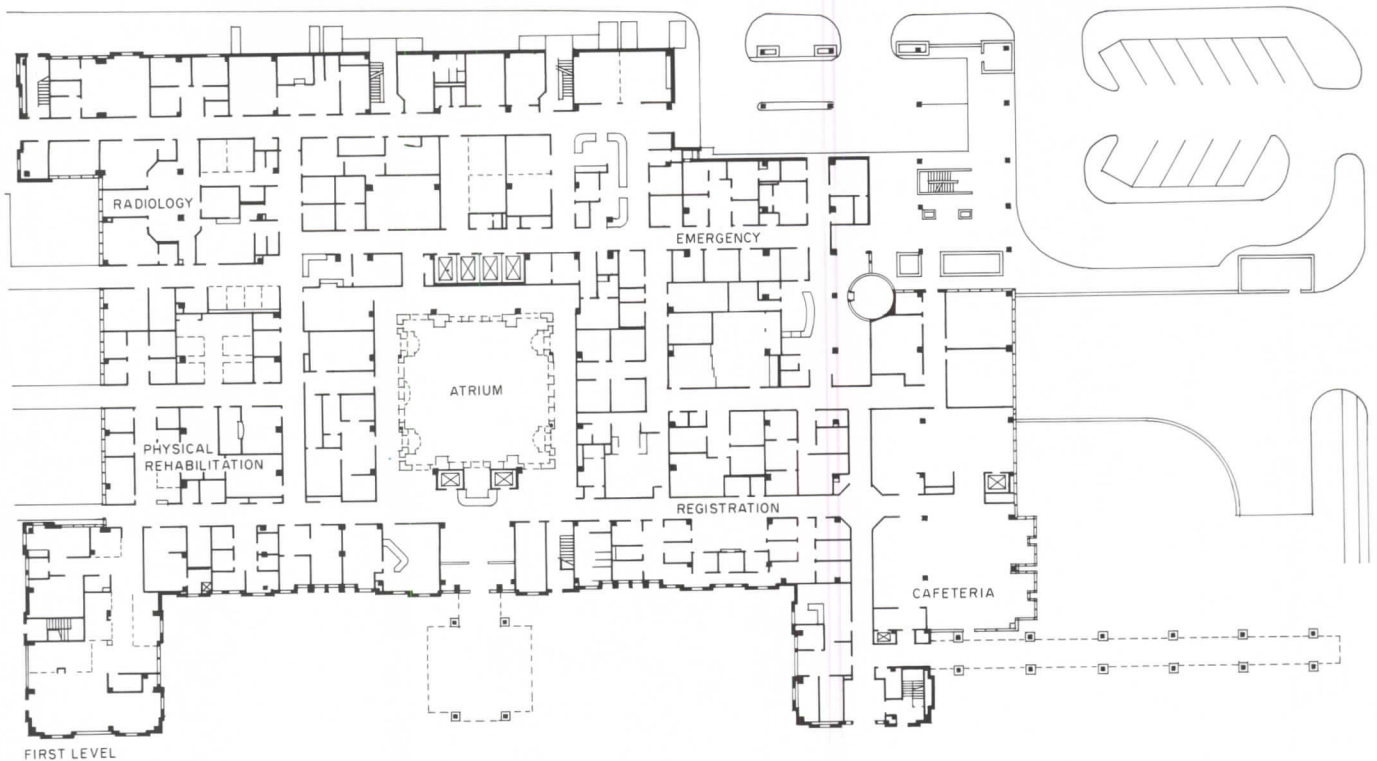
- 1. Bridge to existing hospital
- 2. Tunnel to existing hospital
- 3. Mechanical
- 4. Unassigned
- 5. Post-surgical unit
- 6. Pediatric
- 7. Hematology/oncology

- 8. Neonatal intensive care
- 9. Physical rehabilitation
- 10. Atrium/waiting
- 11. Ancillary support
- 12. Future child-behavior unit
- 13. Adolescents
- 14. Patient registration
- 15. Cafeteria
- 16. Loading



A composition that places specialized departments in a two-story base, with patient rooms in a setback four-story tower above, allows for expansion via satellite buildings around the central mass. Now, bridges link the center with a renovated office facility (top right) and a neighboring hospital to the rear, where mosaic trees enliven a featureless facade (top left). The hospital interior is dominated by an atrium walled with lavishly embellished fairytale "buildings" fashioned of dry wall and imagination. A mirror glass curtainwall employed for the upper walls multiplies the fanciful images while bringing both views and light to adjacent spaces.



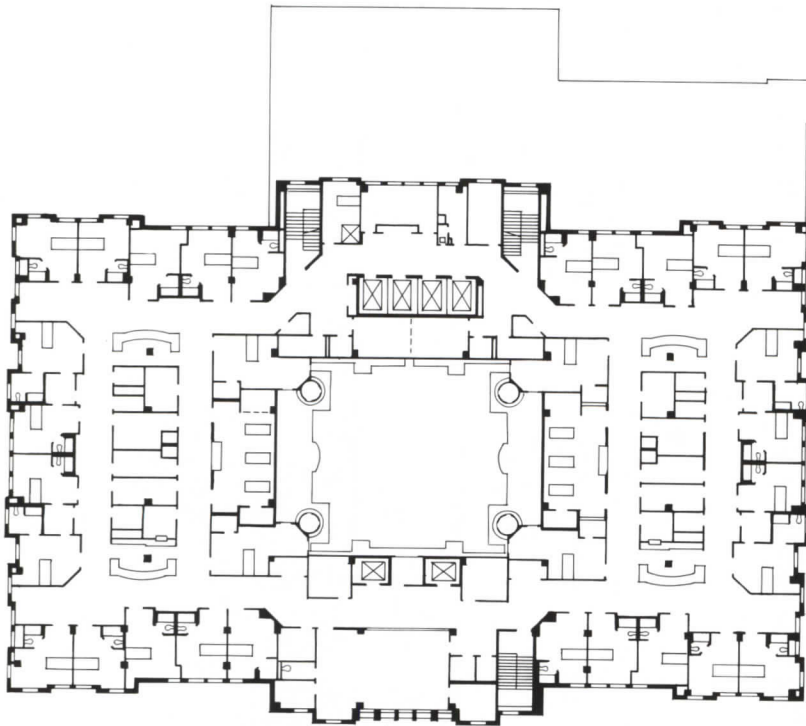


of organizing element and interior landscape. As conjured by David Schwarz and project manager Thomas Greene, it also becomes the courtyard of a fairytale castle—a fanciful montage of doors and windows, columns and piers, balconies and pediments, and culminating corner turrets.

Although balconies step back on the north and south at the third floor where the patient tower meets the base, the atrium space is relatively small (only 56 feet square at lobby level) and disproportionately high. The sleight of hand that transforms its proportions and opens its bounds is literally performed with mirrors. Except for the corner towers, which extend the full six stories, the upper half of the atrium dissolves into a sky of reflective-glass curtainwall and rippling skylight that floods the space with light. In addition to visually completing the projecting towers, the reflections open unending vistas of courtyards repeated across an imaginary city. Despite its luxuriant architectural embellishment, though, the court dodges fussiness with the aid of a quiet palette—white, gray, blue, and rose—accented in the deep blue of the exterior trim.

The well-tempered whimsy of the atrium exemplifies the blend of practicality and play that prevails throughout the hospital, creating a climate that is clearly patient-centered but also emphasizes calm and comfort for visitors and staff. Treatment floors and departments, for example, are serenely rendered in shades of gray, decorated (and color coded) by simple painted stencils in a rainbow of pastels. Signage in-

Introduced by the entry lobby (bottom opposite) and adjoining atrium, the center's two lower levels deploy outpatient services, surgery, and intensive care along major north-south corridors with cross-axial linkages. A similar arrangement within the smaller patient floors eliminates dead-end corridors and offers orienting views outside or to the atrium. Interiors suggest welcome, from playrooms directly opposite visitor elevators to low, "building-block" nurses' stations (below right) that encourage interaction between the nursing staff and their small charges. Patient-room entrances (below left) are marked by identifying plaques and painted stencils that reappear on cornices inside the bright, thoughtfully appointed rooms (bottom).



FOURTH LEVEL (TYPICAL PATIENT FLOOR)

cludes fabric banners and child-high pictograms; such details as cornices, coffers, and lighting are varied to help distinguish major and minor corridors. Most important, patients' rooms are large enough to include a sleeping couch for parents, many feature peaked ceilings or other individual touches, and all boast views either to the outside or to the enchanted world of the inner atrium.

MARGARET GASKIE

*Cook-Fort Worth Children's Medical Center
Fort Worth, Texas*

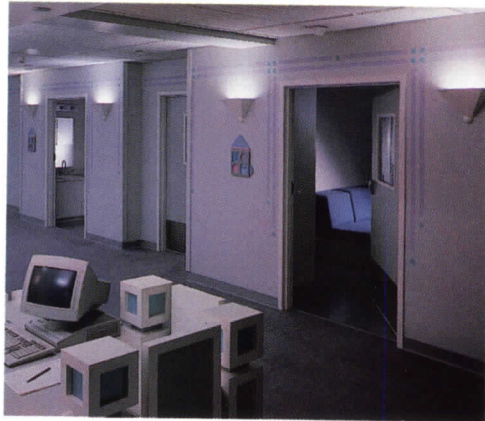
OWNER: Cook-Fort Worth Children's Medical Center

DESIGN ARCHITECT AND INTERIORS: David M. Schwarz/Architectural Services
TECHNICAL ARCHITECT: Karlsberger + Associates Architects Inc. — R. David North, principal-in-charge; Michael Welman, designer; Frank H. Sherwood, project director; Terry Garrett, project architect

ENGINEERS: Paul J. Ford and Company (structural); Blum Consulting Engineers, Inc. (mechanical)

CONSULTANTS: HKS/Health Care Interiors (interiors); EDAW (landscape); Butler, Kosh & Brooks (signage and logo); H.E.L.P. International (equipment plan); Coventry Lighting (lighting); Vorndran and Associates (food service); John Watson, Landscape Illumination (landscape lighting); Jaffe Acoustics (acoustics)

BUILDER: Linbeck Construction Corp.



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DRESSING FOR THE OFFICE

Architects must reconcile often-conflicting notions of corporate image-making when designing office interiors.



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As more and more corporate clients have come to accept, office interiors can be the most seductive or most damning statement of a company's self-image. It is not surprising then that, with increasing frequency, architects and interior designers are being invited to remake even the most workaday office environment into some kind of visual statement. Though the commission may be confined to the more public areas—say, a conference room or reception lobby—in order to minimize expenses, the expected return on any-size investment is anything but modest. When designers are questioned about the program for such a commission, the standard reply is: “The client wanted something different, something special. They want to appear unique.”

The results are as varied as are the manners chosen to convey a particular message—subliminal, subversive, downright showy—or, in some cases, including the projects shown on these pages, a careful, or even perhaps unintentional, blend of all three.

From the outset, the three clients included in this portfolio—*Vogue* magazine, *Spy* magazine, and the accounting firm of Deloitte & Touche—shared few conceptual similarities beyond the fact that both magazines view themselves as steadfastly in the vanguard in the fields of fashion and satire, respectively, and wanted spaces to reflect that. But whether trend-setter, reputation-debunker, or number-cruncher, each client had a serious agenda that married a

1. Vogue Conference Room, Tod Williams Billie Tsien and Associates, Architects

2. Spy Offices, Chan and Mohny Architecture

3. Deloitte & Touche Headquarters, Peter Pran and Carlos Zapata for Ellerbe Becket/New York, Architects

sense of design with a need for good public relations.

The three teams of designers asked to reconcile these often-conflicting requirements were faced with existing conditions that ran the gamut from the prosaic to the architecturally distinct: a 1,350-square-foot conference room on the 13th floor of the Condé Nast office tower on New York City's Madison Avenue (*Vogue*), the gutted 10,000-square-foot top floor of a turn-of-the-century edifice in the less well-heeled Manhattan neighborhood of Union Square (*Spy*), and an 11,000-square-foot reception and executive area within the Cor-Ten steel envelope of a Kevin Roche building from the 1960s, which is located in the suburban community of Wilton, Connecticut (Deloitte & Touche).

At *Vogue* (pages 104-107), partners Billie Tsien and Tod Williams drew on, appropriately enough, a timeless classic of clothing design—“a white linen dress” is how Tsien describes the partners' inspiration for the project. Tsien and Williams's sparing use of luxurious materials, including stainless steel, sandblasted glass, and lac-

quered and gold-leafed wood, reveals that they were able to separate high style from the more transient whims of fashion.

At *Spy* (pages 108-109), the firm of Joan Chan and David Mohny took cues from the work habits of their clients, creating an outdoorsy colonnade of rough-hewn wood beams as a soothing backdrop for the magazine's fast-paced editorial staff. A palette of modest materials, including plywood and slate, not only allowed the architects to stay within a limited budget, but also visually projects *Spy's* avowed dislike of the pretentious.

At Deloitte & Touche, architects Peter Pran and Carlos Zapata of Ellerbe Becket's New York office faced a more unusual circumstance: a client that wanted to overcome its existing public image of conservatism by commissioning architecture that was on the cutting edge (pages 110-115). Pran and Zapata obliged the accounting firm's desire for a corporate makeover by designing an intricate collage of copper, stainless steel, and mahogany partitions; suspended panels of sandblasted glass; curved arcs of steel supporting slabs of clear glass; and planes of black marble that effectively challenge any lingering impression of accountants as dullards. But, like most interior projects, the commission also gave the architects a much sought-for opportunity to make a statement of their own—namely that their ideas, which to date are mostly documented on paper or in model, can in fact be realized in three dimensions. **KAREN D. STEIN**

Tsien and Williams enlivened the prosaic rectangular perimeter of Vogue magazine's conference room by adding a 60-foot-long curved wall sheathed in gold leaf (below and opposite). Aluminum panels and sliding etched-glass doors separate the main meeting area from a more private dining room (bottom).

IN VOGUE

Billie Tsien and Tod Williams fashioned a glamorous backdrop for Vogue's new editorial regime.

Vogue Magazine Conference Room
New York City
Tod Williams Billie Tsien and Associates, Architects



Renovate a corporate conference room? What could be a simpler assignment for two accomplished designers who have successfully completed far more intricate interior commissions [RECORD, Mid-September 1988, pages 106-117]? But in the case of the *Vogue* conference room, located on the 13th floor of the Condé Nast headquarters building on Manhattan's Madison Avenue, even the givens presented to Tod Williams and Billie Tsien were complicated, if not downright daunting: A consortium of demanding clients that included Anna Wintour, the fashion magazine's newly appointed and much-publicized editor-in-chief, and Alexander Lieberman, the publishing company's editorial director and much-revered éminence grise.

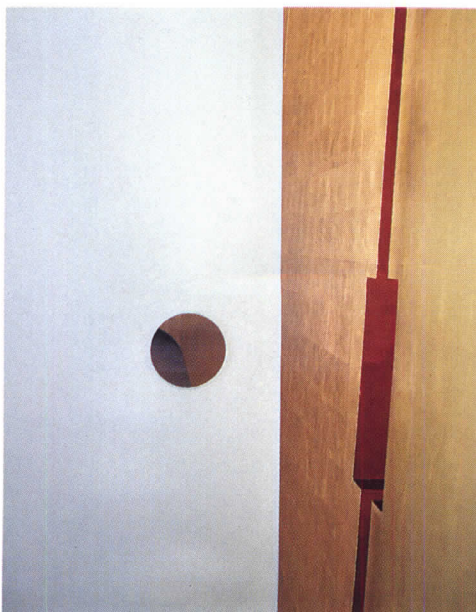
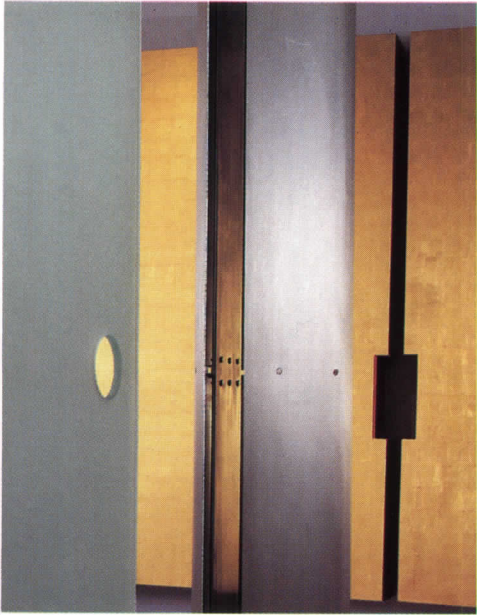
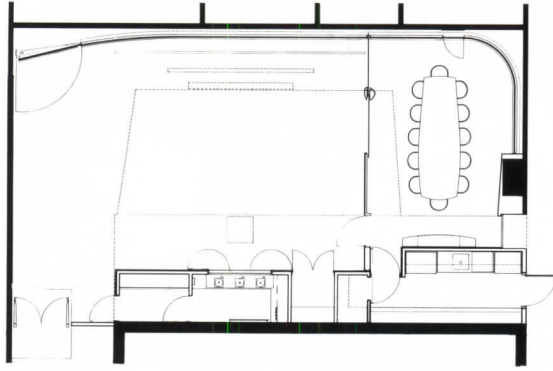
If the task of reconciling various highly reputed esthetic agenda was not problematic enough, the existing conditions wrought by the hand of Lieberman himself only added to the potential dilemma. Not surprisingly, Wintour wanted to update the décor of the room, a 1960s-vintage composite of white laminate surfaces and gray wool carpeting, to more accurately reflect her vision of a trendsetting magazine for the 1990s. The desired effect as Tsien understood it through a series of meetings, and through her own less-official scrutiny of Wintour's personal style, was to be thoroughly "modern" and, though seemingly impossible, even more pared-down than before.

As a point of departure, Williams and Tsien adapted the well-worn metaphor of architecture-as-clothing to the more incisive parti of clothing-as-architecture. The duo envisioned the modest 1,350-square-foot suite of meeting/screening and dining rooms as "a white linen dress," in Tsien's words, which they then sparingly adorned with a luxurious "scarf"—a 60-foot-long gold-leaf wall trimmed in Tuscan red lacquer that seems to hover between ceiling and floor (opposite) while adding a sweeping curve to the room's otherwise decidedly rectilinear spatial attributes. In pro-



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Tsien and Williams used a minimal yet luxurious material palette that included brushed-finish etched glass for sliding doors, gold leaf and red lacquer for a curved partition (top left and bottom right), double-bleached anigré veneer for

cabinetry, zebra-stripe upholstery for couches (top right), aluminum and plexiglass for the entrance (bottom left), and Brazilian granite for the dining table (opposite), which is surrounded by the designers' own Tavern Island chair.

grammatic terms, the golden wall fulfills the varied demands of the editorial meetings and advertiser presentations that occur in the room—more specifically, it serves as a backdrop for clothing displays and for movie screens that can be lowered from the ceiling.

