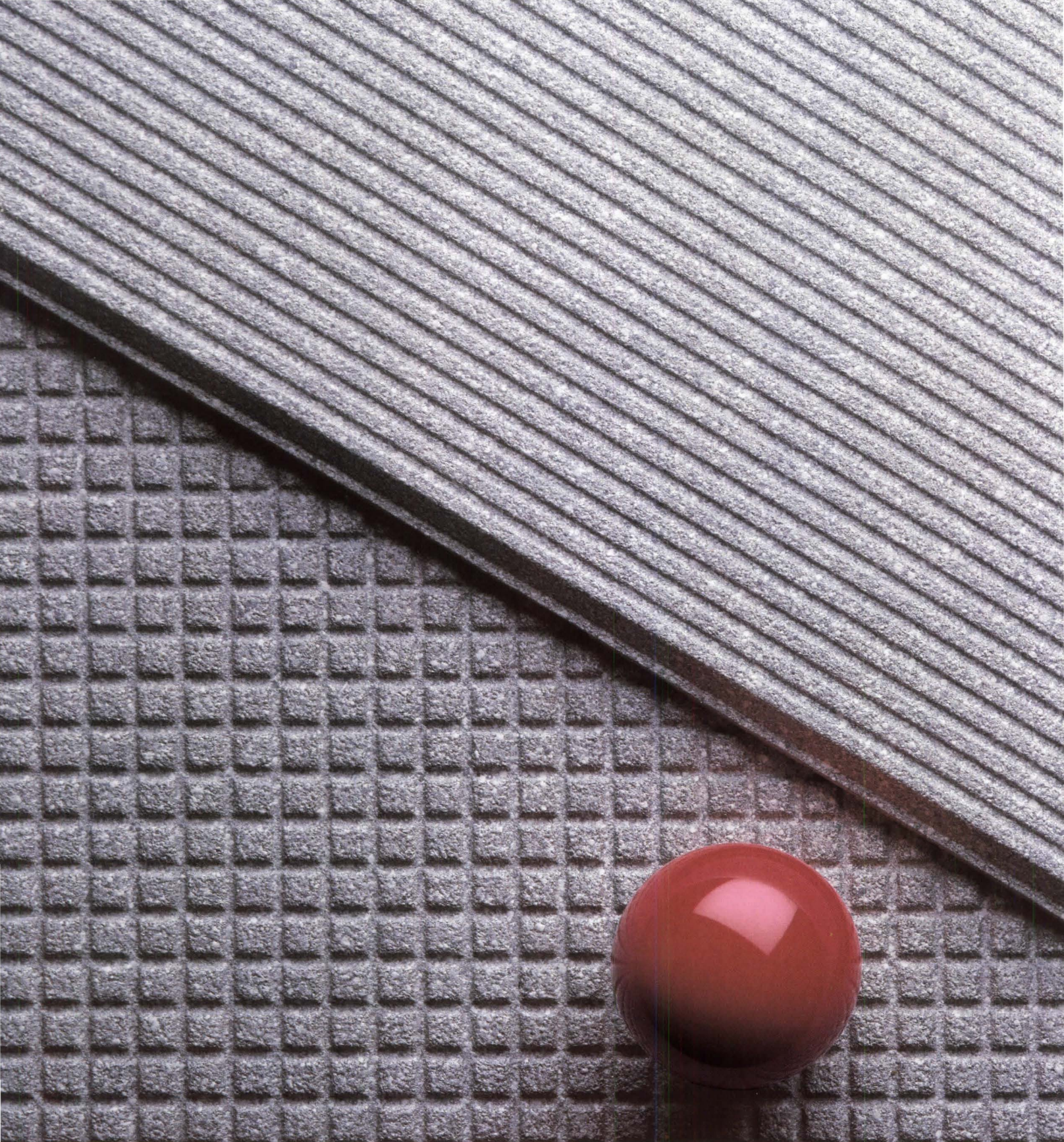


Progressive Architecture

F E B R U A R Y 1 9 8 9





NEW CEILING FINISHES

Multitoned. Finely textured. Three finishes. Available on five Artran[®] patterns. For our brochure, call 1 800 233-3823 and ask for Ceiling Finishes.



ARMSTRONG CONTRACT INTERIORS

CEILINGS
CARPETS
FLOORS
WALLS

Armstrong

Circle No. 315 on Reader Service Card

A close-up photograph of several stacked ceiling tiles. The tiles have a textured, fibrous surface. The top tile shows a stepped edge profile, while the tile below it shows a different profile. The background is dark and out of focus.

CEILING EDGES

Stepped, chamfered, beaded, and bull-nosed. All in 2' x 2' regular lay-in. For our brochure, call 1 800 233-3823 and ask for Ceiling Edges.



ARMSTRONG CONTRACT INTERIORS

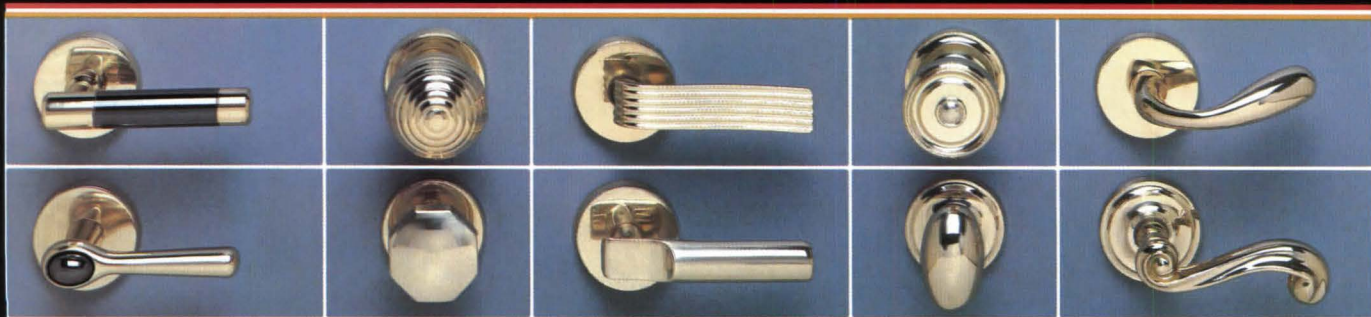
CEILINGS
CARPETS
FLOORS
WALLS

Armstrong

Circle No. 308

OMNIA

Interior Locksets



*Flawless designs...
for perfect interiors.*



NAUTILIDAE
Chambered Nautilus
Nautilus pompilius Linne'

The Omnia collection of interior locksets with solid brass trim affords you a choice of over thirty finely crafted knob and lever style designs, hand finished in highly polished brass or chrome, satin chrome, or shaded bronze.

Whether you select a gracefully sculpted lever or an elegantly carved knob, Omnia locksets make an eloquent statement at every entry.

And, at Omnia, beauty always goes beneath the surface. An internationally patented locking mechanism insures that our locksets will function smoothly day in and day out for years to come.

Omnia hardware is available through leading distributors coast to coast. For the name of your nearest supplier or information on joining our selective dealer network, please contact . . .

OMNIA
INDUSTRIES, INC.

Five Cliffside Drive
Box 330
Cedar Grove, NJ 07009

The Alternative in Elegant Design

Circle No. 355 on Reader Service Card

Editor

John Morris Dixon, FAIA

Executive Editor

Thomas Fisher

Profession and Industry Editor

James A. Murphy, FAIA

Managing Editor

Valerie Kanter Sisco

Senior EditorsPilar Viladas, *Interior design*Daralice D. Boles, *Features*Vernon Mays, *Technics***Associate Editor**Mark Alden Branch, *News***Copy Editor**

Virginia Chatfield

Assistant Editors

Jessica Elin

Debra Ladestro

Editorial Assistants

Andrea E. Monfried

Maxine Konrad

Art Director

Derek Bacchus

Associate Art Director

Lisa M. Mangano

Assistant Art Director

Kristin L. Reid

Contributing Editors

Norman Coplan, Hon. AIA

William T. Lohmann, AIA, FCSI

Walter Rosenfeld, AIA, CSI

CorrespondentsEsther McCoy, *Los Angeles*Barbara Goldstein, *Los Angeles*Sally Woodbridge, *San Francisco*Peter Papademetriou, AIA, *Houston*Thomas Vonier, AIA, *Washington*Monica Pidgeon, Hon. FAIA, *London*Donatella Smetana, *Milan*Jane Holtz Kay, *Boston***Vice-President and Publisher**

Robert J. Osborn

Business Manager

Daniel H. Desimone

Administrative Assistant

Carol Zezima

Promotion Manager

Debra L. Jones

Promotion Director

Jack Rudd

Production Manager

Gerry Lynch Katz

Production Assistant

Evelyn S. Blum

Vice President—Circulation

Gloria Adams

Circulation Manager

Dan Cochran

Circulation Marketing Manager

Joanne M. Improta

Penton Publishing

Progressive Architecture (ISSN

0033-0752) is published monthly,

except semimonthly in October,

by Reinhold Publishing, A Division

of Penton Publishing, 1100

Superior Ave., Cleveland, OH

44114; Philip H. Hubbard, Jr.,

President; Robert J. Osborn,

Vice-President; Penton: Thomas

L. Dempsey, Chairman; Sal F.

Marino, President; James K.

Gillam, N.N. Goodman, Jr., Paul

Rolnick, Executive Vice-Presi-

dents. Executive and editorial

offices, 600 Summer St., P.O. Box

1361, Stamford, CT 06904

(203-348-7531).

FAX 203 348 4023

ABP

MPA

ARCHITECTURAL DESIGN*Editors in charge: Thomas Fisher, Pilar Viladas***59 Geometer's Tower**

The Tampa, Florida, headquarters of NCNB bank, by Harry Wolf with Odell Associates, is a sheer 31-story cylinder that springs from an intricately gridded base. *John Morris Dixon*

68 News on Newbury Street

Frank O. Gehry & Associates and Schwartz/Silver Architects team up to turn a Boston loft building into a dynamic, metal-clad gateway to the city. *Jane Holtz Kay*

74 P/A Inquiry: More than a Box with Docks

Cities from Seattle to Miami are building new convention centers or expanding existing ones to accommodate a boom in the meeting business that shows no signs of abating. Thirteen centers are studied here. *Daralice D. Boles, Jessica Elin*

82 Suprematist Spike

A Neo-Constructivist tower by Gullichsen Kairamo Vormala Architects marks the center of a new town outside of Helsinki, Finland, with a dynamic new architectural form. *Richard Weston*

86 P/A Portfolio: Three Buildings

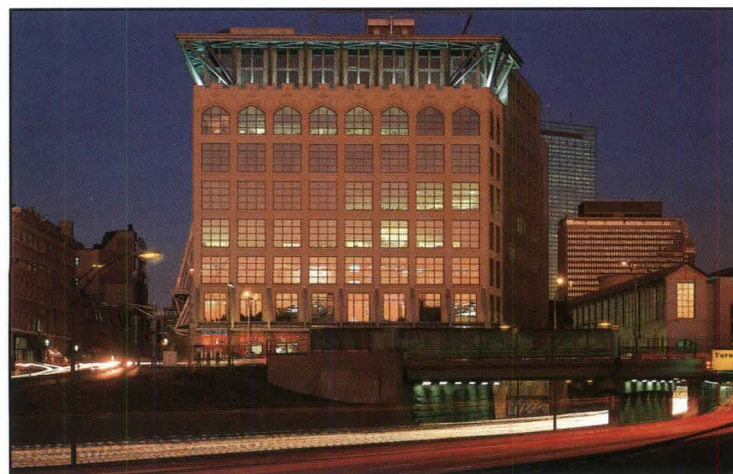
Three exemplary projects, well attuned to their surroundings, include: a mixed-use university building in Philadelphia, by Geddes Brecher Qualls Cunningham; townhouses in Chicago, by Nagle Hartray & Associates; and a manufacturing/office building near Los Angeles, by Michael Burch.

TECHNICS**92 Energy Conservation Update**

Renewed concerns over energy issues make recent advances in building technology and energy policy all the more valuable, as reports from five experts show. *Vernon Mays*

SPECIAL SECTION**111 WestWeek®**

This section includes the participants, program, and products featured at WestWeek®, at the Pacific Design Center, Los Angeles, March 29–31.



68

Subscription information: Send all subscription orders, payments and changes of address to Progressive Architecture, P.O. Box 95759, Cleveland, OH 44101 (216-696-7000). When filing change of address, give former as well as new address and zip codes, and include recent address label if possible. Allow two months for change. Publisher reserves right to refuse unqualified subscriptions. Professionals include architectural and architectural-engineering firm personnel and architects; designers, engineers, and draftsmen employed in allied fields. Subscription rates for U.S. professionals are \$32 for 1 year (\$40 in Canada, \$75 for foreign); \$50 for 2 years (\$65 in Canada, \$130 for foreign); \$75 for 3 years (\$95 in Canada). U.S. student subscription for 1 year is \$32. Subscription rate for U.S. nonprofessionals is \$45 for 1 year (\$60 in Canada, \$90 for foreign). Single copies are \$7 in the U.S., \$8 in Canada, and \$12 for foreign except Information Sources issue, \$12 in U.S., \$12 in Canada, and \$20 for foreign. Permission to photocopy is granted for users registered with the Copyright Clearance Center (CCC), provided that the base fee of \$1 per copy of the article plus \$0.50 per page is paid directly to CCC, 21 Congress St., Salem, MA 01970. Indexed in ArchiText Construction Index, Art Index, Architectural Index, Engineering Index. Second class postage paid at Cleveland, Ohio, and additional mailing offices. Volume LXX, No. 2. Printed in U.S.A. Copyright © 1989 by Penton Publishing Inc. POSTMASTER: Send address changes to PROGRESSIVE ARCHITECTURE, 1100 Superior Avenue, Cleveland, OH 44114.

DEPARTMENTS**9 Editorial**

Big Issues of 1939

11 Views**15 P/A Reader Poll**

Education

21 News Report**33 Perspectives**

Architecture in Poland

43 Calendar**49 P/A Practice**

U.S./Canada Trade

Roundtable on

Liability

98 Technics-Related

Products

103 Technics Topics

Commercial

Construction

Elevators

Tilt-up Construction

147 Books

Villas of the Veneto

151 Products and

Literature

153 Building Materials**155 P/A in March****156 Job Mart****159 Selected Details**

Glass Staircase, Esprit

Store, London

160 Advertisers' Index**161 Reader Service Card****Cover**

NCNB Bank, Tampa, Florida,
by Harry Wolf with Odell
Associates (p. 59). Photo:
Steven Brooke.

Fay Schroeder had a problem. She needed a quality office system for the loan operations area at First Commerce Corporation's lead bank in New Orleans. But aesthetics were going head to head with economics.

"We needed a comfortable and productive working environment," she says. "We certainly wanted it to look nice. But since it's a back office area, we didn't want to spend a lot of dollars on it."

As First Commerce's staff designer in charge of interior planning, Fay evaluated

several competitive products.

Her local Steelcase® rep suggested Movable Walls.

"I'll be real honest," says Fay. "I'd always heard—especially from their competition—that Movable Walls was the pits. A product used only in inexpensive, governmental applications. I believed them. I was convinced that people who specified Movable Walls were embarrassed to admit it.

"Well, I was wrong...

"Movable Walls is tough and durable. It's

True confessions.



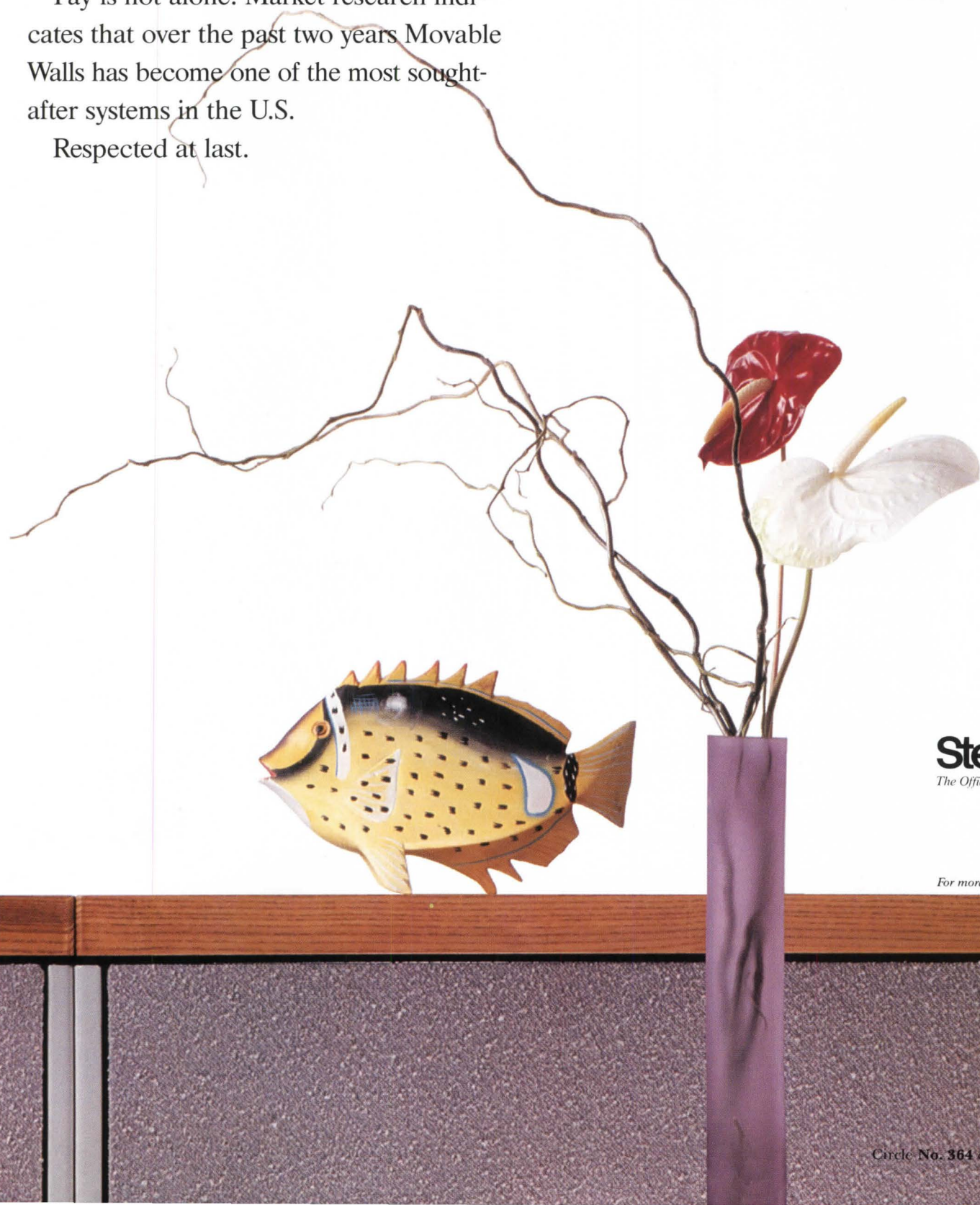
simple to configure, has good wiring and cabling. And flexibility. I was impressed with the choice of surface materials.

"Working with these options, I designed everything from data-entry to management-level workstations—without a big price tag.

"I'm sold on Movable Walls."

Fay is not alone. Market research indicates that over the past two years Movable Walls has become one of the most sought-after systems in the U.S.

Respected at last.



Steelcase
The Office Environment Company™

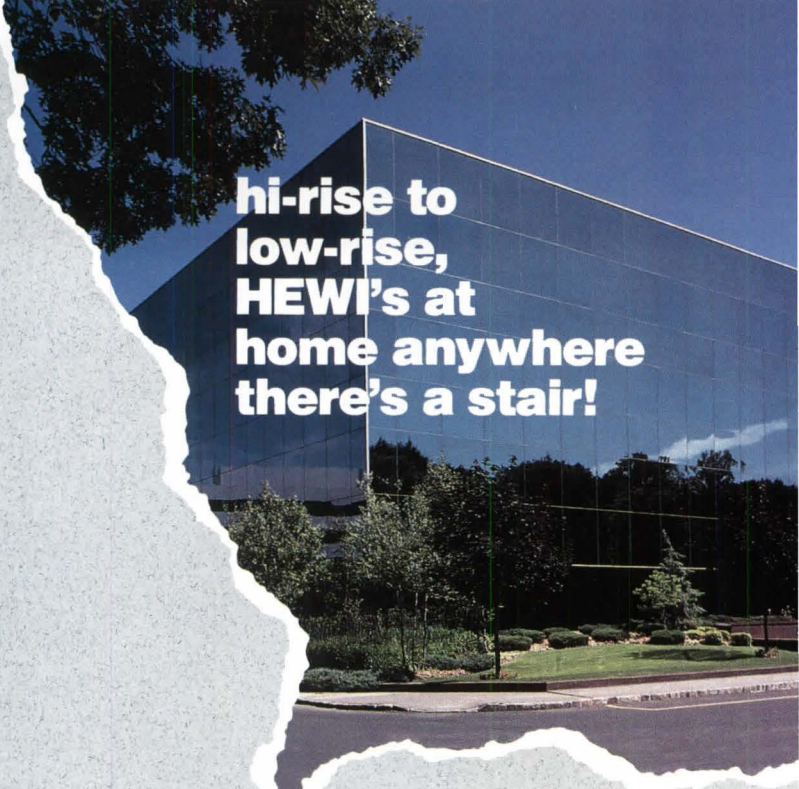
For more information, call 1-800-333-9939

Circle No. 364 on Reader Service Card

**From hospitals
and schools
to corporate
headquarters
and residences,**



**hi-rise to
low-rise,
HEWI's at
home anywhere
there's a stair!**



HEWI RAILING SYSTEMS by W&W

Sleek good looks result from shiny high quality nylon components, colored throughout in a range of 13 colors.

Smooth, non-slip surfaces are virtually carefree and pleasant to the touch.

Solid and secure handrails have continuous corrosion-free steel cores galvanized inside and out and comply with BOCA codes.



W&W GLASS PRODUCTS LTD.

300 Airport Executive Park
Spring Valley, NY 10977
1-800-GLASWAL (914) 425-4000
Fax: (914) 425-6156



Big Issues of 1939

A look into some 50-year-old issues of *Pencil Points*—P/A's predecessor—reveals a profession absorbed with two familiar concerns: the merits of Modern design vs. historicism and the provision of low-income housing.

THE advent of 1989 set me to wondering about how the world of architecture looked in early 1939, just before the outbreak of a war that would interrupt and redirect architecture, along with just about everything else. Turning to the early 1939 issues of *Pencil Points*—P/A's name before World War II—I found a remarkably familiar situation: a profession torn between Modernism and traditional styles and much concerned about low-income housing.

On the style front, the January 1939 *Pencil Points* presents a critical report on the Bauhaus exhibition then at New York's Museum of Modern Art, written by the eminent Talbot Hamlin. Much like our reviewer of MOMA's recent Deconstructivist show (P/A, Aug. 1988, p. 25), Hamlin admires much of the design shown, but has little good to say about the exhibit. In the same issue, editor Kenneth Reid publishes excerpts from a book on art and craft in Post-Bauhaus Germany. While disclaiming any sympathy with the Hitler government, Reid shows some doorways, stained glass windows, and such in a Classical-Vernacular-Modern style that the state was encouraging. Reviewed 50 years later, these works look charmingly nondoctrinaire, much like, say, Eliel Saarinen's work at Cranbrook.

The "Threshing Floor" pages of *Pencil Points* in those days published the unedited opinions of readers, one of whom soon writes to congratulate the editors for revealing that "all is not stagnant in Germany," as émigrés portrayed it, and hopes that they will "recollect this letter in a few years, when Bauhausism and its related conceits have been packed away for the moths."

In America, the reigning design attitude shown in these 1939 issues is, if not Post-Bauhaus, then Non-Bauhaus. It shows a similar kind of accommodation of Modernism to Classicism by adopting familiar forms and compositional strategies—the very approach that was the subject of the recent New York exhibition *Everyday Masterpieces* and its catalog (Jan. issue, p. 24). The great fairs of 1939, in New York and San Francisco, which earned many pages in those issues, present this kind of a comfortable, crowd-pleasing stylistic mix.

While the architects of 1939 were trying to sort out their stylistic allegiances, a whole other controversy revolved around publicly subsidized housing. After six years of New Deal policies, a considerable amount of public housing had been produced. One type of reaction from the ranks of the architects is revealed in a "Threshing Floor" letter of July 1938: A New York architect complains bitterly about a hypothetical Iskowitz family ("This is just a name I made up, but I think it sounds nicer than John Q. Public"), who pay less for an ample new apartment than he does for his smaller old one, while his taxes go toward their subsidy. *Pencil Points* invites responses to this letter, and in the January 1939 issue we find one from a Philadelphia architect who himself lives in a subsidized project; he portrays public housing as throwing down a challenge to private builders and predicts that it will encourage them to stop marketing "sham gables" and "robin's egg blue baths" and start producing affordable housing; if the earlier writer is so worried about his taxes benefiting the Iskowitzes, what about the money that goes for "battleships that will become obsolete in a few years"? Comparable arguments are bound to be much heard in 1989.

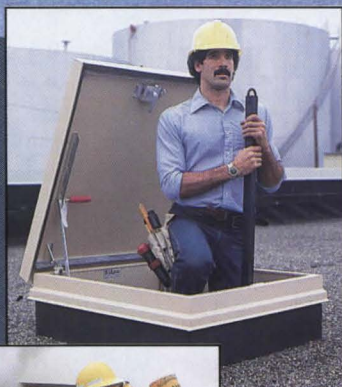
More calmly assessing the housing question from the point of view of professional practice, Talbot Hamlin begins a 17-page survey of accomplishments with the headline "Housing Is Architecture." Citing the lament of a "well-known elder" architect that architecture had fallen to the state of designing "mere apartment houses and housing developments, and those of the cheapest type," Hamlin asks what more inspiring subject there could be than "an entire designed community." While his article emphasizes large apartment developments, both public projects and moderately priced private ones, he also points out virtues in some isolated buildings, as well. He too believes that no-nonsense public housing can shame the private sector into scrapping its "stylistic tricks," although he accuses the FHA, which was making inexpensive loans to private builders, of encouraging "pseudo-colonial."

While all of Hamlin's housing examples are more practical than inspired, none are cursed with the vast scale and anonymity of postwar projects, and all of the units published could command substantial prices on today's market. It is not mere nostalgia to wish that we could address our housing crisis of today with units as good as these.

Ideas such as Modernism and social consciousness seem to vary in cycles that are somewhat independent of circumstances. Our political and economic situation today has little in common with that of 1939. Yet these two issues, which seemed settled for eternity in the 1950s, have become areas of broad disagreement that will continue in 1989. ■

John Morris Dixon

Proving Ground



In the cities, in the towns, throughout the land, Bilco products are keeping their users satisfied. Satisfied with the smooth, easy, reliable operation. Satisfied with the low maintenance and long, trouble free service.

Bilco. Time tested, performance proven products for your clients. Roof Scuttles, Automatic Fire Vents, Pit, Floor and Sidewalk Doors, Ladder Safety Posts, Ceiling Access Doors, Basement Doors.

See our catalog in Sweets or send for a copy.



DOORS FOR
SPECIAL SERVICES

P.O. Box 1203, Dept. FS117, New Haven, CT 06505

Circle No. 317 on Reader Service Card

Views

Rarefied Houses

Nothing better illustrates the conceptual bind that architects put themselves in than contrasting two attitudes evidenced in your December issue. (One so typically well written, presented and considered that its delights are self-evident.)

Tom Fisher's editorial decries a professional attitude moving "toward a more rarefied position." Jim Murphy in his introduction states that "Few of the houses in this issue are what the public would call 'homey.'" Oh those shallow, unenlightened people. . . . It is so fitting that this attitudinal psychophrenia is in an issue on homes. Houses are inherently idiosyncratic and personal, but are they more successful when they reflect the occupant's character or the architect's? I think Mr. Fisher and Mr. Murphy cogently tipped their hands.

Duo Dickinson

Architect

Madison, Conn.

[Interesting points, but bear in mind that the occupants of most of the houses in this issue were no more interested in conventional homeyness than were their architects. We met these owners, and they wanted the environments they got.—Editors]

Editorial Resonance

Contrary to the apocalyptic fears of the post-structuralist argument, I remain convinced—as I believe you do—that "right" exists. It may not be accessible, it may be repressed, it may be unobtainable, but it exists. I take this position because, on occasion, in life and in architecture a thing feels so right (true?) that it cannot be doubted.

Your editorial in December's issue has this quality. It is wonderfully and painfully accurate. It resonates . . . great job.

Don Prowler

Architect

Philadelphia

Skylight Research Clients

The clients for the Skylight Handbook and AAMASKY1 Software (January issue, p. 125) were inadvertently omitted from the credits. They were: Skylight and Space Enclosures Committee, American Architectural Manufacturers Association, Des Plaines, Illinois, and Office of Building and Community Systems, Building Systems Division, U.S. Department of Energy, Washington, D.C.

Competition flashbacks

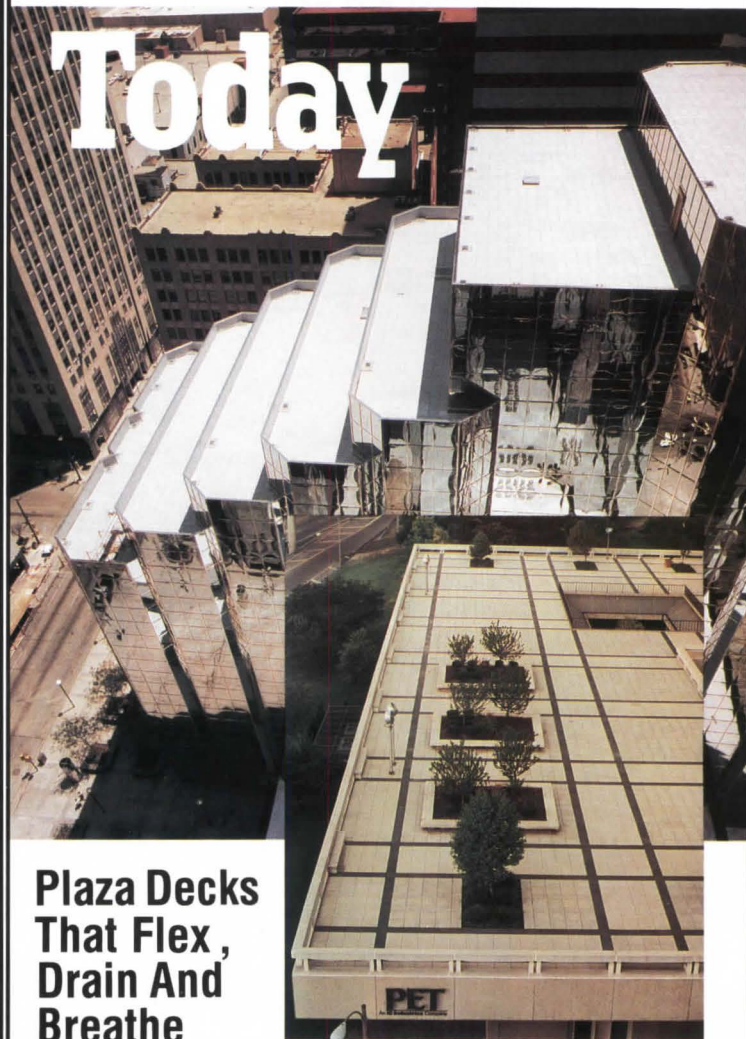
In the January issue, references to previous P/A articles on two competition-winning schemes were inaccurate. For the West Hollywood Civic Center (Jan. issue, p. 107) the earlier article was in P/A, Dec. 1987, p. 25; for the Carnegie Mellon master plan (Jan. issue, p. 113), the earlier article was in P/A, Aug. 1987, p. 25.

Publication Source Correction

An incorrect Zip code was shown in the address for the publishing arm of the Harvard Graduate School of Design. The correct address is: Office of Special Programs, Graduate School of Design, Harvard University, 48 Quincy Street, Cambridge, MA 02138.

Step Onto The Next Century...

Today



Plaza Decks That Flex, Drain And Breathe

Terra System One™

Extremely Durable
Terra-Pavers...
Terr-adjust Leveling Pedestals...
Terra-Tabs...Top Quality Components
That Are Guaranteed As A System.