To accommodate the vast array of necessary equipment, both high-tech and high-fashion, the designers tucked an audiovisual booth and a generous closet behind a wall of custom-made built-in cabinetry constructed of double-bleached anigré veneer. In the dining room, the subtle blond-wood finish is repeated in storage units that front a small kitchen and pantry (plan above and photo opposite). Partially enclosed by etched-glass sliding doors set into an aluminum-panel framework, the centerpiece of this more intimate area is Tsien and William's dining table—striated blue, white, and ivory Brazilian granite set atop a steel base whose taut profile echoes the floating planar effect of the room's gold-leaf wall.

Although clothing design and interior design may share sources of inspiration, Williams and Tsien were understandably cautious about embodying the more transient whims of the former in their work. Concludes Tsien: "Fashion is about being new; architecture is perfected through time." Perhaps it's no mere coincidence that legendary *Vogue* editor Diana Vreeland, who was the mastermind of the magazine from 1963 to 1971, had a particular penchant for zebra-stripe fabric and red lacquer finishes, two motifs featured in the new conference room. Clearly, some things never go completely out of style.

K. D. S.

Vogue Magazine Conference Room
New York City

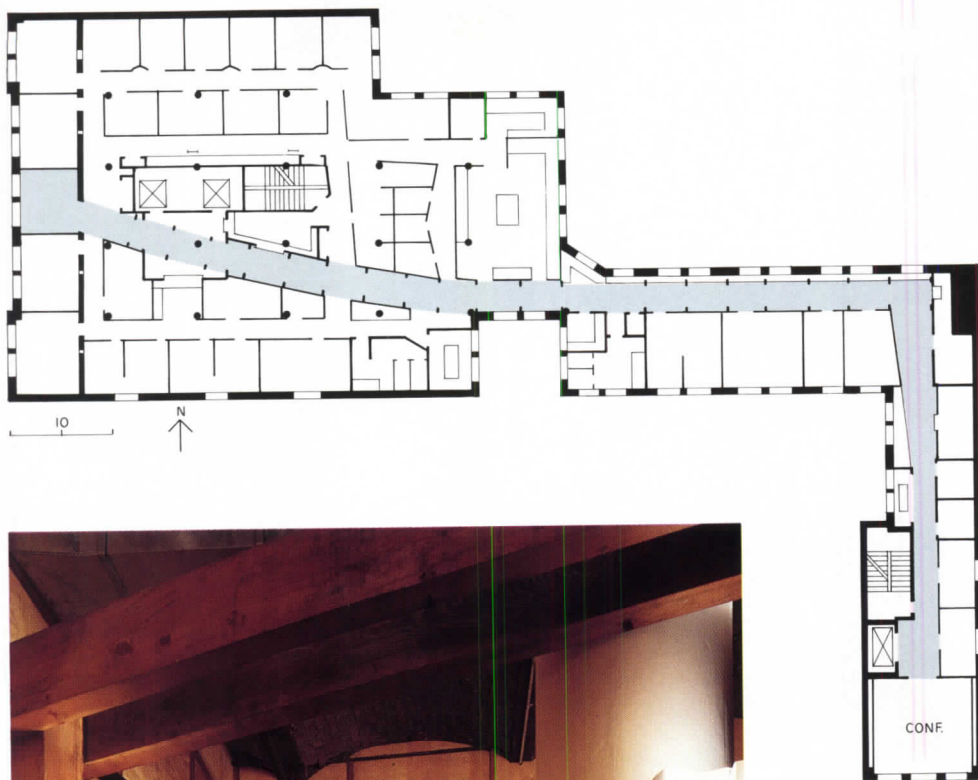
OWNER: Condé Nast Publications, Inc.
ARCHITECT: Tod Williams Billie Tsien and Associates—Billie Tsien and Tod Williams, partners-in-charge; Brett Ettinger, project architect
CONSULTANTS: Abbott Glass (aluminum, plexiglass, and etched-glass doors); William Somerville Cabinetmakers (custom cabinetry); David Anderson (gold leaf)



SPYING ON THE SQUARE

Offices for an irreverent magazine bring the garden folly indoors.

Spy Magazine Offices
New York City
Chan and Mohny Architecture



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A timber “pergola” serves as a key circulation space, running through the lobby (above) and into the offices (opposite, bottom right). Slate siding on a sloping wall (opposite, top and bottom left) gives an outdoor feeling to the offices. Hung ceilings were removed to expose brick barrel vaults (opposite, top right).

For *Spy*, the puckish magazine that delights in rummaging through the dirty laundry of the rich and pretentious, the architecture team of Chan and Mohny designed offices that are simultaneously subversive and bucolic. Using 6- by 10-inch pine timbers to build an indoor “pergola” and applying a variety of typically exterior materials to this 10,000-square-foot interior, the architects created a gardenlike setting for an often frenetic editorial staff.

“Rather than doing something sleek and hard-edged, we designed something more peaceful,” says David Mohny. Greenish-hued slate, plywood with mahogany battens, and gray carpeting set the tone for the top-floor space, while a small aquarium (dubbed the “water folly”) and a gravel-bordered lounge add the sort of eccentric touches found in English garden designs.

A key element is the meandering pergola, which stretches from the four partners’ offices overlooking Manhattan’s Union Square, through the lobby, and to the main conference room (or “laboratory,” in *Spy*-talk). Because it is a series of timber arches set at 8-foot intervals, it is both separate from and open to the various offices.

Eschewing drywall as much as possible, Chan and Mohny defined work areas with battered plywood walls topped by fluted glass, and separated the partners’ offices with a battered slate wall punctured by arrow-slit windows. **CLIFFORD A. PEARSON**

OWNER: *Spy Publishing*
ARCHITECT: *Chan and Mohny Architecture—David Mohny, Joan Chan, Nathan Cherry, Antonio Rossello-Salazar, James Mandle, Greg Ensslen, Ann Krsul, project team*
ENGINEERS: *Robert Silman Associates (structural); V/S Consulting (mechanical)*
GENERAL CONTRACTOR: *Kanwhel Construction*



The reception area (opposite) sets the tone for the offices, combining a curving wall of metals and mahogany with a long desk of clear glass (below). The steel arc supporting the desk introduces the theme of movement that is picked up by a floating light fixture running the length of the offices.

MODERNISM IN MOTION

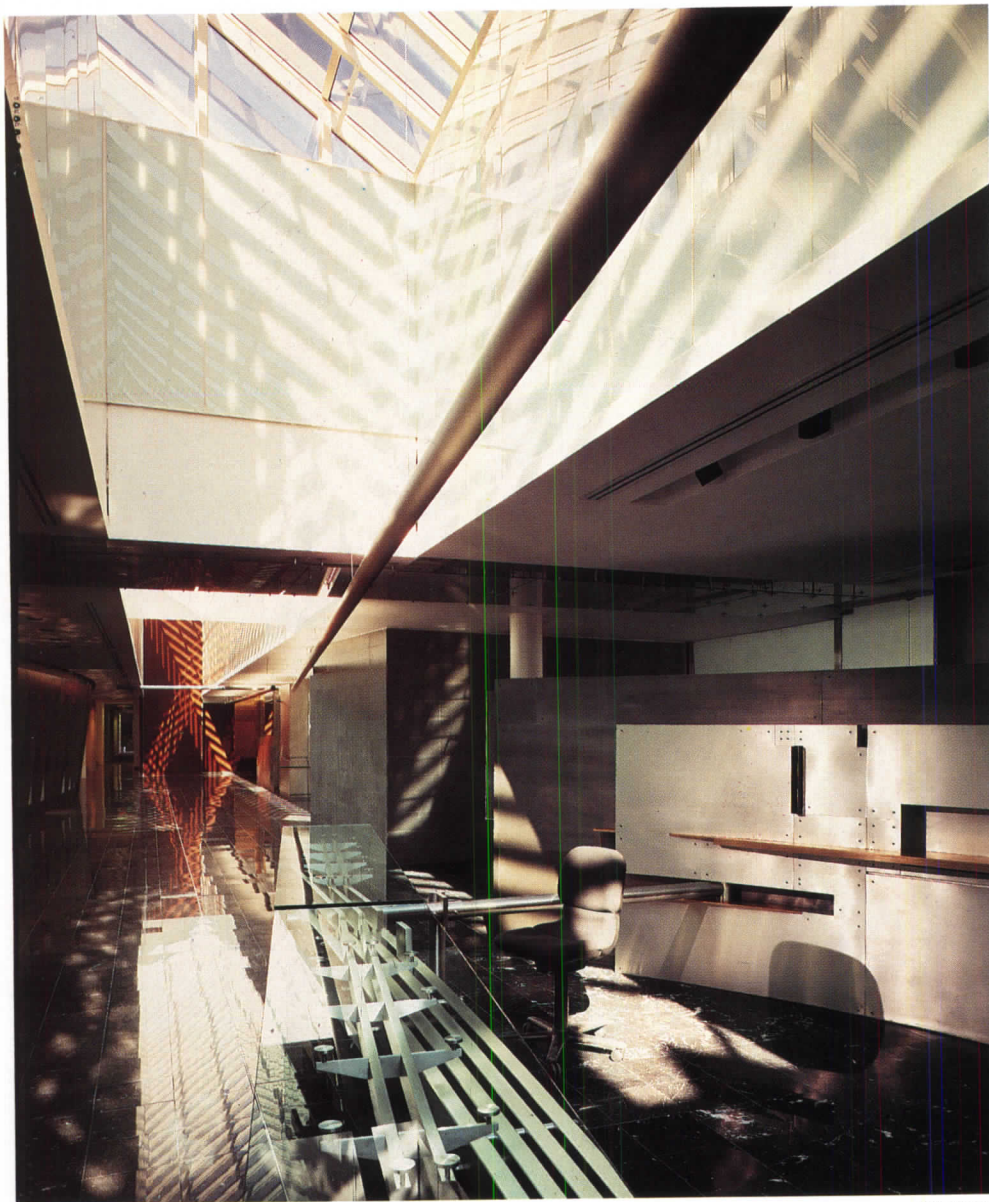
New executives offices by Peter Pran and Carlos Zapata put an accounting firm on the cutting edge.

Deloitte & Touche Headquarters
Wilton, Connecticut
Peter Pran and Carlos Zapata for
Ellerbe Becket/New York

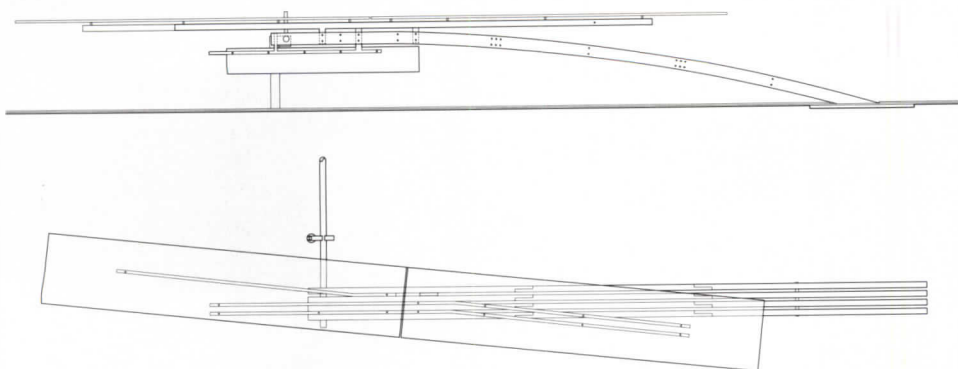
Anyone expecting wainscoting, chair rails, and Chippendale furniture at Deloitte & Touche's new offices in suburban Connecticut is in for a big surprise. The daring interiors by Peter Pran and Carlos Zapata effectively shatter the stodgy stereotype normally attached to accounting firms and replace it with an image that is fast-paced and forward-looking. The message is clear: These accountants are on the go.

The same is true for the project's architects. Since they first teamed up five years ago, Pran and Zapata have been in the forefront of a newly revived Modernism that combines structural gymnastics with a sophisticated feel for materials. In their designs for a new terminal at JFK International Airport in New York and the University of Minnesota School of Architecture [RECORD, April 1989, pages 90-95], the designers created architectural collages in which cantilevered planes and sweeping arcs set buildings in motion. Although neither project was awarded to Pran and Zapata (the JFK terminal went to Helmut Jahn and the Minnesota school went to Steven Holl), their designs attracted considerable acclaim and helped bring the two architects into the public eye.

The same sense of energy is evident in the Deloitte & Touche offices, set inside a Cor-Ten steel complex designed by Kevin Roche in the 1960s. The Roche buildings, which have aged extremely well, represent a very different kind of corporate Modern-

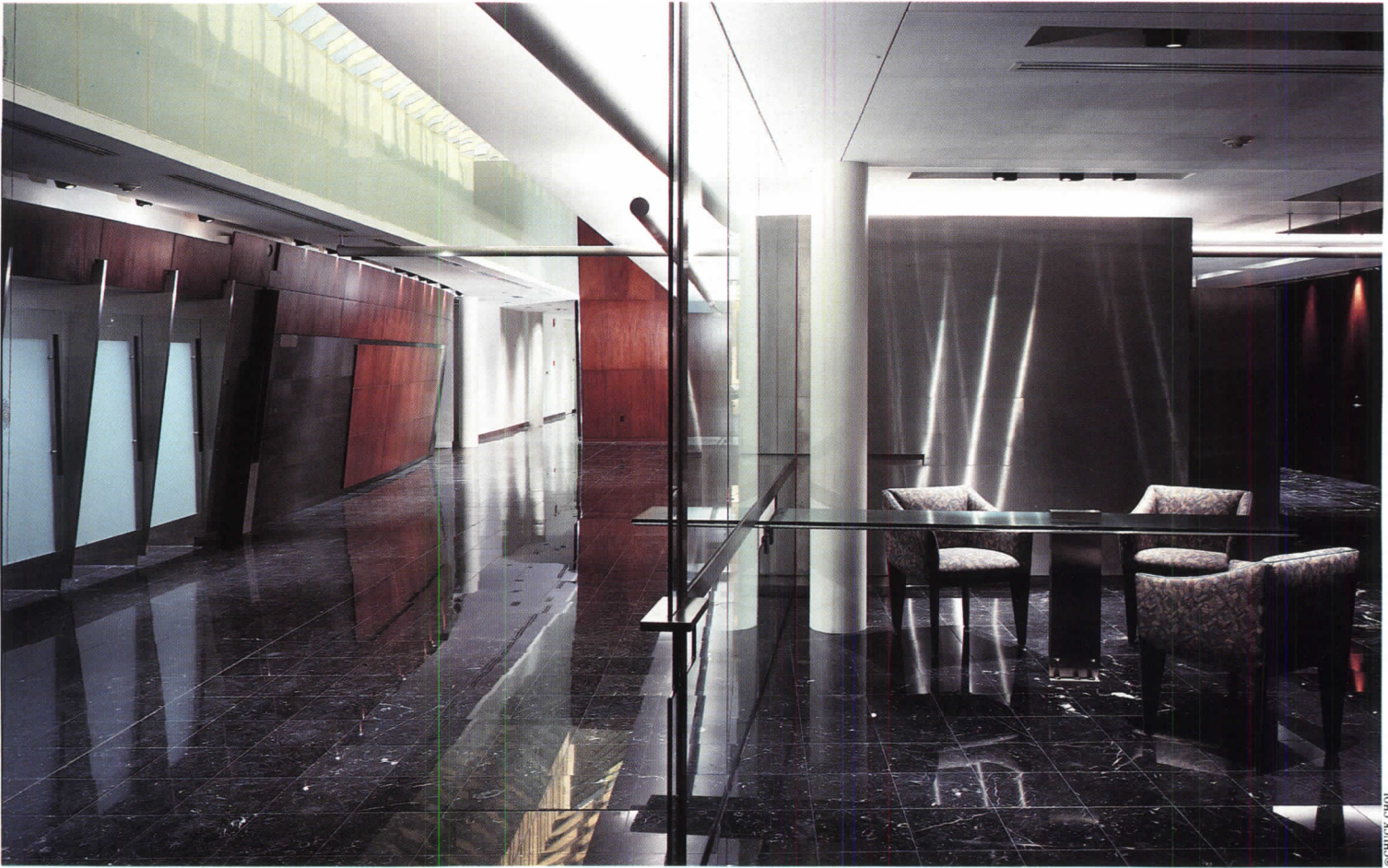


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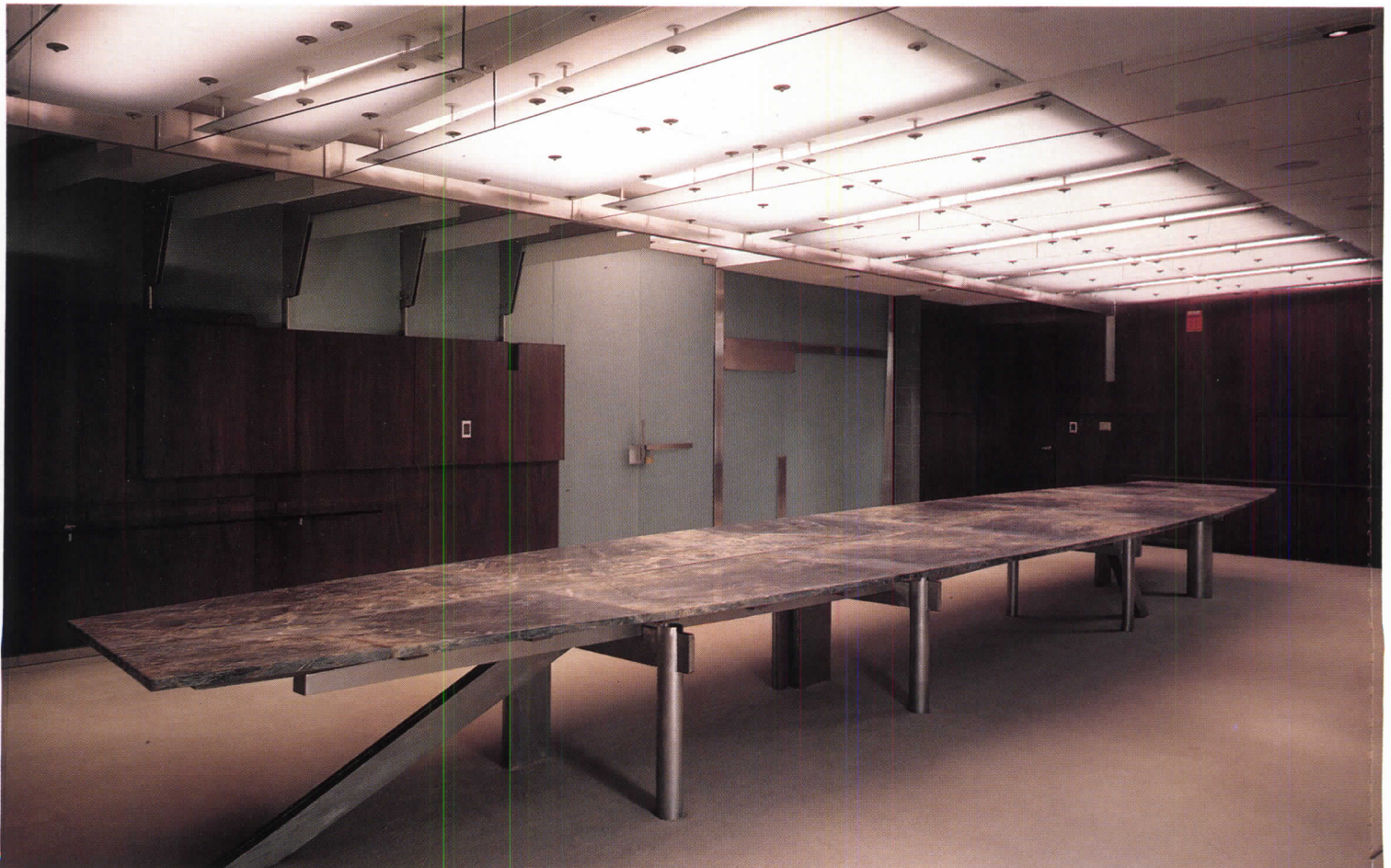


@DAN CORNISH PHOTOS, EXCEPT AS NOTED





A clear-glass desk extends from the top executives' suite to the main corridor.