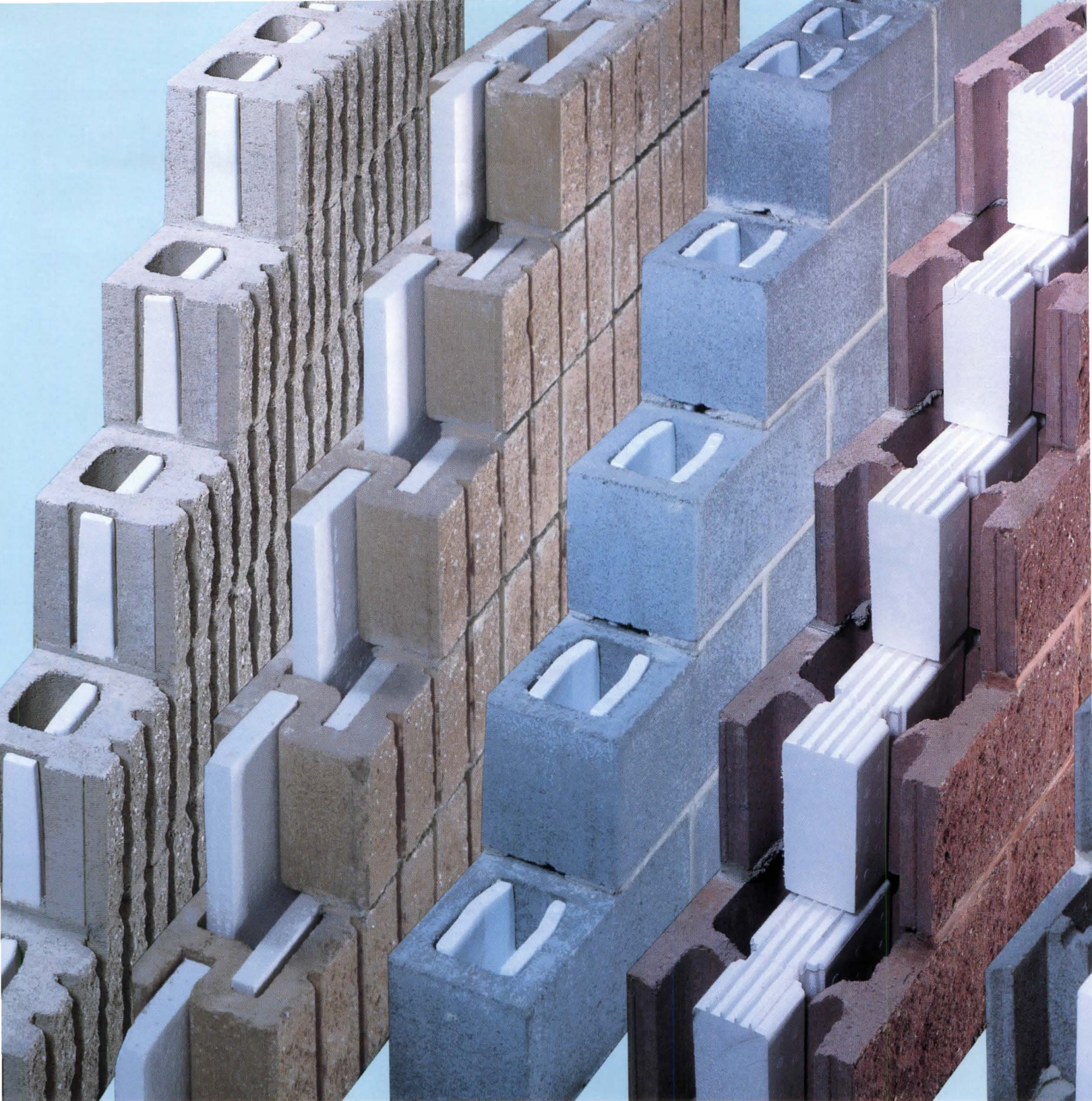
A One Source • Complete System



WAUSAU TILE

P.O. BOX 1520 • WAUSAU, WI 54402-1520 • 715/359-3121

1-800-992-8728

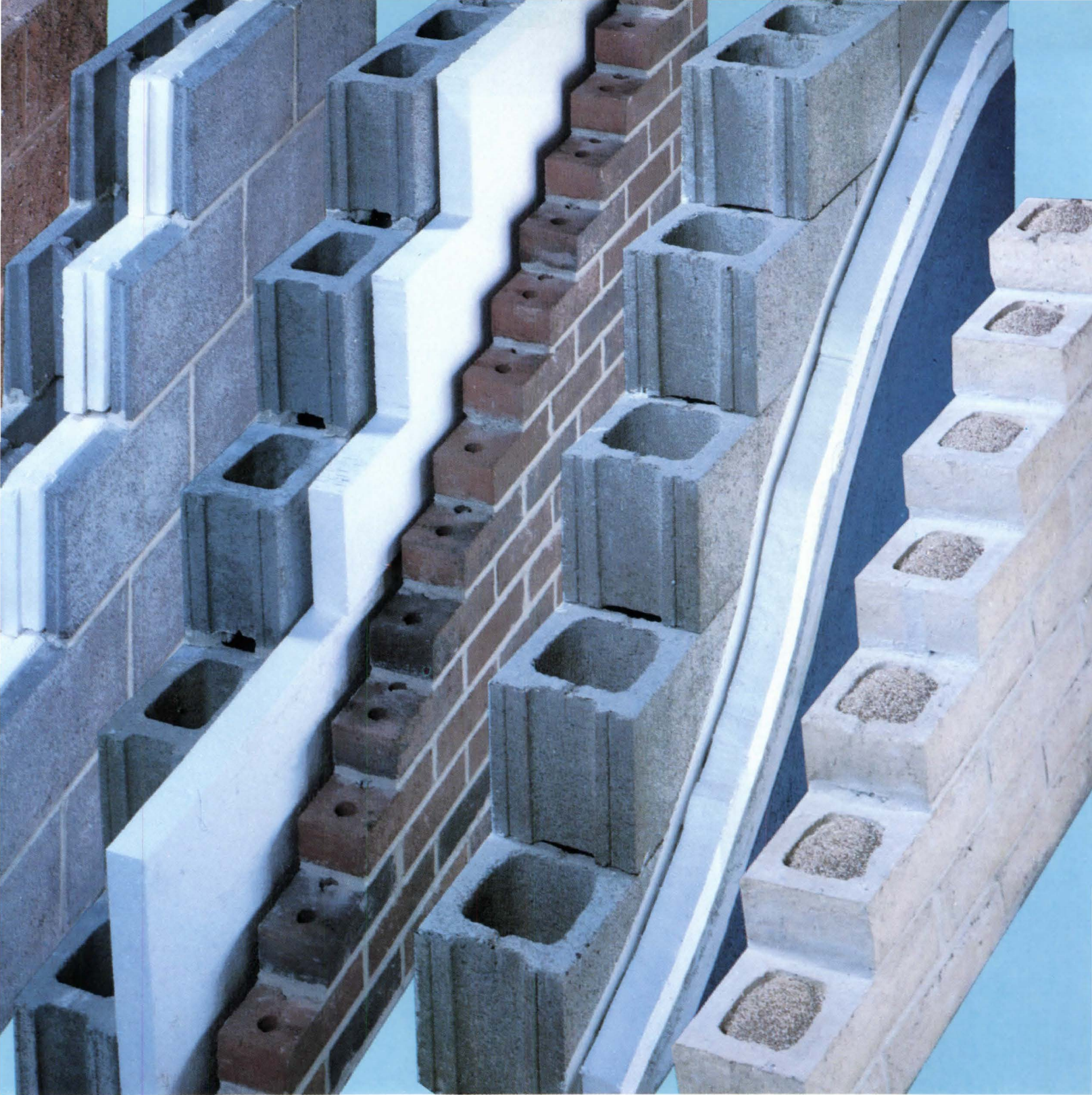


CONCRETE MASONRY INSULATED WALLS deliver high thermal performance and won't rust, rot or burn.

The wall sections illustrated here are all designed and constructed with the most versatile building material on the market—insulated concrete masonry. In addition to delivering high “R” values and complete fire safety, concrete masonry walls are loadbearing, sound absorbing and energy efficient.

And, as you can see, there's a wonderful new world of shapes, sizes, colors and textures, just waiting for the touch of talented designers.

These are not exotic pie-in-the-sky products. All of these wall systems—and more—are available now from your local NCMA



member/producer. Discover the concrete masonry advantage. Contact your local CMA member now, or mail the coupon for complete information. The wonderful new world of block is as close as your telephone.



**NATIONAL
CONCRETE MASONRY
ASSOCIATION**

2302 Horse Pen Road, P.O. Box 781 Herndon, Virginia 22070-0781
Phone (703) 435-4900 FAX (703) 435-9480

Circle No. 353 on Reader Service Card

Marketing Department
National Concrete Masonry Association
2302 Horse Pen Road • Herndon, Virginia 22070

Please send me complete details about insulated concrete masonry wall systems.

Name _____

Company Name _____

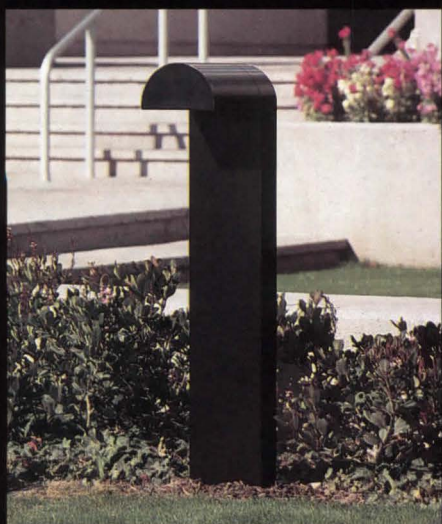
Address _____

City _____ State _____ Zip _____

Phone () _____

PRA 20 2/89

Site Lightforms



Presenting six new luminaires specifically designed to complement neo-classic and high-tech architectural design through carefully integrated geometric shapes, refined proportions and innovative detailing. Vandal resistant cut-off lighting for pathways, entrances, courtyards, atriums and landscape. H.I.D., fluorescent and incandescent lamp modes, and of course uncompromised Kim quality.



KIM LIGHTING

16555 East Gale Ave., Post Office Box 1275
City of Industry, Calif. 91749 • 818/968-5666
FAX 818/330-3861

Circle No. 340

P/A Reader Poll

Education

This reader poll reveals a profession at odds with its own educators and split in some ways over what architectural education should ideally be.

Education helps define a profession. Through it, professionals gain the specialized knowledge and skills that justify their monopoly of certain practices through licensing. But what if a profession and its professional schools are at odds over what should be taught and how? What responsibilities exist between the two? What should their relationship be? This reader poll raises, and partly answers, those questions.

The Respondents (Fig. 1, 2, 3)
Over 1500 readers responded to this poll. Three-quarters of them work in architectural firms and 10 percent are either faculty or students. About half (52 percent) work as designers and half (48 percent) do not. Also, about half of the respondents (53 percent) have undergraduate degrees and just over one third (35 percent) have graduate degrees.

Rating Education (Fig. 4)
At first glance, the poll seems to show a profession satisfied with its education. A majority of those who responded (53 percent) rated their own education as superior and most of the remainder (38 percent) considered theirs adequate. There were only slight differences among readers: Those who attended graduate architecture school were somewhat more satisfied

than those with undergraduate degrees, while those who went to design-oriented schools and work as designers gave their education the highest marks.

But that satisfaction did not extend very far, certainly not to our readers' evaluation of architectural education today. Only 9 percent rated it as superior, while 60 percent rated it as adequate, and 31 percent as unsatisfactory. Here, the age of the respondent made a difference. Those who graduated in the 1980s or who will graduate in the 1990s were more likely to consider today's education adequate than graduates from the 1950s or before.

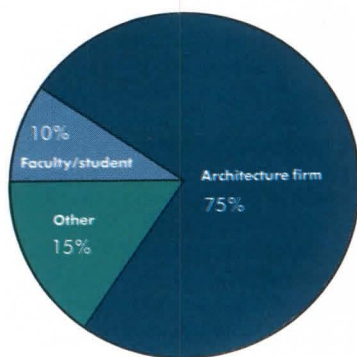
Educational Emphasis (Fig. 5)
Such a negative response from older architects is telling, for the poll reveals a marked change in architectural education in the last two decades. A quarter of those readers who graduated in the 1950s or before attended schools that emphasized practice and technology, compared with only 9 percent of 1980s graduates. Likewise, only 39 percent of the oldest graduates had a design-oriented education versus 60 percent of the newest. "It would appear," say Morrison & Morrison, consultants for this poll, "that the education system of today has decreased the em-

phasis on practice and technology skills, concentrating more heavily on design principles."

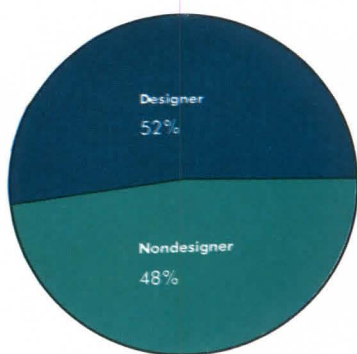
Education and Practice (Fig. 6)
Does that shift in emphasis better equip students for the profession? It appears not: 81 percent of those who responded to the poll concur that architecture schools do not adequately prepare students for practice. Agreement on this point was widespread, with 81 percent of those employed in firms, 75 percent of faculty and students, 77 percent of the designers in firms, and 85 percent of nondesigners rating it a problem.

"That their education did not prepare them for practice," state the Morrisons, "may be the largest complaint of practitioners who believe their education was less than satisfactory, with over 90 percent of them agreeing with the statement." Yet even among those who considered their education superior, 72 percent did not feel adequately prepared for the work world.

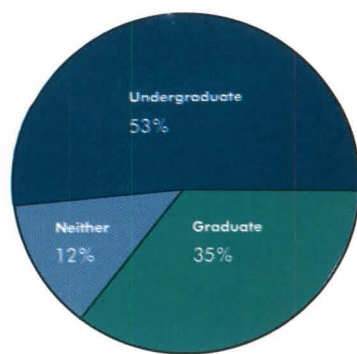
If the schools do not ready students for practice, they also give students unrealistic expectations of the profession, according to 76 percent of our readers. That percentage, too, cut across differences of age, education, and employment, with the one exception being those readers



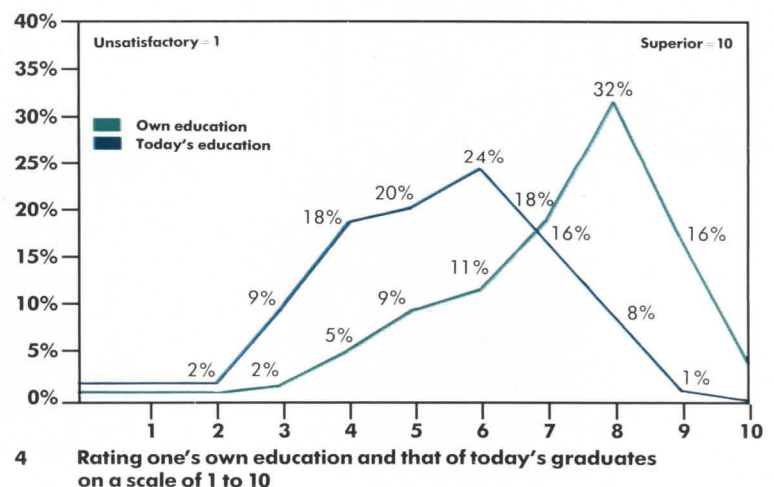
1 Employment



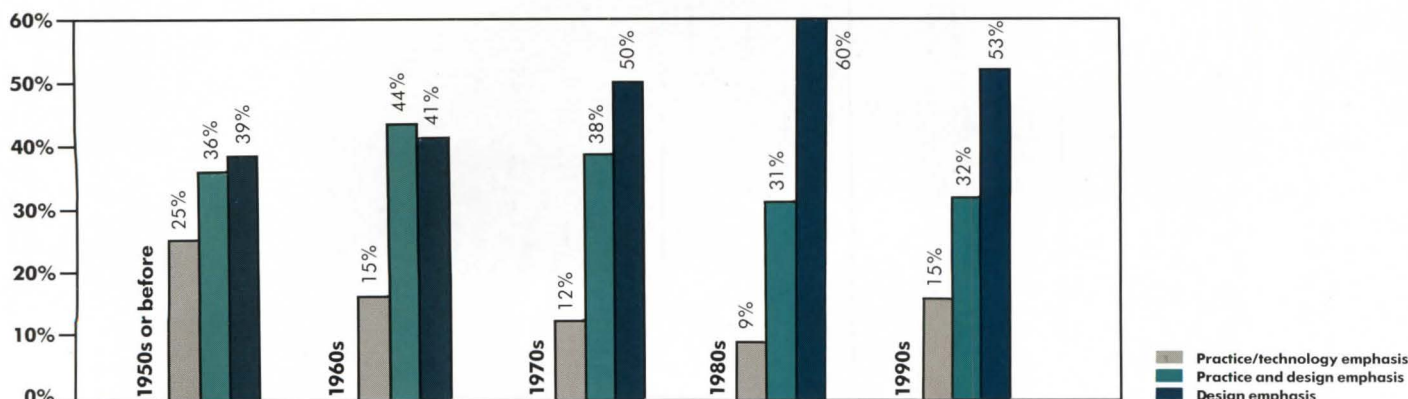
2 Primary responsibility



3 Degree Earned



4 Rating one's own education and that of today's graduates on a scale of 1 to 10



5 Emphasis on one's own education by decade of graduation

who rated their own education unsatisfactory: 90 percent agreed that the schools create unrealistic expectations.

Three quarters of our readers also did not think success in school is a good way of predicting one's success in practice. Those who graduated in the 1970s were especially skeptical of academic success: 82 percent thought that it had little bearing on one's later fortunes. Conversely, educators and students were more lenient, with 33 percent (versus 23 percent of those who work in architectural firms) finding some relation between success in school and in practice.

Readers were more positive when it came to rating the effect the reputation of a school can have on one's career. Almost 62 percent agreed, to some extent, that reputation can make a big difference; slightly over 38 percent disagreed. Here too, educators and students gave more weight to academic reputation. Over 68 percent thought that it makes a big difference in one's career, compared to 60 percent of those in practice.

If reputation is important, what are the best architecture schools? Many schools received at least some votes, but the top ten, listed in order, were: Harvard, Yale, Berkeley, Cal Poly, MIT, Cincinnati, Cornell, Columbia, Pratt, and Princeton.

Nearly 40 percent of our readers did not respond to the question, however. Also, because "no one school received the majority vote," say the Morrisons, "we suspect that many architects may have nominated their own alma mater for this honor." Except for the schools that rated highest, "this data may more closely reflect the percent of graduates from each school who read P/A than anything else."

Schools' Shortcomings (Fig. 7)

When asked about specific shortcomings, 95 percent of our readers found their own education lacking in some respect. The most common complaint, listed by 74 percent, was insufficient instruction in management and business practices. Those less likely to agree with that were educators and students (63 percent) and recent graduates (69 percent); those most likely to agree were those readers who graduated in the 1960s (87 percent), many of whom are presumably managing staffs and running businesses.

Other shortcomings recognized by a sizable number of readers included: an insufficient connection made between design studio and other courses (cited by 48 percent of our readers), too little emphasis on communication skills (cited by 41 percent),

insufficient instruction in technical matters (39 percent), and too little opportunity to study other disciplines (39 percent). While some of these complaints reflect a desire to have more focused, practice-related instruction, others represent an urge to broaden architectural education to encompass other fields, such as communications.

Wanting to probe this connection between architectural education and the liberal arts further, we asked our readers whether they thought having a liberal arts degree made one a better professional. A full 60 percent said yes; 40 percent, no. While 68 percent of those with graduate architectural degrees (some of whom undoubtedly have liberal arts degrees) agreed with that statement, a surprising 55 percent of undergraduate degree holders (most of whom probably lack a liberal arts degree) also agreed. Experience, too, seemed to affect our readers' view of liberal education: 70 percent of those who graduated in 1950 or before agreed that a liberal arts degree helps, compared with 58 percent of those who graduated in the 1980s.

Packaging Education (Fig. 8)

To what extent should architectural education change to address such shortcomings? Although a majority of readers

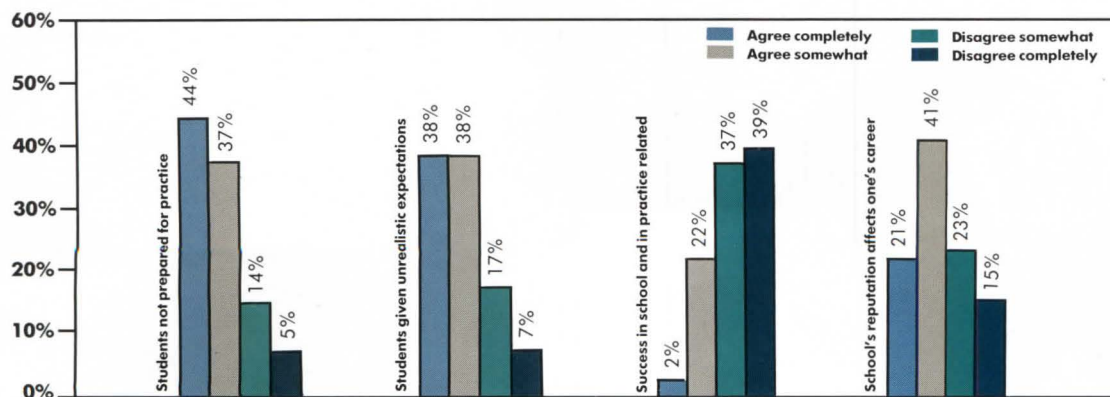
recognized the benefits of a liberal arts degree, an even larger majority (68 percent) did not think that architecture is best taught at the graduate level. The only group in favor of graduate education, at 52 percent, were those readers already holding graduate degrees.

The responses to two other questions, however, show support for fundamental changes in the way architectural education is commonly conducted. A majority of readers (68 percent) agreed that co-op or work-study programs better prepare students for practice than conventional degree programs. Support for work-study was greatest among those with undergraduate degrees (74 percent) and among students currently enrolled in school (79 percent).

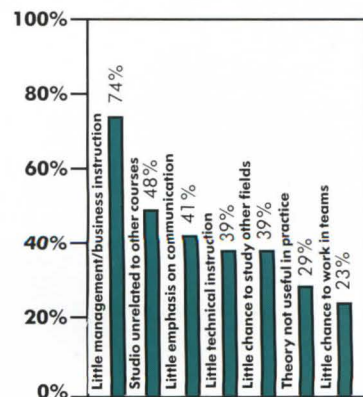
Among all readers, 79 percent also agreed that continuing education courses should be given a higher priority in the schools. The need for continuing education seems especially acute among nondesigners; 81 percent favored it as opposed to 77 percent of the designers.

One trend that a majority of our readers might oppose is the increasing number of full-time architectural educators. When asked if practicing professionals make the best studio critics, 65 percent agreed.

There was a split opinion



6 Relation of education to practice



7 Shortcomings in one's own education

P/A Reader Poll Internship & Registration

Please tear out, fill in, and mail promptly.
Results will be published in the June 1989 P/A.

INTERNSHIP

1. How well do you feel internship prepares today's young professionals for the following areas of practice? Circle your answers according to the following scale:

Poorly Prepared	1	2	3	4	5	Well Prepared
A. Project programming/scheduling	1	2	3	4	5	
B. Site/environmental analysis	1	2	3	4	5	
C. Schematic design/design development	1	2	3	4	5	
D. Office procedures	1	2	3	4	5	
E. Client contact	1	2	3	4	5	
F. Building cost analysis	1	2	3	4	5	
G. Construction document preparation	1	2	3	4	5	
H. Specifications/materials research	1	2	3	4	5	
I. Bidding/contract negotiation	1	2	3	4	5	
J. Construction observation	1	2	3	4	5	
K. Professional ethics	1	2	3	4	5	

2. Which of the above areas of practice do you feel are most important for interns to participate in? Write in the letter of the three most important areas.

3. How often would you say that interns actually participate in these important areas of practice? Place letters from question 2 on appropriate line.

_____ Almost always _____ Occasionally
_____ Most of the time _____ Rarely

4. How well do you feel today's interns are prepared for practice compared to your own experiences? Circle one number.

Not as Well Prepared 1 • 2 • 3 • 4 • 5 • 6 Better Prepared

For the following questions, indicate the degree to which you agree with the statement.

5. Many firms take undue advantage of interns, offering low pay for long hours.

☐ Agree Strongly ☐ Disagree Somewhat
☐ Agree Somewhat ☐ Disagree Strongly

6. Graduates of work-study or co-op programs perform better as interns than graduates of conventional degree programs.

☐ Agree Strongly ☐ Disagree Somewhat
☐ Agree Somewhat ☐ Disagree Strongly

7. Proof of experience as an intern in varied aspects of practice should be required for licensing.

☐ Agree Strongly ☐ Disagree Somewhat
☐ Agree Somewhat ☐ Disagree Strongly

8. The Intern Development Program (IDP) as administered by the National Council of Architectural Registration Boards has improved the quality of intern preparation.

☐ Agree Strongly ☐ Disagree Somewhat
☐ Agree Somewhat ☐ Disagree Strongly

9. In your opinion, what should be the standard term for internship?

☐ One year ☐ Three years
☐ Two years ☐ Based on experience, not time

REGISTRATION

For the following questions, indicate the degree to which you agree with the statement.

10. A professional degree should be a prerequisite for licensing.

☐ Agree Strongly ☐ Disagree Somewhat
☐ Agree Somewhat ☐ Disagree Strongly

11. Graduates of four-year non-professional programs (BA in architecture or equivalent) should be able to qualify for licensing if they acquire prescribed credits.

☐ Agree Strongly ☐ Disagree Somewhat
☐ Agree Somewhat ☐ Disagree Strongly

12. Continuing education should be required of all licensed professionals.

☐ Agree Strongly ☐ Disagree Somewhat
☐ Agree Somewhat ☐ Disagree Strongly

13. Architectural schools adequately prepare students for the licensing exam.

☐ Agree Strongly ☐ Disagree Somewhat
☐ Agree Somewhat ☐ Disagree Strongly

14. The licensing exam is a reliable test of professional abilities.

☐ Agree Strongly ☐ Disagree Somewhat
☐ Agree Somewhat ☐ Disagree Strongly

15. The design portion of the licensing exam is a good test of design skills.

☐ Agree Strongly ☐ Disagree Somewhat
☐ Agree Somewhat ☐ Disagree Strongly

16. Registration "cram courses" improve one's exam performance.

☐ Agree Strongly ☐ Disagree Somewhat
☐ Agree Somewhat ☐ Disagree Strongly

For each of the following questions, please check one answer.

17. Your Degree:

☐ B. Arch. ☐ M. Arch. ☐ Neither

18. Licensing Exam:

☐ Have not taken license exam
☐ Have taken exam, but need to repeat some portion
☐ Passed by repeating some portion
☐ Passed without repeating any portion

19. Have you participated in NCARB's Intern Development Program (IDP)? Check all that apply.

☐ As an intern
☐ As a professional supervising interns
☐ Have not participated in IDP

20. Number of Years in Profession:

☐ Student ☐ Under 3 ☐ 4-10 ☐ 11-20 ☐ Over 20

21. Role in Firm:

☐ Owner/Principal ☐ Staff Architect
☐ Project Manager Or Equivalent ☐ Designer/Draftsman
☐ Other

22. Type of Firm:

☐ Architectural or A/E Firm ☐ Other

P/A Reader Poll Internship & Registration



FASTEN HERE

Be sure your opinions are counted in this nationwide profile. Fill out and mail this form before March 1.

FOLD HERE



NO POSTAGE
NECESSARY
IF MAILED
IN THE
UNITED STATES

BUSINESS REPLY MAIL

FIRST CLASS MAIL

PERMIT NO. 36

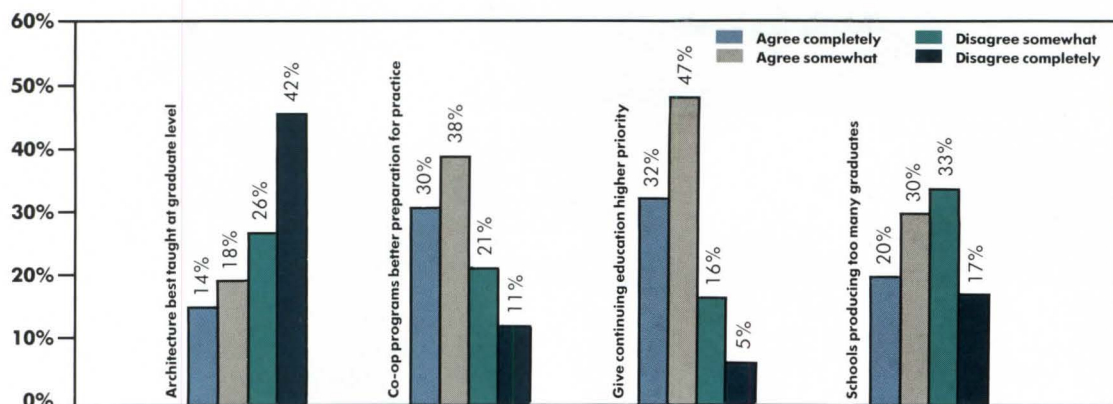
CLEVELAND, OH

POSTAGE WILL BE PAID BY ADDRESSEE

Progressive Architecture

P.O. Box 657
Prospect, KY 40059





8 Packaging education

over whether there are too many graduates coming out of the schools, leading to overcrowding and increasing competitive pressures. Half of our readers agreed that there are too many graduates, the other half disagreed. The Morrisons note, however, "that these sentiments were not strongly held . . . 63 percent could only agree or disagree somewhat," which suggests that a changing economic climate could affect that sentiment one way or the other.

Advice on Curriculum (Fig. 9)

The profession is strongly divided over some aspects of the architectural curriculum and evenly split over others. One area in which there is considerable agreement involves the offering of business and management courses: 60 percent of our readers think that such courses should be required and 39 percent think that they should be offered but taken at a student's own discretion. Only 1 percent did not think they should be part of an architectural education. Those readers who most supported the requiring of business and management courses were nondesigners (63 percent), professionals whose own education was practice oriented (64 percent), and those who graduated in 1950 or before (70 percent). Educators and students (53 per-

cent) were least in favor of it.

Considerable agreement also arose over the question of whether research should play a larger role in architectural education. Here, 72 percent agreed and 28 percent disagreed. The most support for this came from educators and students (78 percent) and from professionals whose own education was practice-oriented (81 percent); the least although still sizable support came from designers in firms (70 percent) and from the graduates of design-oriented schools (69 percent).

The question that received the most agreement (84 percent) addresses a problem that many schools seem to have difficulty achieving: the integration of other coursework into design studio. Here too, age makes a difference. Those least in favor of it (at 76 percent) were students currently enrolled in architecture programs.

One question over which our readers were not at all in agreement asked whether schools should focus on the teaching of design or practice-related information: 48 percent favor a design focus; 52 percent, a practice focus. Those who rated their own education superior were twice as likely as those dissatisfied with their education to advocate that the schools focus on design. The emphasis of their own

school also affected readers' response: 60 percent of those from design-oriented schools supported a design focus, while 71 percent of those from practice-oriented schools supported a practice focus. Those with graduate degrees favored a design focus more than undergraduate degree holders (60 versus 43 percent) and educators and students favored design more than professionals in practice (57 versus 49 percent).

Another curricular issue over which our readers were split 50/50 is whether the emphasis in school should be on individual or collaborative effort. The only group not evenly divided was those whose education emphasized practice; 61 percent favored collaboration.

The Profession and the Schools

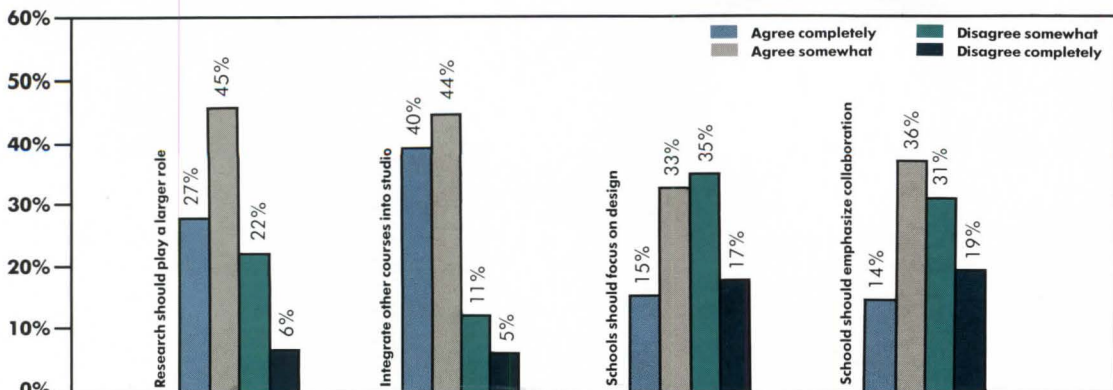
This poll seems to carry some conflicting messages. "While most architects," note the Morrisons, "seem to fault the educational system for failing to prepare students adequately for practice, many of these same professionals believe at least to some degree that the primary function of architecture school is to provide design training."

The dilemma facing educators is how to accommodate a profession that values design education, yet wants more technical and practice-related instruction

and more exposure to other disciplines. To that end, it is significant that, of all the questions, the one that received the most agreement favored the integration of other coursework (and presumably other disciplines) into the studio system, even at the expense of design time. The message seems to be that, while design studio is important, it has become too dominant, crowding out other educational opportunities. The fact that half of those responding to this poll do not have a design role in firms raises further questions about the shift in recent decades toward a stronger design emphasis in the schools.

The issue of educational balance has become critically important as the architecture schools are now virtually the only route open to those who want to become architects. If the schools are going to accept the benefits of that position, then they must also accept the responsibility for ensuring that the profession's educational needs are being met both in school and afterward. And if, as this poll seems to indicate, the schools are not meeting that responsibility, then the profession must demand it. Its very survival is at stake.

Thomas Fisher



9 Recommendations

R E S T O R A T I O N



 Wolverine Technologies
The Restoration Collection
1-800-521-9020

C O L L E C T I O N



Restoration
Cumberland Mill™
3" Dutch Lap style is
one of five distinctive
profiles that make
up the new Restoration
Collection of premium
vinyl sidings and
coordinated architec-
tural accents.

"From the beginning of the design process, Restoration was the siding of choice. Appearance and durability were the reasons. This house would be difficult to maintain without Restoration vinyl siding to help alleviate painting problems. And the smooth, matte finish looks authentic. In fact, this house mixes Restoration with painted wood to achieve a very appealing, genuine — and saleable — look."

William A. Bentz
Designer
Design Group West, Inc.
Palmetto, Florida

Before beginning your next design, take a closer look at the five new Restoration Collection panels. Call 1-800-521-9020 now for product information, specifications, and case studies.

Circle No. 372 on Reader Service Card

IMPROVE BUSINESS WITH SUNBRELLA® FABRIC.



It's easy to improve almost any business by using Sunbrella awnings, canopies or other treatments. Because there's no prettier way to give a facade a facelift or make an interior more inviting.

And using Sunbrella is good for your business, too. Because nothing pleases your clients more than our beautiful looks, tough performance and long-lasting style. **No Wonder It's The #1 Acrylic Canvas in America.** The fact is, no other awning or marine canvas sells as well as Sunbrella. Or equals our 108-year reputation for quality. Furthermore, Sunbrella offers these unique acrylic advantages:

- Our stripes, solids and patterns are colorfast so they won't fade for years.
- Both sides are identical. So awnings, patio covers, room dividers—you name it—look great from every angle.
- Tiny pores let the fabric breathe. This means moisture and hot air don't get trapped...so the fabric stays fresh and new looking.
- The same tiny pores let light through while providing protection from the elements.
- Sunbrella is made from man-made fabric, so it resists rot and mildew.



SUNBRELLA
Glen Raven Mills, Inc., Glen Raven, NC 27215
* Registered trademark Glen Raven Mills, Inc.

Plus it's easy to clean—all it takes is soapy water and a brush. Sunbrella comes with a five-year limited warranty that no other acrylic fabric can beat!

Choose From The Broadest Selection in The Industry. From bold, bright stripes, solids and patterns to subtle pastels, Sunbrella also has the right look for any business. In all, we offer 88 choices...far more than any other acrylic canvas. Which means whatever look you want, we have a fabric to fit. So improve business after business by using Sunbrella. Look in the Yellow Pages under "Awnings & Canopies" for the name of the dealer nearest you.



Frank Gehry's winning design for the Walt Disney Concert Hall.

Gehry Awarded Disney Hall

Last December, as a result of a limited competition, Frank O. Gehry & Associates was awarded the commission to design Walt Disney Concert Hall in Los Angeles. The other contenders were James Stirling Michael Wilford, Hans Hollein, and Gottfried Böhm.

For many years, the Los Angeles Philharmonic has needed a new concert hall, and it had conducted studies on where it should be located. In May 1987, the question was settled with a \$50-million donation from Lillian Disney, in memory of her late husband Walt. Along with the money came the choice of a site across First Street from the Music Center, directly behind its existing concert hall, the Dorothy Chandler Pavilion.

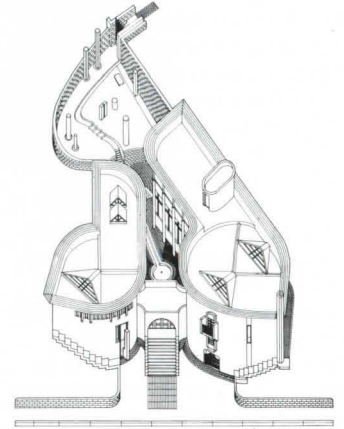
The program contained very specific goals. The building was to have an accessible, parklike atmosphere, which would attract people day and night. It was to

A letter from Poland describes the changes in design and practice under glasnost. See Perspectives, page 33.

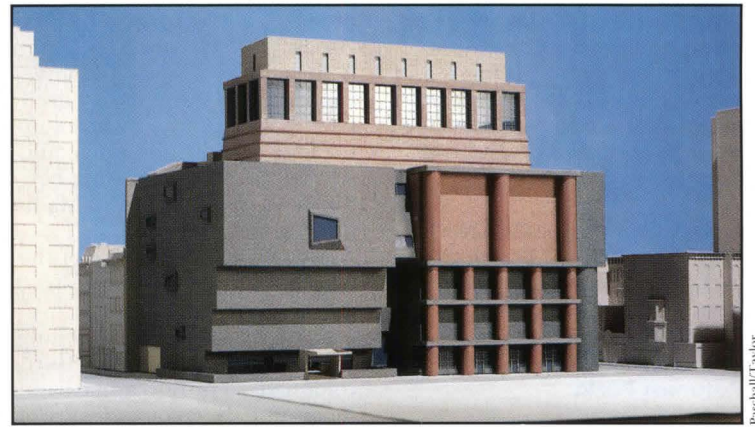
Soviet Changes at Georgian Biennale

Within the enthusiasm of "perestroika," the Union of Architects of Georgia organized and held the first Biennale of Architecture in the Soviet Union last November in Tbilisi. The event included exhibitions and lectures by foreigners, awards competitions in categories ranging from design to photography, public forums, and plenty of friendship over fine Georgian wine.

On the whole, the architecture that was exhibited from the



Arts Center, Tbilisi, USSR, by V. Davitaia, seen at Soviet Biennale.

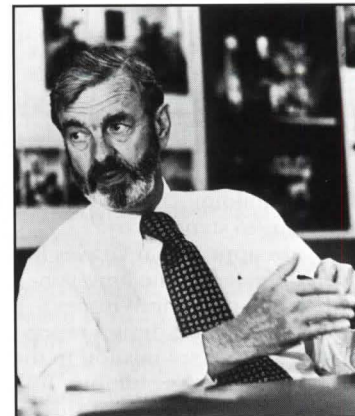


Michael Graves's third expansion proposal for Marcel Breuer's Whitney Museum.

Another Try for Graves and Whitney

Michael Graves has unveiled his third design for an addition to Marcel Breuer's Whitney Museum, responding again to widespread criticism of his two earlier proposals (P/A, Sept. 1985, p. 25, April 1987, p. 29).

Graves's first design of 1985, a collage of Post-Modern forms that



Joseph Esherick, Gold Medal winner.

Esherick Wins AIA Gold Medal

San Francisco architect Joseph Esherick, FAIA, has been awarded the Gold Medal of the American Institute of Architects, the institute's highest honor. Esherick was cited for his contributions to design, education, and practice.

In over 50 years of practice, Esherick has enriched and extended the Bay Region tradition exemplified by the previous gold medalists from the area, Ber-

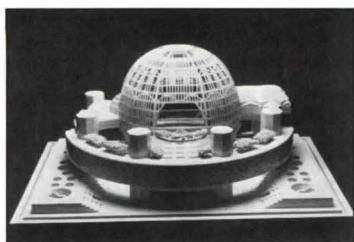
Carpet (continued from page 23) architects and artists (see New Products, p. 151).

Roy Lichtenstein, David Hockney, Gerhard Richter, Sol LeWitt, Sam Francis, Arata Isozaki, Norman Foster, Hans-Ulrich Bitsch, Oswald Mathias Ungers, Matteo Thun, and Michael Graves all participated.

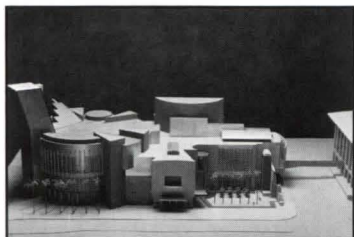
Dr. Peter Littman, Vorwerk's president and an avid art collector, began working on the collection two years ago in an attempt to make floors "more dramatic." Littman invited his favorite artists and architects to create designs for mass-produced, affordable carpet.

The new line, "Fascination '91," is available exclusively through Furniture of the 20th Century, New York.

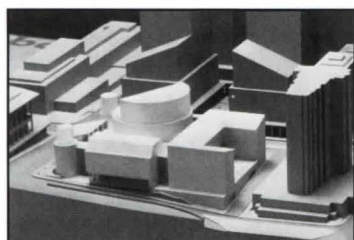
Jessica Elin



Walt Disney Concert Hall runners-up: Gottfried Böhm (above) . . .



Hans Hollein . . .



and James Stirling Michael Wilford.

Gehry (continued from page 21) create a strong connection with the existing Music Center and become a cultural focal point linking the Music Center with the Museum of Contemporary Art and the proposed Dance Gallery, all on Grand Avenue. The program included a 2500-seat concert hall, a major foyer, a chamber music hall, a music library, and support facilities.

Gehry's scheme was the most responsive to the program and to Los Angeles. He created a dynamic group of buildings surrounding an outdoor plaza, linked by a bridge to the Music

Center. The centerpiece of the composition is the concert hall and its foyer, a grand conservatory containing a variety of California flora. The hall is flower-shaped, its ceiling radiating up and out like a series of petals. The Grand Avenue and First Street edges of the site are embellished with a dome-topped restaurant and bookstore, which anchors a bridge crossing the street from the Music Center.

In contrast with the openness of Gehry's scheme, Gottfried Böhm proposed an inward-looking, symmetrical monument featuring a domed concert hall covered in glass and steel. Stirling Wilford prepared a densely packed group of buildings focused on a stepped, circular concert hall. Neither this nor Böhm's scheme created a strong architectural link with the Music Center. Hans Hollein's scheme, almost an homage to Gehry, was a complex collection of building forms, visually weaving together the colors, materials, and rhythms of MoCA and the Music Center. An almost symmetrical composition, it proposed a bridge to the balcony level of the Dorothy Chandler Pavilion.

Ground-breaking will take place sometime this year, with completion in 1991.

Barbara Goldstein

Home Builders on Homelessness

As they themselves stated again and again, rarely have the advocates of housing for the homeless received so significant an invitation as that issued by the Home Builders Institute, educational arm of the National Association of Home Builders, to address their conference on the subject in Washington last fall. Representatives from religious, private, and governmental bodies urged their audience—50 percent of whom were builders—to get involved. A video produced for the occasion reinforced the message.

But conference attendees were given more than mere words and images. Over 35 groups assembled in a resource center provided further concrete information on programs and projects, and HBI is now operating a Homelessness Information Exchange as a clearinghouse of relevant data. For more information on the video or the network contact Eldean Green, HBI, 15th & M Streets, Washington, D.C. 20005. **Daralice D. Boles**



Tête Défense nearing completion in Paris.

Disappointment at La Défense

Now nearing completion on the outskirts of Paris, "Tête Défense" is proof that impressionistic sketches of an architectural idea can take on a vastly different appearance when built. Danish architect Johann Otto von Spreckelsen, now deceased, won the competition to design an international communications complex with his ethereal vision of a glass cube, void at its center, that would at once terminate and extend an axis that runs from the Louvre through the Arc de Triomphe to La Défense.

As built, however, the design is considerably more earth-bound. Its glass skin stretches across an all-too-visible concrete grid, and "le toit," the top cord of the cube, bears no resemblance to Spreckelsen's gravity-defying design. The built reality has too much in common with commonplace French office buildings—an unintended reflection of the Tête's sad come-down from Carrefour de la Communication to spec office space.

A second of the *grands projets*, the Opéra at La Bastille, could become the latest victim of Parisian art politics. Following the dismissal of artistic director Daniel Barenboim by the President of the Opéra Board, artists from conductor Zubin Mehta to soprano Jessye Norman have threatened not to perform there, and its 1990 opening season now appears in jeopardy.

Daralice D. Boles

Soviet (continued from page 21)

USSR is still based on a modern formalism of expressive concrete most evident in mass-produced housing. A new wave of permissiveness, however, has resulted in a movement to protect the old cities through preservation of historical monuments and the design of sensitive infill structures. Unlike the self-conscious historicism or preservation by gentrification in the West, these architects build simply and directly to preserve the city using regional typology.

Other architects in the USSR have been able to build excellent contemporary structures despite governmental limitations. One example is Vakhtang Davitaia, whose work was exhibited at the Biennale. Davitaia's new arts center in Tbilisi reflects the traditional local pattern of open-court three-story communal houses.

The most revealing moment of the biennale was a three-hour round table discussion on the final day. At this session the architects outlined a series of political and professional goals: increase the power of architects to make independent decisions; conduct sociological studies of the massive satellite cities for rural immigrants; allow architects to propose new alternative designs for purpose of discussion; introduce elementary school courses on the environment; study the possibility of private ownership of apartments; and continue the development of private or "co-operative" architectural offices.

Glenn Weiss

The author is an independent curator of architecture.

TISCHLER WINDOWS AND DOORS. UNCOMMON. UNCOMPROMISING.



TISCHLER UND SOHN

Made in Germany since 1888.

67 Holly Hill Lane Greenwich, CT 06830 USA
Telephone 203/622-8486 Telefax 203/622-8558

Circle No. 366 on Reader Service Card

TOP LEVEL INTELLIGENCE.

Build R/26 structural roof systems in one step with TUPS™: the smarter, faster way to build.

Smart architects have discovered an intelligent way to stay on top of current demands for higher energy ratings *and* lower costs.

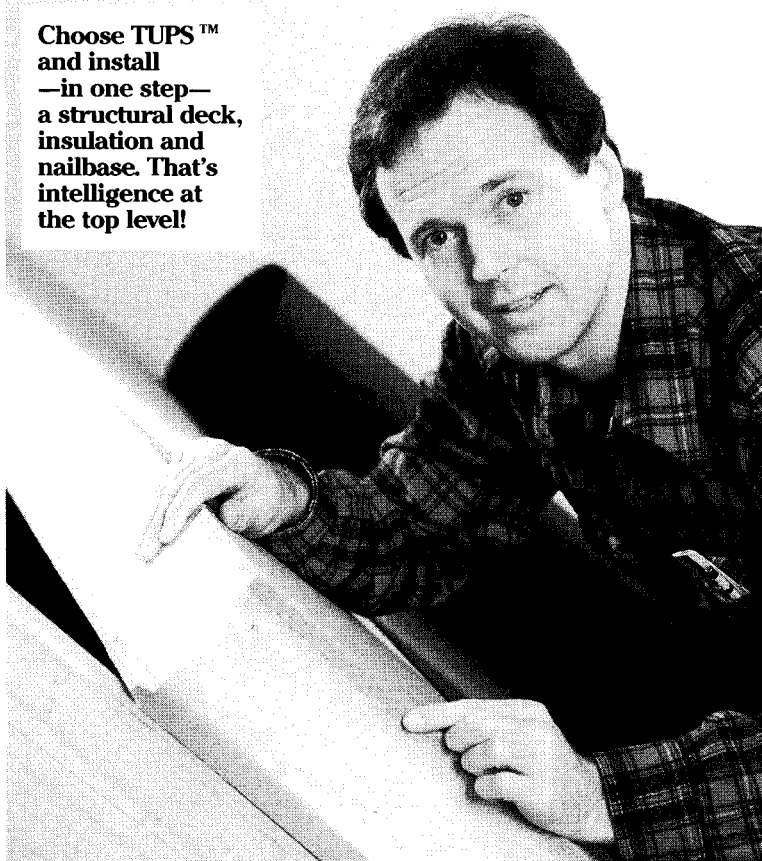
They go to the very *top* and choose a structural, insulating roof system panel that can save energy, reduce cost, eliminate labor-intensive steps and cut time.

They choose TUPS.

Only TUPS features a load bearing, stress skin panel integrating structural Homasote 440 Boards with an insulating core of rigid polyisocyanurate foam.

In just one step, you can install an interior ceiling ready for paint or other finish. And an energy efficient layer of insulation. Plus a structural nailbase

Choose TUPS™ and install—in one step—a structural deck, insulation and nailbase. That's intelligence at the top level!



ready for shingles, slate, tile, BUR or single-ply membrane roofing system.

All with one-step TUPS roofing panels. That's intelligence at the top level.

For full details, call (609) 883-3300. Or write The Homasote Company directly.

Panels sizes, nominal 4' x 8', 10' and 12' with T & G Long Edges	Nominal Thickness	
	4"	5"
R-FACTOR AGED	19.2	25.48
R-FACTOR SYSTEM*	20.43	26.71
Lbs. per sq. ft.	4.2	4.4
Foam Thickness (nominal)	2½"	3½"

*Includes air film and asphalt shingles.

homasote

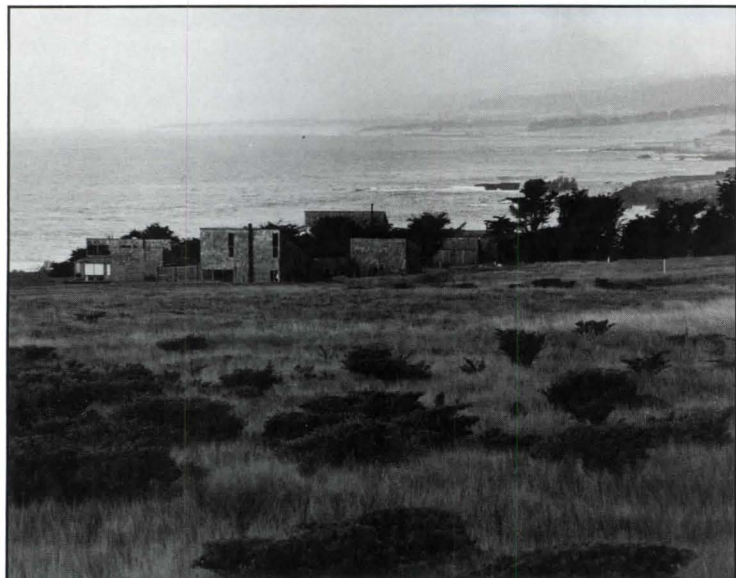
C O M P A N Y

P.O. Box 7240, West Trenton, New Jersey 08628-0240

SMART ARCHITECTS CHOOSE HOMASOTE.

5666

Circle No. 335 on Reader Service Card



Sea Ranch houses, 1963, by Joseph Esherick.

Esherick (continued from page 21)
nard Maybeck and William W. Wurster. Like Maybeck and Wurster, Esherick is known for the houses he designed, beginning in 1939, that complemented their settings, whether on urban hillsides in San Francisco, spreading flatlands in the Sacramento River delta, or the Central Valley. A consummate example of this site-specific design is a complex of shingled houses with sod-covered, wind-deflecting shed roofs built in 1963 at the Sea Ranch.

Born in Philadelphia in 1914, Esherick was schooled, albeit, he says, with some protest, in the academic Beaux-Arts tradition expounded by Paul Cret at the University of Pennsylvania. He was deeply influenced by his experience working in the wood shop of his uncle, Wharton Esherick, a well-known Philadelphia furniture designer. The experience left Esherick with an abiding belief in design as an inductive process and a mistrust of over-arching concepts, particularly those related to style.

The memory of a California vacation brought Esherick to San Francisco in 1938, not for career opportunities, which seemed to him equally strong in Philadelphia, but because he considered the city less tradition-bound socially. He worked for San Francisco architect Gardner Dailey until entering the Navy to serve in World War II.

After the war, Esherick returned to San Francisco and opened his own office in 1946. In 1952, he joined the UC Berkeley Department of Architecture, which he chaired from 1977 to 1981. As an educator, Esherick was concerned both with fostering a free-wheeling, exploratory attitude in his studios and with

establishing a program in building science so that basic ideas about building construction were made part of the curriculum.

In the late 1950s, his firm's mainly residential practice diversified with important commercial and institutional commissions. Among the firm's better known work are Wurster Hall, UC Berkeley's architecture building (1965), The Cannery retail development at Fisherman's Wharf (1968), and the Monterey Bay Aquarium (1986). In 1972, the firm became Esherick Homsey Dodge & Davis, and in 1986 EHDD received the AIA's Firm of the Year Award.

Sally Woodbridge

Isamu Noguchi Dies at 84

Isamu Noguchi, the celebrated sculptor and designer of sculpture gardens, died of heart failure in New York on December 30 at the age of 84.

Noguchi, whose works have become integral parts of Modern buildings and urban plazas, was born in Los Angeles, but spent a great part of his childhood in his father's native Japan. As a young man, he worked as an assistant to Constantin Brancusi, who was to have an influence on his work. His early work included stage designs for Martha Graham and others.

Noguchi's most celebrated works are large, simple shapes rendered in elegantly treated materials. Among the best known are his "Red Cube" of 1968 in lower Manhattan and his sunken sculpture garden at the Beinecke Library at Yale.

In 1985 Noguchi opened the Isamu Noguchi Garden Museum in Queens, New York, which displays over 200 of his works. ■

LIGHT AND DESIGN



Satellit,
Maxi and Mini,
Post top

UL/CSA Listed

**louis
poulsen**

Poulsen Lighting, Inc.
5407 N.W. 163 Street
Miami, Florida 33014-6130
Telephone - 305-625-1009
Telefax - 305-625-1213

Circle No. 357 on Reader Service Card

Design Better Swimming Pools With PARA-FLYTE QUALITY DECK EQUIPMENT



KDI Paragon Inc.

SINCE 1956 MFRS. OF DISTINCTIVE POOL EQUIPMENT
P.O. Box 256, Pleasantville, NY 10570 • 914/769-6221 • Fax: 1-914-769-0670

Circle No. 338 on Reader Service Card



Park looking east from belvedere.

A Central Park for Seattle Suburb

Seattle residents are fond of thumbing their collective nose at the bedroom community of Bellevue across Lake Washington and its reputation as a wet-weather Marin County, replete with hot tubs, New Age boutiques, and BMWs. But Bellevue may have the last laugh: While Seattle has failed so far to develop an urban counterpart to its splendid natural surroundings, Bellevue, as evidenced by a successful new downtown park, is transforming its humdrum strip-development environment into a cohesive community.

Unlike Seattle's new Westlake Mall, a tiny wedge of a park among high-rises, Bellevue's park is a boldly conceived, 17.5-acre project combining a highly

sophisticated formal design with exceptional flexibility. The Bellevue park, at the edge of the city's downtown business district, was designed by Beckley/Myers/Flad Inc. of Milwaukee, Wisconsin, winners of a 1985 design competition (P/A, Feb. 1985, p. 33). The park's first \$1.8 million, seven-acre phase was finished in 1987. A bond measure passed last October provides \$3 million to complete the second phase. Credit for the park's development goes to a combination of public/private cooperation. In 1984 Bellevue purchased the park site for \$14 million. Once the plan was selected, the batch was handed to a private corporation, which collected money for the first phase from local businesses. The impetus from the first phase's success then led to the successful October bond measure.

The Beckley/Myers design is essentially a large grassy circle defined by a tree-lined canal. Within the circle are the foundations of an early school preserved as places to sit or for children to play. Included in phase one is a belvedere and unlike fountain that provides a focal point for the design.



Plan of park. Area in upper right quarter was completed in phase one.

Phase two, scheduled for start in 1989, will improve park access, finish the belvedere, and complete the west half of the circle, which will include a small lake. A yet-unscheduled Phase 3 may incorporate a small amphitheater and complete the circle.

Many of the 67 proposals submitted to a jury headed by Vincent Scully proposed tangled assemblages of arcades and plantings for the site. The architects of the winning design looked to New York's Central Park and Versailles for antecedents, deriving from Olmsted the notion that the new park should not dictate one or several uses but allow for many, and from Versailles the idea that a strongly imposed sense of order

can make a large space coherent.

But the park is not without flaws. The park's key east edge—which faces the downtown area—is bordered by strip development that will be difficult to remove. And the park's distance from Bellevue's business core is problematic; it may be too far from the action to attract noon-time brown-baggers, leaving it popular for weekend events, largely unused the rest of the time.

In pushing ahead with the park, though, Bellevue has staked out its position on urban life. The city sought—and now has—a refuge that promises to add richly to the downtown environment. **Douglas Gantenbein** ■

The author, a free-lance architectural writer, is a resident of Bellevue.

Tractionfloer

SMOOTH AND STUDDED

Safety Floor Steps Out In Style

Name another anti-slip sheet vinyl that comes in 16 contemporary colors—smooth or studded. That's tough. Dimensionally stable. Chemical/heat resistant. Asbestos free. AND easily maintained.

Forbo Tractionfloer gives you the perfect blend of beauty and function, so it can truly be used in any installation—from the board room to the loading dock. Forbo Vinylweld rod, available in all 16 colors, is easy to apply when seamless or hygienic installation is required.

New for 1989. Tractionfloer Smooth and Studded in "Jet Black." Shown right, it is used in a custom design inlay to add dramatic impact to a stairwell and hall.

For complete details and technical information, call or write for our new brochure.



FORBO NORTH AMERICA INC.
RESILIENT DIVISION - a member of the Forbo group of companies

P.O. Box 32155 • Richmond, VA 23294 • (800) 233-0475 • (804) 747-3714

Shinglevent™

Keeps the weather out

Our Newest Vent Has Some Very Attractive Features

Twenty-five years of ventilation research have resulted in Shinglevent... the ultimate shingle-over ridge ventilator. Shinglevent combines maximum net free vent area with

pleasing aesthetics for these superior performance benefits:

- Keeps attics cool and dry
- Prevents winter ice dams
- Reduces energy costs
- Meets new shingle warranty requirements for ventilation
- Exclusive wind baffle uses wind to "lift" warm, moist air from attic

- Exclusive patented weather filter keeps out rain, snow and insects
 - Low profile... half a dollar high
 - One-piece construction
 - Exclusive 30-year warranty
- For more information, call or write Air Vent Inc., 4801 N. Prospect, Peoria Heights, IL 61614 (309) 688-5020

Circle No. 310

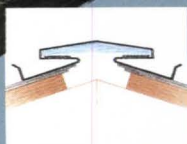

AIR VENT INC.
A CertainTeed Company

Cap Shingles

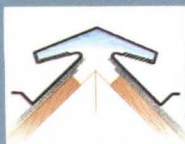
Wind Baffle

Low Profile
1½" high

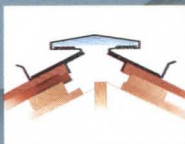
The Best Vents For All Homes



ridge filtervent



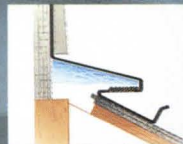
steep pitch filtervent



tile/shake filtervent



peak filtervent



flash filtervent



drip edge vent

WE MAKE WINDOWS WHERE MONEY'S NO OBJECT.



AND WHERE MONEY'S PRECISELY THE POINT.



Over the years, we here at Marvin have built something of a reputation for ourselves. We've become the company to call when the plans call for a dazzling, one-of-a-kind masterpiece.

But there's another side to Marvin. A more practical, down-to-earth side. In addition to difficult, one-of-a-kind windows, we make the industry's broadest and most versatile line of standard shapes and sizes.

As a result, you can probably maintain the basic integrity of your design at practically any budget level.

You see, we make windows to order. Which means you can specify the features you want us to build in. And you can specify the features you want us to leave out.

For more information call 1-800-346-5128 (in Minnesota, 1-800-552-1167; in Canada, 1-800-263-6161) or write, Marvin Windows, Warroad, MN 56763.

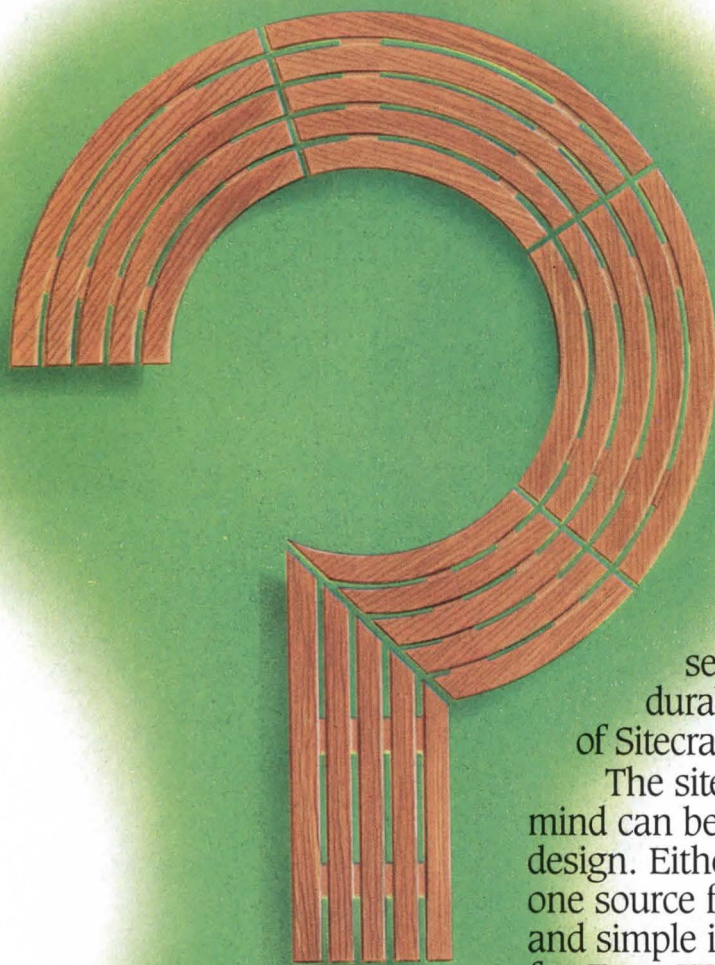
Sometimes money's no object. Sometimes money's precisely the point. Which is precisely why Marvin Windows are always a smart choice.

**MARVIN WINDOWS
ARE MADE TO ORDER.**



Circle No. 348 on Reader Service Card

Throw us a curve.



Are you getting a little tired of the straight and narrow? Try throwing us a few curves on your next site furnishings project. We're the world's foremost specialist in turning ideas into reality because we've been doing it for professionals like you for generations. Whether it's seating, planters, decking, receptacles or accent furnishings, you'll select from the world's finest, most durable woods and get the benefits of Sitecraft's experience and craftsmanship.