The main conference room includes projectors hidden behind sliding wood panels.

ism—more subdued, less flashy, but just as powerful. The confluence of the two design approaches shows the great range of Modern architecture and helps refute accusations of uniformity and banality sometimes directed at the movement.

While the Roche buildings sit securely on their wooded site, the Pran and Zapata interior appears poised for flight. Elements such as walls, partitions, lighting fixtures, and furniture seem to slide past one another without touching. “We wanted to create a kind of floating architecture,” says Pran of the 11,000-square-foot reception and executive area he and his partner designed. The more workaday remainder of the 120,000-square-foot headquarters (not shown) was also laid out by the two architects.

To make elements float, Pran and Zapata hung partitions, closets, and baffles from the ceiling, a device that required reinforcing existing steel members and adding some new ones as well. “We put the ceiling to work,” says Zapata. The result is a remarkable exercise in defying gravity, especially when a heavy bowed partition of stainless steel hangs two feet above the floor (bottom page 114).

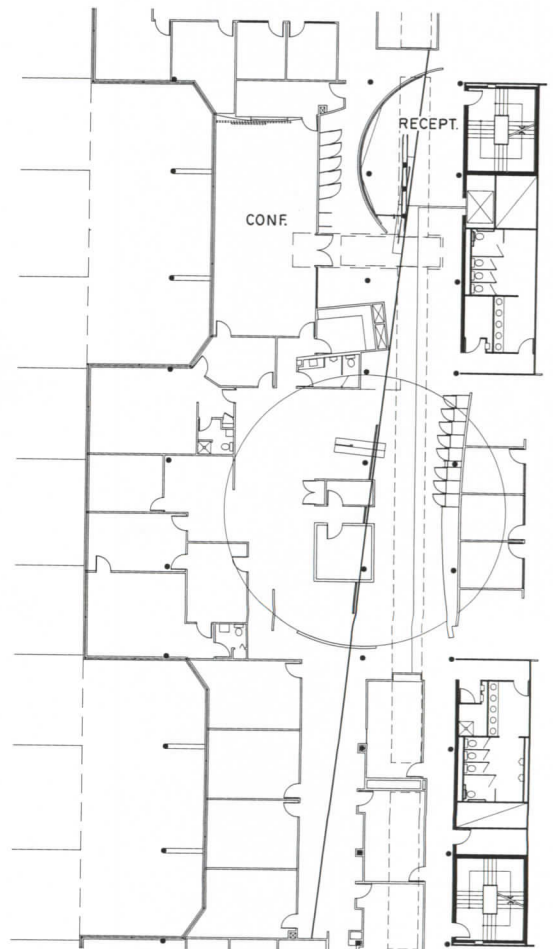
Such dramatic gestures might have gotten out of control had the architects not established a floor plan simple and strong



Curved metal partitions hang from the ceiling.



The view from the corridor to the conference room.



enough to hold it all together. By creating a major axis bisected by a circle incised on the black marble floor, Pran and Zapata made sure visitors wouldn't be disoriented by curving partitions and angled walls.

The procession from entry to back offices begins with a long glass reception desk (page 111) supported by a steel arm extending from a gently curving wall and an exaggerated steel arc reminiscent of the roof of the architects' JFK proposal. The desk and wall introduce visitors to key materials (lightly tinted green glass, smooth and brushed stainless steel, copper, and mahogany) and begin the dialogue between transparent and opaque elements continued throughout the project.

Above the desk is a long skylight, inherited from the Roche design, that runs the entire length of the offices and brings in natural light to play off the hard surfaces. Behind the curving wall lies the main conference room (bottom page 112), whose subtly sloped ceiling directs attention to the spectacular views outdoors.

Farther down the hallway, the incised circle brings visitors into a set of offices reserved for the firm's top two executives and their support staff. The feeling here is of a glass jewelry box set within a clear showcase, a play of transparent and reflective surfaces that fit tightly together. But instead of simply enclosing one space within another, Pran and Zapata connect them with elements such as a glass desk that punctures the clear wall between hallway and office area (top page 112).

From the metalwork to the mahogany cornice above a curving row of telephone booths, the quality of craftsmanship exhibited throughout the project is very high. "Putting this job together was like working on a fine watch," says Gregory O'Connell, Deloitte & Touche's manager of architectural services. "We had very little margin for error." **C. A. P.**

*Deloitte & Touche National
Headquarters*

Wilton, Connecticut

CLIENT: *Deloitte & Touche—Jerry Kolb,
vice chairman*

ARCHITECT: *Peter Pran and Carlos
Zapata for Ellerbe Becket/New York—
Peter Pran, design principal; Carlos
Zapata, design director; Ed Calma,
project designer; Carol Krewson, project
director; Frank Yu, Maria Wilthew,
Curtis Wagner, designers; Wayne
Fishback, project coordinator; Arch
Currie, Michael Rufino, Moon Kim,
Carol Napper, Ron Miranda, Michael
Welebit, technical staff*

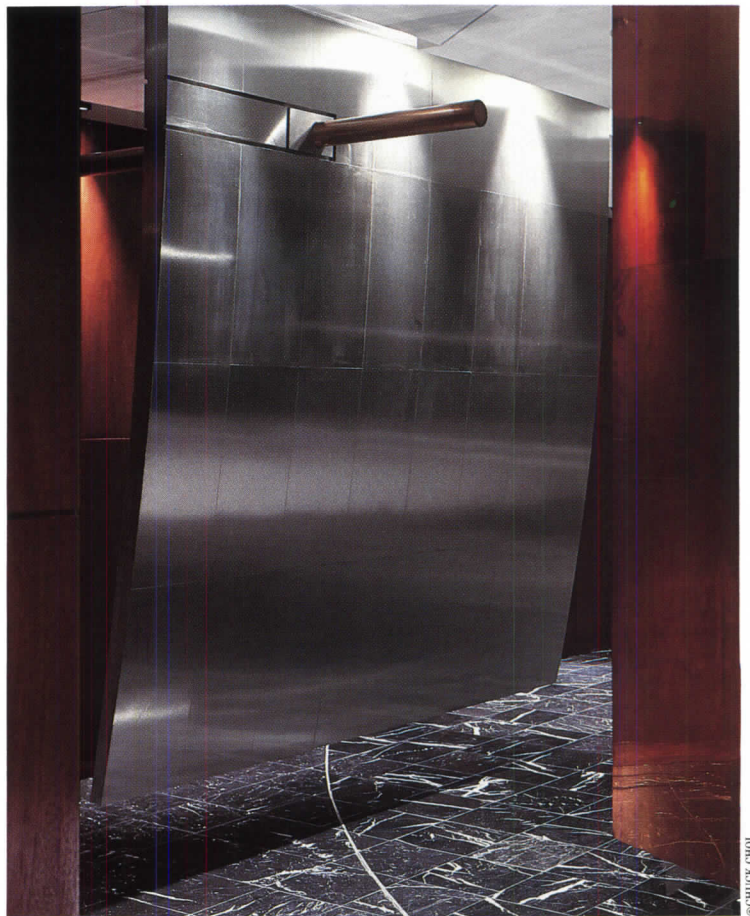
ENGINEERS: *Robert Silman Associates
(structural); Malafronte and Kasperek
(mechanical/electrical)*

CONSULTANTS: *Mison Inc. (metalwork);
T. S. I. (audio-visual)*

GENERAL CONTRACTOR: *C. E. Larson*



The interplay of transparent materials and reflective surfaces is a major theme in the project.



The architects had to reinforce steel members above the ceiling to hang heavy steel partitions.



© BRUCE CHOI

A set of phone booths bulges out into the corridor and conjures up images of a ship's hull.



Finely crafted metals such as stainless steel, gun metal, and copper are pieced together like jewelry.



Combining curved elements with straight edges, Pran and Zapata created a strong sense of procession.



Natural light from a long skylight moves through the offices, activating various elements at different times.

Have you seriously considered the advantages of today's standing seam roofing systems?

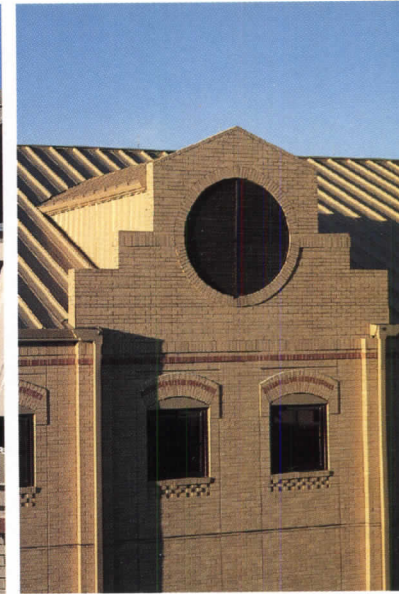
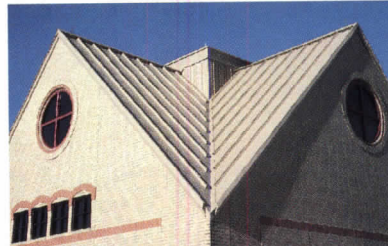
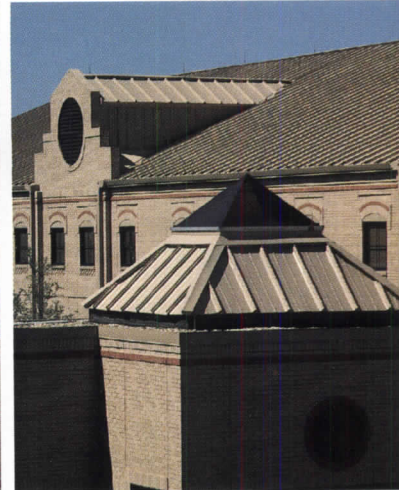
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AN AFFINITY FOR ORNAMENT

The work of Kohn Pedersen Fox proves that what can be spun out of metal is limited only by the imagination of the designer.

In what might be considered a signature of its style, Kohn Pedersen Fox Associates has always investigated the formal and decorative possibilities of metal. Clients now expect a high level of surface-finish sophistication, but to get a superior result requires a considerable effort in coordinating the myriad details and entities involved. Many large-scale commercial projects are fast-tracked (bid after design development), so quality standards are pinpointed in preliminary drawings and specifications.

Architects in the firm frequently refer to the National Association of Architectural Metal Manufacturers *Metal Finishes Manual*, which includes sections on aluminum, copper alloys, and stainless steel (NAAMM, 600 South Federal Street, Chicago, Ill., 60605, 312/922-6222). To fully describe items, however, the following aspects are covered in contract documents. The *type of base product* is described generically: "stainless-steel bar stock," or "extruded-bronze tube." Installed rigidity may be controlled by the gauge, the kind of structural backup, or by dimension of

the component. The *type of finish* is designated by description or by industry code; direction of grain is shown. *Connections* are usually made with snap-on elements or concealed fasteners—tapped and screwed from the back. Any exposed bolts or screw-heads will be indicated. Specifications require that any visible welds must be ground smooth, with adjacent surfaces free from heat distortion and burning, but such connections are avoided because visual quality is difficult to control. *Types of joints*: all reveals are carefully dimensioned or are indicated to be hairline joints. Sealant joints in exterior work are anticipated, detailed, and located on drawings. The *method of attachment* to substrate is also shown.

A hands-on approach is at the crux of the process. During the bid phase, project architects meet with prospective subcontractors to insure accurate interpretation of the documents in order to keep pricing in line as well as to impart the "spirit" of the design. This appeal to the craftsman buried within many a jaded shop employee often inspires innovative solutions.

Mockups and samples are used to communicate and verify the exact nature of finishes. Instead of just red-lining shop drawings, architects schedule face-to-face meetings and may repeatedly visit the factory during fabrication. Then, if samples or mock-ups must be remade to meet quality standards, this ongoing personal contact smooths the process. Furthermore, architect and craftsman often learn from each other. Since field installers are not ornamental specialists, it is important to shop-assemble as much finish metalwork as possible for better quality control. It is the responsibility of the contractor, however, to coordinate finishes of separate products that must match.

KPF has worked with fabricators around the country and abroad and found that craftsmanship is very much alive. It is not always easy to make the process work, but when pride of workmanship becomes a shared ideal, a concerted team effort can achieve work of the highest standard.

Donald London is a job captain with Kohn Pedersen Fox Associates.

©WAYNE CABLE



One of two pairs of painted-aluminum spires atop 225 West Wacker Drive, in Chicago.

©BARBARA KARANT



©JOCK POTTLE



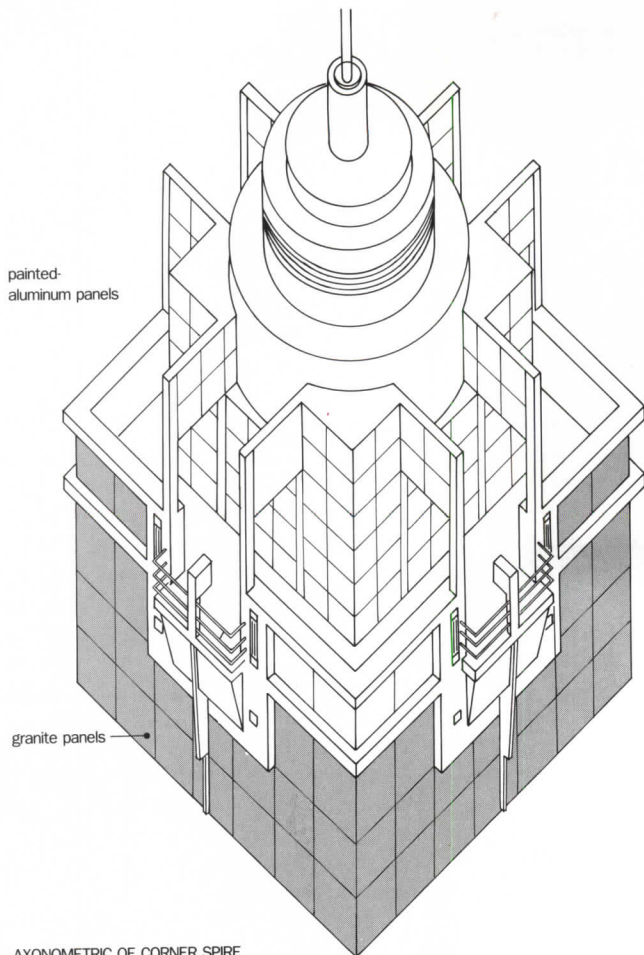
Top: light fixture in the mall of 900 North Michigan Avenue. Bottom: the crown of 101 Federal Street.

©GEORGE LAMBROS



The lobby of One O'Hare Center, in Rosemont, Ill., including metal-clad security desk and wall trim.

225 West Wacker Drive, Chicago



AXONOMETRIC OF CORNER SPIRE

©JOCK FOTTLE

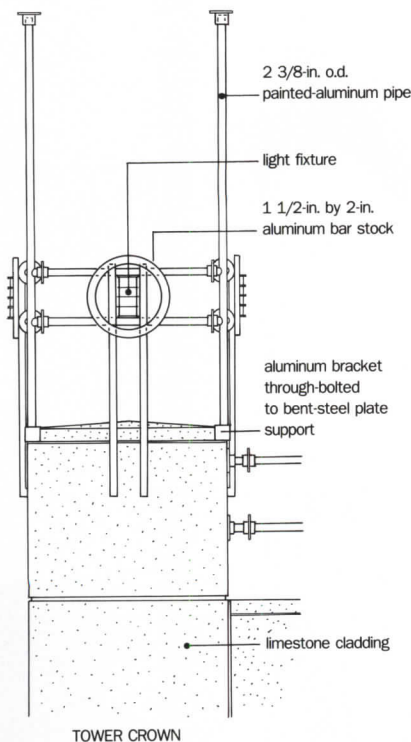


The gridded rectangular base of each spire is topped by a cylindrical drum formed of curved metal panels.

Two pairs of painted aluminum spires crown this recently completed office tower, a symbolic terminus for the Franklin Street bridge in Chicago's Loop. Mechanical equipment housed in two of the drum-shaped spires was placed first, then shop-built panels, fabricated by Jones and Brown, of Addison, Ill., were bolted into place on aluminum framing, which was in turn attached directly to a waterproofed structural concrete curb. Installers worked from the inside, and then exited on completion through service access doors. DeSoto's gray Kynar-based fluoropolymer baked-on coating system matches the curtainwall window-frame color.

In designing the spires, the architects studied the complex geometry in axonometric sketches, which were refined to become part of the contract drawings and were even used by the fabricator for shop drawings. Specifications and working drawings were developed jointly with Perkins and Will, the associate architect, which also provided in-house structural engineering services.