The site furnishings you have in mind can be standard or custom design. Either way, Sitecraft is the one source for the quality, beauty and simple installation you're looking for. For a FREE copy of our Sitecraft IDEA BOOK, call or write today. You know how good we are on the straightaway, now see how we handle the curves.



sitecraft

40-25 Crescent Street, Long Island City, NY 11101
1-800-221-1448 Toll Free (In NYS, 718-729-4900)

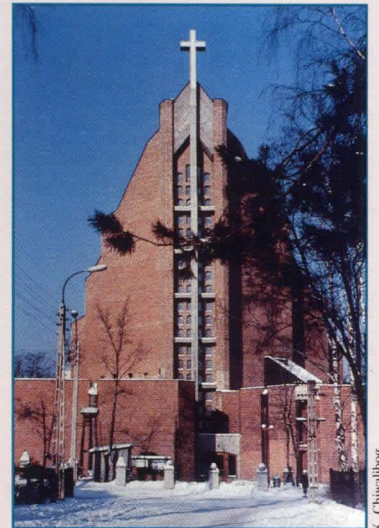
Who says imagination doesn't grow on trees



Circle No. 363 on Reader Service Card



K. Ingarden



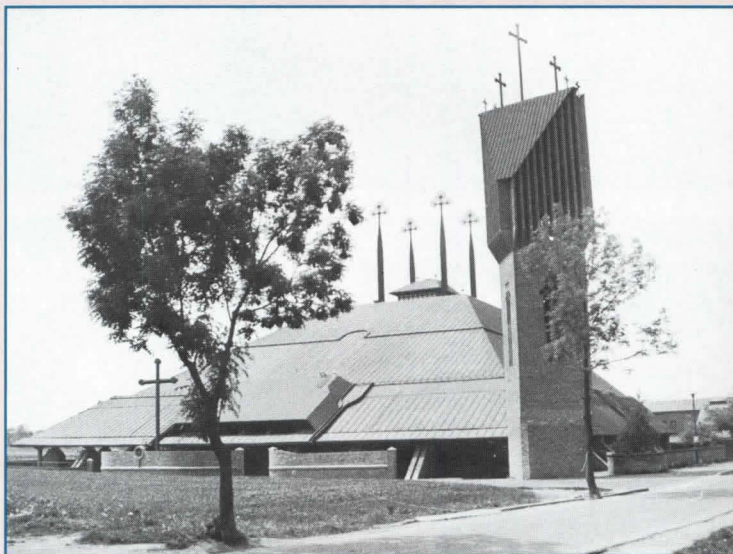
K. Chwalibog

1 Perestroika Poland

Architect Noel Moffett and P/A correspondent Monica Pidgeon, both of London, recently visited Poland as guests of the Association of Polish Architects (SARP). They traveled by coach to 12 cities and towns and inspected many contemporary buildings and innumerable examples of Poland's fine architectural heritage. SARP, with headquarters in Warsaw, has a strong regional structure, with each region's center located in an important historic building—"the Architects House"—which is in fact a club and hotel for architects and their guests.

Strangely and—in a Communist country—rather paradoxically, the current architectural energies in Poland seem to be concentrated on the design of new churches. This is partly because the Catholic Church has been traditionally very strong in Poland and partly because, since World War II, the most powerful critic of Government policy has been the Church. The Church's role is social as well as religious, and most church buildings are in fact social centers—with school classrooms, libraries, meeting rooms, and sports facilities. Two thousand churches have been built in the last five years, and 2000 more are planned.

The design quality of these churches varies a lot. The best churches are fine, bold architectural statements; but many



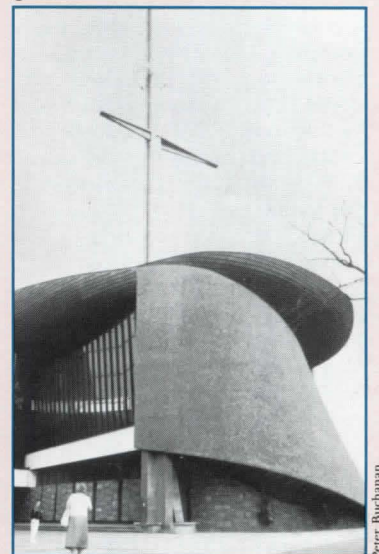
Tadeusz Barnacki

shout too loudly, with enormous crosses dominating the skyline, out of scale with their neighbors—as if the architects want their buildings to declare that, without any shadow of doubt, the Church reigns supreme in Poland.

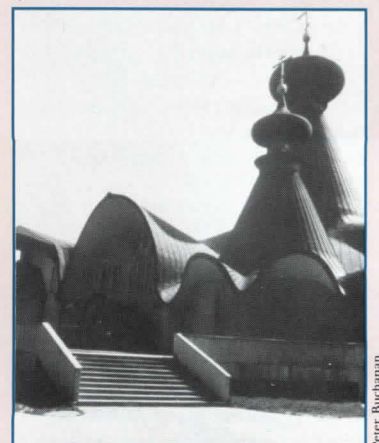
Among the best designed churches is one by the architect Stanislaw Niemczyk in Nova Tichy near Katowice, with a magnificent, dominant roof dropping down almost to the ground and surmounted by four crosses (2). Inside, the roof, with its brilliant paintings by artist Jerzy Novosielski, soars up to a lantern over the central altar (1).

Near Warsaw, two churches (continued on page 34)

New churches in Poland designed by Stanislaw Niemczyk (1, 2); Krzysztof Chwalibog (3); W. Pietrzyk (4); I. Bitas, A. Grygorowicz, and T. Dabrowski (5).



Peter Buchanan



Peter Buchanan



Poland (continued from page 33)

are worth mentioning: one recently completed by the architect Krzysztof Chiwalibog at Legionowo, with exposed steel roof trusses that sweep up to the highest point over the altar, itself dominated by a high, stained-glass window (3); the other, still under construction in Ursinow, by the architect Maryk Budzinski, with an impressive lofty interior and a huge window in the form of a cross over the entrance.

Down south, at Bienczyce near Cracow, a theatrically designed church by the architect W. Pietrzyk provides evidence of parish devotion vis-à-vis the difficulty of finding materials in Poland today. The pebbles that coat much of the outer skin were all collected by local children from the mountains and brought to the site in baskets (4).

These churches are all Roman Catholic; but there are also quite a number of Russian Orthodox. A dramatic example at Hajnowka near Bialystok has a wildly curving roof and onion-domed towers (5). The designers were I. Bitas, A. Grygorovicz, and T. Dabrowski.

The residential areas of cities and towns are dominated by huge slabs of flats, built from large factory-made components. The factories were erected during the post-war Stalinist era (when Social Realism dominated architecture) to provide urgently needed housing for Polish families. For economic reasons, components are still being turned out in large numbers, and architects are obliged to use them. Many of the develop-



ments, therefore, have an unacceptable, inhuman scale, but the landscaping around and between the blocks is often very good, as in a housing estate in Warsaw by Budzinski.

Because of the almost complete absence of private gardens, public parks play an unusually important role in people's lives; the parks of Warsaw, Cracow, Katowice, and Lodz are among the finest, each with a lake or canal and with modern sculpture of a high order. When Cracow's medieval walls were demolished, for example, the area occupied by wall and moat was imaginatively planned as a public park, which surrounds downtown.

The "rynek" (market square)

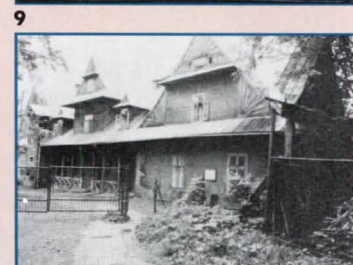
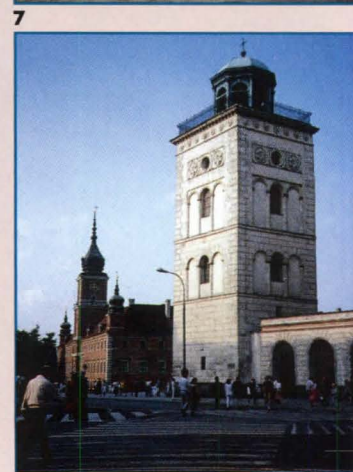
also has an exceptionally important role to play; it is very popular—nearly always full of people obviously enjoying its urban quality—usually traffic-free and architecturally interesting.

Cracow's "rynek" is one of the finest urban spaces in the world.

A few of Poland's contemporary architects, such as Jakub Wujek, have concentrated on the problem of using factory-made components to create a more human environment; his huge housing scheme now under construction in Lodz goes some way toward achieving this. Painted symbols distinguish one block from another.

However, the best housing is

(continued on page 36)



Two housing developments in Nova Tichy by Stanislaw Niemczyk (6, 7); Baminsky Palace, Bialystok, restored to house the Academy of Science and Faculty of Architecture by Henryk Toczydlowski (8); restored heart of old Warsaw (9); new, vernacular houses in the South (10); new village of Chocholow (11).

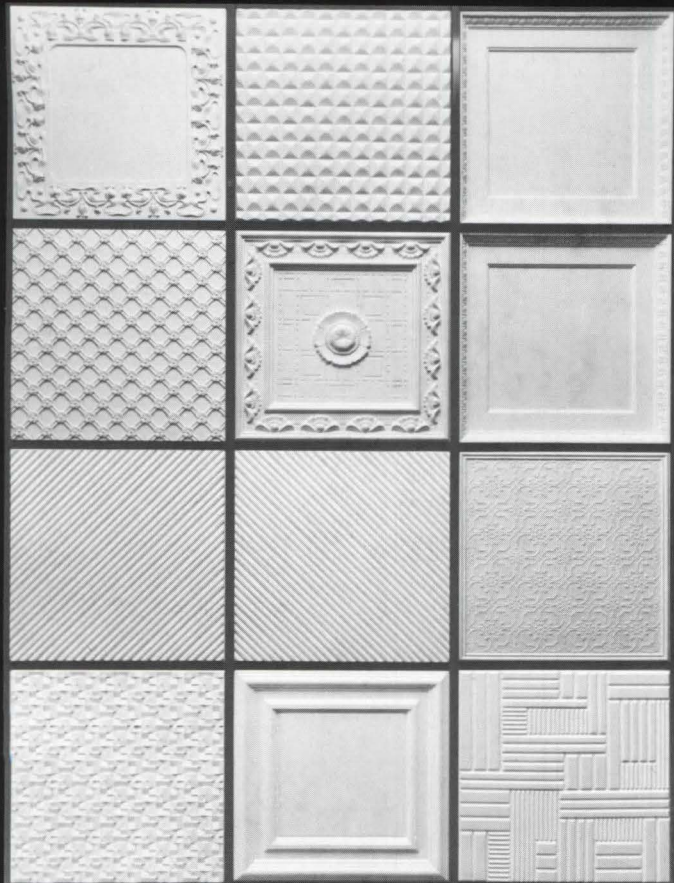


Jack Lenor Larsen is color...
any color you can imagine.

Infinite color, texture, and
material combinations.
Continuously evolving vo-
cabularies of technology
and processes. Unique
combinations of furniture,
carpet, and textiles to
furnish any interior.

41 East Eleventh Street
New York, NY 10003-4685
Telephone: 212.674.3993
Available Through Architects
and Interior Designers

#JACK LENOR LARSEN



ABOVE VIEW, INC.

241 EAST ERIE STREET • MILWAUKEE, WI 53202 • 414-271-4477

Circle No. 309 on Reader Service Card



-like no other ice rink builder in the world.

Ice rinks are our business. Our only business. We finance, plan, design, engineer and construct them. We take your concept and translate it into a functioning reality.

Viking offers low energy TURNKEY facilities at minimum cost. A long list of satisfied private, school & community ice rink projects

attest to our experience and reliability.

Why settle for less? When you choose Viking you choose a builder whose reputation is as rock solid as the ice of your finished rink.

Let us help plan your new facility or rehabilitate an older one.

P.O. BOX 464, WAYNE PA 19087 ■ 215/687-5744 ■ FAX 215/964-1670

Circle No. 367 on Reader Service Card



12 Entrance to Madjanek death camp.

Poland (continued from page 34)

being designed by a younger generation of architects for the recently formed and now rapidly growing cooperative movement. Some of the co-ops are State-owned and some are private; but all of them are sponsoring low-rise, courtyard-type layouts—in complete contrast to the ubiquitous high-rise blocks. Polish families are at last being given a choice. Actually, Oscar Hansen had shown the way as early as the 1960s in his fine, sensitively designed housing in Lublin, with its excellent detailing, amusing service buildings, and good landscaping. Even the housing provided for their workers by the 19th-Century Poznanski coal barons of Katowice pointed in the right direction, with parallel three-story brick blocks and spacious inner gardens separated by streets but linked at ground level by thoroughways and at upper level by covered bridges.

In one of Poland's Post-Modern prefabricated housing schemes at Nova Tichy, Stanislaw Niemczyk has successfully used imaginatively detailed blocks of varying heights in a rich mélange of courtyards (6).

The do-it-yourself movement has also started to grow, although it is still rather unsteady on its feet. Andrzej Owczarek has worked closely with local people in designing several pioneering blocks in a big housing project in Lodz.

Architects are struggling hard to find a solution to one of Poland's biggest problems—the destruction of the conventional in situ building industry. This happened when craftsmen of all kinds moved into the component factories. They must now learn all over again to lay bricks, mix mortar, and fix timber rafters. The situation is exacerbated by a chronic shortage of building materials. These problems have



13 Monument to Silesian uprising.

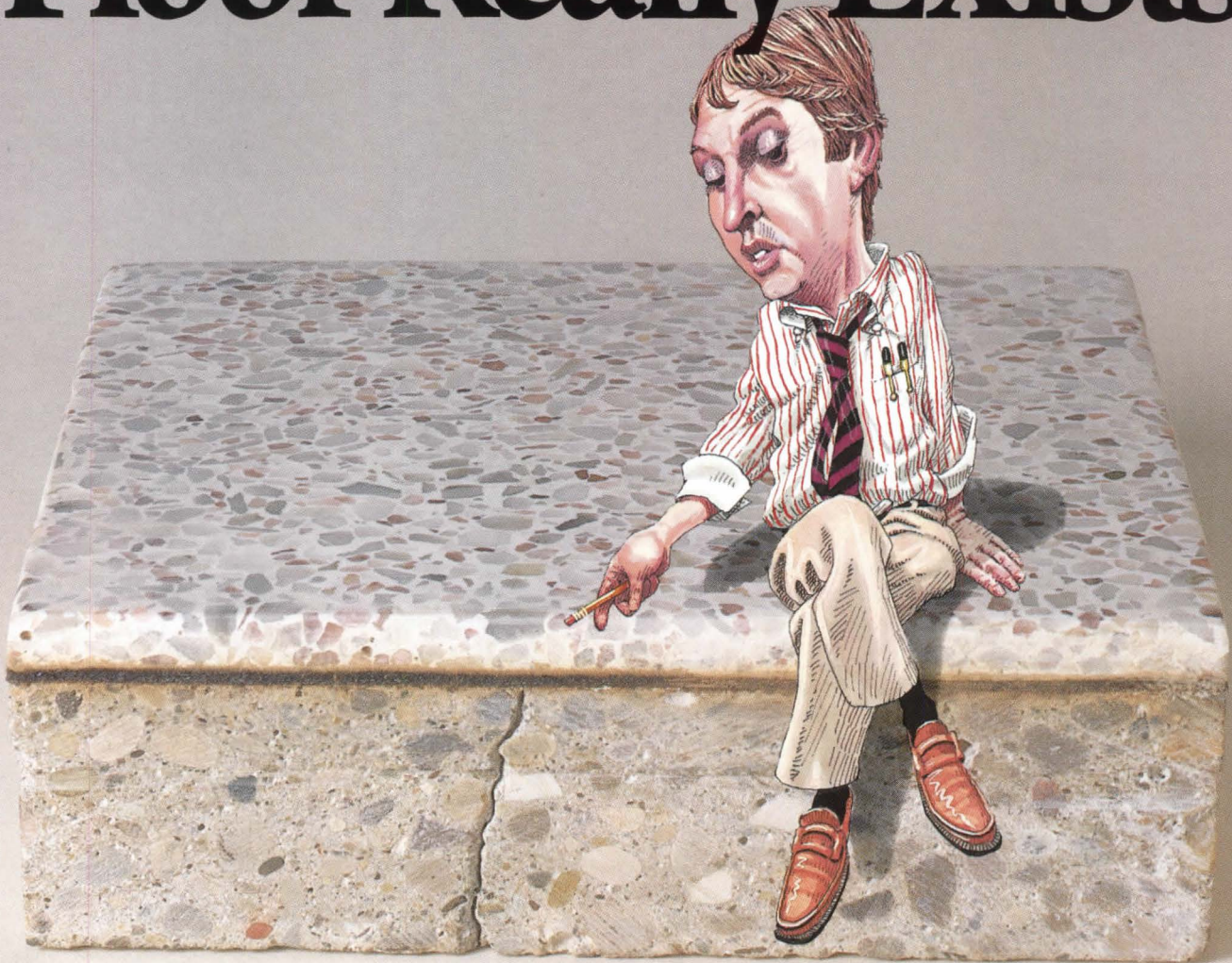
been overcome by Stanislaw Niemczyk (7) and also by Renata and Jacek Heyda in housing schemes in Nova Tichy. Their overall layout, detailing, and use of materials are all excellent. But the shortage of money and material in Poland results in buildings taking many years to complete.

Conservation has also played an important role in Poland's post-war recovery, and many fine old buildings have been lovingly restored to their former glory. In response to Hitler's determination to destroy Polish culture, the central area of Warsaw was almost completely razed systematically, street by street, by the German army and the Luftwaffe. One of the first post-war acts of the citizens was to rebuild the Royal Palace exactly as it had been, as well as the central market square (9), using the pre-war measured drawings of architecture students from the Warsaw Polytechnic, with most of the buildings in the square adapted to new uses.

Restoration and reuse are also being done in other cities (8), the adaptation often executed with skill and sensitivity. Actually the best achievement of the Social Realists was a plan for the rebuilding of Warsaw, which respected the medieval character of the "old town" and laid down a broad, spacious, gridiron street pattern, sprinkled liberally with trees, with a huge park running

(continued on page 38)

Proof That A Guaranteed No-Crack Floor Really Exists.



Fracture Free Flooring Systems. Exclusively from General Polymers.

Sometimes, flooring isn't what it's cracked up to be. Normal concrete shrinking can cause sub-surface cracking that causes the floor surface to crack as well.

But Fracture Free Floors from General Polymers are guaranteed not to crack. Even after shrinking or lateral movement has already damaged the sub-surface.

These easily installed floors are available in Thin-Set Terrazzo, decorative and tough industrial styles. Perfect for areas where sanitation, ease of maintenance and aesthetics are important.

For more information, call 1-800-543-7694 or mail this coupon to:
General Polymers, 145 Caldwell Drive, Cincinnati, Ohio 45216.

Name

Company Name

Address

City State

General Polymers Zip

A Cambridge General Company Phone PA

Tough Floors For Tough Specifications.

At last! Hickman quality for fast-track projects...



Now you won't have to sacrifice roof appearance and integrity to meet fast-track completion dates. Hickman's new lightning-fast delivery lets you safely spec our premium quality...without putting contractors in a time bind.

Now your genuine Econosnap® membrane roof edging or Permasnap® parapet coping can roll on-site in only 2 to 8 working days! That's faster, in many cases, than your contractor could field-form substitutes himself. This fast turn-around applies for most U.S. orders in 24 ga. galvanized steel or .050" aluminum, with prefinished Kynar 500®. Naturally, Hickman-applied Kynar 500, baked acrylic, anodic, or other special finishes take somewhat longer.

By specifying Hickman, you ensure outstanding appearance, precise fit, top performance in wind and weather, a solid guarantee, and above all...no call-backs and satisfied owners.



Next fast-track project, don't gamble on field-formed roofing products—spec Hickman. Call your local Hickman representative today for all the details on Hickman's lightning-fast delivery programs.

See Sweet's General Building & Renovation 07715/HIC and 07610/HIC, and ask your Hickman rep for our new PRODUCT/DATA sheets.

Kynar 500® is a reg. TM of Pennwalt Corporation.

HICKMAN
construction products



W.P. Hickman Company □ 175 Sweeten Creek Road
P.O. Box 15005 □ Asheville, NC 28813 □ (704) 274-4000 □ FAX (704) 274-4031

© 1988 W.P. Hickman Company

Poland (continued from page 36)

parallel to the river Vistula and with one of the main boulevards passing underneath the rebuilt old town, sitting defiantly on its hill and now largely pedestrian.

Many Polish architects—particularly in the south—have a healthy respect for the regional vernacular architecture in their country. This is especially noticeable in the southern Tatra mountain region where at present there seems to be a minor building boom. New houses (10), blocks of flats, and hostels follow the old style, with a concrete or stone basement, an upper structure of local timber, a steeply sloping roof, and several large balconies.

Chocholow, a new village now under construction (11) has an impressive architectural unity and a strong sculptural form just because the old vernacular has been followed—almost copied—and the same local materials have been used.

One cannot leave the subject of Poland without mentioning its sculptors' talent for making strong, emotive statements in public places. In the center of Katowice, next to a colossal sports stadium, stands an equally colossal monument by Zeml'a to commemorate three Silesian uprisings (13). Equally impressive monuments mark the entrances to the carefully preserved sites of the Auschwitz and Madjanek (12) Nazi camps.

To sum up: The liberalization policies of Gorbachev will probably affect life in Poland. But Poland has had its own "glasnost" since 1956 and the birth of Solidarity in 1980. Architects seem determined to take advantage of this new freedom, and it is encouraging to witness the relatively rapid development of the co-op movement, of self-build or private initiatives. The long-term future is uncertain. For the present, Poland remains economically a poor country but culturally a very rich one. The State is in firm control of almost everything, and the Catholic Church is increasingly the strongest critic of Government policy. Many Polish architects are trying hard to raise the standard of design and to give Poles an environment more sensitively adapted to modern life.

Noel Moffett and Monica Pidgeon ■

Noel Moffett is a British architect and critic, and Monica Pidgeon is P/A's British correspondent.

DESIGN YOUR FLOOR WITH FLEXCO'S SPEC 1™ SYSTEM AND ALL THE PIECES FALL INTO PLACE.

Flexco just made your job easier. Because now, with the Spec 1 system, you can actually see the floor you're designing before you install it. In fact, you can see several flooring variations—all in a matter of minutes.

The Spec 1 flooring system from Flexco contains a supply of one-inch tiles in more than 25 exciting colors, and several styles and textures, plus a large grid on which to build your floors. You choose the colors you want—in the styles you want—to create endless floor design possibilities. As a result, Spec 1 system not only helps you design better, more applicable flooring solutions but it makes it a lot easier to sell those designs to your clients.

Order Spec 1 through your participating Flexco distributor. Or, for more information, call 1-800-877-2232, EXT. 204. Or write Flexco, P.O. Box 81368, Atlanta, GA 30366.



Circle No. 327

FLEXCO®

WORKING FLOORS FOR THE WORKING ENVIRONMENT.



FOR THE ARCHITECT ON THIS PROJECT, THERE WERE A LOT OF TOUGH DECISIONS. AND THEN THERE WAS ANDERSEN.



According to the Design-Build team of OPUS Corporation and Hammel Green and Abrahamson, there were "special problems" building St. Therese, an enhanced retirement facility in Hopkins, MN.

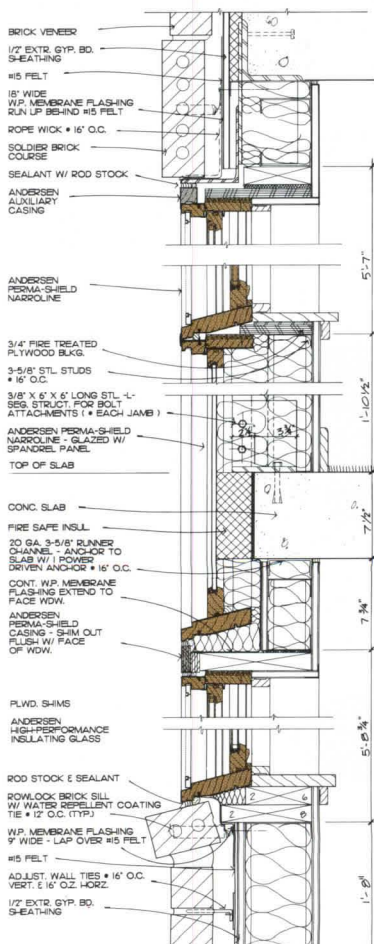
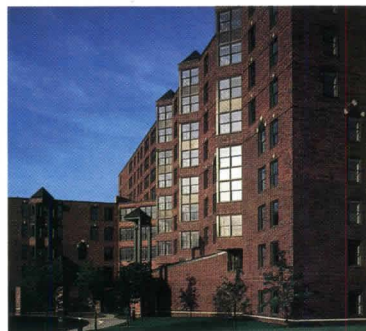
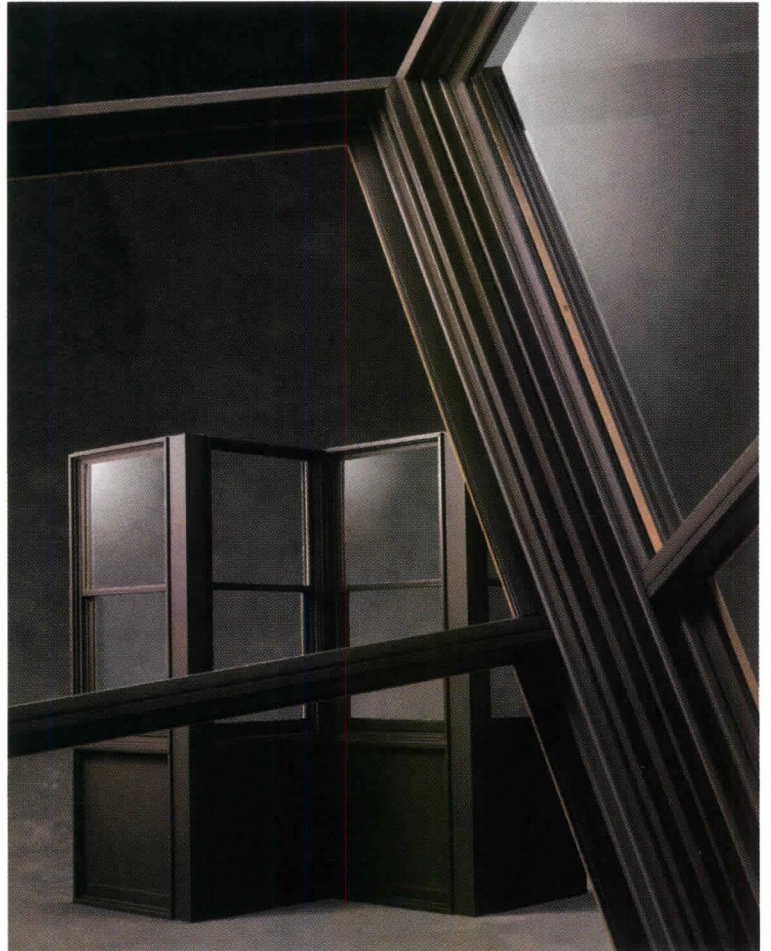
For one, there was concern about putting a 228-unit project in a suburban neighborhood. "We wanted to do it in a sympathetic fashion," said project architect Duane Johnson of HGA.

Other considerations were a tight budget and what Larry Everson of OPUS described as an "incredibly demanding" 15-month schedule.

Fortunately, Architect Johnson didn't worry about selecting the right windows. Thanks to their reputation, "Andersen was a given when I came onto the project."

Johnson claimed Andersen® windows were chosen because "there's never a question about the quality. Plus, they came through and delivered to our rigorous schedule."

To find out more about using Andersen® windows and gliding doors in your next commercial project, call 1-800-635-7500 for the name of your local Andersen Commercial Representative. Or write Andersen Commercial Group, Box 12, Bayport, MN 55003.



St. Therese Care Center
Hopkins, Minnesota
Architect: Duane Johnson
Hammel Green and Abrahamson
Minneapolis, Minnesota
Design-Build Contractor:
OPUS Corporation
Larry Everson, AIA
Minnetonka, Minnesota

**ANDERSEN
COMMERCIAL
GROUP** 

Circle No. 305

Lighting the way to tomorrow.

Today, windows are a bigger part of architectural design than ever before. That's because design is a bigger part of windows.

Kawneer's window line includes both Thermal and Non-Thermal models. Vertically and horizontally pivoted. Inswinging and outswinging casements. Projected, top-hinged, fixed and high performance windows. Kawneer has them all. To open design opportunities. To open minds.

And Kawneer windows are not only constructed to meet AAMA performance standards, but standards much higher. Our own.

Kawneer windows. They let you look at your design in a whole different light.

 **Kawneer**
The Designer's Element





*For full technical description, tracing details and specifications,
contact your Kawneer representative or write to: Kawneer Company, Inc.,
Department C, Technology Park-Atlanta, 555 Guthridge Court, Norcross, GA 30092.*

Circle No. 341 on Reader Service Card

LIGHTING WORLD INTERNATIONAL

SPOTLIGHT ON INNOVATION

INNOVATIVE PRODUCTS...

Over 500 manufacturers from across the US and
30 different countries showing—

Sources
Fixtures
Lighting Controls
& Equipment

INNOVATIVE EDUCATION PROGRAM...

Current information on many topics including—

Retail Lighting
Office Lighting
Color
Money Saving Techniques
Controls
Historic Preservation
Preview of Products
ASID & DLF Workshops

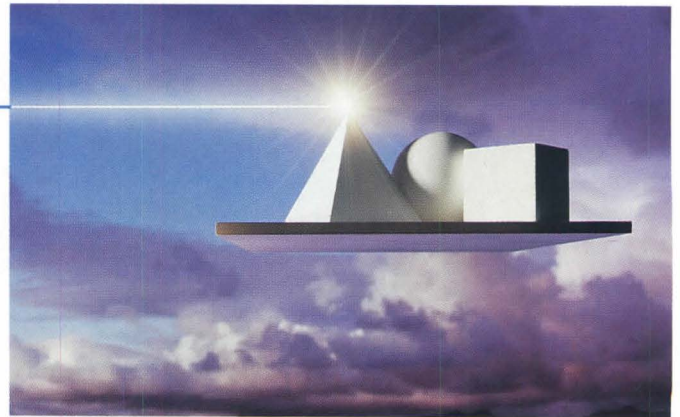
INNOVATIVE EXCHANGE OF IDEAS

for the Architectural Lighting Community

Architects
Engineers
Lighting Designers
Interior Designers
Facility Planners & Managers
Contractors
Developers

*Stay at the forefront of the lighting industry.
Mark your calendar today to attend Lighting World International.*

Circle No. 344 on Reader Service Card



May 10, 11, 12, 1989
Jacob K. Javits Convention Center
New York City

Sponsored by:
The International Association of Lighting Designers
The Illuminating Engineering Society of North America
The New York Section of the Illuminating Engineering Society

Produced and Managed by:
National Expositions Company, Inc.
15 West 39th Street, New York, NY 10018
212/391-9111 Telex 135401 dimcomm Fax 212/819-0755

-
- ☐ Please send attendance information
☐ Please send complete information to exhibit

NAME _____

TITLE _____

COMPANY _____

ADDRESS _____

CITY _____ STATE _____ ZIP _____

PHONE () _____ FAX _____

p

Law: P/A convenes a roundtable of experts to examine the liability crisis.

Products: Michael Chusid and John Zika consider the effect of the Free Trade Agreement with Canada.

"Okay,
let's
sue."

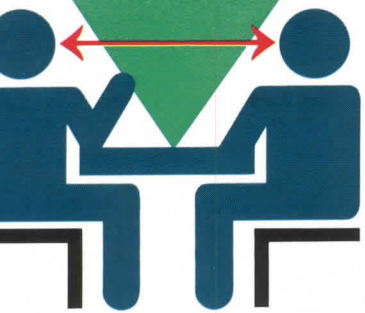


Illustration: Lisa M. Mangano

Law: Liability Roundtable

There has been an explosive increase in the amount of legal actions involving architects and in the cost of insurance. P/A gathered a panel of experts to discuss this problem: Elliott Gleason from Design Professionals Insurance Company; C. Jaye Berger, an attorney in New York; Lev Zetlin, an investigative engineer with Zetlin Argo Structural Investigators; Jay Frankel and Kenneth Lazaruk, attorneys with the New York firm of Shay & Gould; and Martin Raab, senior managing partner of Haines, Lundberg & Waehler, architects. The following are excerpts from that discussion.

P/A: What do you see as some of the main forces driving the increase in liability among architects and designers?

Gleason: I would mention first the deep-pocket syndrome in which lawyers go after those who are perceived to have the financial resources. Second, I would mention the litigation mania. The former chief justice of the United States Supreme Court Warren Burger said that our society has a virtual mania for believing that the best way—or the only way—to resolve a conflict is in a courtroom. Design professionals are no longer being let off the hook.

I also think the quality problems within structural engineering have hurt you. Where structural engineers have been unable to respond financially to damages, architects also have been targeted for recovery. But architects and designers have not been without shortcomings, not so much as technicians, but as business people. Many fail to mitigate their exposure to liability and exposure to claims.

Berger: I would underline the point about business practices. When professionals miss appointments with clients, don't show up for meetings, and don't return phone calls—all of those things are just laying the

(continued on page 50)

Products: Made in Canada

The construction industry is becoming part of an international marketplace. To stimulate the flow of building materials, ideas, and capital across borders, barriers to free trade are being dismantled around the world. In Western Europe, all tariffs and barriers to Common Market trade will be eliminated by 1992. Closer to home, the recently ratified Free Trade Agreement (FTA) will eliminate, over the next decade, virtually all tariffs between the U.S. and Canada and will liberalize regulation of cross-border investments. This will affect the availability, distribution, and competitiveness of building materials and services on both sides of the 49th Parallel.

The FTA will provide the U.S. construction industry with greater access to a dynamic and growing building market. Canada has a population of about 10 percent of that in the U.S., but a construction industry that is 17 percent of ours. This greater per capita expenditure on construction probably stems from two factors. First, Canada's population is distributed over a greater area and has a lower density, requiring a greater commitment of funds to the construction of highways and other services to link its population. Second, the northern climate of Canada typically requires more substantial, weather-resistant buildings.

Because most of Canada's population lives within 200 miles of the U.S. border, Canadian cities are often closer to major U.S. cities than they are to other Canadian population centers. Toronto, for example, is closer to both Detroit and Cleveland than it is to Montreal. This should make the distribution of building products move more in a north-south than in the east-west direction of current Canadian commerce. Also, many of the building-product manufacturers who currently maintain separate companies on both

(continued on page 55)

Practice Points

Design and construction industry professionals are now buying computer hardware first and selecting software packages second, report A/E/C Systems trade show principals George S. Borkovich and Michael R. Hough. The trend reversal reflects buyers' confidence that a number of the appropriate CADD and other programs will be available in today's market.

A \$41 million settlement has been reached resolving the claims filed after last year's L'Ambiance Plaza collapse in Bridgeport, Conn. The two-judge panel attributed responsibility for the disaster to more than 20 separate parties but avoided placing blame on any specific group.

Computerized testing for professional registration is now being offered nationally to architects signing up for state registration exams. The computer randomly selects questions for each applicant and scrambles the order in which they appear. For more information contact the National Council of Architectural Registration Boards.

This year's federal budget appropriates \$700,000 for an industrialized housing research program in an attempt to help U.S. industry keep pace with foreign competition. The University of Oregon in Eugene and the Florida Solar Energy Center at Cape Canaveral will jointly administer and operate the program.

Hotels are now being refurbished every five to seven years, the shortest life cycle ever, according to a report in the A/E Marketing Journal. Renovations of all sorts, they add, may be one of the strongest markets for design professionals this year and into the 1990s.

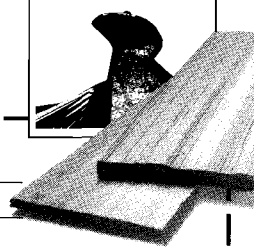
OUR FREE GUIDE PUTS YOU ON TOP OF CEDAR ROOF CONSTRUCTION.

This manual is designed to aid architects and builders in the proper application of cedar shakes and shingles.

Every page is filled with details and guidelines. Covering topics such as mansard roofs. Low slope and cold weather roofs. Vapor barriers. Fasteners. And much more.

It's everything you need to stay on top of cedar roofs. And it's free!

NEW ROOF CONSTRUCTION



Please send me the free brochure "New Roof Construction."

Name _____

Address _____

City _____ State _____ Zip _____

RED CEDAR SHINGLE & HANDSPLIT SHAKE BUREAU

515 116th Avenue NE, Suite 275, Bellevue, WA 98004-5294

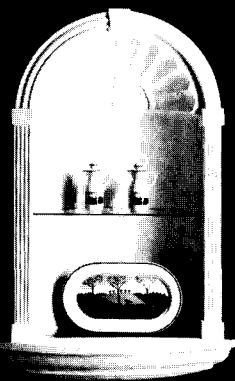
Circle No. 359 on Reader Service Card

Old World Elegance... New World Appeal

Sculptured crown mouldings, niches, traditional mantels, medallions, and other fine architectural details add old world elegance and value to any home.

Aristocast Originals, of durable moulded plaster, are rich-looking design elements—unique in their detail and intricate patterns. These decorative extras create a style and quality that's unmatched. Yet, they're competitively priced.

Aristocast Originals are easily installed and assure perfect cornering and fit. And, they won't show age through cracking, warping or shrinking.



For free color catalogue or more information:

NAME _____

ADDRESS _____

CITY _____

STATE _____

ZIP _____

Send to: **ARISTOCAST ORIGINALS, Inc.**, Dept. PA289
6200 Highland Pkwy., Suite 1, Smyrna, Georgia, 30082
(404) 333-9934

Dealer and manufacture inquiries welcome.

See us in Sweet's.

Circle No. 306 on Reader Service Card

Law (continued from page 49)

groundwork for a lawsuit. Once there's a breakdown in communication, that's when people go to their lawyers and say, "Okay, let's sue."

Zetlin: There is a reason for the increase in liability. It's very simple: We have many more problems in construction than we ever had before. We have a much larger gap between what we show on the drawings and the real structure. The lack of communication is, rather, a breakdown of responsibilities and interfaces among disciplines. Because of the liability situation, each discipline now is trying to get into a shell. One of the biggest problems, by the way, is that more and more we pass responsibility of design to contractors, which is dangerous. When you look at failures, you will find that somewhere the contractor was asked to design.

And finally, there is quality control. Because the construction field changes at such a rapid rate, our profession does not have quality control guidelines. One way to achieve that is through peer review, which should not be just reviewing the final design, but rather reviewing the concept and working forward.

Lazaruk: You have to talk about liability in terms of exposure. You as a design professional may have done everything correctly and accurately, but you can still get hit with a million dollar suit. It is a question of exposure: what the public, owners, and contractors understand your responsibilities to be. There is a great misunderstanding about what coordinated drawings or coordinated field work is. Another thing increasing your exposure is the law, adopted in most states, that allows a contractor to sue a design professional directly even if there is not a contract between the two. How do you minimize your exposure? You educate everyone on the job as to what your responsibilities really are. Do you have shop drawing review? What does that review entail? How long is it going to take to turn around those drawings and what can hold those drawings up? Who is responsible for coordinating drawings or field work? If that education process is not done, it is going to lead to lawsuits.

Raab: We as a profession have enhanced the view, mainly through our marketing efforts, that we are perfect. Not one of us admits that we're not perfect in any presentation to a client.

We have created a set of expectations in our clients that differs radically from what we want to put in our contract. What we face is not, in most cases, a technical problem, but a management problem. Many of us have backed away from managing clients and their expectations. I think we have an inherent problem—which is the problem the AIA is having with the American Society of Civil Engineers—in determining what is a reasonable standard of performance. The standard of performance in architecture, I think, can be far more variable than in structural engineering. In trying to establish an absolute standard of performance, the two organizations are starting to go head-to-head, because many of us have to practice different standards of performance depending on what our contractual relations are.

Lazaruk: You as a design professional never want to reach the point where a jury is making decisions as to what the responsibilities are because the jury is probably the least knowledgeable group of people to make that decision. And they are going to make their decision based on the perceptions and acts of lawyers in a courtroom and not on what really happened. Most owners believe that the design professional designs to perfection. They believe it's a science. You should give them exactly 100 percent, and the cost of construction should not vary one-tenth of 1 percent from what it was estimated to be. We all know that is nonsense, but the owner has to be told right up front that that's not going to happen. You want the client whom you can tell: "We're not perfect, we make mistakes, but we get them fixed."

Berger: The whole educational process has to go back to the contract stage and discussing the terms of the contract with the owner and you as design professional educating the client in what you do. You can't just hand an owner a contract and say, "Sign it." It's your responsibility to go over with them the things that you are going to be doing so they know what kinds of expectations to have.

P/A: The history of the AIA contracts has been one of relieving architects of more and more responsibilities. Is that a good trend or bad?

Raab: It's a horrible trend. We're perfectionists giving up more and more of our responsibilities to others: the construction manager, the preparer of shop drawings, and the like.

(continued on page 52)

MARMO

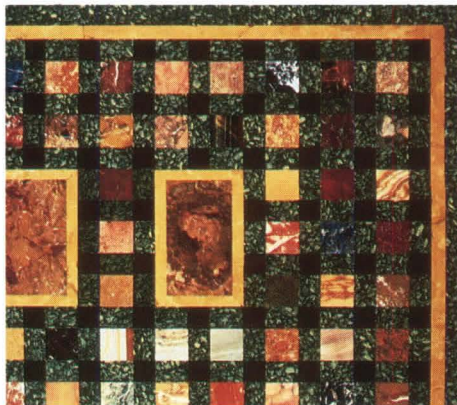
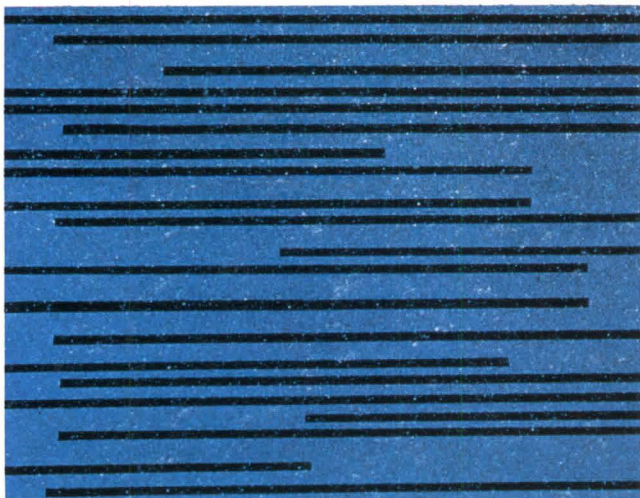
The New Italian Stone Age

9 March/30 April 1989



An exhibition highlighting significant Italian technological and artistic achievements in marble from 4000 b.c. to 2000 a.d., created by architect Angelo Mangiarotti is now at the California Museum of Science and Industry, Harbor Freeway & Exposition Boulevard.

Special Technical Seminars and Cultural Forums are presented in conjunction with this exhibition. For information and reservations, telephone the Italian Trade Commission at (213) 286-9963 or (213) 879-0950.



SPONSORED BY THE ITALIAN TRADE COMMISSION
CO-SPONSORED BY CONSULTA MARMO

Circle No. 337 on Reader Service Card

Law (continued from page 50)**Comment from the Audience:**

There's something fundamentally wrong with the relationship of architect, engineer, and contractor in this country, where we produce a highly complex product that involves a lot of proprietary systems and that carries a one-year guarantee, and yet where the contractors walk away and leave the liability to the design profession and the owners.

Comment from the Audience:

Where the contractor has access to the client and he has an opportunity to lobby his viewpoint, the client's first reaction is, "You made a mistake, the contractor is right." But it's really a matter that we haven't, as a profession, taught the public that there are

two sides to a story and that they shouldn't jump to conclusions.

P/A: What about tort reform? What is it and will it happen?

Berger: There's been a lot of talk about reforms that limit the ability to bring lawsuits many years after the event. But no sooner do states try to enact such reforms than the courts strike them down as unconstitutional. There doesn't look as if there's going to be any major reform any time soon.

Question from Audience: Are there any statistics that exist for cases that do come to trial?

Gleason: Roughly one out of ten cases comes from admitted, clear, conspicuous design error. Another two out of ten come from some expert saying there's

clear design error but where the other side does not agree. That's what I call a theoretical design error. But the other 70 percent stem from business practices: all of the various things that you do other than technical design, of which bad contract administration is a big part.

On the question of tort reform, there is some hope out there. California, for one, has had for eight years now a certificate-of-merit law, requiring that the pleading against the design professional be "certified by a design professional practicing in the same discipline," which says that the attorney has consulted with an architect or engineer and has been given, for lack of a better word, assurances of a

probable cause to file and maintain the action.

Hawaii has had for the last five years the Design Professional Conciliation Panel. While of limited value initially, it has been added to with a Certificate of Merit statute. Colorado has a Certificate of Merit statute also. Oregon has just recently passed legislation that has improved greatly the liability exposure law. And Kansas and Oklahoma have both been insulating design professionals from workers' personal injuries claims from jobsite injuries.

Comment from the Audience:

One of the things that could be done is to set a limit on the amount that you can litigate for: say 2, 3, or 4 percent of the cost of construction. Simply set it aside and say when the owner signs the contract that this percentage is something that you can anticipate as extra cost coming from various sources.

Frankel: The Port Authority in New York has a cut-off of 5 percent in its contracts with design professionals. Should costs exceed 5 percent, they take a look at whether or not there was design error, or some form of malpractice in the performance of the contractual obligation. We believe that that is a suitable clause. We've developed a clause that we call the "over and under clause." During negotiations, the owner and the design professional can determine what that cost overrun percentage shall be: 5, 2, 10 percent, depending upon the complexity of the project. If the cost of additional work caused by design is above the agreed-upon percentage, then the parties sit down and talk. We ask for talks, for dialogue, alternative dispute resolutions, anything that will avoid litigation, whether we're the owner or we're the design team. We find that it works more often than not. It's a small way of educating the owner that he or she can't find perfection from you.

Raab: Another, very serious problem in the profession is that, over the last 15 or 20 years, there has been a dramatic increase in the demand for service. There are environmental issues, energy, more complicated codes and issues, zoning ordinances and what have you. The architect has thrown off things that he probably should control and has picked up things he has not received compensation for. The percentage of the total cost of construction that architects take in as fees has gone down slightly over the last 15 or 20 years. So

(continued on page 54)



JUST PUSH A BUTTON AND...

Move parts, products,
assemblies, tote boxes,
pallet loads, etc.
UP-DOWN-LEFT-
RIGHT-AROUND
CORNERS

ALL
AUTOMATICALLY

Get the complete story on
Pflow's Automatic System
capability. Contact:

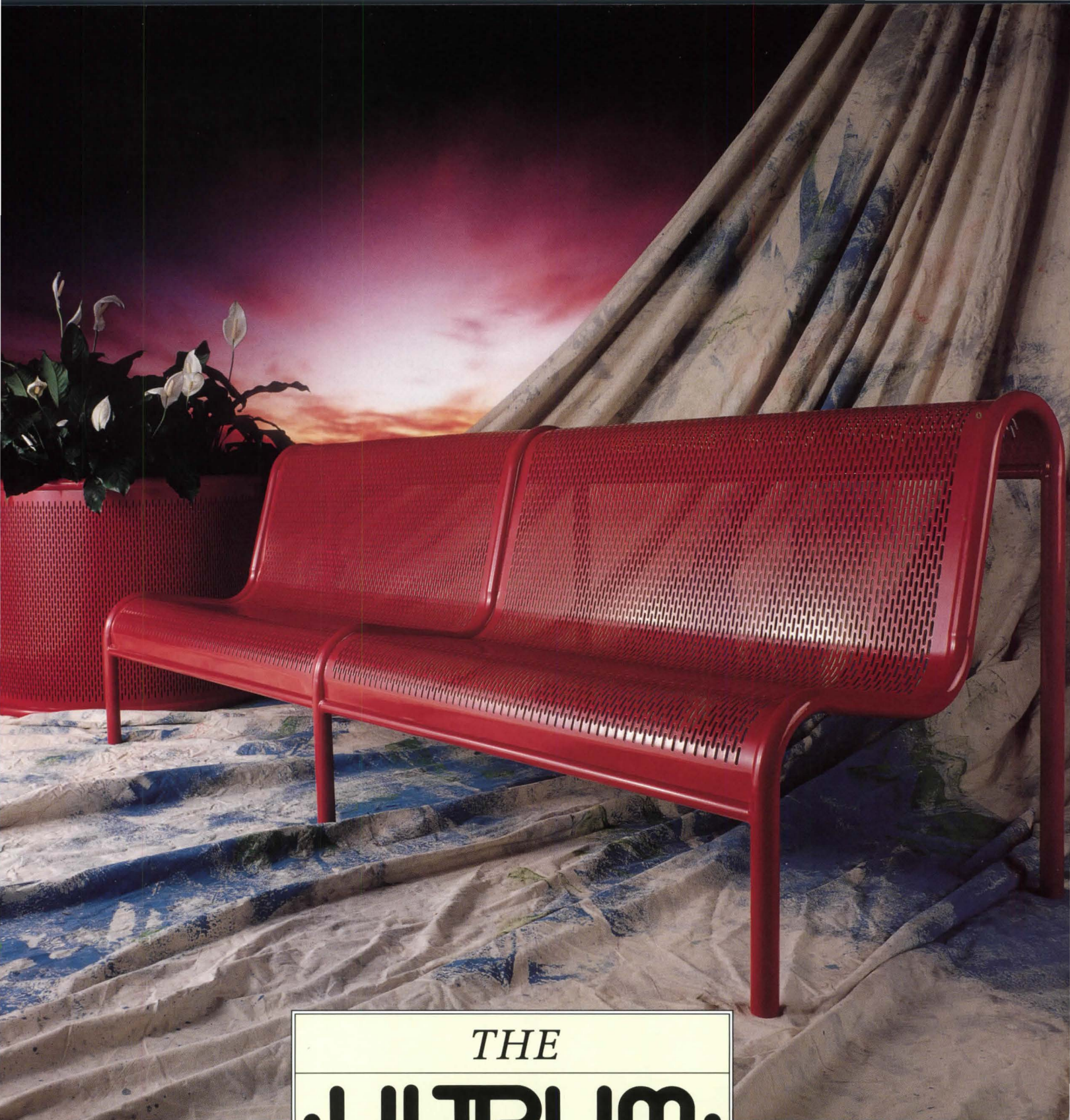
Pflow
INDUSTRIES, INC.

5045 N. 35th St., Milwaukee, WI 53209-9977
Phone: (414) 462-8810 • FAX: (414) 462-2673

World's Largest Manufacturer of Vertical Reciprocating Conveyors.

ProMat 89
Productivity Solutions Through Material Handling

An MHA INTERNATIONAL SHOW AND FORUM
McCormick Place North • Chicago, IL • February 20-23, 1989
SPONSORED BY THE MATERIAL HANDLING INDUSTRY OF AMERICA, INC.



THE
•ULTRUM•
COLLECTION

© 1988 GameTime, Inc.

When it comes to metal furnishings, Ultrum sets the standard... in style, in durability and in innovative space design. Ultrum offers today's most exciting site furniture collection. For our new full-color catalog, contact your Ultrum sales representative or write GameTime, Inc., P.O. Box 121, Fort Payne, AL 35967. 205/845-5610, telex 782-534, FAX 205/845-2649.

Law (continued from page 52)

the work has expanded, the fees, as a proportion of the cost of construction, have shrunk, and the standard of quality has gone up. With the problem of defects you have the problem of a litigious environment and you have a profession that's in very, very serious difficulty.

P/A: How do design professionals protect themselves from the increasing threat of litigation?

Lazaruk: They have to think about risk management. Every project has to be analyzed from the beginning as to who you are dealing with, what is involved in that project, and what risk you are taking. There are situations in the course of many projects where the owner asks you to do

things that are exposing you to lawsuits, such as sending out an incomplete set of plans. You have to properly document that you objected and that you explained to the owner the inherent risks. You have to establish quality control, and review procedures of drawings to protect yourself against contractor claims later on. And some projects may have to be turned down if an owner is known to be litigious or if a project has risks.

P/A: If a firm is insured, does that make it a target of more suits?

Gleason: Yes and no. If you are the only one in a case who has either personal assets or insurance to cover damages, your adversary will work hard to de-

velop a case of malfeasance against your work. But it is still a good practice to protect your firm with insurance. The policy limits also have a way of capping your exposure. I can't think of one case in ten years where we have paid more than the policy limits; insurance helps control exposure as well as protect you.

P/A: Would insurance rates be lower if, say, the AIA had its own insurance company?

Berger: The comments that I hear over and over again about captive insurance companies are: one, people think their premium is going to be lower, but it probably isn't; and two, a lot of these captive insurance companies don't have the expertise in managing claims. Even if you

pay a lower premium up front, will that company be there in seven years to cover the claim?

P/A: Do you see the tight market for insurance continuing?

Gleason: No, the cost of the product is going to stabilize and, in some disciplines, has already stabilized. We will not go back to the underwriting attitude of the early 1980s which led to a terrible loss ratio starting in 1983 and 1984, and becoming very dramatic in 1985. Competitive pricing is good, but reckless pricing is going to take us into an uncontrollable soft market cycle that is going to put us back, in 1992, to where we were four years ago.

P/A: To what extent has the legal profession actually caused this litigious climate?

Raab: It is the major problem in third party suits because they're handled in a different way than the major claims. The major claims are our fault in the sense that they are a result of our services, not a result of a deficiency in maintenance over ten years. It's the third party suit that you should worry about.

Gleason: If you were to look upon the judicial system in our country as a business, you'd probably agree that it's the most poorly run business in the country. Judges are not good managers. It's not the legal community that is the source of our problems, but the system in which they practice their profession. There is a need for improvements in the system. There are alternatives out there and they're a very forceful element in the world of litigation today, such as mediation, mini-trials, and arbitration. The truth comes out quicker with less ritual. If you owe, you get to that point a lot quicker and save a lot of money on the allocated-claim ledger.

Question from audience: What advice do you have for the young people who look to this profession as a glorious future? You all make it sound as if it's a no-win situation.

Raab: Go to law school . . .

Gleason: I don't think young people should give up architecture as a career because of liability. You can make a profit at it, and the risks of liability can be managed and lessened with good business practices. People didn't quit manufacturing products in this country 15 years ago; they just tried to do it better when the liability bloodbath hit.

Raab: The reality though is that more and more work is being done by fewer firms. Join a large firm is one answer to your question. The other is to go bare.

The problem for a starting prac-

A STEP UP

If you're looking for quality, Roppe rubber stair treads are a step above the rest. They're solid rubber throughout to provide an attractive, hazard-free surface for all interior stairs. They reduce noise; resist scuffing, gouging, burns and most chemicals. Easy to clean, too. Available in Raised Circular, Raised Square, Low Profile Circular, Abrasive, Smooth, Diamond and Rib designs and dozens of designer colors, Roppe rubber stair treads will give you years of trouble-free service in high traffic areas. Step up to Roppe on your next job. For your nearest distributor, write Roppe Rubber Corporation, 1602 N. Union Street, Box X, Fostoria, Ohio 44830. Or call toll-free.

ROPPE

1-800-537-9527

In Ohio 419/435-8546

tionner is that you have a choice between sleeping or eating. If you want to eat, you don't sleep too well because you don't have coverage. And if you have coverage, you sleep well but can't afford to eat.

Gleason: I do think it will get better. I do think there will be tort reform over the next 20 years. I do believe that people will quit going to the courts to solve every dispute and look to mediation and various forms of negotiation, and I do believe the price of coverage will ultimately come down in the next 15 years not because of reckless cash flow underwriting by the insurance industry, but because alternative dispute resolution will start to pay dividends in the form of lowered legal expenses. There are, however, strong interest groups, such as the American Trial Lawyers Association, trying to prevent these reforms from happening.

Zetlin: I don't see the situation like that. There's a reason why there are lawsuits. A small firm has a much better chance than a large firm of not getting involved in a suit by establishing quality control procedures and by looking ahead to what contractors will do. A large firm cannot do that; it is a big machine that follows a certain routine. Design professionals have to start being more paranoid. We must think that the impossible will happen. If you, as a young firm, start thinking that way, you will instinctively review what you're doing and look ahead to potential problems. You will avoid litigation and will also feel more confident. ■

Products (continued from page 49)

sides of the border may now find it economical to consolidate their operations. In the building industry, such multinational operations could make it increasingly difficult to specify products on those publicly financed jobs with a "Buy American" clause.

But overall, U.S. architects and builders will have an increased range of brands and products from which to choose, better access to Canada's significant building research and, through Canada's traditional links with Great Britain and linguistic ties with France, a bridgehead to European construction technology. Consumers in the U.S. also will benefit from lower prices on imported Canadian products, timber, and construction materials such as gypsum, steel, and aluminum.

Differences in industry standards between the two countries

may remain a disguised barrier to trade. For example, U.S. and Canadian building authorities have different requirements for fire resistance, which frequently requires expensive duplication of testing and classification by both Underwriters Laboratories (UL) and Underwriters Laboratories of Canada (ULC). The Treaty commits both countries to work towards resolving such conflicting standards and actually establishes procedures to unify lumber standards.

The FTA also seeks to encourage the movement of design and construction services across the border. It calls upon the American Institute of Architects and the Royal Architectural Institute of Canada to develop mutually

acceptable standards for the licensing of architects. Upon review of the recommendations of the professional societies, the parties to the Treaty are required to encourage their respective states and provinces to extend reciprocal recognition to each other's qualified architects. Other provisions of the FTA encourage the bilateral practice of engineering, building, developing, general contracting, and special trade contracting.

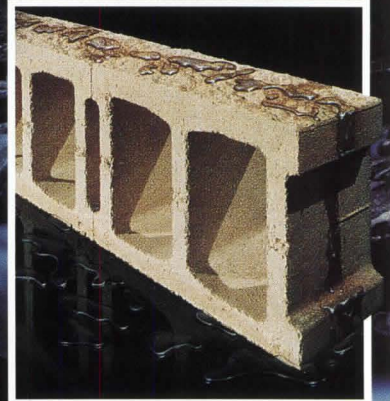
Canada and the U.S. are already each other's best trading partners. But now, with the FTA, companies can plan integrated North American marketing strategies with less fear of trade skirmishes. Canadian brands like Domtar and MacMil-

lan Bloedel have already found an active niche in U.S. markets, and progressive U.S. companies continue to strengthen their position in Canada. While some companies will undoubtedly face painful new competition due to the FTA, the U.S. building industry will benefit from the agreement. Abroad, we will have greater access to Canadian markets for goods and services. And at home we will enjoy an expanded choice of materials and reduced prices on imported products as we see "Made in Canada" on more building materials. **Michael Chusid, John Zika** ■

Michael Chusid is a marketing and architectural consultant to building product manufacturers. John Zika is an architectural information specialist.

Mother Nature Set The Standards...

DRY-BLOCK® Exceeded Them



Mother Nature pours an average of 405 inches of rain on Hilo, Hawaii—the rainiest city in the U.S. But that still isn't enough to satisfy the makers of DRY-BLOCK®—the original water-repellant system.

All DRY-BLOCK® producers are required to batter a test wall of their own with 600 inches of water a day for 28 days. The equivalent of 41 years of Hilo weather.

The result? Our DRY-BLOCK® test walls are as water-tight today as the day they were set-up.

Don't settle for less. Specify DRY-BLOCK®. Ask for complete test results, specifications, producers and applications in your area.



7221 Parkland Court • Milwaukee, WI 53223 • 414/354-4400

Solving the problem.

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

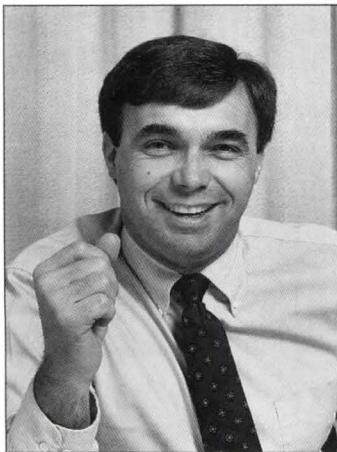
Almost six years later, the town filed a suit against Street & Lundgren. There was water leakage into the fire house and some hairline cracking of exterior masonry. The town was afraid the building might not be structurally sound.

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

Dale believed the problem was solvable.

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

Dale managed to keep the dialogue open. Ultimately, the town hired a consulting structural engineer to assess the situation. This engineer's opinion fully supported Street & Lundgren, and convinced the town its fire station *was* structurally sound. Now, all that was left to be done was help the town resolve the existing problems. In the conciliatory environment established by Dale, Street & Lundgren provided maintenance guidelines for the fire station as well as advice on how to repair the cracked masonry.



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

R. Dale Currie

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

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

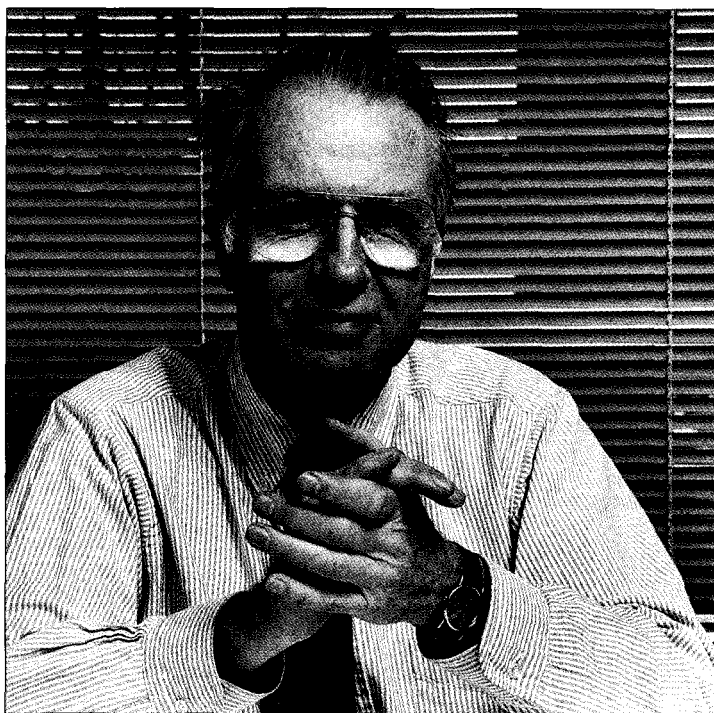
“I liked Dale Currie immediately for his grasp of the situation, his concern about our welfare, his willingness to come up promptly and talk the situation over.

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

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

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

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



Roy E. Lundgren

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

Professional Liability Insurance
For Design Professionals

DPIC COMPANIES



Design Professionals Insurance Company • Security Insurance Company of Hartford
The Connecticut Indemnity Company
Available through an exclusive network of independent agents. Please call
1-800-227-4284 or 1-800-682-3400 (in California) for the agent serving your area.

2959 Monterey-Salinas Highway, Monterey, California 93942

Weyerhaeuser—for Doors That Are Worthy of Your Design

Weyerhaeuser Architectural Woods Doors . . . a matchless array of custom and standard options that will fit the internal logic of your design as precisely as a mortised joint.

The Weyerhaeuser doors chosen for the NCNB Plaza in Tampa, Florida, are ample testimony. Regardless of your aesthetic, thematic, or functional requirements, Weyerhaeuser can build a door to your specifications. We offer:

- Any species available
- Any veneer match or pattern
- Any size up to 16 feet
- Machining to any specifications
- Construction around any core type.

And most Weyerhaeuser doors are backed with a full, unlimited, lifetime warranty that includes repairing, replacing, refinishing, and rehanging.

For more information, call your Weyerhaeuser sales representative. Or, call toll free in the East at (800) 544-6522 or in the West at (800) 521-6186.

Marshfield Series: Clear finished, Plain sliced, Burmese Teak

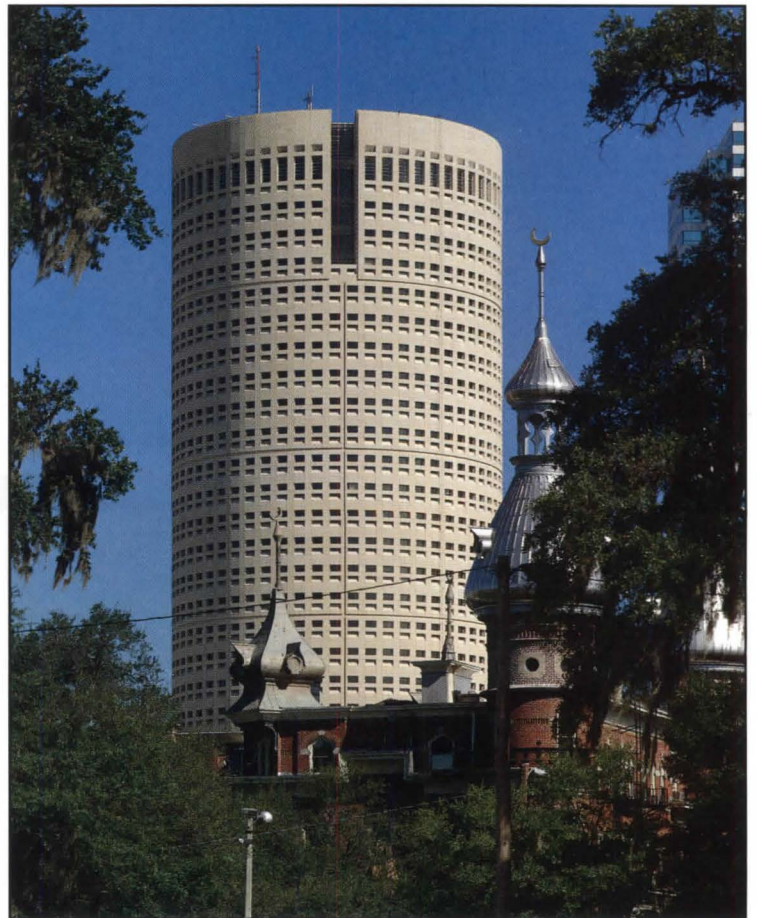
 **Weyerhaeuser**

There Is No Equal.™

Circle **No. 373** on Reader Service Card

Geometer's Tower

Rising on the motley skyline of downtown Tampa, Florida, the NCNB banking headquarters by Harry Wolf, with Odell Associates, is a sheer cylinder governed by a rigorous proportional order.