101 Federal Street, Boston



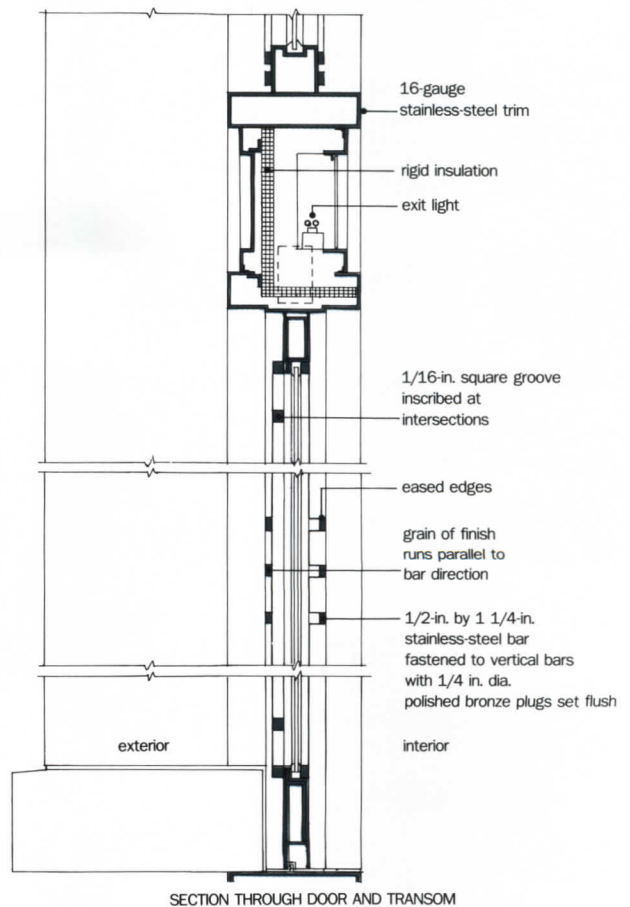
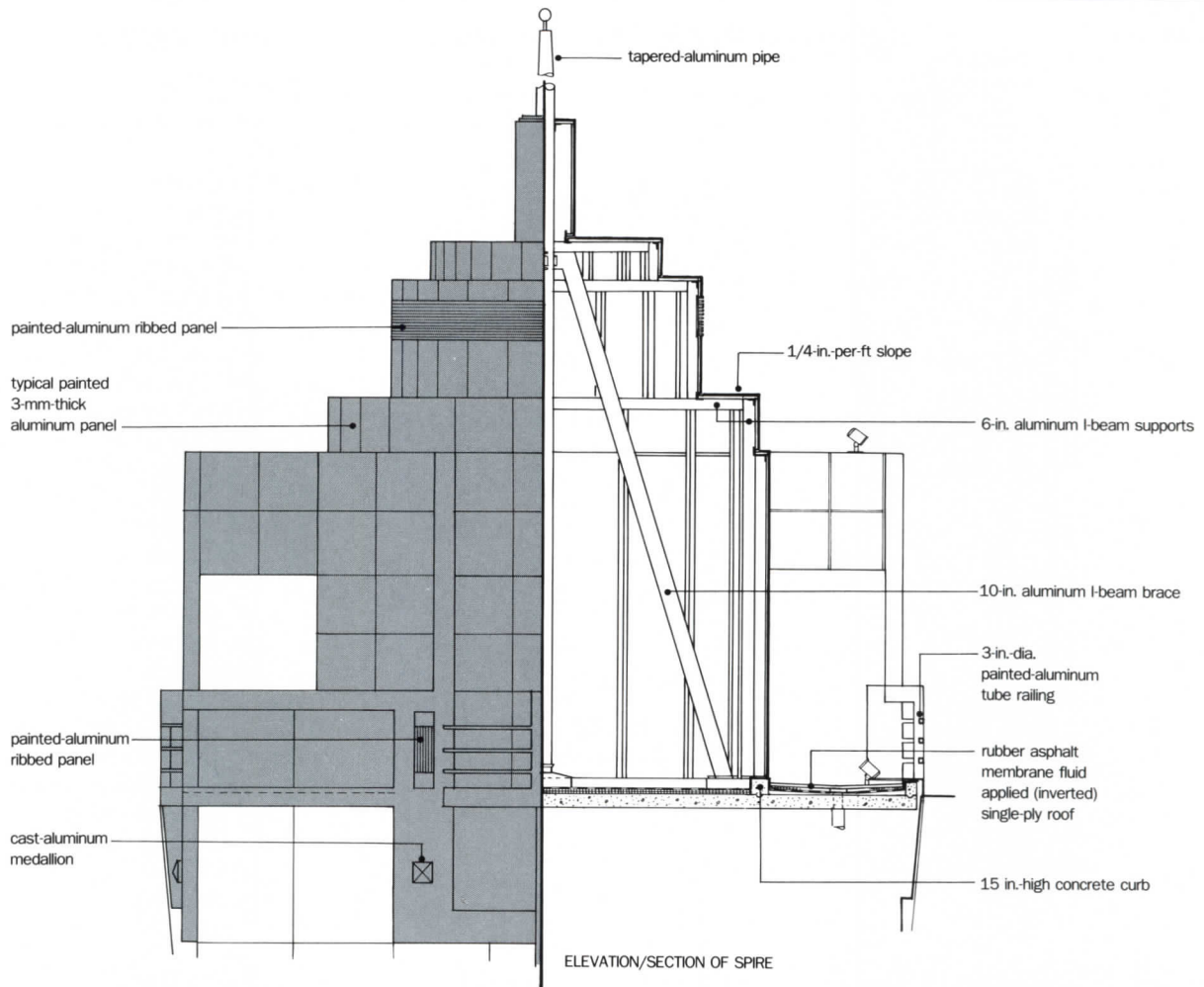
©CERVIN ROBINSON



A fretwork of aluminum pipes (above) is painted to resemble stainless-steel entrances (opposite).

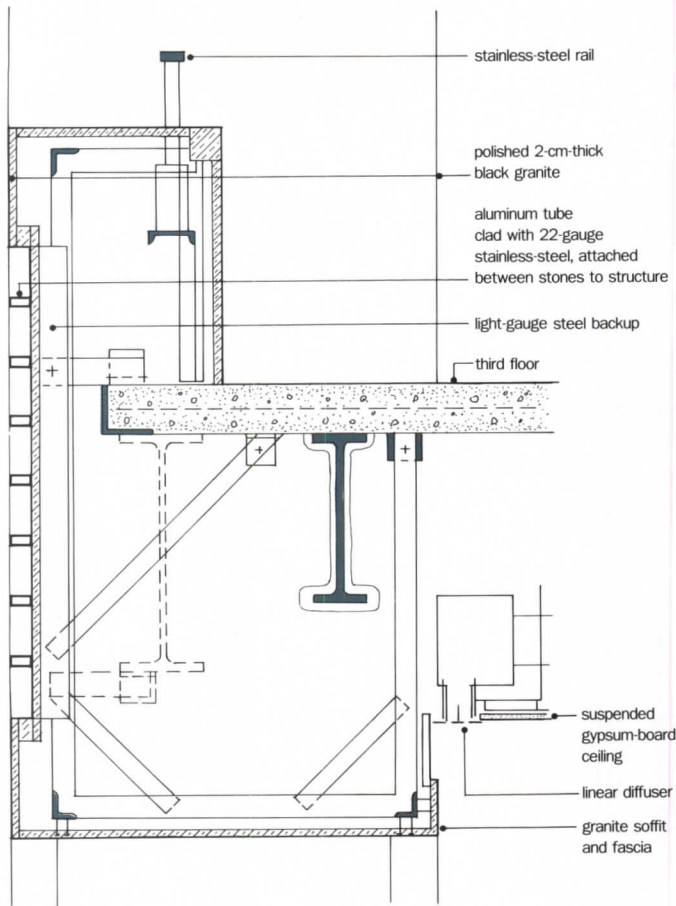
For this office building, the Tajima Corporation, of Japan, fabricated stainless-steel and bronze entrances (opposite). Though distance to the metal shop was vast, Tajima worked closely with KPF. The shop meticulously embedded the structural-steel tube and supports into the overall bent-steel sheet assembly. Tajima also developed its own snap-on glazing channels in response to KPF's requirement for "no exposed fasteners," but convinced the architects to change the revolving-door push-bars from bar stock to extruded tubes for cost control. To track quality from across the ocean, project manager Greg Clement received regular factory progress photographs. Morse/Diesel, the construction manager, coordinated the shipping and installation of the storefront into a prepared masonry opening.

The painted-aluminum decorative fretwork at the top of the building (left) was constructed by a miscellaneous-metal contractor rather than an ornamental shop. All members are pipe sections, except the small rings—which were cast—and the larger decorative ring, which was fabricated from a rolled angle. The pieces were shop-welded, the light fixture prewired and the entire assembly finished with an aliphatic-cured urethane coating.



One O'Hare Center, Rosemont, Ill.

Within the lobby of this office building located in a Chicago suburb, railings, trim, and details of the security desk and light fixtures were conceived as an ensemble of polished and satin-finish stainless steel and bronze. Project manager Jan Gleysteen notes that copper alloys such as bronze are far easier to bend, cut, and join than stainless steel, and were used where these qualities were advantageous. Special care was required to match bar-stock finishes with sheet product, especially in locations where several subcontractors were involved. The elevator cabs, for example, combined metalwork produced by four different companies. The security desk and the desk lights (drawings opposite) were manufactured by separate shops and assembled on-site. Among changes proposed during the shop-drawing-review phase, metal-strip inserts in the balcony wall that had been shown as bar stock were fabricated as aluminum tubes clad in thin-sheet stainless steel to avoid deflection. In Chicago, MTH served as miscellaneous-iron contractor and subcontracted the ornamental metalwork. Turner Construction sought out excellent metalworking sources in the Chicago and Milwaukee areas.



SECTION AT THIRD FLOOR

900 North Michigan Avenue, Chicago

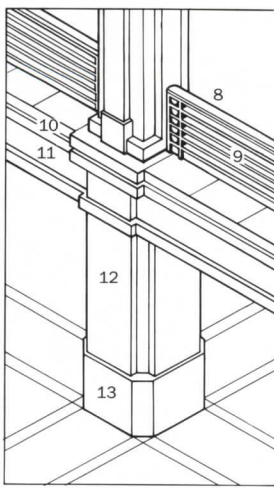
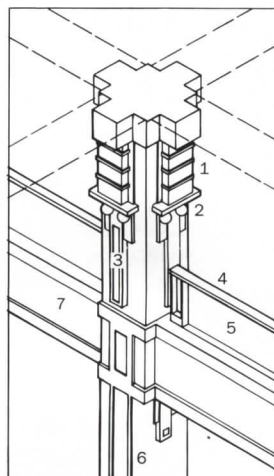
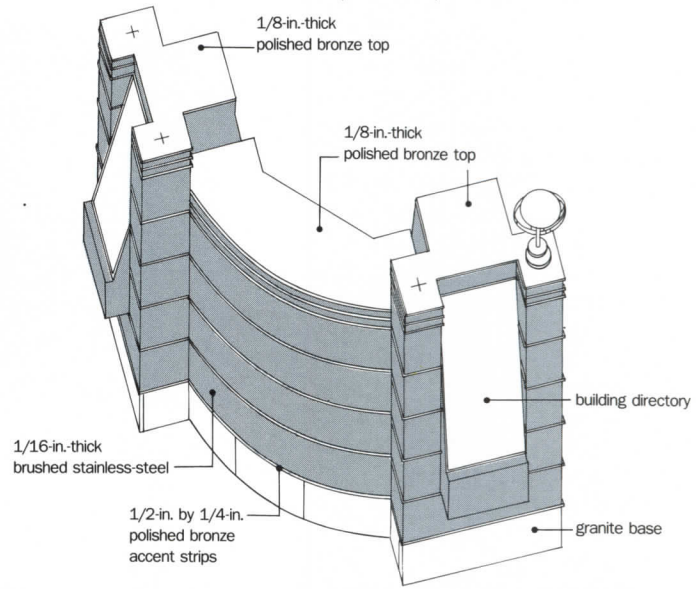
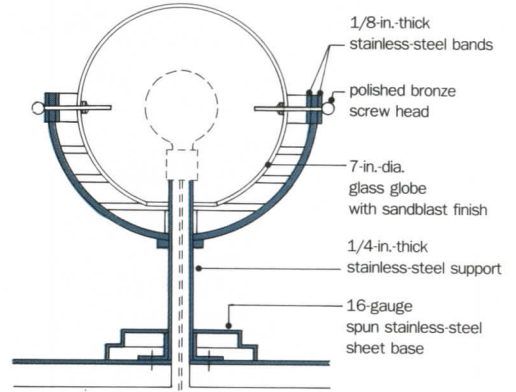
The "Avenue Atrium" in this mixed-use skyscraper located along Chicago's "Magnificent Mile" features a six-story retail mall unified by a vertical decorative system that pulls together custom light fixtures, railings, interior stonework, and other ornamental details. Models are integral to the design process at KPF, and in this case details were explored with a highly detailed, professionally built acrylic-plastic model of the mall's interior (left). Because customers are in such close proximity to much of the ornamental metalwork, individual pieces were worked out to a very finely grained level. Column-capital lights (designed with lighting consultants Jules Fisher & Paul Marantz) were made with both bent stainless-steel sheet and bar stock parts and with a polished finish in some areas and a brushed finish with a directional pattern. (The two treatments are separated by an etched line.) Ceiling-mounted spun-brass sphere ornaments match the finish of the solid bronze disk inserts at the lower-level railing (opposite). The upper-story rail is bronze with stainless-steel trim and glass infill panels.



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1. Opalescent-glass light fixture
2. 5-in.-dia. brass sphere
3. Stainless-steel bracket
4. Bronze top rail
5. 1/2-in. plate glass
6. Stainless-steel trim
7. Painted gypsum board
8. Bronze top rail
9. Stainless-steel bar
10. Polished granite
11. Marble spandrel
12. Polished marble
13. Polished granite base

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A VOLATILE ISSUE

A look at two breakthroughs in exterior coatings for architectural aluminum—and dramatic changes sure to come in the near future.

More than 60 years have passed since aluminum was first fabricated for architectural windows and doors. And although alloys of this silvery metal have gained wide acceptance for their light weight, strength, and the complex shapes into which they can be readily extruded, aluminum's usefulness on the exterior of buildings has only been possible because of a series of breakthroughs in finishing. Finishing is a critical step: without protection, aluminum is susceptible to corrosion and oxidation. To make correct decisions, architects who specify aluminum as a building component need to know the possibilities and limitations of aluminum finishes—and new developments that are on the horizon.

Anodizing aluminum

The first finishing breakthrough occurred in 1927 when anodizing, the earliest process affording long-term protection, was patented. It is not a paintlike coating. Instead, aluminum is dipped into an electrically charged bath and this electrolyte solution frees oxygen molecules, which then react with the aluminum parts to create a very strong film of aluminum oxide at the surface. The result is an extremely hard, durable, nonconductive finish that resists abrasion and corrosion. Later, the ability to color aluminum was added. The integral or one-step process produces bronze tones which, depending on the alloy of the aluminum being finished, can be more or less gray. Because the tint is contingent upon the metal alloy, which may vary according to manufacturers' tolerances, maintaining color uniformity has not been easy.

To improve color consistency, a separate finishing step was added after World War II. The two-step process (Aluminum Association designation A-44 for "electrolytically deposited color") was developed in Germany and was used in Europe prior to its introduction to the United States 20 years ago. Aluminum is first clear-anodized, then color is introduced by placing the aluminum in a second bath of inorganic metal salts. The metal salts are deposited deep



Anodized finish colors

into the porous anodic film through the use of alternating electrical current in the bath (drawings opposite). Because the anodic film and color are created separately, the amount of metal deposited into the pores in the second step—which creates the color—can be precisely calibrated.

Baked-on paint finishes

The next architectural finishing breakthrough came with the introduction of fluoropolymer finishes in 1965. These are now accepted as the highest-quality paint finishes for exterior applications on high-rise, industrial, institutional, and commercial structures. They are most commonly referred to as Kynar 500-based finishes, since this polyvinylidene fluoride—the trademarked formulation of Pennwalt (now Atochem Corporation)—is the basis of most U. S. fluoropolymer finishes. They are generally applied to the metal prior to fabrication and baked on. On-site touch-ups are made with air-drying versions.

Paints on the market prior to 1965 could not long weather the harsh ultraviolet rays of the sun. Fluoropolymer finishes expanded designers' options by offering heretofore unavailable finishes in blues, greens, and burgundies that would last many years without significant chalking or fading. Over the last two decades, their popularity has dramatically increased. More colors were offered as three-coat systems were developed, and brighter pigments became possible with the introduction of a protective clear coat. With the replacement of metal flakes by mica, two-

coat metallic-looking fluoropolymers were born. A primerless finish was also brought to market.

The next revolution?

More changes are in store for architectural finishes. The newest breakthrough, likely to begin in the early 1990s, is being brought about by innovation born of restrictions. With increasing concern for the health effects of hydrocarbon emissions and depletion of the earth's protective ozone layer, government agencies are phasing in strict air-pollution regulations. Although these rules are not expected to affect anodized finishes, the focus for paint applicators is emissions of volatile organic compounds (VOCs) found in, among other products, solvent-based paints and fluoropolymer finishes. Restrictions and timetables are now up to the states, but the version of the Clean Air Act recently negotiated between Congress and the Bush Administration will likely speed VOC reductions.

This has forced changes in the production of fluoropolymer finishes and may affect their availability since they are composed of approximately 70 percent solvents (containing the objectionable VOCs) which make the paint fluid. (The remaining 30 percent consists of resin, pigment, and additives, which are generally solids or powders rather than liquids.)

Paint manufacturers say two solutions are at hand. Those with the financial means will add incineration systems that will capture close to 100 percent of the VOCs. But manufacturers are also hard at work to bring powder and other non-solvent-based forms of high-performance coatings to market ("Outlook for New Coatings" opposite).

Other paints such as polyesters and acrylics are already available in high-solids, powder, or water-based formulations but these chalk and fade more readily than the fluoropolymer coatings. Union Carbide has developed technology in which carbon dioxide is substituted for solvent. The formula reduces VOCs in spray-applied coatings by 30 to 70 percent. High-performance fluoropolymer finishes are already being applied in powder versions in Europe, and test runs of powder fluoropo-

Jane Nemke has worked in both architectural painting and anodizing. She is general manager of Anogee, an anodizing division of Apogee's Wausau Group.

lymer finishes have been completed in the United States.

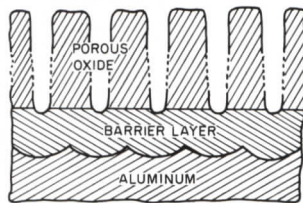
How will this switch from solvent-based paints to powders and other low-VOC formulas affect the architectural designer and building owner? On the positive side, the powder coatings will be thicker and more abrasion-resistant, and thus will have a longer life than many liquid finishes now on the market. But powder coatings may have a more textured, less smooth sheen and are likely to be more expensive when both new production and application costs are added. Incineration will also add costs to solvent-based paints.

Color selection for the new coatings will initially be limited, especially on small projects, because not every licensed fluoropolymer paint applicator will be able to afford an in-house blending system for custom colors. With powder paints, simply mixing black and white pigments together will produce speckles, rather than a blend of gray. Colors will be manufactured through a process in which pigment, resin, and other additives are blended and extruded into uniformly mixed pellets or strands. These solids must then be pulverized into a powder. With a system of this complexity, custom colors will likely cost more and will take longer to obtain. And there will probably be a minimum order size, such as 20 or more pounds.

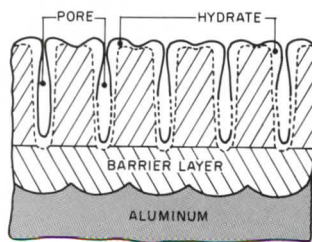
Though incineration systems may cost upwards of \$1 million, companies that can afford such systems will probably prefer to continue spraying solvent-based paints for their greater flexibility and speed in color matching and production. If incineration becomes more affordable, independently owned job-shop painters may prefer

these paints for the same reason.

Another environmental issue for painters is solid-waste disposal. Architectural specifications currently call for metal pretreatments of chromate or chromium phosphate, which leave behind a toxic sludge. Research has already been devoted to chrome-free pretreatments, and an environmentally acceptable alternative will



Two-step anodizing: first the barrier,



... then the color.

likely soon be a reality. However, it may also cost more to apply than the traditional chrome pretreatments available today. It is apparent, then, that the high performance fluoropolymer finishes will cost more in the near future, no matter how they are applied.

Anodizing technology has also made noteworthy strides over the last 10 years in color consistency, seal quality, and color

choices. In addition to bronze and black tones, shades of burgundy are now widely marketed, and all have excellent resistance to oxidation and fading. Brighter anodized colors, such as reds, yellows, and blues, are becoming available and may be a viable alternative to the fluoropolymer colors.

Some of the newer anodized colors, made with so-called colorfast dyes, may be susceptible to breakdown with exposure to the sun if they lack an appropriate coloring agent, film thickness, or seal quality. Organic dyes that produce the brighter colors contain oxygen, which is activated by the sun's ultraviolet rays, causing oxidation and fading.

Caution should be exercised when selecting any organic dye for exterior use. Architects and specifiers need to get a satisfactory explanation of what "colorfast" really means. A high-quality seal is a must with these organic dyes, so stringent seal tests (ISO 3210) should be required throughout the finishing project. Inorganic coloring agents (metal salts such as tin, cobalt, and copper) do not contain oxygen and thus offer excellent long-term resistance to ultraviolet rays. The traditional bronze tones, black, and even burgundy are created with inorganic coloring agents.

At this transitional period, the architect will have to keep in close touch with finish makers and extrusion manufacturers to ascertain the viability and availability of the finishes desired. Most trustworthy finishers meet or exceed the American Architectural Manufacturers Association's (AAMA) specifications for anodic finishes (607.1 and 608.1) and paint finishes (603 and 605.2), and can make independent test results available. □

OUTLOOK FOR NEW COATINGS

Fluoropolymer coatings will still be around, but new finishes are being tested.

Will strict new regulations mean the end of fluoropolymer formulations, which are regarded by many manufacturers and architects as the most durable coatings on the market? "About 75 percent of our product goes into coil-coating lines, and nearly every one of these companies has installed incinerators," says Jack Mohnacs of Atochem (maker of Kynar), which puts these painters into compliance with the latest regulations. He says that nearly half of the spray coaters are also in compliance, but admits that smaller shops "are having a problem" with the expense of meeting the regulations.

"The EPA has allowed the states to set different levels [for emissions of VOCs], so New York may be different from Connecticut, which may be different from Ohio," explains Neil Chrisman, of PPG, a Kynar licensee. Though Chrisman says the company can meet all state requirements now in place, PPG, like other makers of solvent-based systems, has new products in development, intended to lower

solvent content and obviate the need for chromium pretreatment. "We have been formulating coatings with water-based technology, high-solids technology, and with resins other than Kynar 500 that would be lower in VOCs," Chrisman continues. Though there are several coatings on the market with the variety of colors offered by Kynar-based systems and which are not solvent-based, none has passed the most stringent test for weathering, AAMA 605.2, commonly specified for high-rise projects. The test requires a sample to survive a 3,000-hour continuous salt spray and five years at a 45-degree exposure to the south Florida sun. This last requirement has slowed the progress of new products to market since there is no substitute of known reliability for the five-year duration of the test. Chrisman says, "Everything we're looking at is in various stages on the fence in Florida." How much will new products cost? Afraid of pricing themselves out of the market, manufacturers are aiming to hold the line at today's price per gallon. **J. S. R.**



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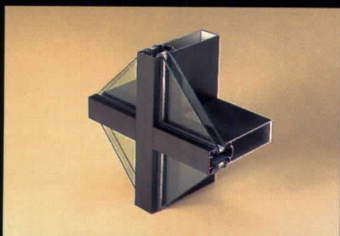
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NEOCON 22: CONTRACT RECAP

As the Merchandise Mart continues its floor-by-floor renewal, contract sources put the finishing touches on prototypes and new lines to debut in Chicago June 12-15. An advance look—**J. F. B.**

1. Slim-profile theatrical seating

Originally a custom design for I. M. Pei's Meyerson Symphony Hall, the Dallas Chair has a frame of 3/4-in.-thick Makore plywood rimmed in solid cherry. Upholstered cushions are removable. JG Furniture Systems, Quakertown, Pa. *Circle 300*

2. Decorative wall treatments

Profiles of oxidized copper, spattered lacquer, Zolotone paint, and Avonite come in panels for interior walls. Forms + Surfaces, Santa Barbara, Calif. *Circle 301*

3. Modular carpeting

Spacescapes patterns such as Marble Walk coordinate with hard-surface floorings. Milliken, LaGrange, Ga. *Circle 302*

4. Upholstery fabrics and leathers

A new line includes distinctive textures in leather, cut velvets, and damask. F. Schumacher, New York City. *Circle 303*

5. Pull-up stackable seating

Glenn Gee designed the Symphony chair. Charlotte, Belding, Mich. *Circle 304*

6. Metal-framed executive chair

High-tech materials create a comfortable chair, on and for big wheels. Palazzetti, New York City. *Circle 305*

7. Small-scale pull-up chair

Timothy de Fiebre's new chair has a back hand-woven of solid-wood strips. Brickel Associates, New York City. *Circle 306*

8. Office assistance

The newest member of the Steelcase Design Partnership will display Work Flo, desk-clearing workstation accessories. Details, New York City. *Circle 307*

9. Environmentally aware textiles

Designed by Suzanne Tick and Laura Guido-Clark, contract fabrics have abstract patterns based on natural motifs. Brickel Associates, New York City. *Circle 308*

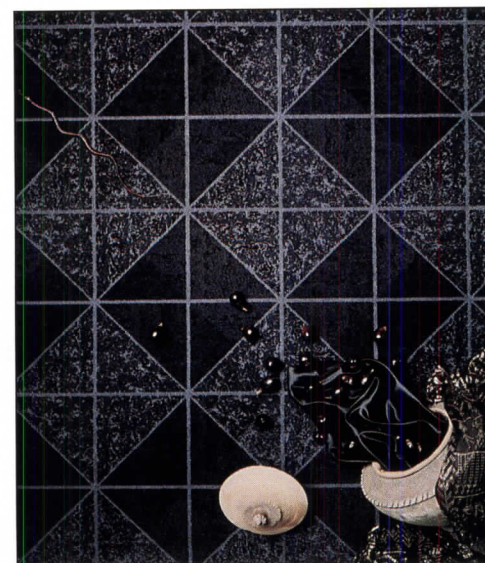
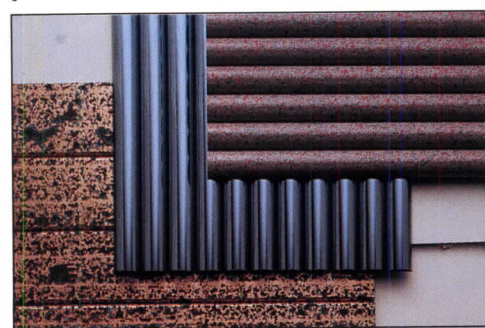
10. Classically styled seating

The Fino Collection is framed in finely detailed beech wood. Brayton International, High Point, N. C. *Circle 309*

11. Aluminum sconce

Ron Rezek's new Crest fixture has an unusual swirled finish. Artemide, Inc., Long Island City, N. Y. *Circle 310*

More products on page 137



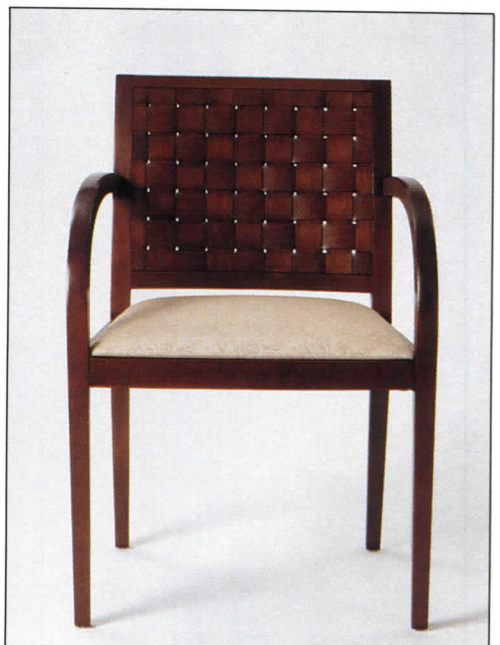
Introductions at this June's NEOCON show will stress enhancement, refinement, and utility: evolution, not revolution.



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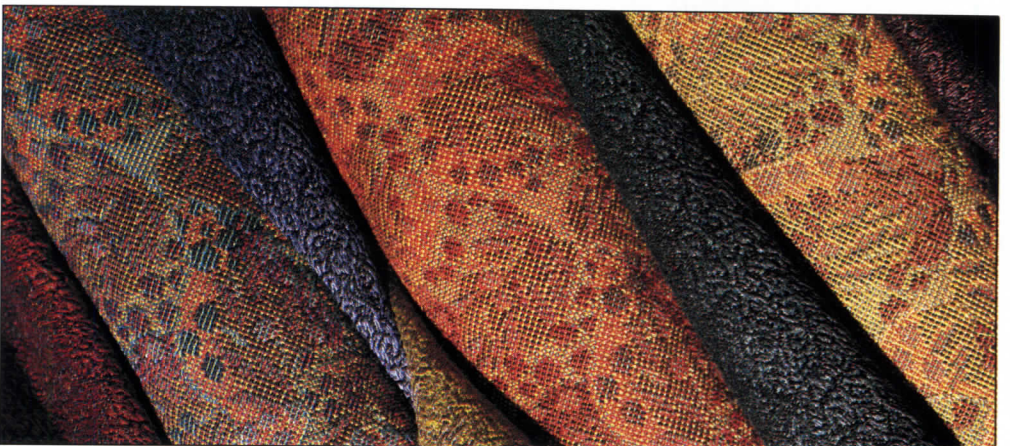
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11

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BEST OF BRITAIN

New work by British-trained designer/makers will be shown at the second International Contemporary Furniture Fair in New York City May 20-23.



1



2

1. Curves and planes

Designed by Christopher Rose for a Modernist house in Surrey, the St. Ann's chair has a frame of solid ash wood. Pearl Dot, London. *Circle 311*

2. Mirror, mirror...

David Davies and Brian Gwynn James may have spent as much time naming their veneered wood mirror as in craftwork: it's called "Invasion of a vain culture by common starling spivs." Imperial Woodworks, Norfolk. *Circle 312*

3, 5. Peripatetic Scot

Glaswegian by birth and education, David Shaw Nicholls came to his current New York City base by way of a stint with Sott-



3



4



5



6

sass Associati. His throne-like Arno chair, 3, and sculpted Angus table, 5, blend elements of each stopover. David Nicholls Corp., New York City. *Circle 313*

4. Material variety

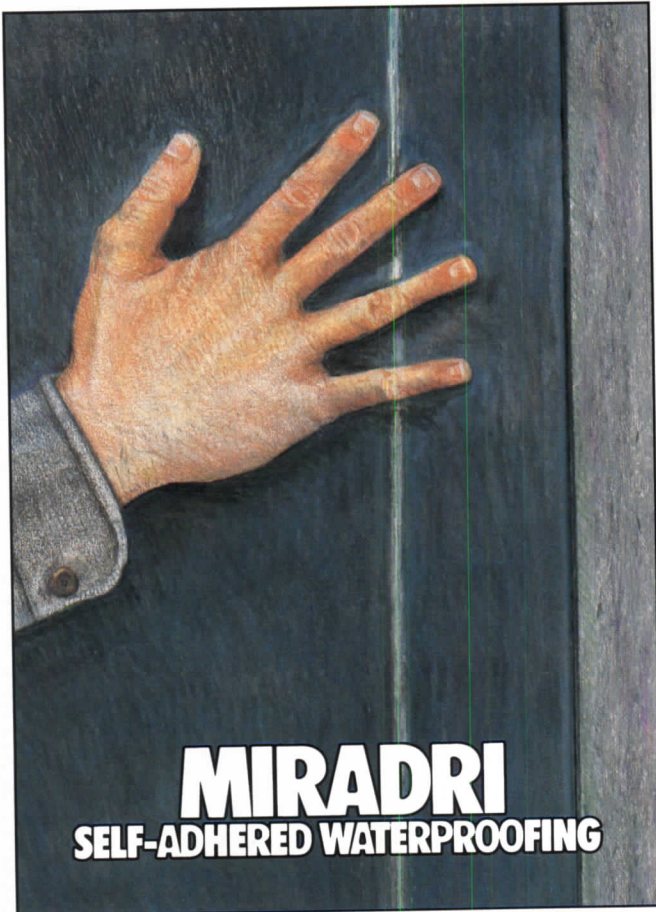
Matthew Hilton's Antelope table has a base of polished cast aluminum and sycamore; the round top is mahogany-color composite with a central steel plate. SCP Ltd., London. *Circle 314*

6. A woman's touch

Commissioned for a small apartment, Jakki Dehn's baby crib has cherry-wood railings and a sycamore base fitted out with storage drawers. A-Z Studios, London. *Circle 315*

More products on page 152

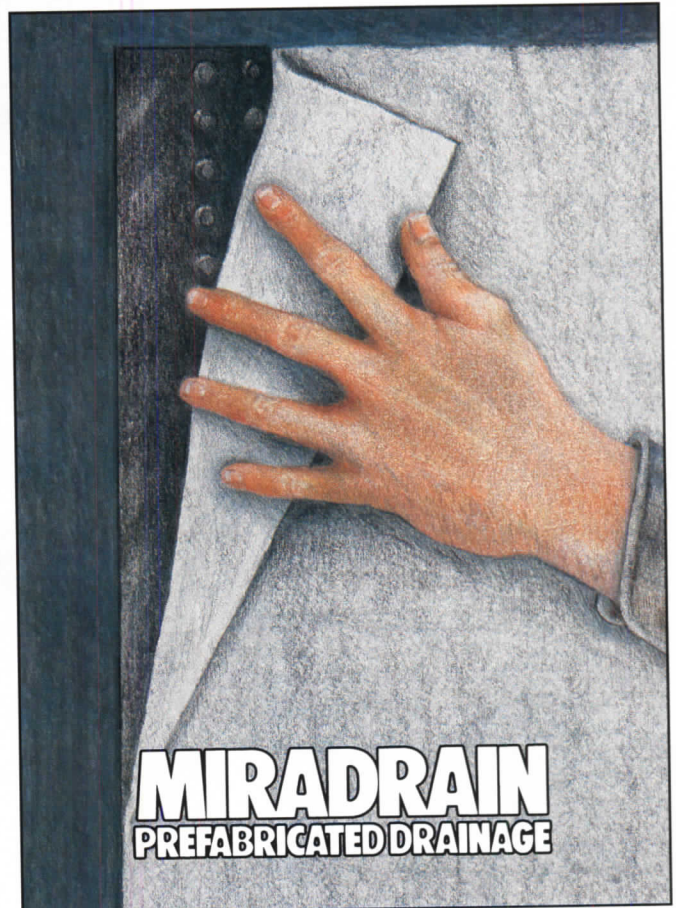
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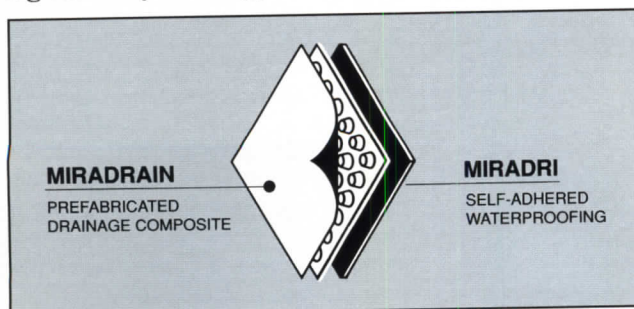


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A POWERFUL ADD-ON FOR AUTOCAD

Auto-Architect 10.30 is a good reason to upgrade to the newest version of AutoCAD.

Auto-Architect 10.30

An add-on for AutoCAD 10 or AutoCAD/386. It greatly enhances AutoCAD's usefulness to architects, providing such niceties as a template program for creating schedules, an activity log (great if you bill clients separately for CAD time), double-line drawing, a large 2-D and 3-D symbol library, and AutoLISP routines for stairs, elevators, escalators, and so forth. The on-tablet menu scheme roughly follows the

AutoCAD "standard" menu arrangement, with the upper section reserved for architect-specific command buttons. Auto-Architect is compatible with AutoSHADE.

Equipment Required: Any IBM- or IBM-compatible computer that can run a version of AutoCAD 10. MS-DOS or PC-DOS systems should have at least 512 kilobytes of extended random-access memory to accommodate the larger routines, which are written in extended AutoLISP. A digitizing tablet, 12 by 12 inches, is necessary for

the menu. (You can get at all the commands with the pull-down on-screen menus, if your display supports AutoCAD AUI. But there will be a loss of productive time.) Auto-Architect takes about 10 megabytes of fixed-disk space.

Vendor: D. C. A. Engineering Software, P. O. Box 955, Henniker, N. H. 03242. (603/428-3199). \$995; upgrade from 10.2 to 10.3 is \$100. Dealers supply support.

SUMMARY

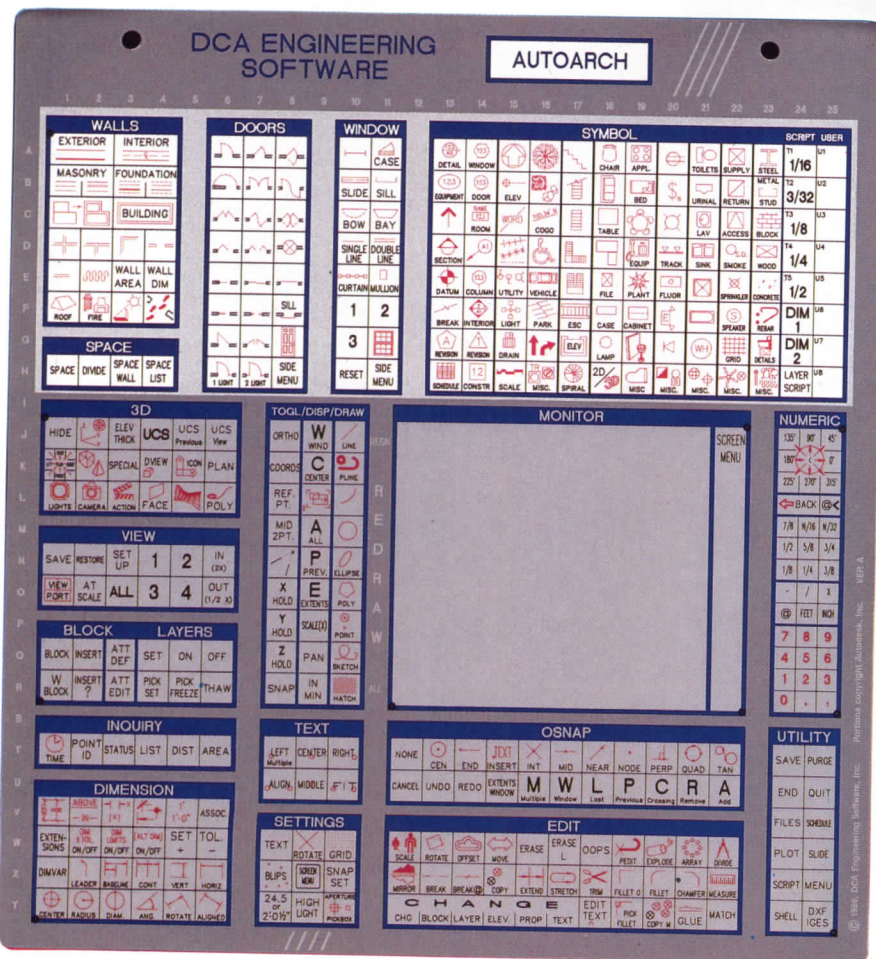
Manuals: The single, large looseleaf manual starts with a good section on installation, and then two lengthy sections covering basic commands and architect-specific commands, respectively. Usually, we do not like to see advice for advanced users mixed in with straightforward "getting started" information. But the mix works well here.