A view of NCNB over the Victorian turrets of Tampa University.

**NCNB Plaza
NCNB National Bank
Tampa, Florida**

Seen from the south along the Hillsborough River (facing page), the 31-story NCNB is separated visually from the several office towers of more or less equal height in Tampa's central district. Facing the main business street to the east is a contrasting seven-story cubic banking hall (photos this page). The repeating squares of its space-frame structural cage are countered by two big cir-

cular openings facing the tower (middle photo). Geometry is underlined in both structures by finely crafted materials: Texas shell limestone—similar to a stone common in Florida—set in the painted steel grids of the banking pavilion; precast panels on the tower, clad in creamy French limestone above a base of the more textured Texas stone.

WHEN architect Harry Wolf talks about the NCNB project, he soon starts doing little sketches showing geometric and proportional relationships. At the macro scale, he sketches a tower whose height is five times its 78-foot radius; then he shows how this 78-foot dimension reoccurs in the framing of the two cubes that form the adjoining banking wall. This key dimension is a multiple of the 13-foot module that is both the floor-to-floor height and the basis of a horizontal grid extending over the entire site of the complex.

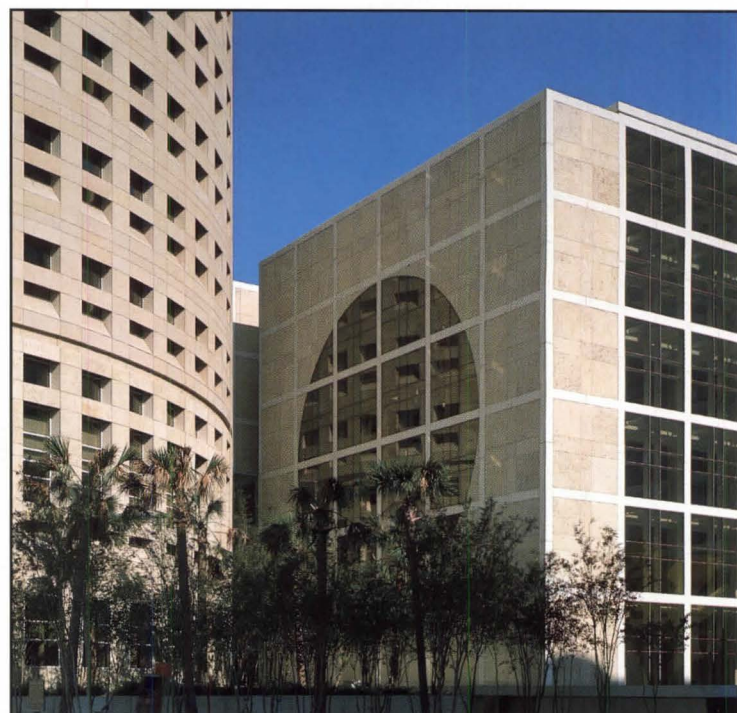
As Wolf moves on to the details, he shows how the 13-foot dimension lends itself to the ratios of the Fibonacci series (1,2,3,5,8,13,...). With a few strokes, he delineates a modular "plaid"—based on dividing the 13 feet into segments of 1, 5, 2, and 5 feet—which underlies much of the design. This plaid controls the design of the banking hall, where structural members are spaced 13 feet apart in all three dimensions and the spaces between these one-foot-thick elements are consistently divided in a 5-2-5 pattern.

In laying out the dimensions of the tower, Wolf has to adapt a different strategy: Here he divides the circular perimeter into 60 modules, each 8 feet wide, then subdivides these into 5-foot windows and 3-foot piers; vertically, he divides the window openings into two 3-foot rectangles per floor, above and below a 2-foot sill member. (These dimensions at the exterior face of the wall differ from those of the actual deep-set windows; see section, page 62).

Geometry to Building Fabric

When Wolf and his associates transformed these geometrical diagrams into actual construction, it was done in a fine palette of materials, made possible by a client willing to invest in construction. The tower walls are made up of thick precast units, clad in a cream-colored French limestone. Near the ground—on the three-story base of the tower and between the painted steel framing members of the adjoining banking hall—the architects have used a Texas shell limestone, which is similar in color and reflective qualities, but has a fossil pattern that adds welcome texture in the strong Florida light. (Similar stone has been quarried and widely used in Florida, so the material has a regional quality.)

The stone-clad precast walls of the tower temper the subtropical sun with their downward slanting sills and heads, which extend almost two feet outside the lightly tinted glass. On the banking hall, the east wall is largely solid, with two-foot-square windows on the street front—which are quite pleasing at the back of the otherwise open mezzanine offices. The large circles cut into the west walls recall the geometry of the tower, and though their glass area is large, they are shaded from direct sun by the tower. The main source of light in this hall is the glazing to south and north, which continues right





NCNB Plaza NCNB National Bank

The tower lobby (photos, lower right) will include a terraced public restaurant around its western half; rings in the limestone floor are marked to illustrate compass points, hours in the day, etc. The second-floor offices have a square mezzanine within a circle of cylindrical columns. Elegantly restrained interior systems in all NCNB spaces, by Associated Space Design, echo the geometries and de-

tails of the building. The steel space frames that support the public banking pavilion (facing page) are exposed on the interior and filled in, as needed, with glazing, skylights, and sun baffles; the 1-5-2-5 division of the typical 13-ft bays (the 1 ft being the column width) forms a pervasive plaid pattern within which all elements, including handrails and air grilles, are laid out.

that served only this garage and the city's museum of art, on the riverfront to the north. When it was pointed out to the NCNB Chairman that the land was not for sale, he asked the developer to obtain the property anyway.

In the deal that ensued, the bank purchased only the land directly under its buildings and agreed to replace the existing parking garage—and meet its own parking needs besides—with a two-level garage extending north to include what had been the city street. On the 3½ acres above and around this new garage, the bank was to build a public park, which would then be maintained by its owner, the city. When local business leaders objected that the site had never been offered for development, the city replied that nobody else had ever asked.

There have been objections to the scheme on urban design grounds: that the eight-foot elevation of the gardens over the garage blocks the view from street to river and that the museum of art is no longer on any public street. Wolf counters that the river is too low to be visible across a street-level park on this site and that the museum now has a pedestrian approach at the park level where its main entrance always was, plus convenient parking and service access through the garage.

A Downtown Oasis

The interaction of Wolf's geometries with landscape architect Dan Kiley's exceptional skills has produced a garden where bands of stone and precast interweave with water troughs and greenery in a way that suggests the gardens of Islamic Spain. Wolf likes to see these—and some of the tracteries of light and shade that develop in the banking hall—as links between present-day Tampa and its Hispanic heritage, which has been reinforced by successive migrations from the Caribbean.

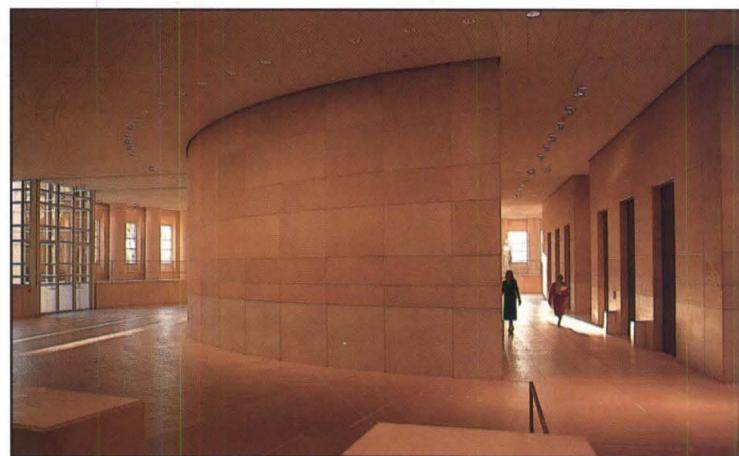
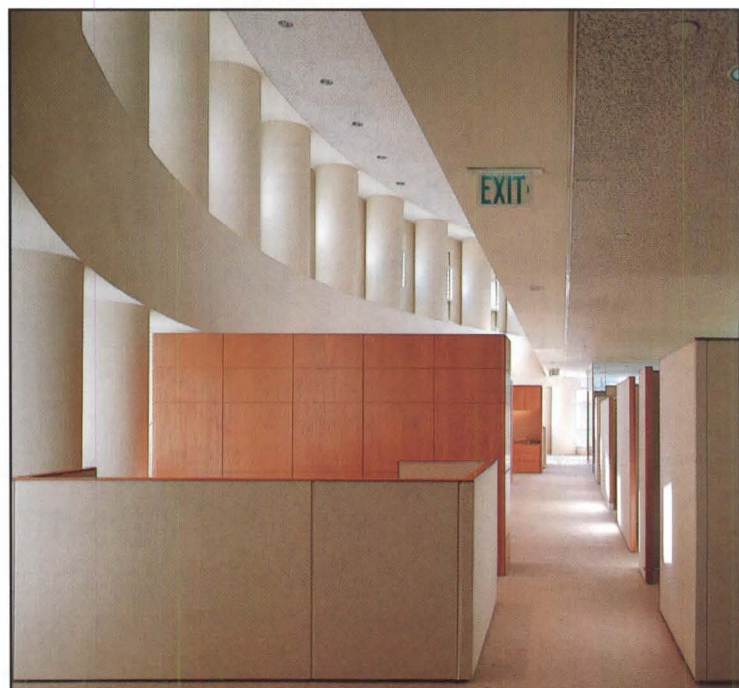
Except for its workable amphitheater, the park has no gathering places, or spaces open enough for tossing a Frisbee, and calls for more meticulous maintenance than city parks departments typically provide, but it is a charming place for a brown-bag lunch or a siesta.

Harry Wolf, having finished this largest of many fine buildings designed by his office—which was originally in Charlotte, then in New York—has now disbanded his firm and joined Ellerbe Becket as a principal in their Los Angeles office. With this work behind him, it should be interesting to see what Wolf accomplishes with the recently-assembled-by-merger, 800-person Ellerbe Becket firm.

John Morris Dixon



Charles McGrath



Courtesy Harry Wolf





Rick Alexander Associates



Rick Alexander Associates

NCNB Plaza
NCNB National Bank

In the adjoining public garden, patterns of limestone paving reiterate the 13-ft modules—divided 1-5-2-5—that appear in the banking hall; rows of palms alternate with crepe myrtle (seen severely pruned, except below right). Tiers of an amphitheater (facing page, bottom left) face the river. A pavilion at the northeast corner of garden (facing page, bottom right) affords elevator access to the garage.

Project: NCNB Plaza, NCNB National Bank, Tampa, Fla.

Architects: Harry C. Wolf, FAIA, New York/Los Angeles (Phillipe Barriere, Alissa Booker, Paul Cha, Nancy Clayton, Oreste Drapaca, Lee Ledbetter, Adi Mistri, Paul Nakazawa, project team).

Associate architects: Odell Associates, Charlotte, N.C. (Stephen D. Thomas, project manager; J. Arthur Killebrew, project architect; Randy Baker, John Burgess, Michael Cole, Gunar Ejups, Ruth Elias, John Gherga, Stephanie Hamilton, Ahmad Jahromi, Dave Park, Steve Price, Dave Taylor, project team).

Client: NCNB Tower Associates (limited partnership of NCNB National Bank and Faison Associates), Charlotte, N.C.

Site: 4.5 acres along Hillsborough River in the downtown core.

Program: 500,000-sq-ft office tower to house NCNB Florida Headquarters; 40,000-sq-ft banking hall adjoining tower; 280,000-sq-ft garage topped by 3½-acre public park.

Structural system: for tower, 100-ton pile foundation, post-tensioned radial beams, conventional concrete slabs and columns; for banking pavilion, three-dimensional, moment-resisting steel frame on concrete sheer wall base; for plaza, upturned concrete beams on concrete columns.

Major materials: limestone, marble, precast concrete, tinted and clear glass, aluminum mullions and grilles, steel column and beam covers (see *Building Materials*, p. 153).

Mechanical system: centrifugal condensers supplying chilled water to air handlers on individual floors; perimeter plenum-air heating.

Consultants: Office of Dan Kiley, landscape; Associated Space Design, interiors; King-Guinn Associates, structural; Benner & Fields, mechanical. Bullard Associates, electrical; Fisher Marantz, lighting; Curtainwall Design and Consulting, exterior walls; William Hobbs, Ltd., fountain; FMG Design, graphics.

General contractor: Pace Construction Corp.

Costs: \$107 million, including land, and all costs except furnishings.

Photos: Cervin Robinson, except as noted.



Rick Alexander Associates



Courtesy Harry Wolf



News on Newbury Street

Frank O. Gehry & Associates and Schwartz/Silver Architects bring an idiosyncratic sense of form and material to an old Boston building.

The Newbury Street facade (facing page) features a metal-clad canopy over the entrance and a glass-covered canopy over the sidewalk, which continues along the Massachusetts Avenue side of the building. The large struts that support the canopies spring from the pilasters of the Arthur Bowditch-designed building and visu-



ally reinforce its column grid. The struts also recall those that support the projecting, metal-clad cornice, which shelters a new penthouse floor. Lighted at night, the upper struts and soffit make the building stand out on the Boston skyline and emphasize its position as a kind of gateway to the city from the west. Where the cornice breaks and the elevator equipment housing extends above the roof (left), Claes Oldenburg will hang a teabag sculpture, a reference to, among other things, Boston's Tea Party. The metal-clad penthouse wall is pulled back from the battlemented façades of the original building and punctured by large, mullioned windows. Their mullion pattern recalls the grid of the aluminum replacement windows.

THE Tower Records building, formally known as 360 Newbury Street, hit the Boston press months before it hit the streets. In this city of uptight buildings, Frank Gehry's signature was welcomed by some critics as a needed flourish, dreaded by others as an unruly insertion, but appreciated by advocates and doubters alike for introducing the city to a more idiosyncratic architecture.

Considering that Gehry was renovating an early 20th-Century warehouse rather than building anew, the worry that his redesign would inject too much mix in a neighborhood that demands match might seem excessive. After all, the eight-story, 117,000-square-foot structure was already in place.

Nonetheless, some concern was merited: Not only were Gehry and his ad hoc artistry still not much in favor in these parts, but the building had a conspicuous location at the terminus to the Back Bay's prime boutique street, visible from much of the neighborhood, and dominating the view as one enters the city on the Mass Pike (See photo, page 5). Ironically, the original structure by architect Arthur Bowditch was already something of an interloper from the day it opened. Even in 1918, it stood aloof, out of joint with both the

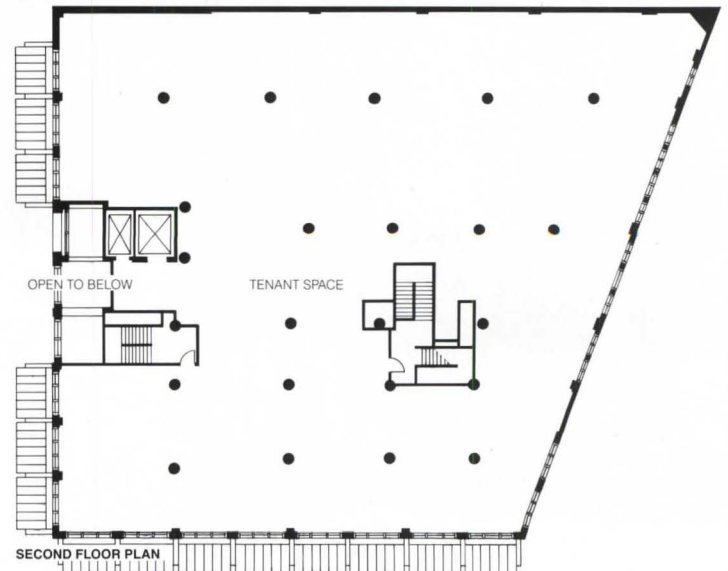
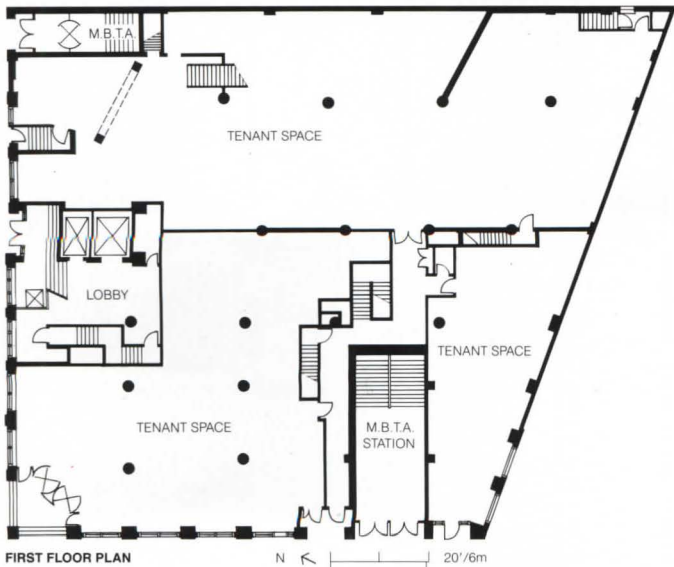
intimate stables-turned-shops on Newbury Street and the larger scale commercial frontage of Massachusetts Avenue.

Gehry's remake deliberately and boldly accents the anomaly. It is idiosyncratic and offbeat. But, if the made-over building remains an aberration, the architect has brought a more positive meaning to these words. In the months since it opened, 360 Newbury has added a striking and controversial presence in a city marked by banal Post-Modern designs.

The Los Angeles architect did not have an easy time making his first Boston statement. Called in to complete a project partially defined by architect Graham Gund and forced to contend with half a dozen clients—from the city transit people who use the structure as a subway entrance to the Back Bay Architectural Commission concerned with the context of the historic district around it—Gehry's firm found Boston "one of the most restricted places in the world to build," says Robert Hale, principal in charge. Boston's Schwartz/Silver Architects shared in the arduous procedure of design and redesign and of securing the necessary okays along the way.

(continued on page 71)







(continued from page 68)

For all the givens of the building—the location and definition of the lobby, elevator core, and windows were already fixed—Gehry has made this concrete box his own: He has produced a compelling if scarcely contextual object. By adding the projecting top, prominent base, and new façades, Gehry has transformed the once nondescript structure into a robust original. Although the architects liken the struts that project from the roof to the Back Bay's traditional cornices, this cantilevered crown is anything but old-fashioned. The most distinct and discussed element of the remake, the stiff angular brackets that support the roof of the new penthouse are far more heavy and brooding. A sculptural parody of a projecting cornice, they are paralleled and emphasized by a mock awning at the second floor.

At once industrial in their metallic-gray cladding and unconventional in their thrusting forms, the treelike struts are pure Gehry. With nighttime illumination calling attention to their imagery, the projections have become a hot topic hereabouts as Bostonians debate the “scaffolding” shape. Is the building finished or still on the way, permanent or impermanent? Do these seemingly unfinished forms

The view of 360 Newbury Street from the southwest (facing page) shows the juxtaposition of the building's historic façade, with its brick pilasters and stone spandrels, and the rear walls covered in lead-coated copper. Knitting the two parts of the building together are the canopy and cornice, which run around the top and bottom of the historic façade, and the aluminum windows, whose grid of mullions appears to run behind both the new and old wall surfaces. This side of the building faces a tangle of roads and bridges, not unlike parts of Los Angeles very familiar to Frank Gehry. The

other side of the building along Newbury Street (above) has a very different urban character, with its adjoining low and midrise commercial buildings, dating mostly from the 19th and early 20th Centuries. While the building's large size and metal cladding have little in common with the other structures along the street, its punched window openings and projecting cornice do respond, as a kind of caricature, to the context.

Both the forms and materials in the lobby (right and facing page) show Gehry's sure hand at countering our expectations. The skewed reception desk looks like a minimalist sculpture; the birchwood paneling and brass reglets look out of scale in the tall, narrow space; the blue granite flooring looks artificially colored; and the yellow onyx ceiling looks both solid and translucent.

Project: 360 Newbury Street, Boston, Mass.

Architects: Frank O. Gehry & Associates, Santa Monica, California (Frank Gehry, principal/design; Robert Hale, principal/management; Tom Buresh, project designer; Sharon Williams, project architect; Edwin Chan, Berthold Penkhues, Peter Becker, Carroll Stockard, project team; Susan Narduli, Kevin Daly, Young Kim, models).



Associated architects: Schwartz/Silver Architects, Boston (Robert Silver, principal; Steve Lacker, David Stern, project managers).
Client: Cohen Companies, Boston (Richard Cohen, president).
Site: corner, commercial site in Back Bay, Boston, above subway station and adjacent to Mass Pike.
Program: 140,000-sq-ft rehabilitated loft building, new penthouse.
Structural system: existing concrete frame with steel frame and concrete deck additions.
Major materials: granite and brick veneer; lead-coated copper cladding (see *Building Materials*, p. 153).
Mechanical system: heat pumps; gas-fired boiler with radiant heating.
Consultants: Simpson, Gumpertz & Heger, structural; Am-Tech Engineers, mechanical.
General contractor: Bond Brothers.
Costs: withheld at owner's request.
Photos: David Hewitt, except as noted.

ask the viewer to suspend judgment or call for it? However one answers them, those questions are more provocative than the is-it-old-or-is-it-new question of Boston's 1980s infill architecture.

Despite such a domineering sculptural element, this is not one-liner architecture. No two façades are alike. The lead-coated copper panels, used to cover the ravaged concrete of the original building's rear façades and chosen to withstand the harsh climate, will age to a deeper pewter tone, adding a Boston surface to Gehry's palette. The dark tinted windows recede into the metallic cladding, which reads like an artist's scumbled surface of gray squares or, notes architect Robert Silver, like Gehry's familiar fish-scales. Whether or not the source of the imagery is the briny deep of Gehry's imagination, the surface is meditative, painterly, and quite appealing.

Less appealing is the base where the gray struts make a rather heavy canopy on the Newbury Street side. There, the pink granite applied at the ground level is also too ponderous, neither harmonious with the rest of the wall nor fragmented enough for artistic dissonance. Combined with Tower Records' dead windows, this façade does little to enliven the vital end of the retail street.

The lobby uses materials to better effect: Again it is an enriched palette, in this case dark birchwood wall panels, brass rails and fittings, blue granite flooring, and yellow onyx used in the elevator cabs and as the lobby ceiling, backlit to show the opalescence of the stone. No one stinted on cost here. A new sidewalk, now being installed, will act as a frontispiece to the building. And, still to come, sculptor Claes Oldenburg's teabag will hang from the balcony notch as a nod to the Tea Party tradition.

This juxtaposition of the past and the pop is typical of the building. If the rich and solid materials here are un-Gehry-esque, the presence of a design by this apostle of impermanence in America's most permanent city is equally un-Boston. Collaboration or jolt, the meeting of the two ends of the continent may have produced a tough building that is too uncompromising, but it is surely one to please more forward-looking Bostonians for standing in its own time and place without bowing to the false and all-too-familiar god of nostalgia.

Jane Holtz Kay

The author is architecture critic at The Nation and author of the book Lost Boston.



P/A Inquiry

More than a Box with Docks

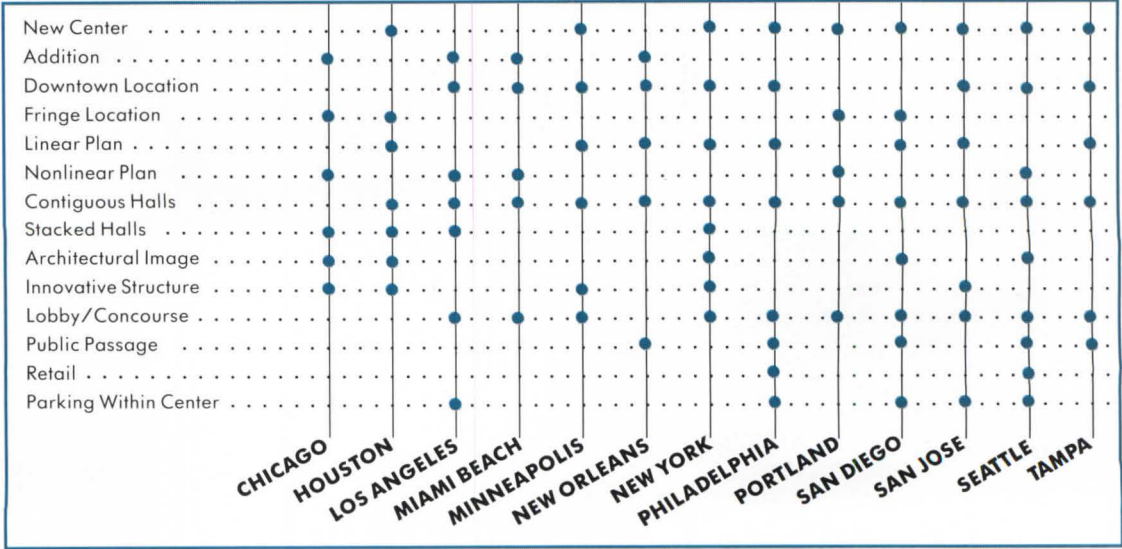
It's boom time in the convention business, and cities from Seattle to Miami are now expanding old centers or building new ones.

SEATTLE opened eight months ago; Miami opens this month; and San Diego opens this fall. The convention centers in these three cities and ten others shown here are but a fragment of the booming convention center business. "I can't think of a major city that's not building a center, expanding one, or considering it," says Andrew McLean of Thomas Ventulett Stainback & Associates, Atlanta. Statistics bear out his assertion. According to the Trade Show Bureau, the number of convention center facilities grew 37 percent from 1980 to 1987, with an average annual growth in exhibition space of 3.3 million square feet. The number of big shows needing 10,000 square feet or more grew from 2733 in 1986 to 3289 in 1988. The average number of new exhibitors compounds annually at a rate of 7 percent, totaling 1 million in 1988. And the boom shows no signs of abating. "With an annual square footage growth factor of 8.4 percent, the space needs of the trade show industry will increase over the next decade by a factor of almost 110 percent," reports Robert Black, publisher of *Tradeshow Week*. Why the growth? Aggressive city governments, hungry for spin-off tourist spending, have played a major role in their willingness to build and operate a center even at a loss. But the real boom is business-driven. According to Tony Calanca, Vice

President of Operations for Cahners Expositions, the nation's largest trade show organizer, a sales contact at a trade show costs 40 to 45 percent less than a sales call. Moreover, changes in the tax laws in 1986 now permit selling at trade shows. Thus, while associations still sponsor 87 percent of all shows, the business is increasingly dominated by profit-making organizations, such as Cahners. For some architects, the boom has turned a once-in-a-lifetime job into repeat commissions. Thomas Ventulett Stainback has convention centers on the boards now in Miami (page 75), Philadelphia (page 81), Mobile, Alabama, and Fort Lauderdale. The firm is also at work on the second expansion of their own Georgia World Congress in Atlanta. I.M. Pei & Partners of New York, architects of the Jacob Javits Center (page 77), is now completing the expansion of the Los Angeles Convention Center (page 78) with Gruen Associates. Loschky, Marquardt & Nesholm of Seattle is involved in the design of convention centers in Denver, Des Moines, Minneapolis (page 76), and San Diego (page 78). Perez Associates of New Orleans is expanding its own design for the center in that city (page 81). Moreover, although four or five architectural firms dominate nationwide, most cities see to it that a

(continued on page 81)

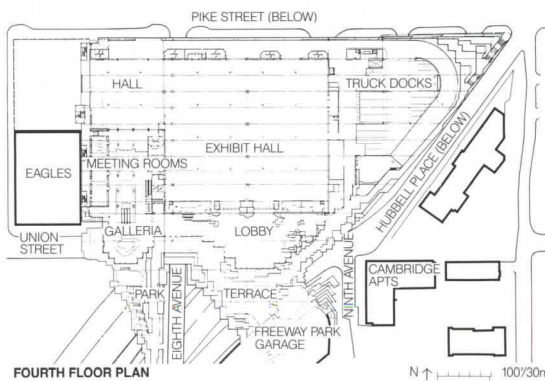
The chart relates design issues for convention centers to the featured projects. It can be used to identify examples of a given design element or arrangement, such as stacked halls, or to identify those features of a given center which are considered exemplary.





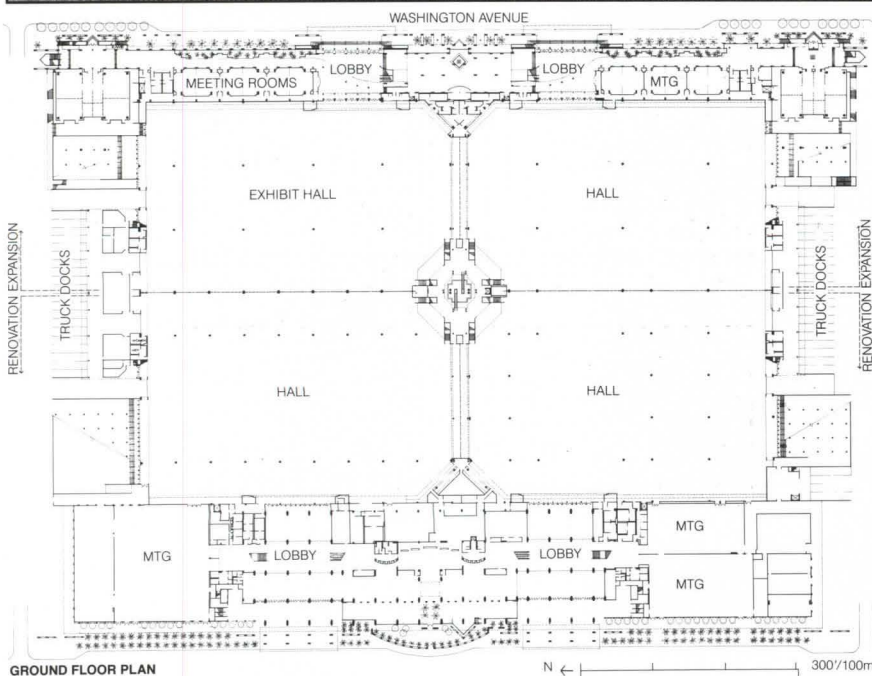
SEATTLE

The Washington State Convention and Trade Center in Seattle, which opened last June, is notable not only for its unusual site atop a freeway, but for the public components of its program, which include street-level retail and a Galleria/concourse that was designed to be open round the clock, providing access to downtown for residents of an adjacent neighborhood. The \$108 million, 1.44-million-sq-ft facility, designed by TRA, Seattle, with associated architects HNTB, Seattle (Skilling Ward Magnusson Barkshire, structural engineers; Danadjieva & Koenig Associates, Tiburon, Calif., associated designers; Pietro Belluschi, Seattle, design consultant), bridges across nine lanes of Interstate 5, three lower express lanes, and two city streets. Its 102,000 sq ft of exhibition space can be divided into three halls, which are clad in precast concrete. Phase two, now under construction, will add 45,000 sq ft, primarily in meeting rooms. When phase three—100,000 sq ft—is finished, the site will be completely built out.