There is no overall tutorial. Instead, discussions of each type of drawing task—foundations, doors, elevations, and so forth—are exceedingly detailed.

Ease-of-use: The program is slow and touchy running on the plain-DOS version of AutoCAD 10. Memory-management is also an issue. Even the memory-resident "driver" (EMM.EXE, CEMM.EXE, and so forth) needed to convert extended memory to expanded memory for plain-DOS AutoCAD 10 on an 80386 computer can use up enough regular-DOS memory to keep extended AutoLISP from loading. The manual recommends that the lipheap be set to 4000 and the lipstack to 5000. You may also have to fiddle with the variable ACADFREERAM in the AUTO-EXEC.BAT file, especially if you deal in 3-D. A snap to a complicated 3-D object may be impossible, for instance, unless ACADFREERAM is set high. That reserves memory that may be needed elsewhere.

Speed is acceptable and memory-management problems disappear with AutoCAD/386. If you are using 80386 or 80386SX computers, Auto-Architect is a good reason to upgrade to the new version of AutoCAD [RECORD, April 1990, page 129]. If you are using older, 80286-CPU computers, consider GeoCAD [RECORD, April 1989, page 137], as your architectural add-on to AutoCAD. It is smaller, speedier, and about as flexible in 2-D operation.

DCA includes plain-text AutoLISP files



The lower two-thirds of the tablet menu may look like the standard AutoCAD overlay, but look again. The togl, disp (formerly zoom) and draw areas have more command

buttons, the dimension area has grown at the expense of 3-D and AutoSHADE commands, and the OSNAP and EDIT areas are more complete.

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for its menus and routines. This allows technically proficient offices to customize the software. There is also space on the tablet menu overlay for invoking eight user-defined scripts.

Error-trapping: Good for an AutoCAD add-on. Auto-Architect enhances AutoCAD's error messages and help. The templates created by BILLMAT, the bill-of-materials program, starts all window-symbol attribute tag names with W, doors with D, and so forth. This helps keep users from sticking doors on window schedules.

There's an automatic save feature. It asks if you want to save after a user-specified number of elements have been added to the drawing. If you say no, it asks again once 50 percent more elements have been added.

As with most programs of this type, it is so easy to get at commands that you can invoke one accidentally. You can easily disable associative dimensioning, for instance. If you do, the dimensions won't change automatically when an object is stretched or shrunk.

REVIEW

Make no mistake. This is a big program. Its files, taken together, are twice the size of AutoCAD itself. Big means slow. Add Auto-Architect on top of AutoCAD 10 running on an older 80286 computer and you have *really slow*. Auto-Architect is a good excuse to upgrade to 80386 (or at least 80386SX) technology, and to Auto-CAD/386, however. It is in most ways the most powerful architectural add-on available for AutoCAD.

Nevertheless, if you must start with the plain-DOS version of AutoCAD 10, some of the features in Auto-Architect can save you time. There are a number of ways to minimize slow REGENs, for instance, with careful zooms, saved views, and so forth. The required commands are easy to get at. There's a hidden-line-removal command (HIDE), but it is slow.

In fact, it can be hours slow. It's faster to use the hidden-line removal option in DVIEW instead.

You can draw in 3-D, and insert 3-D symbols. But you will probably find it faster and easier (as the manual suggests) to draw walls, doors, and windows in 3-D, and insert symbols in 2-D. You convert the 2-D symbols to 3-D as needed for shading, walk-throughs, and so forth. After all, with AutoCAD you adjust the coordinate system to bring, say, a sloping roof into the plane of the computer screen, then draw on it. So even in 3-D, you're working in 2-D. You can also put in a simple door, then change all the doors using that symbol to more-complicated designs that take up more drawing space.

There's a good LISP routine, WALL-EXT, to draw exterior walls (three parallel lines). But if speed is a problem, there's a smaller version, SIMPEXT, that does the same thing faster, without automatic intersection cleanup. Either one can be picked from the side-screen menu that appears when you choose the WALLS tablet menu bar.

The wall-to-roof routine is dandy for those who have been frustrated with the results of extruding a 2-D wall in the Z axis. With the routine, you can extrude to a standard height, draw a slanted roof line

over the wall, and extend the wall to the underside of the roof. You do have to invoke the routine separately for each roof face, however. Similarly, you can join two roofs on intersecting buildings, even where the roofs slant.

Auto-Architect is not really a refined space-planning tool, but it does calculate areas (of the exact interiors of the rooms, not counting wall thicknesses). And you can designate specific hatch patterns for specific departments or functions on a floor plan.

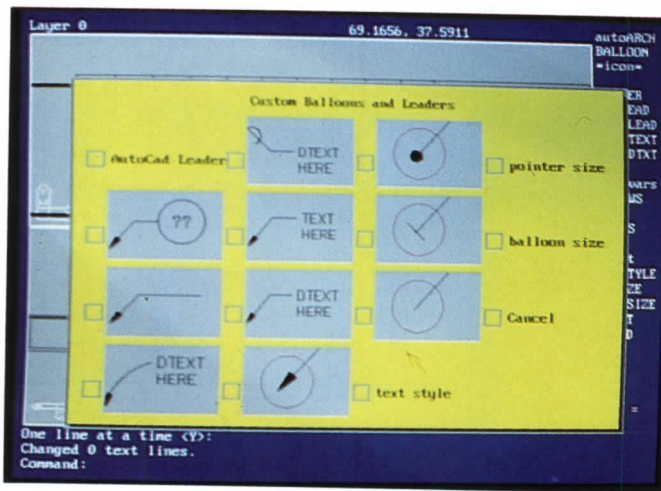
The routines for stairs, including multi-landing layouts and spirals, are excellent. Just respond to the dialog on the command line (it can run to 30 questions or more) and a stairway with handrails, under-stair detail, and landings is created automatically.

You can export or import text with one command. You can also leave AutoCAD and invoke your word-processing program—if you have been clever enough to change the ACAD.PGP file to tell AutoCAD what program you are using. If you are using WordPerfect or Word, however, save your files as plain-ASCII ("text only"). XyWrite files are ASCII to begin with, but all the text in a paragraph may end up on one line. Experiment. Text from schedules can be exported easily into Lotus

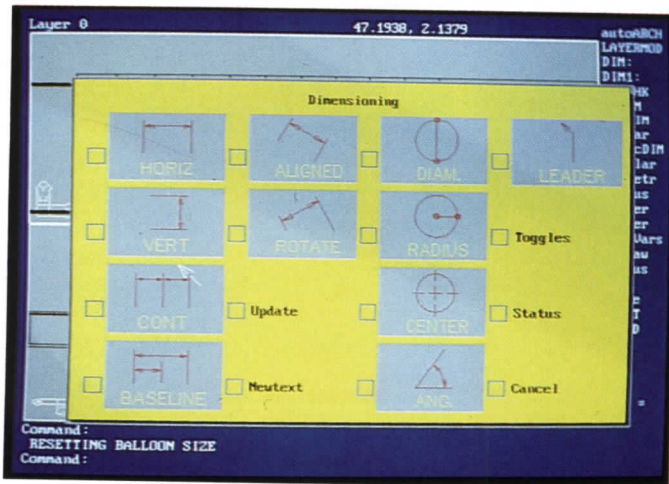
1-2-3, Excel, or SuperCalc, and parsed back into numeric data inside these spreadsheets. But when you bring them back into AutoCAD, use the spreadsheets' "print file" option to retrieve ASCII text.

The font selection is adequate for most purposes. There's bold and outline Helvetica and Times Roman, a Simplex font that can be used to create fractions (the font looks good in schedules), and an all-capitals hand-lettering font. The Helvetica and Times Roman fonts can be easily kerned (i.e., the individual letters can be brought closer together, or extended so that they are more widely spaced than standard). All in all, a fine package.

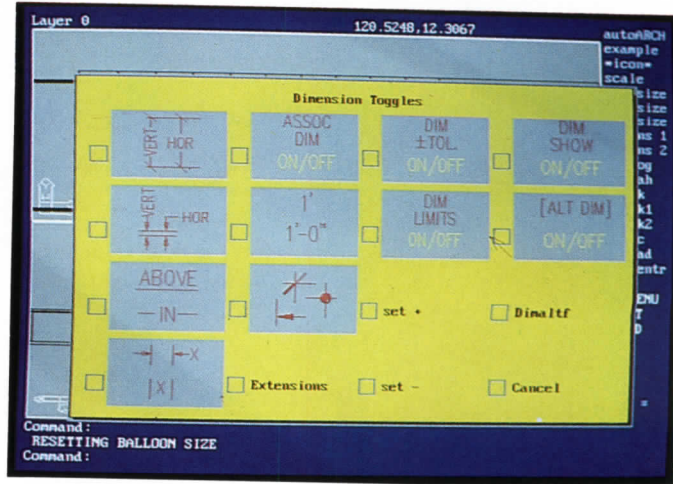
(Another software review follows.)



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There are 24 CAD programs offered for Architects on the Macintosh. ArchiCAD has the highest price.

Why?

Project Conception:
 Marc Corbiau,
 Architect,
 Brussels, Belgium
 Realisation:
 Marc Lust, Architect

Bill of Materials

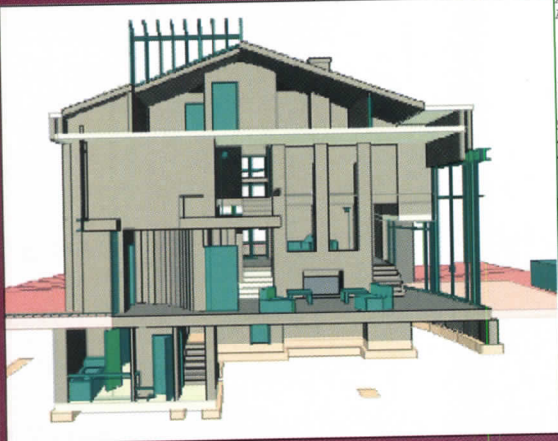
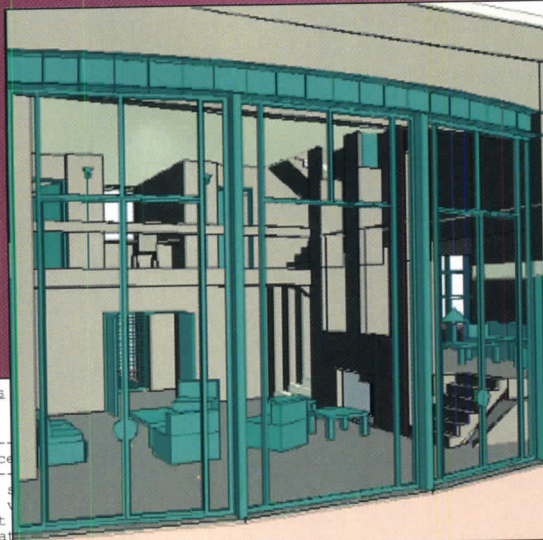
1. STOREY.

Walls Surface

WALL 510.49 sq ft
 2X1 stud+brick veneer
 -story height
 -2X1 sole plate
 -subfloor extension
 -brick veneer
 face brick
 mortar type N
 metal ties

WALL 239.76 sq. ft 237.09 sq ft 1 8
 2X4 stud + plaster 5'

WALL 671.33sq ft 245.67sq ft 278.33c
 WALL 47
 WALL 37



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Vertex Detailer 1.0

A powerful AutoCAD add-on that allows users to assemble 2-D details from 25,000 standard components sizes, types, and views. The components are arranged under the Construction Specification Institute Master Format. There is also a database system to keep track of detail drawings. The resulting details can be imported into other AutoCAD files, or into other CAD programs (as DXF files).

Equipment Required: The same. Any IBM- or IBM-compatible computer that can run a version of AutoCAD 10. Allow at least 20 megabytes of extra space on your fixed disk. The database programs themselves and component files take about 8 megabytes in packed, compressed form. Various groups of details can run 5 megabytes or more. A digitizing tablet, 12 by 12 inches, is useful for the menu. (You can get at all the commands with the pull-down on-screen menus, if your display supports AutoCAD AUI. But you will spend lots of time hunting for components.)

Vendor: Vertex Design Systems, 282 Second Street, 4th floor, San Francisco, Calif. 94105. (415/957-2799). \$1,995 includes 90 days support and updates; \$199 for an additional year of telephone support. \$595 each for separate "dynamic detail" groups (interior windows, interior construction, exterior walls, interior doors and built-up roofs).

SUMMARY

Manuals: There's a users guide (including a tutorial), and separate manuals for various detail groups. The manual offers no specific help on setting the AutoCAD environment space (lispheap, lispstack, and so forth) necessary when using the plain-DOS version of AutoCAD. Instead, Vertex refers users to the AutoCAD reference manual. Vertex is started with a batch file that

resets the variables, enters AutoCAD, and removes them when you exit AutoCAD the normal way. AutoCAD/386 does not require any setting of environment space, except for files and buffers.

Manuals for the dynamic details show plots of all the details they cover.

Ease-of-use: The key to all this is a database of standard components and a database of standard details, all supplied and updated by Vertex. Users create parallel databases of their own details and components as they use the product. The database manager can be accessed from inside AutoCAD, but it runs outside. It can be searched by keyword as well as through a menu arranged in CSI division or section order. It is easy to be sloppy with the details you build yourself, giving them names that are difficult to track, or attaching names and attributes of components in the Vertex database to components in your own details.

Error-trapping: The Detailer knows the difference between nominal and actual ("regular") dimensions—the fact that a 2 by 4 is 1.5 by 3.5 inches thick.

REVIEW

It takes a lot of fixed disk space, but Vertex Detailer can be worth every megabyte in high-volume production environments.

Components are selected from the database and rotated, mirrored, or stretched to fit the detail. Line weights and plotting styles can be customized. Details can be exploded, as with the plain-vanilla version of AutoCAD. But the explode command has been enhanced to explode mirrored blocks. Once a detail has been created and saved, it too can be modified and saved as another detail. Or it can be combined into larger details. Details inserted into larger drawings and plotted at the same time can be plotted at the wrong scale. The default for the details is 3 inches to the foot; it can

be easily changed.

The software will also produce a report giving information on all the components in all the details you specify. The report is an ASCII file that can be picked up by most word-processing programs, or parsed into numbers inside a spreadsheet program such as Lotus or SuperCalc. You can also select details from the overall database and place them in a smaller database for use on a given project. The selection criteria can be CSI keywords, or through dBase III commands that cover keywords, dimensional values, or any combination that can be expressed mathematically.

Components are stored on the fixed disk in a compressed format, and extracted as needed. This takes a bit of time. It is better to store the files in uncompressed form for faster retrieval. But it does require more disk space. The "dynamic details" packages contain from 100 to 300 details each, in specific categories such as interior doors and exterior walls.

Transfer of details to drawings that are being prepared with other architectural add-on packages in AutoCAD is usually fairly simple. All Vertex layers begin with V, for example. So the layers with details can be easily identified and kept separate from the rest of the drawing. The 2-D details, once prepared, can also be added to a "library" for easy use in any drawing.

But Vertex, in general, should be run in its own version of AutoCAD, without any other add-on programs present. If you are using the same computer terminal for regular CAD, put a separate copy of AutoCAD in a different subdirectory, or be careful to establish separate batch files for invoking Vertex and other add-ons with the core AutoCAD program. □

Mr. Ross is a prominent computer consultant and a regular contributor to RECORD.

2	3	4	5	6	7	8	9	10	11	12	13												
SITE	CONCRETE	MASONRY	METALS	WOOD & PLASTICS	THERMAL & MOISTURE PROTECTION	DOORS & WINDOWS	FINISHES	SPECIALTIES	EQUIPMENT	FINISHES	SPECIAL CONST.												
Earthwork	Reinforc.	Mortar	Fastening	Expansion Control	Connectors & Adhesives	Timber	Board Siding	Waterprf & Dampprf	Metal Soffit Panels	Copings	Roof Hatches	Steel Doors	Clad Wood Doors	Stl. Wdws, Fixed & Casement	Wood Wdws, Projecting	Metal Thresholds	Wall Framing Systems	Gypsum Board & Accessor.	Stone Flooring	Extruded Alum. Louvers	Docks Bumpers	Foot Grilles & Frames	Radiation Protection
Granular Paving	Accessor.	Accessor.	Struct. Framing	Side Bearings	Angles, Gussets, Ties	Wood/Metal Joists		Vapor & Air Retarders	Composite Panels	Expansion Joint Covers	Gravity Ventilator	Steel Frames	Coiling Service Doors	Stl. Wdws, Hopper & Awning	Wood Wdws, Sliding	Misc. Door Hardware	Shaftwall Systems	Tile Accessor.	Resilient Flooring	Metal Vents			
Asphalt Paving	Foundtns & Slabs	Clay Unit Masonry	Joists		Straps & Plates	Prefab. Struct. Wood		Insulation	Aggregate Coated Panels	Pipe Penetration Flashings	Plastic Skylights	Wood Doors	Storefrts, Center Glaze	Stl. Wdws, Glazing & Stops	Wood Wdws, Dbl. Hung	Glazing	Ceilings Suspen. Systems	Ceramic Tile	Carpet				
Unit Pavers	Cast-in-Place	Concrete Unit Masonry	Decking		Hangers	Milwork		Fireprflng	Metal & Vinyl Siding	Gutters & Accessor.	Joint Fillers & Sealants	Wood Frames	Storefrts, Front Glaze	Stl. Wdws, Accessor.	Clad Wdws, Projecting		Accoust. Suspen. Systems	Quarry Tile			14 CONVEYERS	15 MECH.	16 ELECT.
Prefab. Curbs	Decks & Toppings		Framing		Caps	Laminates		Shingles & Shakes	Membrane Roofing	Downspouts		Alum. Sliding Doors	Storefrts, Front Dbl. Glaze	Alum. Wdws, Commercl	Clad Wdws, Sliding		Veneer Plaster & Accessor.	Terrazo			Elevators	Floor Drains	Recessed Floor Lumin.
Drainage	Grout		Steel Shapes		Anchors	Plywood Paneling		Roofing Tiles	Sheet Metal Roofing	Scuppers		Wood Sliding Doors	Storefront Accessor.	Alum. Wdws, Residntl	Clad Wdws, Dbl. Hung		Unreinf. Plaster & Accessor.	Acoustic Treatment				Roof Drains	Recessed Incan. Lumin.
			Sheet Metal		Carpentry	Hardboard Paneling		Metal Shingles & Tiles	Flashing	Gravel Stops & Fascia							Reinf. Plaster & Accessor.	Wood Flooring					

This template fits under the top third of the standard AutoCAD template on a 12- by 12-inch digitizing tablet.

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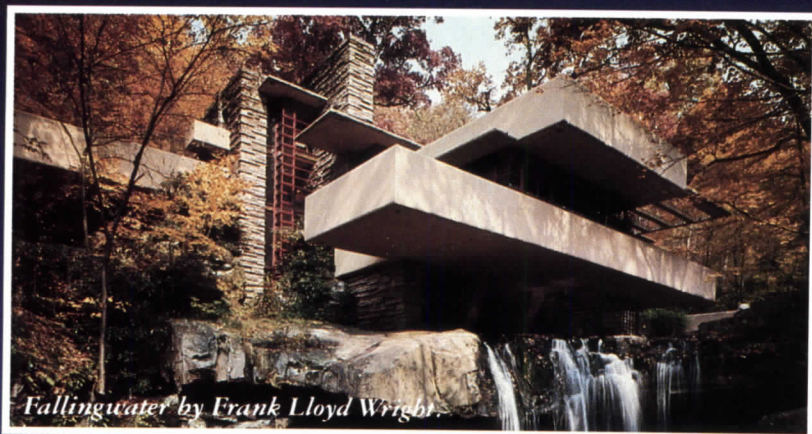
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Mr. Wright never got to know us.



But Elizabeth Wright Ingraham did.

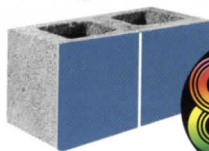
Cole Heights by Elizabeth Wright Ingraham & Associates.

When Elizabeth Wright Ingraham, Frank Lloyd Wright's granddaughter, designed Cole Heights (above), she specified materials as uncompromising as her architectural vision. Including Spectra-Glaze II masonry by Burns & Russell.

These remarkable pre-glazed concrete units offer brilliant, decorative faces on lightweight, modular block. Precise factory construction means uniform sizes, from field units to cove bases to jambs and caps.

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As the architect put it herself: "Spectra-Glaze gave us a durable exterior material with a



wonderfully broad color palette. In short, it offered us choice and beauty." Of course, Spectra-Glaze II is right at home indoors as well. And it saves construction time everywhere by providing a one-step, finished wall.

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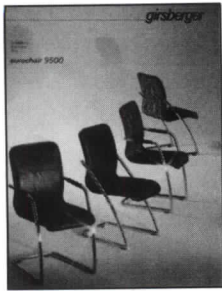
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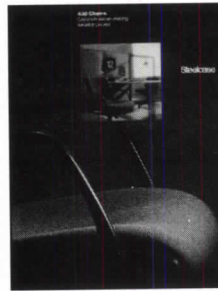
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For more information, circle item numbers on Reader Service Cards



Cantilevered sidechair

The Eurochair 9500, by Dieter Stierli, has a bouncy seat action and well-placed lumbar support. The chair has a bright-chrome frame, and upholstery options that include leather, vinyl, or fabric. Girsberger Industries, Inc., Smithfield, N. C. *Circle 400*



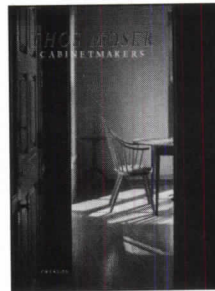
Back-support chairs

The 430 Series ergonomic chair offers dozens of functional and finish options, including seven different types of casters. A color brochure illustrates many of these, and explains special chair adjustments. Steelcase, Inc., Grand Rapids, Mich. *Circle 406*



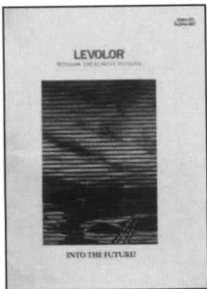
Contract textiles

Swatches of Provence patterns and other collections are offered on specification sample cards. Made of wool, Trevira, cotton, and other yarns, fabrics exceed the heavy-duty test standards of contract upholstery applications. Adam James Textiles, Hauppauge, N. Y. *Circle 401*



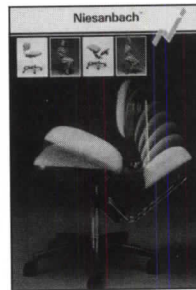
Maine-made furniture

Handcrafted wood pieces for residential, corporate, and educational use, including leather-upholstered sofas and stand-up desks, are beautifully presented in an 80-page catalog. Price list included. \$9 charge. Thos. Moser Cabinetmakers, Portland, Maine. *Circle 407*



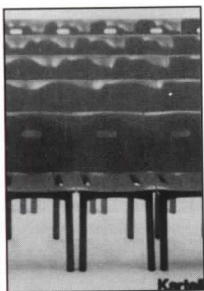
Window treatments

Architectural catalog presents vertical and horizontal blinds, shades, louvers, and other sun-control and decorative window treatments for commercial interiors. Motorized controls, special shapes, and other options are included. Levolor Corp., Sunnyvale, Calif. *Circle 402*



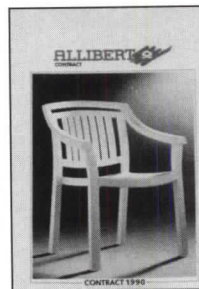
Dual-position task chair

The Niesanbach chair easily folds down from a standard seat-and-back type of task chair to a Scandinavian-style kneerest configuration, and is said to provide excellent back positioning in either mode. Kval Marketing, Inc., Petaluma, Calif. *Circle 408*



Italian seating

Contract and residential seating, including the Castelli stacking chair, bar- and drafting stools, and Joe Colombo's polypropylene armchair, are shown in a color folder. Kartell USA, Inc., Greenville, S. C. *Circle 403*



Casual furniture

A range of outdoor and casual dining furniture, widely used in hotels, resorts, and restaurants, is shown in a 35-page catalog. Seating units are made of molded resin. Allibert Contract Furniture, Stanley, N. C. *Circle 409*



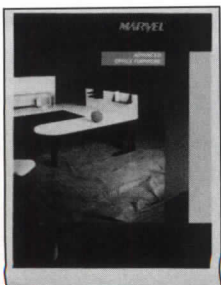
Corporate tables

A color catalog illustrates all base, top shape, and finish options available in the Tempest line of tables for conference, training, cafeteria, computer, and general office use. Howe Furniture Corp., Trumbull, Conn. *Circle 404*



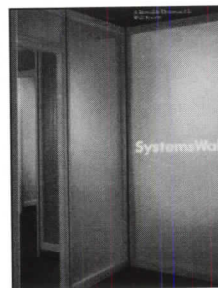
Column-base tables

Classic architectural elements, from Ionic columns to cast urns and sphinxes, create unusual tables and pedestals. Color catalog pictures columns used with glass and stone tops. Chadsworth, Inc., Atlanta. *Circle 410*



Space-saving workstations

A planning and product guide explains how to increase storage and worksurface space within the dimensions of any existing office. Managerial-level and clustered furniture systems are illustrated. The Marvel Group, Inc., Chicago. *Circle 405*



Partition system

A 16-page catalog illustrates the design, layout, finish, and installation flexibility claimed for the KI SystemsWall demountable wall, available in panel sizes up to 60-in. by 10-ft. Krueger International, Inc., Green Bay, Wis. *Circle 411*
More literature on page 150

Light without glare, expanded.

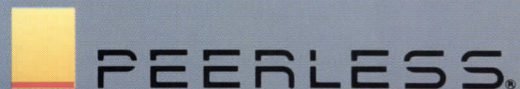
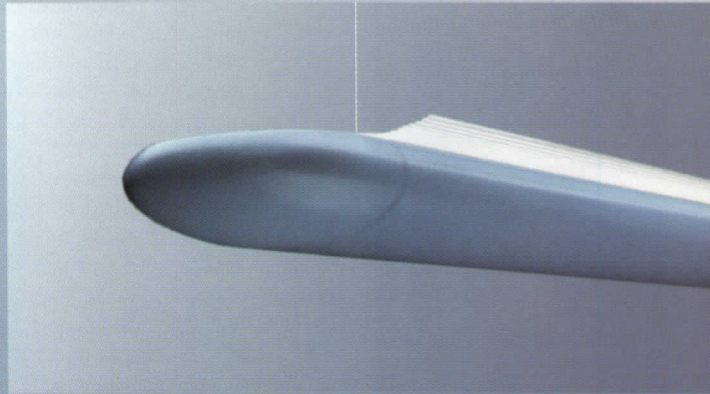
Meet the new 9½" x 3" Rounded system. It may be our most impressive achievement yet.

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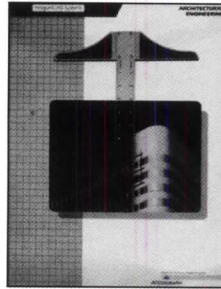
PRODUCT LITERATURE

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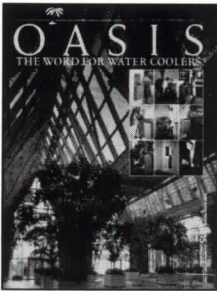
Tile-setting accessories

Expansion joints, trim profiles, stair nosings, and other tile installation products are illustrated in an eight-page architectural catalog. Decorative control joints are offered in 13 colors, as well as brass or chrome. Schluter Systems, Inc., Plattsburgh, N. Y. *Circle 412*



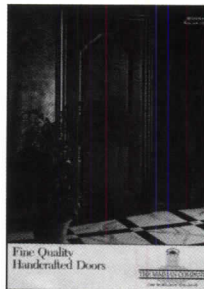
Integrated-design CAD

The Mountain Top design package now offers Relational Information System Environment, an interface that lets the user simply point to a graphic element on the screen, and automatically receive all database information on that object. Accugraph Corp., El Paso, Texas. *Circle 417*



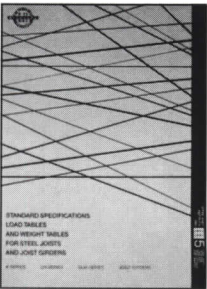
Water coolers

Over 50 different Oasis models, including coolers for wheelchair access and industrial uses, are shown in a 24-page color catalog. Special designs feature bottled water dispensers and built-in refrigerator compartments. EBCO Mfg. Co., Columbus, Ohio. *Circle 413*



Architectural woodwork

Panel, sash, louvered, and fire doors for institutional, residential, and commercial projects are explained in a color catalog. All-wood construction features and custom-design capabilities are highlighted. The Maiman Co., Springfield, Mo. *Circle 418*



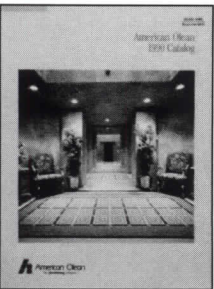
Steel joist design

Revised after six years of research, Specifications and Load Tables for steel joist construction include new data on fire resistive assemblies and welding of longspan and deep-web joists. \$8.50 charge. Steel Joist Institute, 1205 48th Ave. North, Myrtle Beach, S. C. 29577.



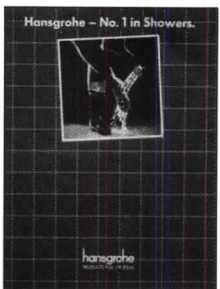
Curved safety glass

The Advanced Bending and Tempering System curves float glass in one continuous process, ensuring excellent optical qualities without tong marks. Monolithic pieces as large as 7- by 12-ft may be "S" and "J" curved. Glasstech, Inc., Perrysburg, Ohio. *Circle 419*



Ceramic tile

A 56-page full-line color catalog illustrates distinctive architectural applications of ceramic tile, pavers, and natural stone. New products include 3-in. porcelain tiles, unglazed floor tile in soft colors, and decorative trims. American Olean Tile Co., Lansdale, Pa. *Circle 414*



Showers and fittings

Booklets describe a German-made line of hand-held and fixed showers, mixing faucets, kitchen units, and bath accessories. Showers offer a number of spray options, and feature a self-cleaning function that eliminates mineral deposits. Hansgrohe, Inc., Soquel, Calif. *Circle 420*



Fabric graphics

Architectural textiles as signage, fabric sculptures, and mood-setting decorative motifs are illustrated in a series of case studies. Brochures feature new restaurant, hotel, and retail projects from Saudi Arabia to South Carolina. Bannerworks, Inc., Seattle, Wash. *Circle 415*



Seismic design of concrete

Case History brochure examines the successful use of reinforced concrete for the construction of a 30-story highrise in Emeryville, Calif. Time-saving details and formwork are discussed. Concrete Reinforcing Steel Institute, Schaumburg, Ill. *Circle 421*




Composite cladding panel

Petrarch is an extremely durable homogeneous sheet with the appearance and texture of natural slate or stone. Performance data and test results are given in a four-page architectural catalog. Petrarch Claddings Inc., Naperville, Ill. *Circle 416*



Architectural awnings

A 16-page guide, Awings in Architecture illustrates weather- and fire-resistant fabric used as a design element in shade structures, back-lit awnings, signage, and graphics. Frame construction is detailed. Industrial Fabrics Association International, St. Paul, Minn. *Circle 422*



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to prevent fire
is to set one.

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set another. And another.

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Circle 56 on inquiry card

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Introducing the Elkay Design 2000 Coolers. An extra-fine strainer, "The Filtrex System," helps keep out solid impurities. And, all components are lead-free. Trust Elkay for all your cooler needs...



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just say **ELKAY**

Elkay – First To Get The Lead Out.

Oak Brook, Illinois – The first lead-free coolers from Elkay Manufacturing Company are becoming a sure – and safe – bet for businesses, schools and other public institutions throughout the United States. According to the Oak Brook-based manufacturer, their new Design 2000 coolers exceed the Safe Drinking Water Act standards and meet UL requirements and all sanitary codes.

"The coolers, which are completely lead free, are another aspect of Elkay's comprehensive program to provide high-quality water coolers to institutions throughout the country," says Elkay Chief Executive Officer Ron Katz. He explains that the Elkay coolers address safety issues with cutting-edge technology. The Design 2000 Series features waterway systems manufactured of copper components and other completely lead-free material. And as an added safety measure, the unique Filtrex™ system prevents waterborne particles – as small as 140 microns – from entering the cooler system.

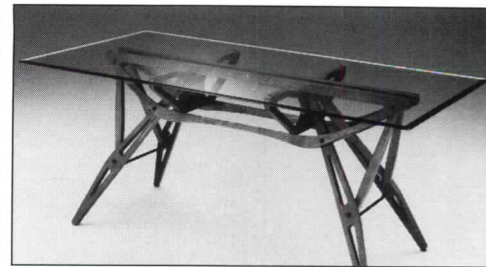
The company's Design 2000 Series coolers represent the broadest line of totally lead-free, high-quality water cooler products available.

With the Design 2000 Series water coolers and drinking fountains, schools and businesses are discovering a new, refreshing way to offer drinking water — and still play it safe. For information about Elkay's Design 2000 coolers, simply write or call Elkay Manufacturing Company.

just say **ELKAY**

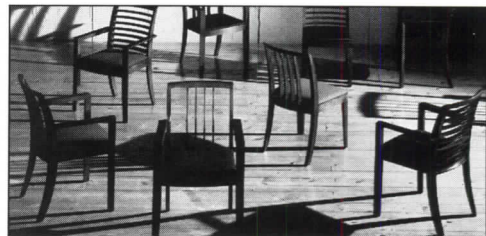
2222 Camden Court, Oak Brook, IL 60521 (708) 574-8484

Continued from page 137



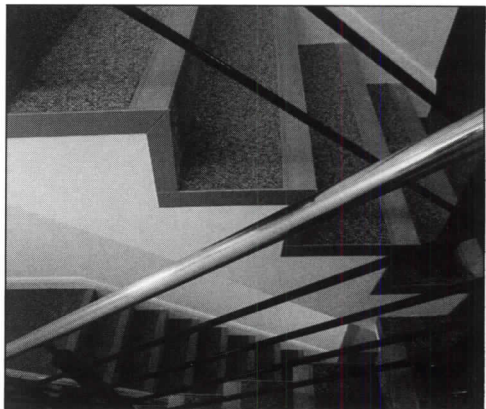
Italian interpretation

A NEOCON introduction, the Reale table is based on a 1946 design by Italian architect Carlo Molino. The interlocking base is made of ash, either oak-stained as shown, or painted with a black, open-pore finish; top options include beveled- or fissure-edged glass, and beola stone. ICF, New York City. *Circle 316*



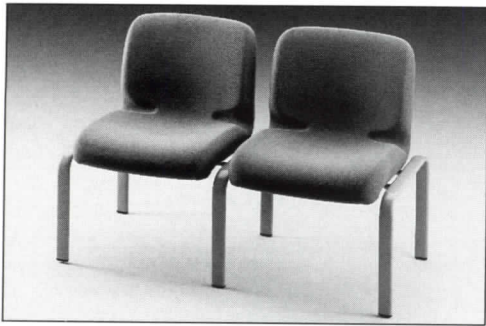
Thick and thin

Designer David Jenkins refers to his Oriana chair as a dynamic, Modernist version of slat- and ladder-back American furniture. The line is available with horizontal or vertical slats and with or without arms, and is suggested as guest seating for office, lobby, and dining areas. Stow & Davis, Kentwood, Mich. *Circle 317*



Stair edgings

Floor trims and stair edgings meet all California Title 24 regulations for the safety of the visually impaired. Made of aluminum, bronze, or PVC, trims come in various tread gauges for all floor types; their use will extend carpet wear warranties to stair installations. Antislip inserts allow dozens of color combinations; an Edgelite nosing accepts low-voltage light strips. Gradus, Inc., Cartersville, Ga. *Circle 318*



Waiting-room seating

Built for the rugged requirements of public lounge areas, Varix seating by Charles Pelly comes in a range of styles from polypropylene stackers to fully upholstered side chairs. A new modular unit is pictured. Samsonite, Atlanta. *Circle 319*



Workstation components

An extension of the current Freestanding Steel Furniture line includes a new corner unit that expands the configuration potential of the system. An adjustable keyboard pad makes it a dedicated space for VDT equipment. Connecting tables, returns, and vertical storage are also offered. Ha-worth, Inc., Holland, Mich. *Circle 320*



Occasional tables

New hardwood tables work with Robert Arko's Venetia and Verona seating series. Offered in a range of sizes from cocktail to sofa dimensions, tables may be ordered with wood, stone, or leather tops. Metropolitan Furniture Corp., South San Francisco, Calif. *Circle 321*

More products on page 155



The quality runs deep!

This wall hung economy cooler is no exception. It doesn't take up a lot of room. Or a lot of your budget. For high quality coolers for every setting, one word says it all...