MIAMI

When it opens this month, the expansion of the Miami Beach Convention Center, designed by Thompson, Ventulett, Stainback & Associates of Atlanta, with associate architects Borrelli, Frankel, Blitstein, Miami, will double the size of the facility for a total of one million sq ft. At 500,000 sq ft, the expanded exhibit hall is claimed to be the largest single space for exhibition in the U.S. (It can also be split in four.) The project was phased to permit continuous use of the original building, which is now undergoing renovation for completion by 1990. (Total project cost is \$71 million.) The use of pastel-colored stucco, glass block, tropical foliage, water features, and sunscreens in both addition and renovation will tie the center to the adjacent Deco district and enforce the sense of a single building, thereby avoiding the stigma attached to an "old" wing. Meeting rooms to east and west are connected by a crossover with views of all four halls, while services are concentrated to the north and south.





Wayne Cable

CHICAGO

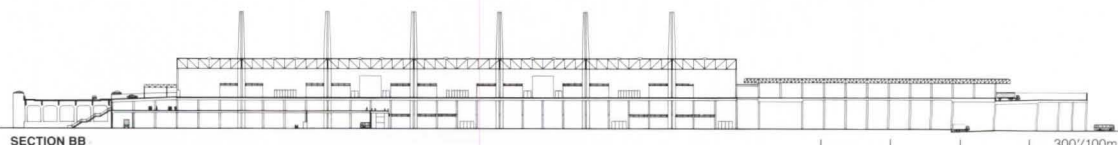
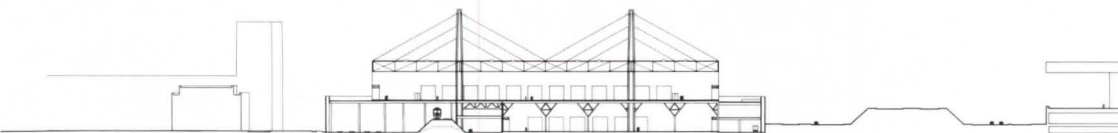
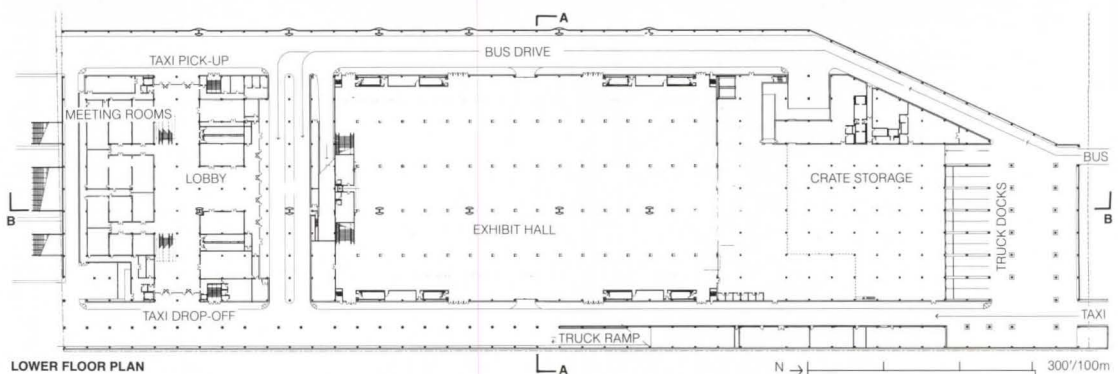
With the completion in 1986 of the annex designed by a joint venture of architects Skidmore, Owings & Merrill and engineers Lester B. Knight & Associates, both of Chicago, McCormick Place became the world's largest complex for nonpermanent exhibits. Although its stacked halls, the product of a tight site, are not considered ideal by exhibitors, the 1.6-million-sq-ft, \$195 million annex is nevertheless a distinguished addition, with its cable-suspended roof truss system—whose pylons double as mechanical ducts—and gray aluminum skin. Inside, the use of Y columns in the 375,000-sq-ft lower hall cut the span from 60 to 30 feet, thereby saving steel.

MINNEAPOLIS

Designed by a joint venture of Setter, Leach & Lindstrom, The Leonard Parker Associates—both of Minneapolis—and Loschky, Marquardt & Nesholm, Seattle, the new Minneapolis Convention Center replaces an older facility on its downtown site one block from Nicollet Mall. Its plan, designed with an eye to expansion, is composed of three repetitive increments, each with an exhibition hall sandwiched between arrival, registration, and meeting rooms facing the city and service and loading docks along the freeway. Each hall is capped by a structural steel dome, 210 ft in diameter. Circular rotundas mark the entrances to the \$103 million, 800,000-sq-ft facility, whose first phase opens in May with completion due in April 1991.



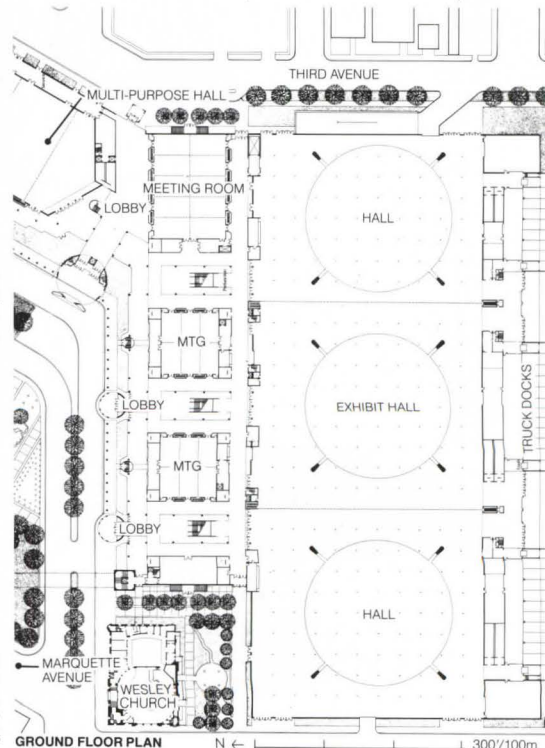
Satin Photo Group

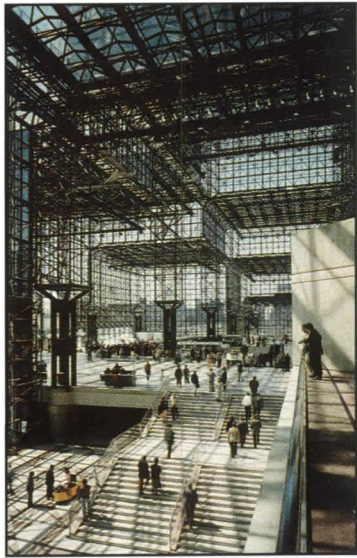


Shin Koyama



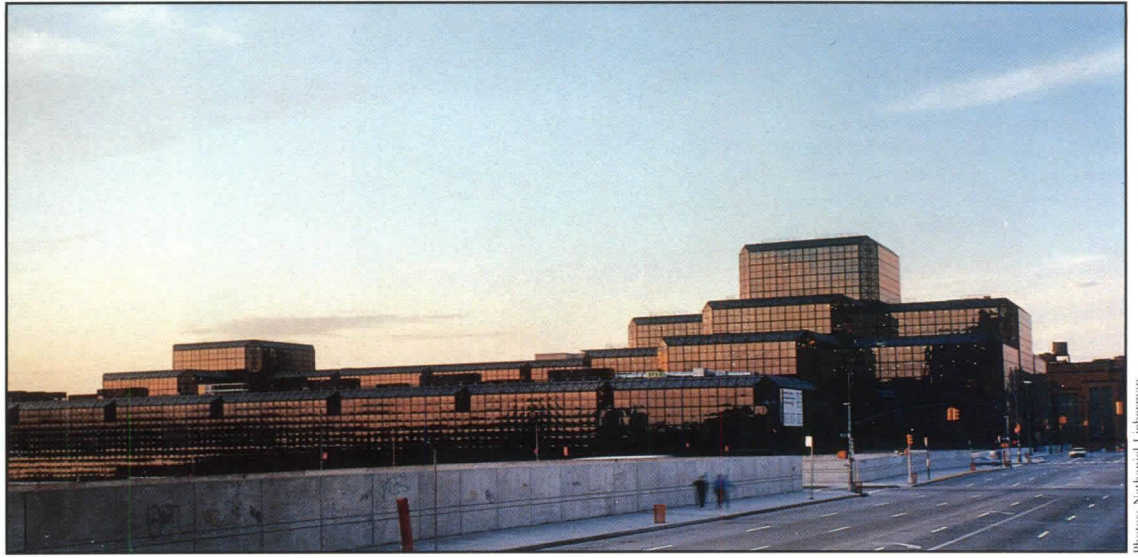
Jerry Swanson



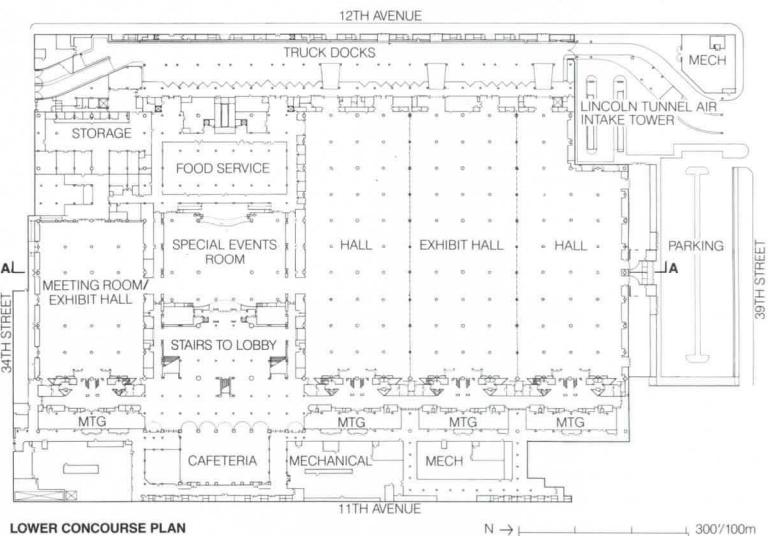
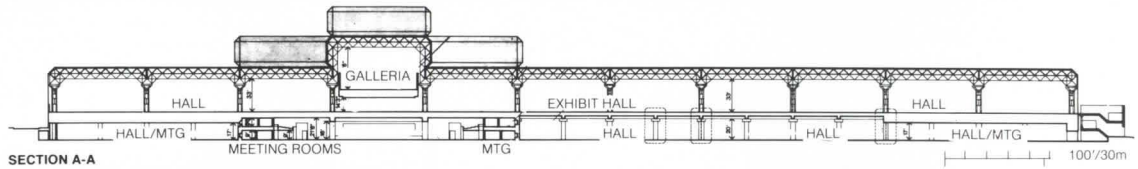


NEW YORK

Although its grand hall and concourse are structural tours de force, much of the actual business at the Jacob K. Javits Convention Center in New York, which opened in 1986, is conducted underground in airless meeting rooms along a four-block-long spine. The 1.6-million-sq-ft center, designed by I.M. Pei & Partners and associated architects Lewis, Turner Partnership, both of New York and completed for \$300 million, is one of the nation's largest, with 720,000 sq ft of exhibition space, 418,000 sq ft of it in one hall alone. But it is faulted by exhibitors and visitors alike for nondesign factors such as transportation to its isolated site on the edge of Manhattan and difficult unions.



Photos: Nathaniel Lieberman

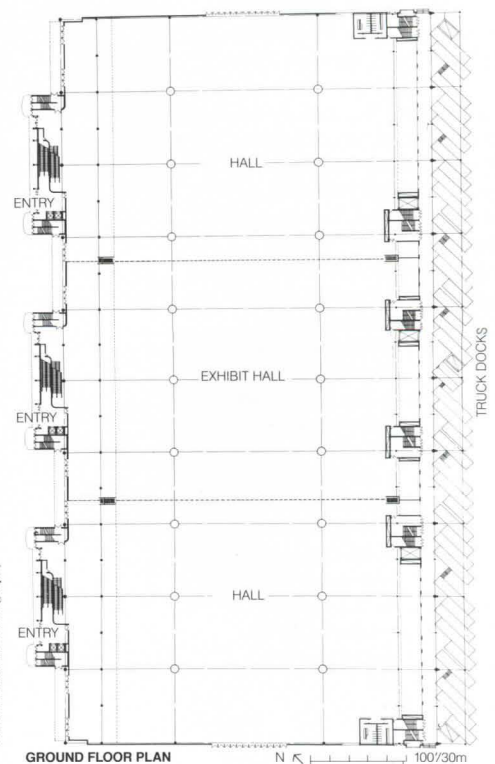


HOUSTON

The 1.16-million-sq-ft first phase of the George R. Brown Convention Center, which opened in September 1987 at a cost of \$104.9 million (P/A, Jan. 1989, p. 29), fills six blocks at the edge of downtown, surrounded by surface parking for 3000 cars. As designed by Bernard Johnson; Golemon & Rolfe Assoc.; John S. Chase; Molina & Assoc.; Haywood Jordan McCowan; Moseley Assoc.; 3D/International, all of Houston, circulation is concentrated behind the front façade and given a high-tech finish. Four exhibit halls—two stacked—total 470,500 sq ft. Second-floor meeting rooms total 45,000 sq ft. A 31,500-sq-ft ballroom—the largest in Texas—and a 36,000-seat tiered theater occupy the third floor.

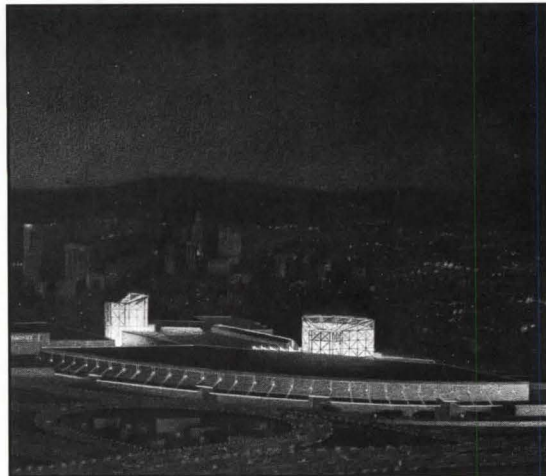


Photos: Hazeltine Photography

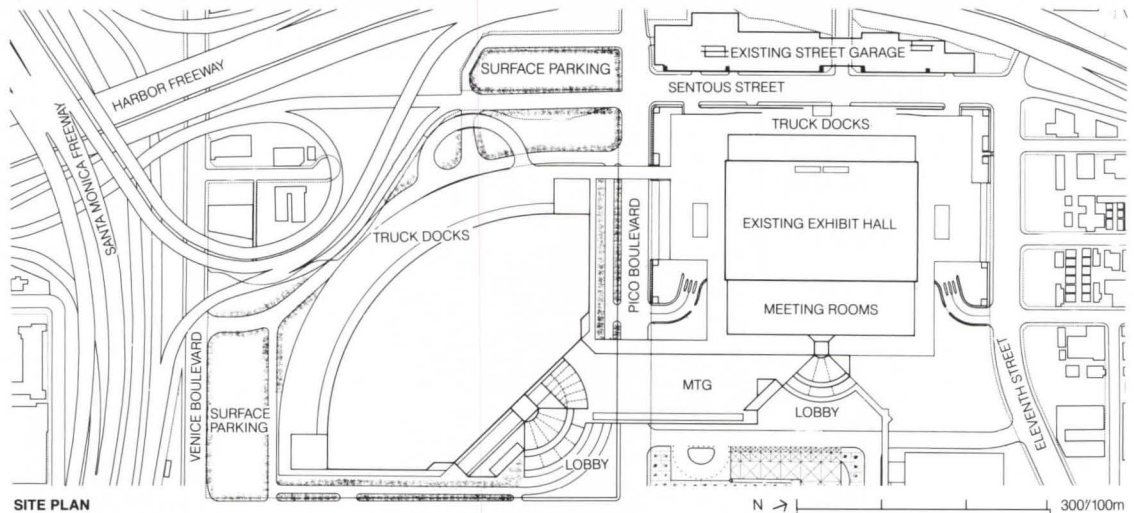


LOS ANGELES

This \$247 million addition, which goes into construction next month for completion in 1992, will increase the size of the Los Angeles Convention Center from 1.5 to 4 million sq ft and upgrade its image. I.M. Pei & Partners, New York, and Gruen Associates, Los Angeles, propose to span Pico Boulevard with a 240-foot-wide pedestrian "bridge" linking the addition to the existing center. The bridge is lined with special-event facilities, meeting rooms or organized in three clusters, and a restaurant. Two new halls, totaling 350,000 sq ft, will be located on the same level as the existing halls (one level above grade) atop two parking levels, one of which could be converted in the future to exhibit space. Truck docks and a new connecting street will be added at the rear of the addition. Two four-story glazed lobbies, visible from the nearby freeway, identify street-level entrances. Lighted at night, these shape a new gateway to downtown.



Photos: Nathaniel Lieberman

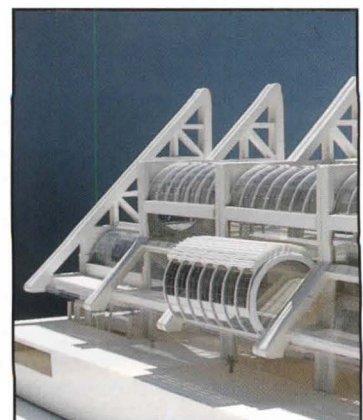
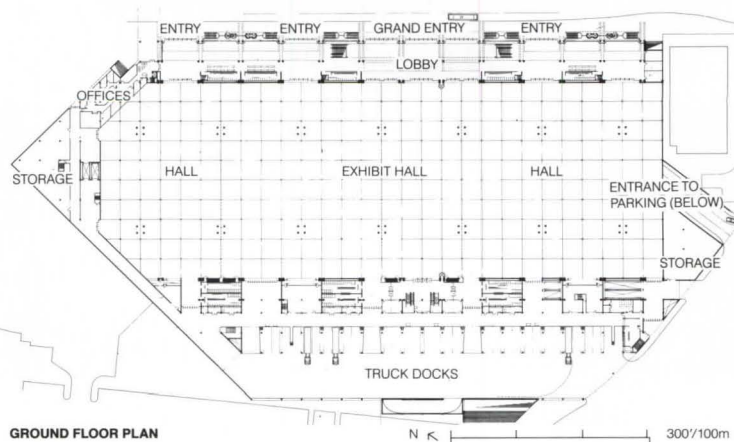


SAN DIEGO

The 1.705 million-sq-ft San Diego Convention Center, which opens this fall, was designed for a tight waterfront site by joint venture partners Arthur Erickson Architects, Los Angeles; Loschky, Marquardt & Nesholm, Seattle; and Deems, Lewis, McKinley, San Diego. Their design distinguishes "active" uses of arrival, reception, and circulation concourses, which face the city, from more "passive" functions such as 100,000 sq ft of meeting rooms, lounges, and landscaped terraces, which face the harbor atop 28 loading docks. Parking for 2000 cars is located below grade to permit the location of 200,000 sq ft of exhibit space at ground level. An additional 100,000 sq ft of outdoor exhibition space is sheltered beneath a large rooftop tent. One bridge connects the \$130 million center, which is constructed of cast-in-place concrete and long-span steel, to the harbor, and a second bridge, as yet unbuilt, will connect to a future park across the street.



Marcelo Igonda/Arthur Erickson Architects



David Zaninger

PORTLAND, OREGON

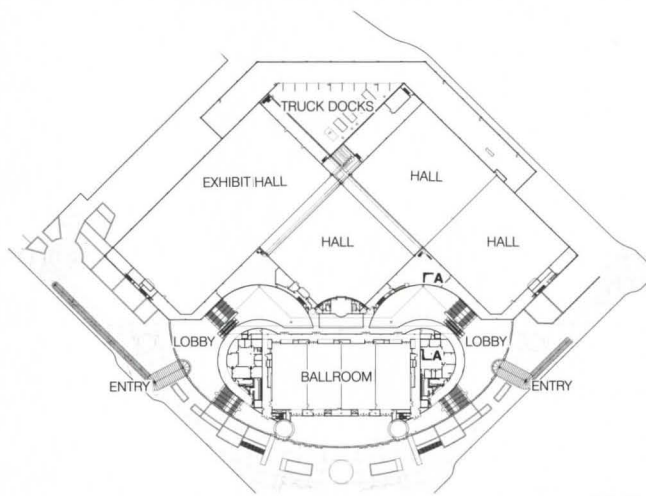
Located across the river from downtown in the hopes of attracting future development to the area, the 512,000-sq-ft Oregon Convention Center utilizes an unusual binodal plan. The solution, designed by the Zimmer Gunsul Frasca Partnership, Portland, in association with DMJM, Los Angeles, was dictated both by the oblong, warped site and by the need to avoid favoring one street over another. Visitors will enter two 31-foot-high lobbies and either ascend half a level to the 25,000-sq-ft ballroom or descend half a level to registration, exhibition, and meeting rooms. The halls, totaling 150,000 sq ft, can be divided into a maximum of five equal modules. A steel truss system spans the column-free space. Trucks gain direct access onto the floor from loading docks at the site's southwestern edge. Skylighted masts above the prefunction areas bring natural light into the center of the building. Construction of the \$85 million precast concrete and brick structure is under way, with a fall 1990 opening planned.



Strode Eckert Photographics

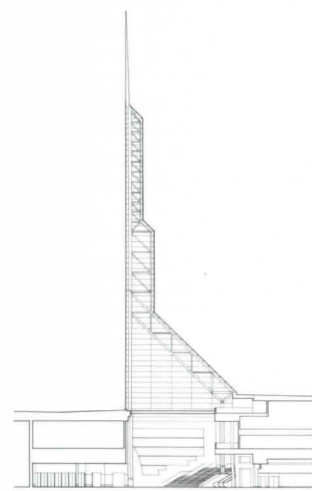


Rendering: Steve Oles



FIRST FLOOR PLAN

N ↓ 300'/100m



SECTION AA

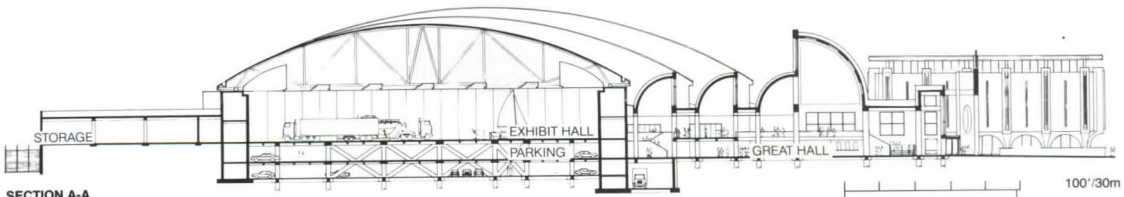
40'/12m

SAN JOSE

This 1.1-million-sq-ft, \$99 million center, designed by Mitchell/Giurgola Architects, Philadelphia, with consulting architects Daniel Mann Johnson Mendenhall, San Francisco, and The Steinberg Group, San Jose, and due to open in June, occupies a tight midblock site behind San Jose's public library. The design positions two floors of a 1200-car parking garage one-half level above and one-half below grade, providing direct access from there to a public arcade and nearby buildings. Above, three halls totaling 140,000 sq ft are separated from meeting rooms by a circulation spine. The halls are completely column-free; structural piers, set 30 feet on center, that support the halls' bow trusses are located in adjacent service spines. Ramps from 11 loading docks provide direct truck access to the convention floor. A screen wall façade designed by Lin Utzon marks the main entry. The circulation spine will be extended to link hotels, planned for the site's northern corners, to the facility.

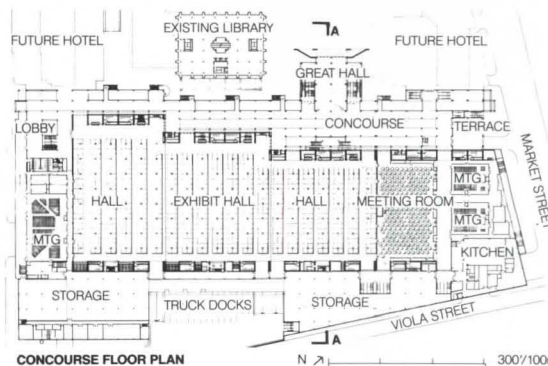
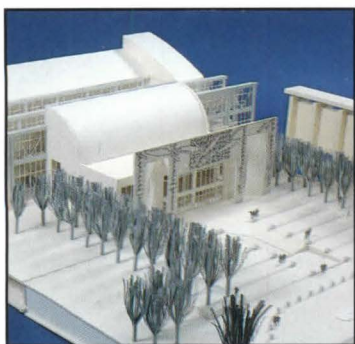


Photos: Peter Niquens



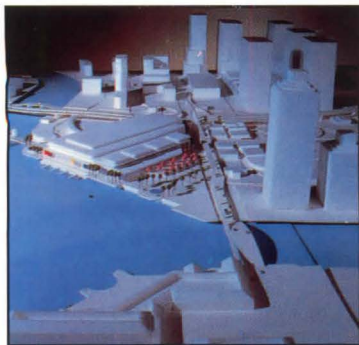
SECTION A-A

100'/30m

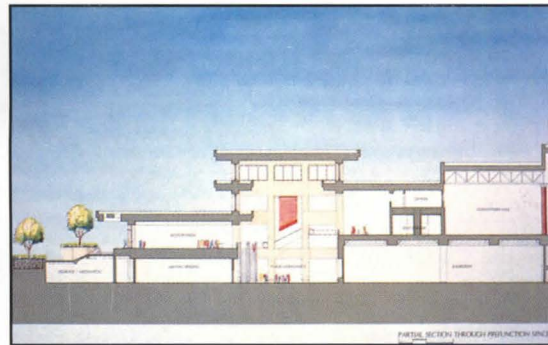
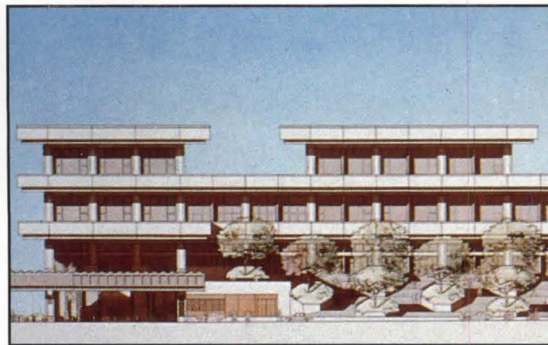


CONCOURSE FLOOR PLAN

N ↓ 300'/100m

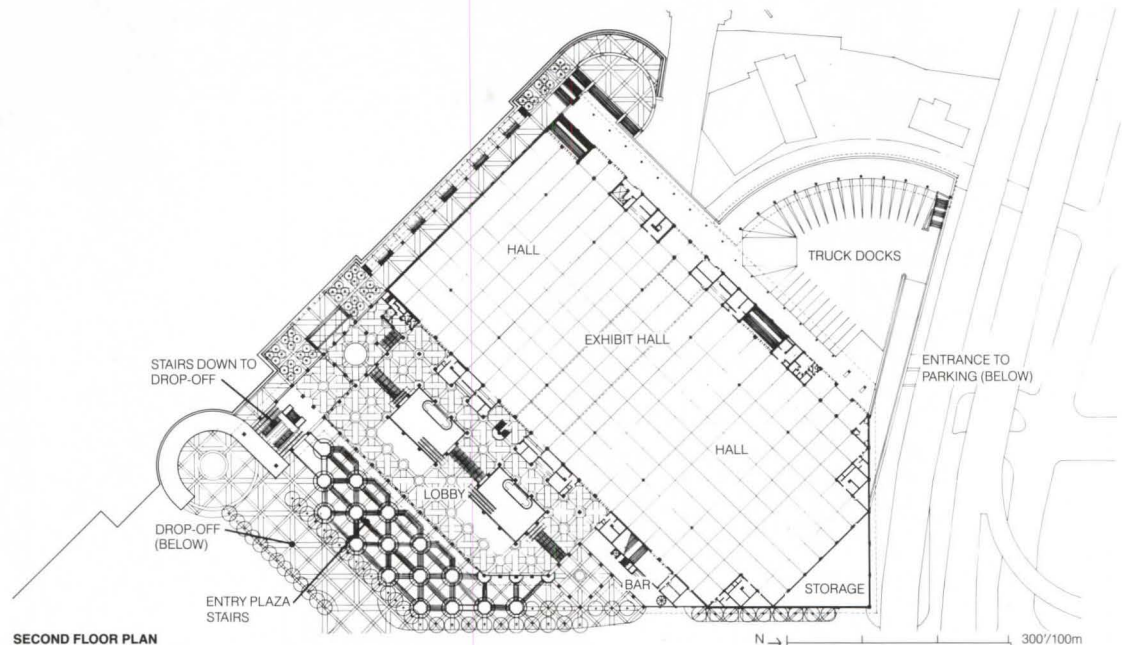


George Côté



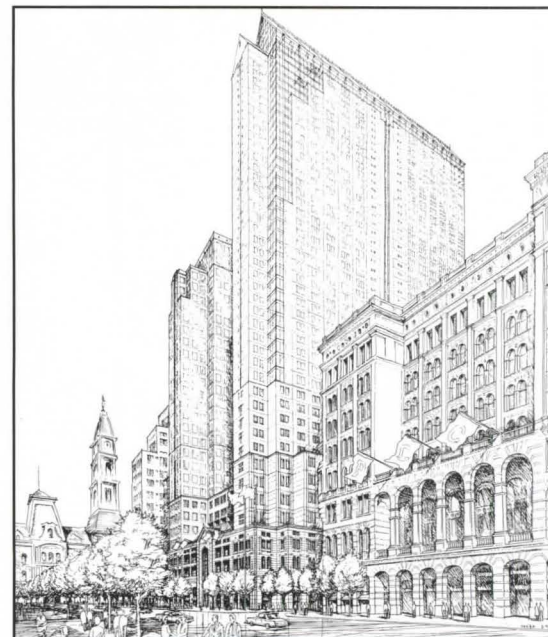
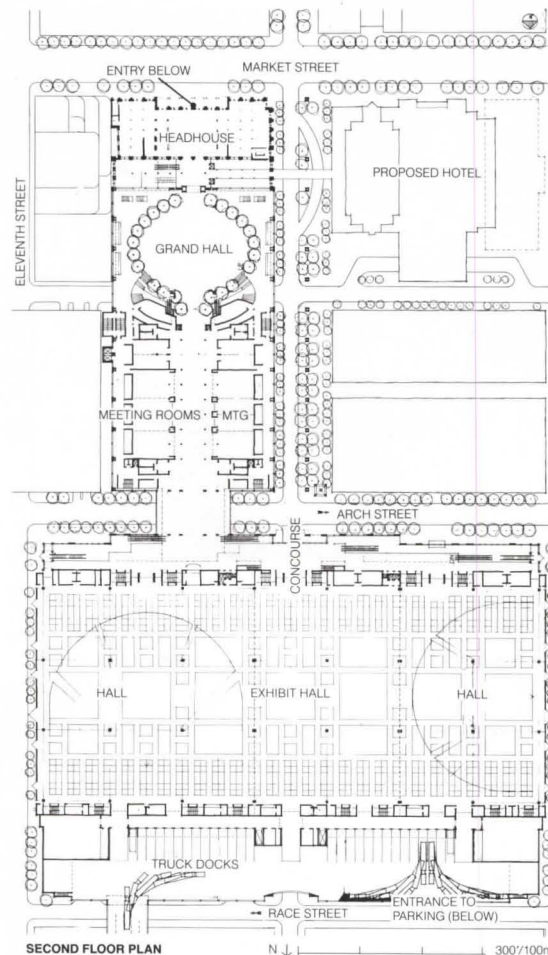
TAMPA

The proposed 832,000-sq-ft, \$71 million Tampa Convention Center, located on a spectacular harbor site and due to open fall 1990, spans a major traffic artery that could not be rerouted. Consequently, architects Hellmuth, Obata & Kassabaum, Tampa, with associate architects Ranon & Partners, Tampa, placed the 200,000-sq-ft exhibition hall one level above grade. The main entrance on the waterfront is accessible by car or boat, and visitors ascend directly from there to the convention hall level. Street-level meeting rooms are separated from service functions by the existing roadway.