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Circle 58 on inquiry card



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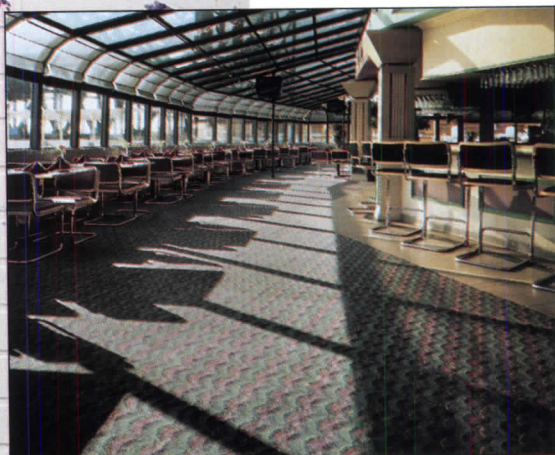
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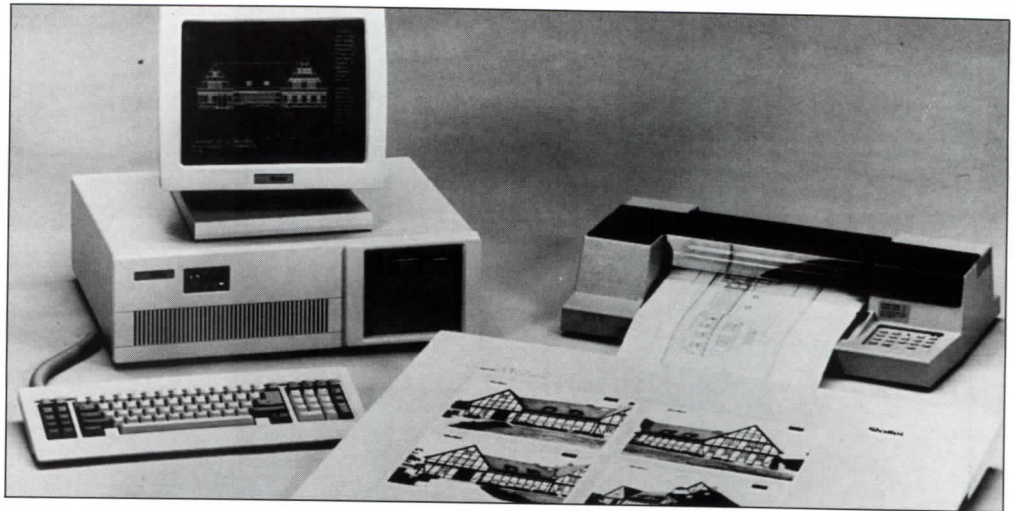


Amoco Fabrics and Fibers Company

Continued from page 153

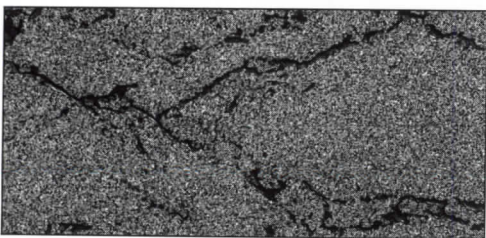
Photogrammetric system

Dimensionally accurate CAD drawings of built structures can be easily obtained using the Rollei metric system, which uses a SLR camera fitted with a reseau grid, an exact digitizing tablet and magnifying cursor (pictured) that "reads" the photographs, and proprietary PC software to convert this dimensional data into CAD drawings. While easy to use, the system is not inexpensive, ranging up to \$33,000 for camera, processor, and software. Rollei Fototechnic, Braunschweig, West Germany. *Circle 322*



Divided-light patio doors

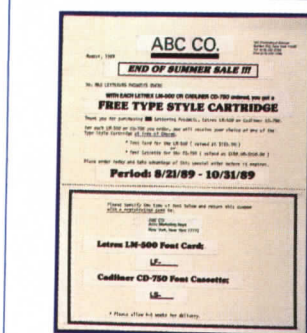
A new Cathedral door style features all-wood construction, a raised-panel base, and divided-light glazing in low-E, argon-filled, or etched glass. Exterior finish options include water-repellent treated wood or cladding in tan, adobe, white, or any of six customized colors. Weather Shield, Mfg., Inc., Medford, Wis. *Circle 323*



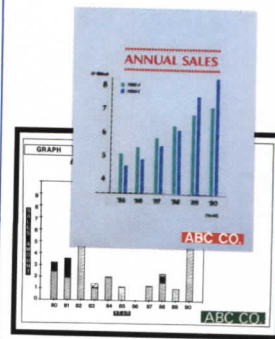
Stone-grained porcelain tile

A new granite-finish porcelain, Top tile comes in a total of 12 colors and 33 sizes, including 8-, 12-, and 16-in. squares. The line offers several unique finishes, such as Marmi, pictured, a polished surface with incised marbling that replicates the graining of natural stone, and Oxide, flecked with mineral specks. Cooperativa Ceramica d'Imola, Miami. *Circle 324*

More products on page 159



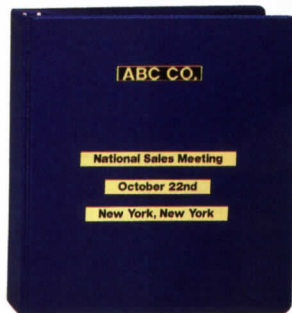
Flyers



Overhead transparencies



I.D. badges

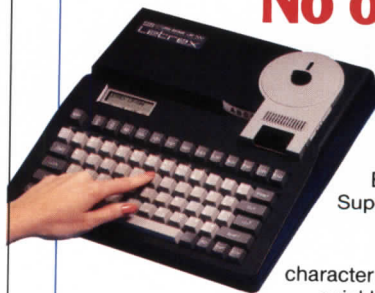


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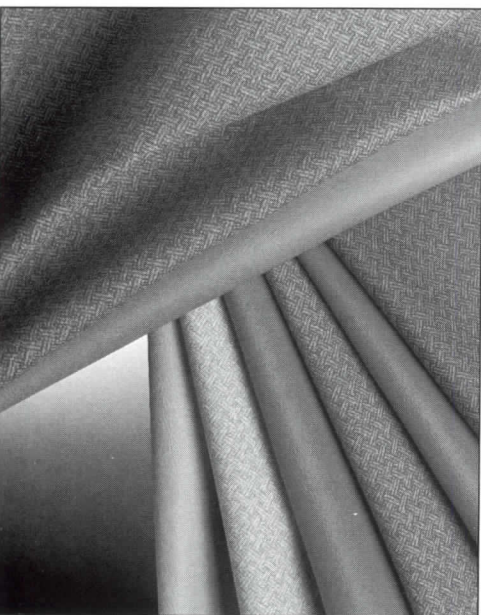


Continued from page 155



Updated wicker furniture

Handmade in Long Island, N. Y., the Vintage II Collection offers original designs from the 1930s subtly adapted to contemporary dimensions and colorways. The sleigh chaise shown above, for example, is 70 in. long, made of lacquered natural reed with trim in gray, green, or red. Other pieces in the line include a barrel chair, an Art Deco chair and sofa, and a Queen Anne-style sofa. Bielecky Brothers, Inc., New York City. *Circle 325*



Code-approved upholstery

A new Naugahyde fabric construction, ComfortAire contract upholstery has been microperforated to allow it to "breathe" for improved body comfort. Available in two styles—Granada, with the appearance of aniline-dyed leather, and heather-toned Irish Tweed—the material passes the most stringent flammability tests, including the Boston Fire Code and Port Authority NY/NJ requirements. Uniroyal Engineered Products, Inc., Mishawaka, Ind. *Circle 326*



Space-frame canopy system

Using two basic pieces—tubular members and spherical nodes—architect John T. Backus designed a custom space frame that integrates the platform, ticketing, and escalator areas of Seattle's new Convention Center transit station. The small scale of the Unistrut assemblies facilitated on-site erection of the canopy, and no field welding or painting was required. Unistrut Corp., Ann Arbor, Mich. *Circle 327*

More products on page 165

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

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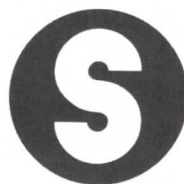
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VDT workstation accessory

Panel-mounted monitor arm is a simple way to solve several PC-related problems at once. The device has a counterbalance that allows the arm to be positioned exactly where the user wants, adjusting the tilt of the screen for comfortable, glare-free viewing. Lifting the monitor up saves worksurface space. Ergo Systems, South Windsor, Conn. *Circle 329*



Contemporary casegoods

New Unity furniture is a building-block system, with different top configurations available for double-pedestal, table, and column-supported bullet-shaped bases. Other pieces include files, vertical storage units, and VDT corners. Kimball Office Furniture Co., Jasper, Ind. *Circle 330*

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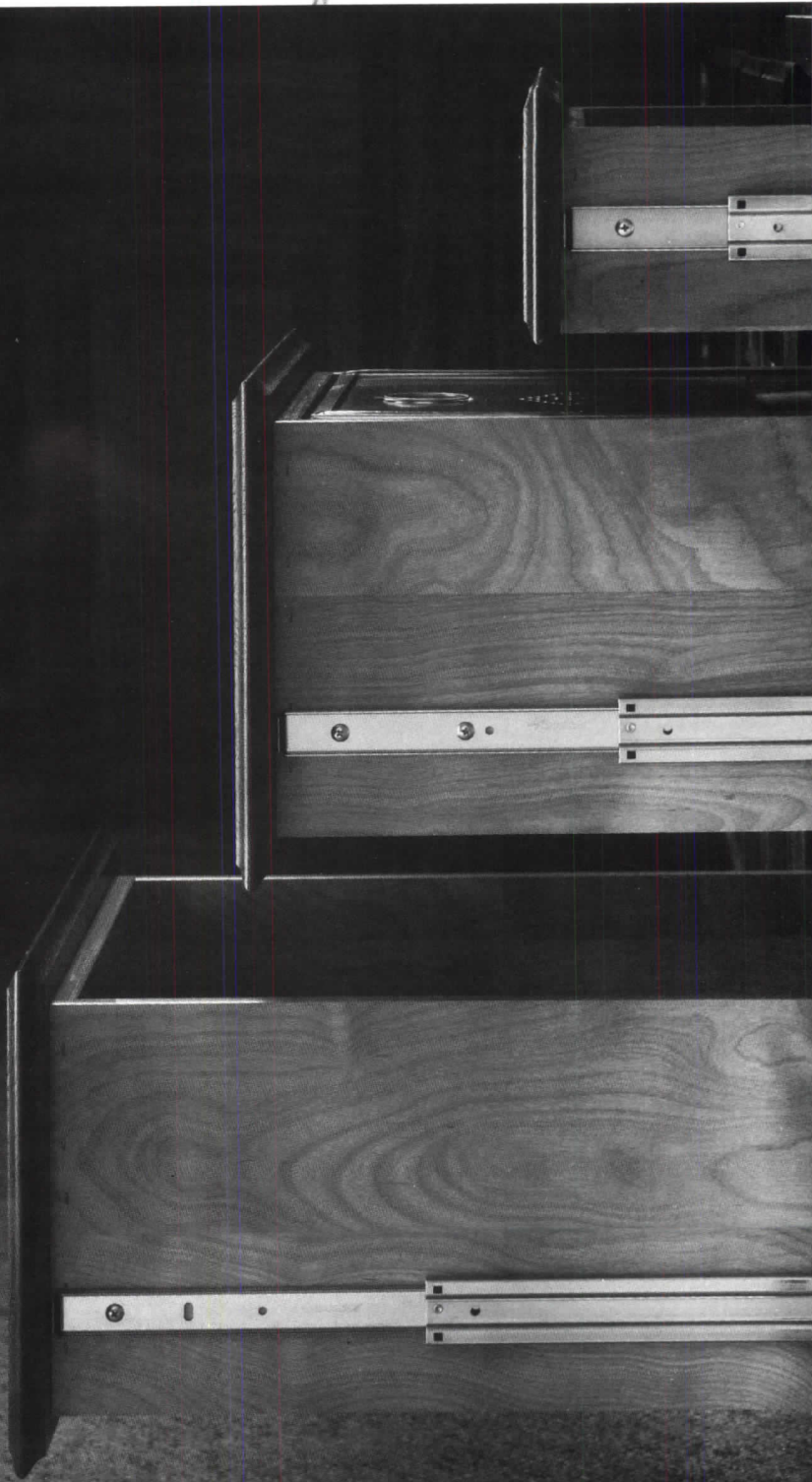
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Manufacturer Sources

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 78-83
 Shad Hall, Harvard University
 Kallmann, McKinnell & Wood, Architects
Pages 78-81—Brick: Glen-Gery Corp. Stone: Indiana Limestone. Stucco: Sonneborn Building Products. Membrane roofing: Carlisle Syntec. Slate shingles: Burlington Natstone. Aluminum-framed windows: Custom Window. Downlights: Halo. Entrance doors: Peerless Woodworking.
Page 82—Skylights: Imperial Glass Structures. Paints: Devoe & Raynolds. Textured wall finish: Dryvit System. Gymnasium pads and dividers: Porter Athletic Equipment. Track surface: Mondo Rubber International. Sound-absorbing CMU: Proudfoot. Maple gymnasium flooring: Horner Flooring. Metal-halide lighting: Rambusch.
Page 83—Chandelier: CSL Lighting. Chairs: Interna (Miles Carter).

Page 85
 Two Union Square, Seattle
 The NBBJ Group, Architects
 Silver-coated reflective glazing: Cardinal IG. Tempering: Falconer Glass Industries. Unitized curtainwall: Triad Architectural Products. Aluminum mullions and spandrels: Hundai. Finish on metal: PPG Industries (Duranar).

Page 86
 Washington Mutual Tower, Seattle
 The McKinley Architects and Kohn Pedersen Fox Associates, Architects
 Stone: Venetian Gold and Caledonia granite. Green-tinted heat-absorbing glass: Cardinal IG. Curtainwall: Harmon Contract Glazing. Spandrels: Barkshire Panel System. Metal enclosure panels: Construction Specialties.

Page 87
 Pacific First Centre, Seattle
 The Callison Partnership, Architects
 Curtainwall: Benson Industries. Glazing and skylight: Cardinal IG. Penthouse and rotunda panels: Becher. Rotunda glass: Pilkington Glass.

Pages 90-91
 Larry's Market, Kirkland, Wash.
 Carlson/Ferrin Architects
 Cladding panels: ECI Building Components. Coatings: DuPont (Imron and Kynar 500); Galvalume. CMU: Forrer Industries (Dry Block) Canopy: Tuff-Span. Metal halide light fixtures: Lithonia Lighting (HiTec). Downlights: Abolite. Flooring: Armstrong World Industries. Metal wind vanes: fabricated by Buster Simpson.

Pages 94-99
 Cook-Fort Worth Children's Medical Center
 David M. Schwartz/Architectural Services, P. C., Architects
Pages 94-95—Glazed face brick: Elgin-Butler Brick. Limestone: Texas Quarries, Div. Featherlite Corp. Curtainwall: Amarlite Architectural Products. Skylights: E. P. I. Architectural Systems. Built-up roofing: Koppers. Metal: Copper Sales. Windows: Alpana. Glass: PPG Industries; ACI Glass Products; Southern Tempglass. Automatic entrances: Stanley. Area lighting: Antique Street Lamp. Ceramic tile: American Olean. Quarry tile: Fiandre.

Pages 96-99—Granite flooring: Cold Spring Granite. Sprinkler system: Grinnell. Acoustic ceiling, walls, and resilient flooring: Armstrong World Industries. Grid: National Rolling Mills. Paints: Pratt & Lambert. Elevators: Montgomery Elevator Co. Modular carpeting: Milliken. Laminate surfaces: WilsonArt.

Pages 104-107
 Conference Room, Vogue Magazine
 Tod Williams Billie Tsien and Associates, Architects
 Aluminum and acrylic doors, etched glass sliding doors: Abbott Glass. Architectural woodwork: William Somerville Cabinetmakers. Modular carpeting: Interface. Chairs: ICF (Tavern Island). Upholstered seating: Brickel.

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 Spy Magazine
 Chan and Mohny, Architecture
 Custom sconces: Louis Galea.

Pages 110-115
 Deloitte & Touche Headquarters
 Peter Pran and Carlos Zapata for Ellerbe Becket/New York, Architects
 Wood doors: Weyerhaeuser. Locksets: Sargent Mfg. Custom woodwork, paneling: Hartford Builders. Wallcovering: J. M. Lynne; Maharam/Vertical Surfaces. Stainless steel and copper surfaces: Mison. Reception furniture: ICF; Stow & Davis; Helikon.



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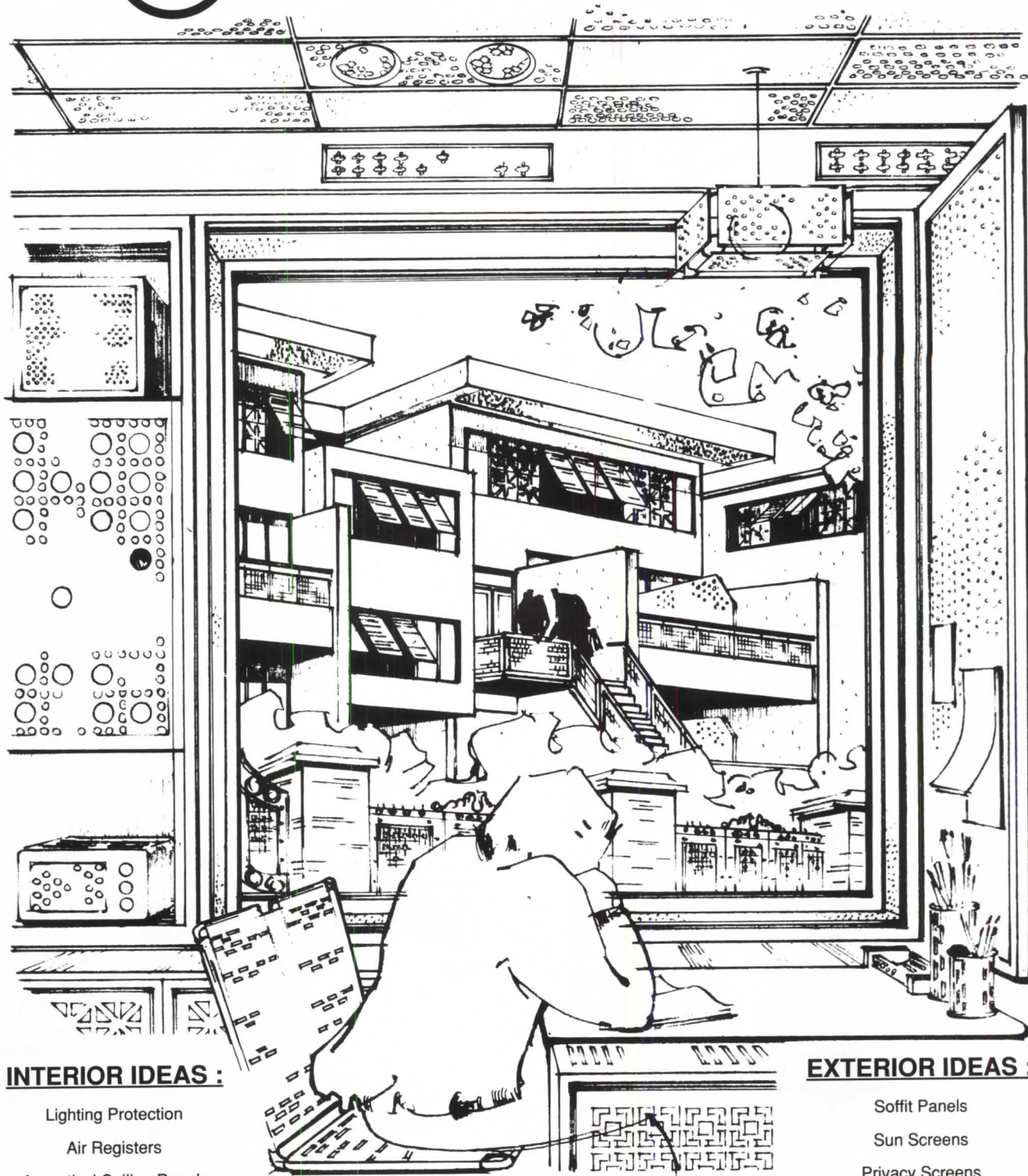
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