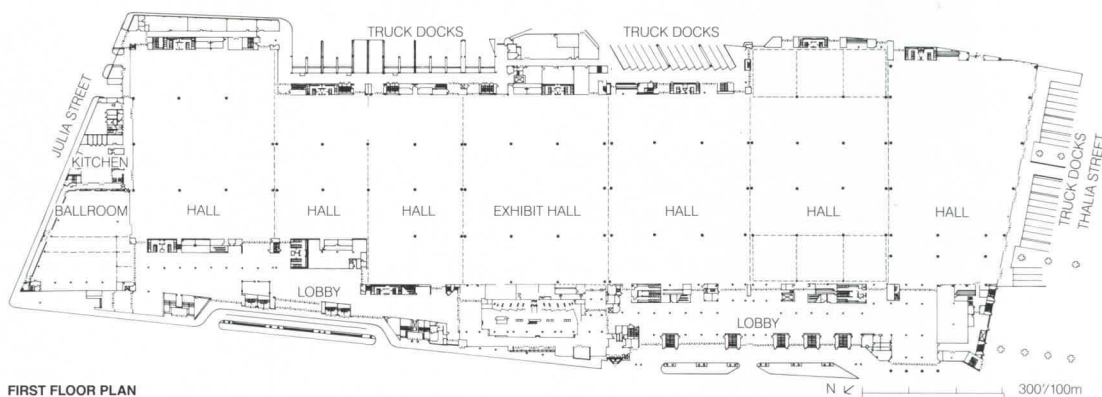
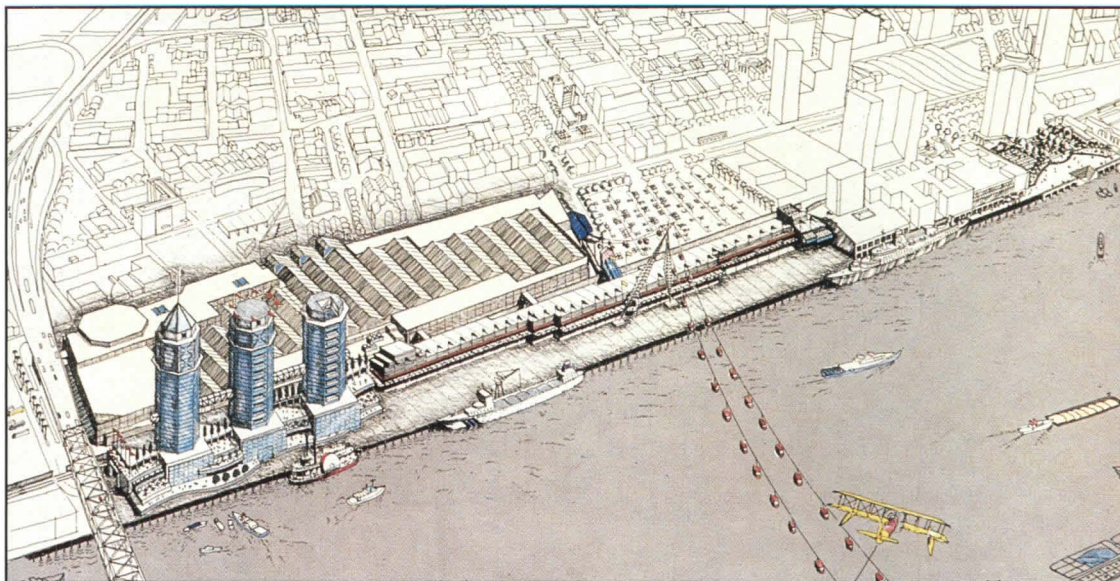
PHILADELPHIA

The \$200 million, 1.3 million-sq-ft Philadelphia Convention Center, designed by Thompson, Ventulett, Stainback Associates, Atlanta, and associate architects Vitetta Group, Philadelphia (Kelly Maiello and Livingston Rosenwinkel, both of Philadelphia, consulting architects), and scheduled for completion in 1991, will place 310,000 sq ft of exhibition space, 90,000 sq ft of meeting rooms, a 33,000-sq-ft ballroom, and support facilities on a three-block site east of City Hall. The historic Reading Terminal Headhouse will serve as the facility's main entrance, while the grand 1893 train shed behind it, which is the only surviving single-span arched train shed in the country, will house pre-function uses, the ballroom, and meeting rooms. The exhibit hall, which can be divided in three, is elevated over a major street, as are its truck docks. Adjacent blocks are programmed for hotel and office uses, and the convention center itself includes street-level retail.



NEW ORLEANS

The original 1984 design for the New Orleans Convention Center by Perez Associates, New Orleans, made allowance for future expansion. A short five years later, Perez, Billes/Manning Architects, New Orleans, have completed their design for an 899,335-sq-ft expansion, to open in spring 1991. Adjacent to the historic warehouse district, the \$86 million project will double the size of the existing center by adding 300,000 sq ft of contiguous, subdivisible exhibition space to the current grade-level halls. The new halls are constructed of exposed structural steel with 82,500 sq ft of column-free space. A 40,000-sq-ft ballroom and 75,000 sq ft of new meeting rooms will be spread out over two upper levels. New prefuction and lobby spaces will also be added, along with new truck docks. An unusual roof design channels rainfall directly into the river. An enclosed pedestrian bridge connects the center to current and planned river-front developments.



FIRST FLOOR PLAN

P/A would like to acknowledge the following individuals who were interviewed for this article: Thomas Baker, I.M. Pei & Partners; Alberto Bertoli, Arthur Erickson Architects; Robert Black, Tradeshow Week; Tony Calanca, Cahners Expositions; Walter Ernst, Perez Associates; Robert Frasca, Zimmer Gunsul Frasca; Harry A. Golemon, Golemon & Rolfe Assoc.; Dan Graveline, Georgia World Congress Center; Allan Greenberger, Lauren Mallas, Mitchell/Giurgola Architects; Phillip Jacobson, TRA Associates; Don Jewell, Facility Consultants; Fred Lo, SOM; George Loschky, Loschky, Marquardt & Nesholm; Andrew McLean, Jack Plaxco, Thompson, Ventulett Stainback Associates; William Mee, Trade Show Bureau; Jennifer Moss, researcher, Meetings & Conventions; Alan Steel, George Little Management; Lynn Thompson, Anaheim Convention Center; Steve Worthington, HOK.

Figures for all 13 convention centers cover construction costs only.

(continued from page 74)

local firm is involved as part of a convention center design team.

Given an apparently generic program, you'd think designing a successful center would be a simple case of follow the leader. Not so, says George Loschky of LMN: "Just because you've worked on one—or many—centers doesn't mean you know it all." In fact, few building types must resolve such a welter of separate and occasionally conflicting agendas. The city wants a high-profile engine to drive its tourist trade. The architects' goal is to design a grand public building, one that serves not only out-of-towners but citizens who pass by, or better still through, their building every day. The engineer gets to solve that most favored of all structural problems—the long-span—with great domes or soaring arches. But the exhibitor, the proverbial "end-user," wants none of this. "Give us a box with docks," says Calanca.

These different agendas explain why cities will pick downtown sites while some show organizers prefer the suburbs; why an architect may praise New York and scorn Orlando, while the man in the booth would settle for Orlando any day; why show decorators drape windows designed to let daylight and views into cavernous halls.

Thus the definition of a successful convention center depends heavily upon who's being asked. Still, the ideal facility would be likely to include some if not all of the following features: exhibition halls at grade (stacked halls take longer to set up); loading docks in immediate proximity to halls; at least one drive-in hall; high ceilings of 30 feet or more; floor-based utilities, as opposed to pole or ceiling access; and structural dimensions based on the industry selling increment of 30 feet.

Beyond these specific demands, logical program-

ming and planning are imperative. "You don't want to have to wheel a food cart through the lobby," says Don Jewell, president of Facility Consultants. Entrances should be designed to avoid bottlenecks, like those encountered at the new annex for McCormick Place in Chicago, where the most commonly used taxi drop-off is a small, secondary lobby serving stacked halls. Meeting rooms should be placed in proximity to exhibition halls to avoid long walks. New centers should be designed with expansion in mind.

Other needs are relative or of recent vintage. Parking priorities, for example, depend upon the show. Conventioneers who fly to a city don't need parking space, while shows geared to a local audience do. Flexibility remains a business byword, but it need not be all-encompassing. "Larger facilities can afford the luxury of dedicated functions, like ballrooms. You give something away when you put all uses in one space," argues McLean.

Finally, architecture—the actual look and feel of a convention center—is also a new chip in the game. "Assuming all else is equal, architecture can be important," says Lynn Thompson, Director of the Anaheim Convention Center. "Perks" such as lounges, restaurants, and even retail are assuming greater programmatic and architectural prominence. "Convention centers are more like Las Vegas casinos than they are like museums. They need to be entertaining and memorable," says Loschky.

Those centers and cities that stick to the box with docks could come up short in an increasingly competitive market. The ad for a new center in Topeka, for example, seems particularly retardataire. "What's more important, a great meeting or a great view?" it asks. The point is, what's one without the other? *Daralice D. Boles, Jessica Elin*

Suprematist Spike

Gullichsen Kairamo Vormala's office complex has a dynamic imagery that recalls Constructivist architecture and a plan related to Wright's Price Tower.

The tower marking the center of Itäkeskus, a new town outside of Helsinki, is as slim as the architects could make it, a response to the project program calling for a visual landmark (facing page). The slim shaft has a glass-enclosed stair, two exterior ventilation ducts, a signage tower, and alternating bands of windows and tile-clad spandrels. Inspired by Constructivist architecture, the architects also acknowledge their debt to Wright's Price Tower.

STRADDLING a main highway and the only subway line out of Helsinki, Itäkeskus's commercial center is marked by this office tower designed by Gullichsen Kairamo Vormala. The tower, which rises from a podium containing a four-story welfare center, a second-floor restaurant, and ground-floor shops, is organizationally straightforward—a stack of 15 floors of offices above a double-height lobby and ground-floor café. And the basic plan is simplicity itself—a compact core of elevators, escape stair, bathrooms, and services surrounded by a relatively shallow ring of office space—but various moves contribute to the development of an exceptionally expressive and dynamic external form. Two circular ventilation ducts, clad in shiny chrome sheeting, are hung in square steel cages outside the building envelope; the main stair is positioned to one side, with its half-landings projecting beyond the perimeter in a thin, fully glazed steel-and-glass tower; and corners are chamfered at 45 degrees, with open balconies cantilevered from alternate floors on the west-facing corner. The offices are enclosed by alternating bands of tiled panels and Corbusian strip windows, and these are displaced laterally on each side by the stairs, ducts, and a tower for advertising signs, producing a strong sense of rotation around the core.

The contained energy implicit in the plan is released in the scheme's elevational development. The ducts shoot free above the offices and feed back horizontally into the protruding service core. The staircase tower soars up some 60 feet beyond the top floor, an airy spiral replacing the more solid dogleg stair below and giving access to services and reinforcing the building's effectiveness as a visual landmark. Balustrade railings, duct cages, cleaning gantry tracks, and an open steel frame, which describes the volume of the topmost balcony, read clearly against the sky in constantly shifting relationships as one moves around the building.

Ideally the architects would have liked the tower to be taller and even thinner—a genuine spike—but the economies of floor planning and fire regulations effectively determined the overall size. The strong vertical articulation of the services and stairs compensates by exaggerating the building's apparent height, and the materials and colors—green

and white ceramic tiles, blue-green and gray-green painted steel—give an impression of delicacy and lightness as the tower strives upward and dissolves into the sky.

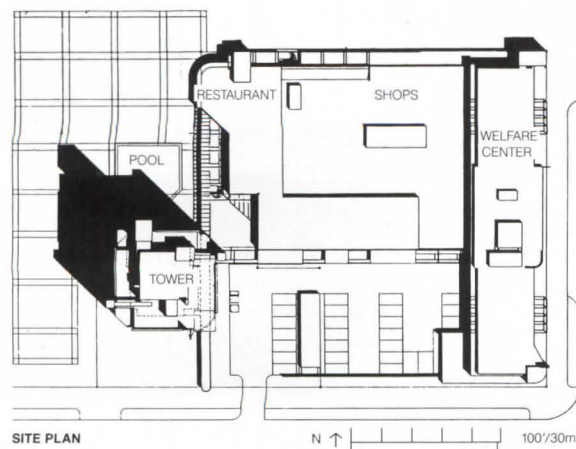
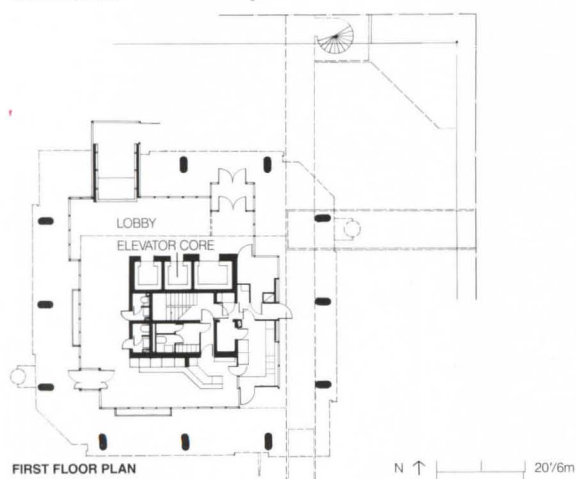
When lighted up at night—and night in Finland, of course, means much of the day during the long winter—the tower becomes an illuminated sign (Volomerkki), which the architects used as the identifying motto for their competition entry. The illuminated strip of the staircase shaft and the glowing horizontal line of the shopping center create a great cross of light, an abstract emblem of modernity and a marker of place that the Suprematists would surely have loved. Elementarist in its composition, the tower clearly belongs to that line of lyrical Constructivism that crystallized in Russia in the 1920s.

This Constructivist-inspired language—which also reflects the influence of De Stijl—has been developed by Erkki Kairamo and Timo Vormala in a series of industrial, commercial, and housing projects that form a consistent counterpart to the better known and more eclectic work of Kristian Gullichsen, such as his Lewerentz-inspired church at Malmi and the widely allusive Kauniainen parish center (P/A, Feb. 1986, pp. 88–92). But while the Itäkeskus tower recalls in spirit projects such as the Vesnin brothers' Pravda Building of 1924, Wright's Price Tower at Bartlesville, Oklahoma, was a more direct formal inspiration—a source the architects readily acknowledge. The faceting and rotational geometry of the plan, abstract banding of the elevations, and articulation of the profile all seem to owe something to the Wright exemplar.

The tower's imagery may recall the heroic Modernism of the 1920s, but its mode of construction—slip-formed cast-in-place concrete structure and factory-made claddings—is clearly of our time. It is an emphatic demonstration of the continuing possibility of using contemporary technology expressively to make formally compelling architecture without recourse to the technological exhibitionism of much "High Tech," let alone the superficial stylistic eclecticism of all too many essays in the Post-Modern mode. **Richard Weston** ■

The author teaches at the Leicester School of Architecture in Leicester, England.





The Itäkeskus commercial center (above) is marked by this tower, which stands next to a block of shops and a welfare center (site plan, left) and which is connected by a bridge over a highway and subway line to an enclosed shopping mall, designed by the same firm. The plans of the tower (left) indicate how the elements pulled away from the core to the outside edge of the building seem to rotate around its center. The four-story welfare building (facing page) recalls not Constructivist work, but the thin walls and glazed corner stairs of the Bauhaus.

Project: Itäkeskus commercial center, Itäkeskus, Finland.

Architects: Gullichsen Kairamo Vormala, Architects (Erkki Kairamo, Heikki Mäkinen, Timo Vormala, Aulikki Jylhä).

Client: Haka Construction Cooperative.

Site: commercial center in a new town outside of Helsinki.

Program: office tower, shops, restaurant, and welfare office.

Structural system: cast concrete on piles.

Major materials: glass, tile cladding, chrome-plated ducts, steel signage tower.

Mechanical system: district heating system. Variable-air-volume central air-conditioning system.

Consultants: Magnus Malmberg, structural; Risto Uusikoski, mechanical; Joel Majurinen Ltd., electrical.

General contractor: Haka Construction Cooperative.

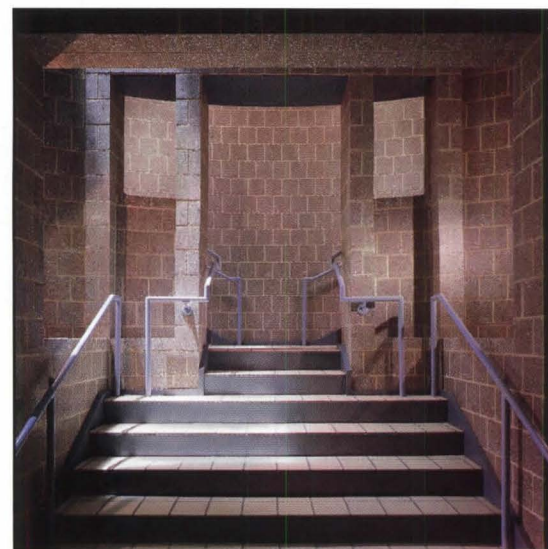
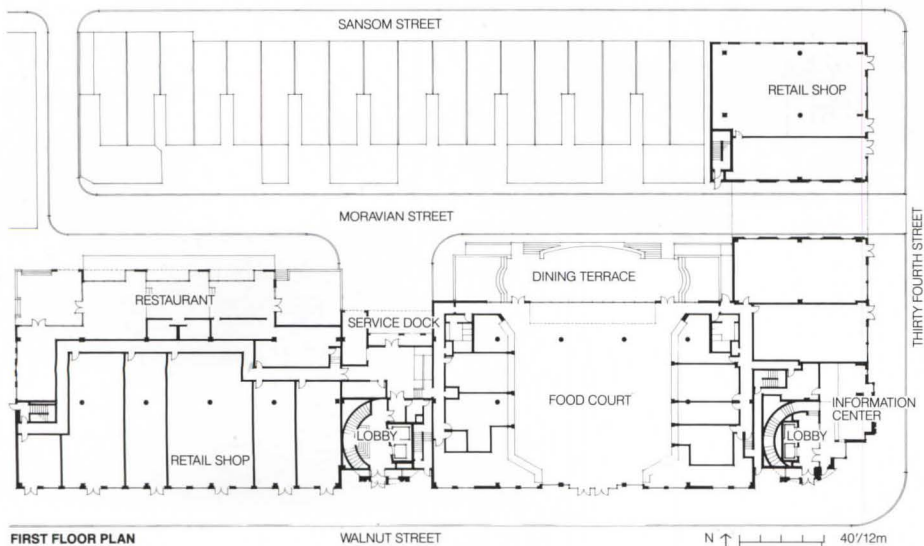
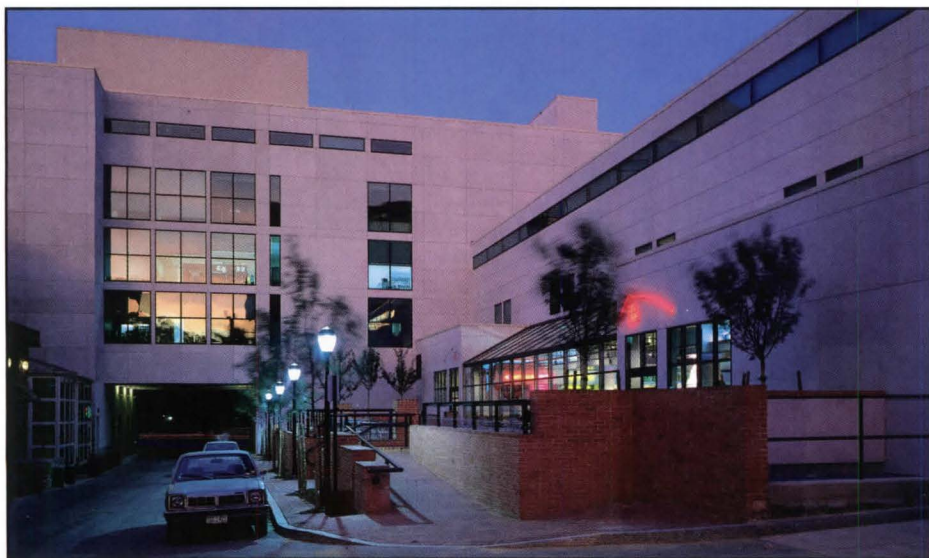
Costs: not available.

Photos: Simo Rista



P/A Portfolio Three Buildings

Diverse projects from three different parts of the country represent sound architectural solutions, carefully attuned to their surroundings.





3401 Walnut Street

Designed by Geddes Brecher Qualls Cunningham, Architects, this office and retail building (above) represents a departure for their client, the University of Pennsylvania. It is an urban building that opens out to the street, and it is a commercial building that the university developed.

This departure was a long time in coming. The site was cleared in 1973, but the owners of the adjacent brownstones blocked its development until 1985, when a consent decree was signed that included limitations on shadows cast by the building.

That set up the central design problem: How to minimize the building's impact on its backyard neighbors yet maximize its presence on the street and as a gateway to the campus. GBQC gave the building presence by pushing it to the edge of the site. At the building's corner, they placed a vertical circulation core (facing page, lower right) whose fragmented composition of planes and cylinders, banded in brick, marks the entrance.

A four-story wing along the south side of the site is broken midway by another banded, cylindrical entry tower and modulated by alternating groups of punched window

openings and two-story glass planes. This wing, which contains a large and very popular food court on the ground floor, steps back toward the block's center. An outdoor dining terrace (facing page, far left) faces a pedestrian and service drive. The other wing has a more monumental street façade with base, columns, and entablature.

The building shows how well Modern architecture can respond to an urban setting. It defines space, enlivens the street, and respects adjacent structures without mimicking their style. As with the best urban buildings, it is quiet and refined. *Thomas Fisher* ■

Project: 3401 Walnut Street, Philadelphia.

Architects: Geddes Brecher Qualls Cunningham (Ronald Kobelin, Michael Kihn, Edward Ford, Daniel Russionello, Brian Wait, Charles Capaldi, Thomas Normile, Patricia Kucker, Gina Weckel, Quinn de-Menna).

Client: University of Pennsylvania. **Site:** urban site at edge of campus.

Program: retail and offices.

Structural system: concrete.

Major materials: see p. 153.

Consultants: Hannal/Olin, landscape; Vinokur/Pace, mechanical; Architectural Specifications, specifications; David Slovic, food court.

Contractor: Daniel J. Keating Co. **Costs:** \$18,309,000 (\$106/sf).

Photos: Hedrich-Blessing.

Svelte and restrained, these townhouses on Chicago's Near North Side exemplify the Modern yet contextual approach of architects Nagle Hartray & Associates. Here the streamlined forms and simply luxurious materials of Early Modernism are applied with an attention to small-scaled detail that places the houses firmly in the 1980s.

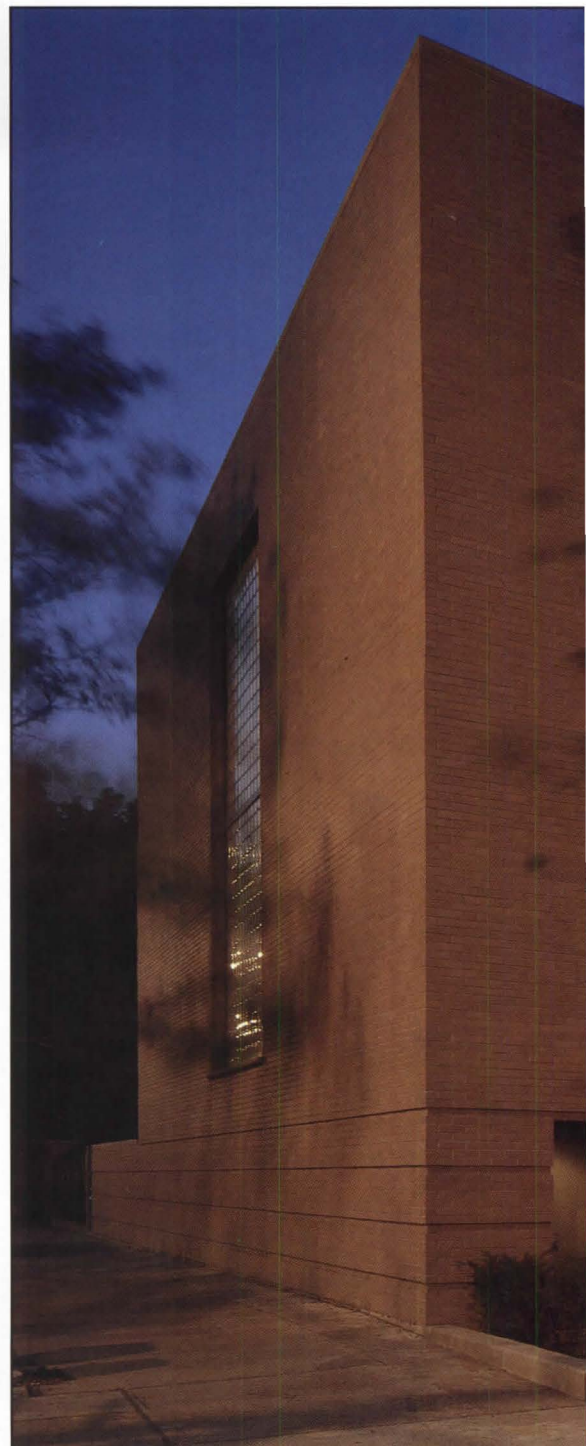
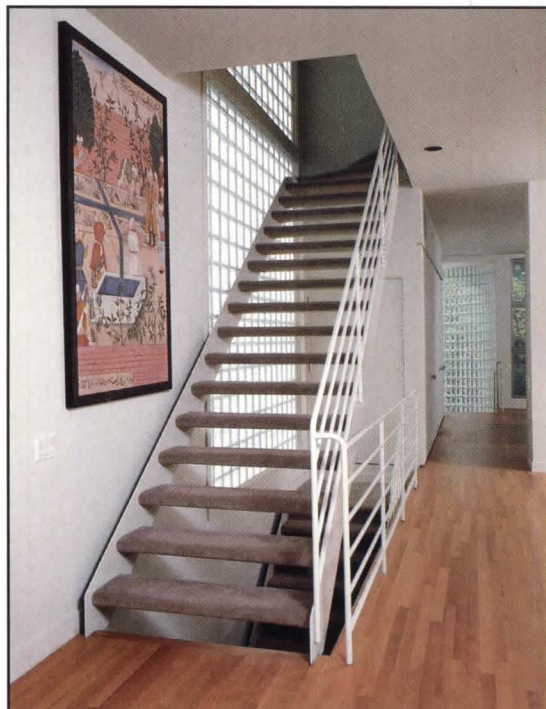
Facades of tawny brick encase the fronts along Schiller Street (top photos), in a block where an eclectic line of houses links the not quite rejuvenated Old Town area with busy LaSalle Street, on the site's eastern edge. Curved and gridded bays face the street, and smaller bays of glass block enclose spiral stairs to the rear. A sheer wall pierced by glass block confronts the traffic—and captures the sun—along LaSalle.

The gridded glazing of the streetfront bays extends around only about 60 percent of their curves. Occupants cannot see into their neighbors' living rooms or master bedrooms, but they do get a nice sense of belonging to a larger urban group. The offset glazing also tilts the outlook of the complex toward the east, toward the denser Near North residential area and the urban core.

Subtle detailing distinguishes the exterior: a rusticated base, soldier courses of brick, bull-nosed limestone copings and sills. Regrettably, pipe rail fences and metal entry gates intended by the architects were not installed; the \$650,000 houses sold so quickly that the developer did not add them.

The interiors (photos, right) are as direct as the exteriors, with comparable attention to small-scale detail. Natural light from a central well plays on white walls, pipe railings, and oak floors. Materials and finishes are simple but sensuous: granite counter tops, travertine flooring in the entrance halls, marble surfaces in the bathrooms. The large adaptable spaces—with their 10-foot ceilings—are ideal for the young professionals, some with children, who live here; the oversized kitchens are good for entertaining. These accommodations are appropriate for owners making a long-term commitment to the city. *Lisa Goff*

The author is Associate Editor of Crain's Chicago Business.





Project: Schiller Street Residences, Chicago.

Architects: Nagle Hartray & Associates, Chicago (James L. Nagle, principal in charge, with John Schiess, David Jennerjahn, Martin Short).

Client: Ronald Ysla.

Site: vacant lots in the Old Town district; 106 ft frontage on Schiller St., 90 ft deep.

Program: Five townhouses, 3500 sq ft each, including garages.

Structural system: brick and block walls with wood frame and truss joist spans.

Major materials: brick, limestone, glass block, gypsum board walls, hardwood floors, granite counters (see *Building Materials*, p. 153).

Mechanical system: forced air, warm and cold.

Consultants: Beer, Gorski & Graff, structural; Wallace-Migdal & Associates, mechanical.

General contractor: James A. Blackmore Construction.

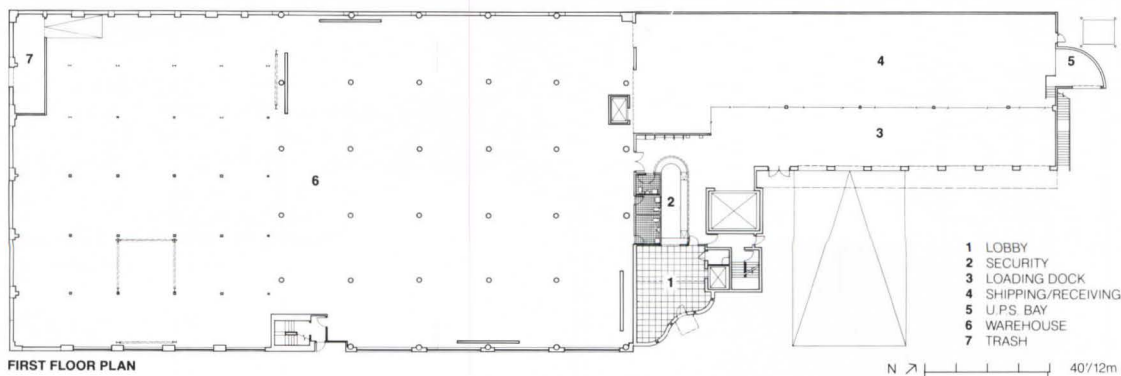
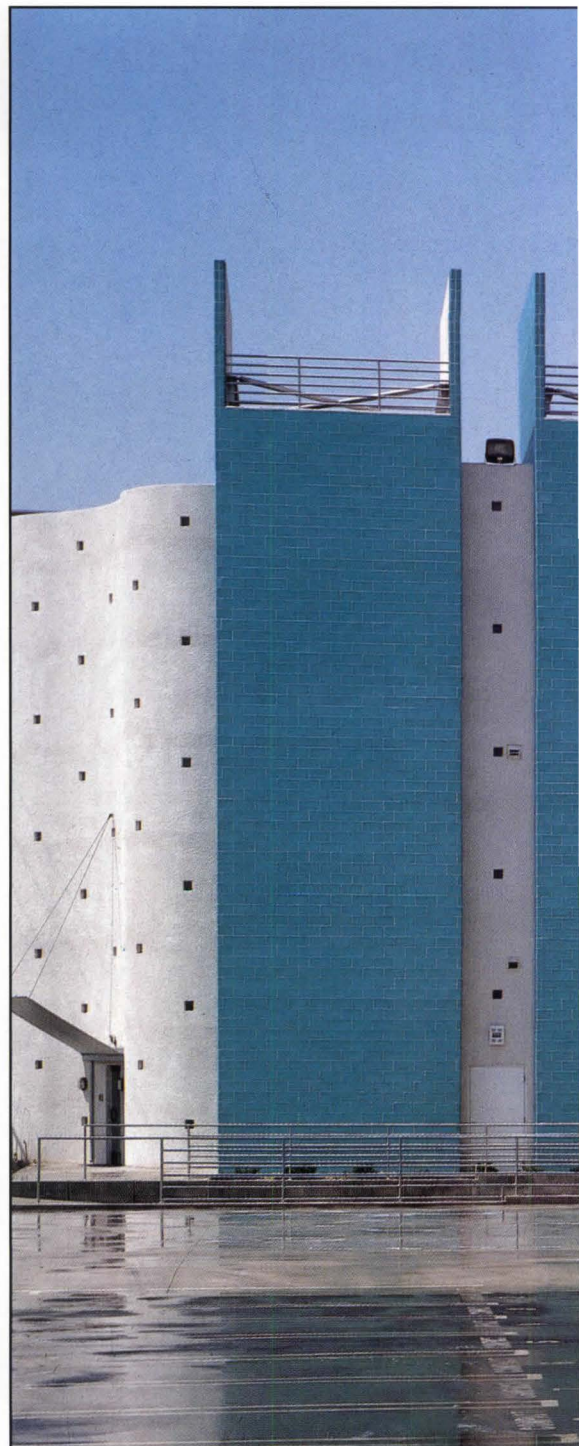
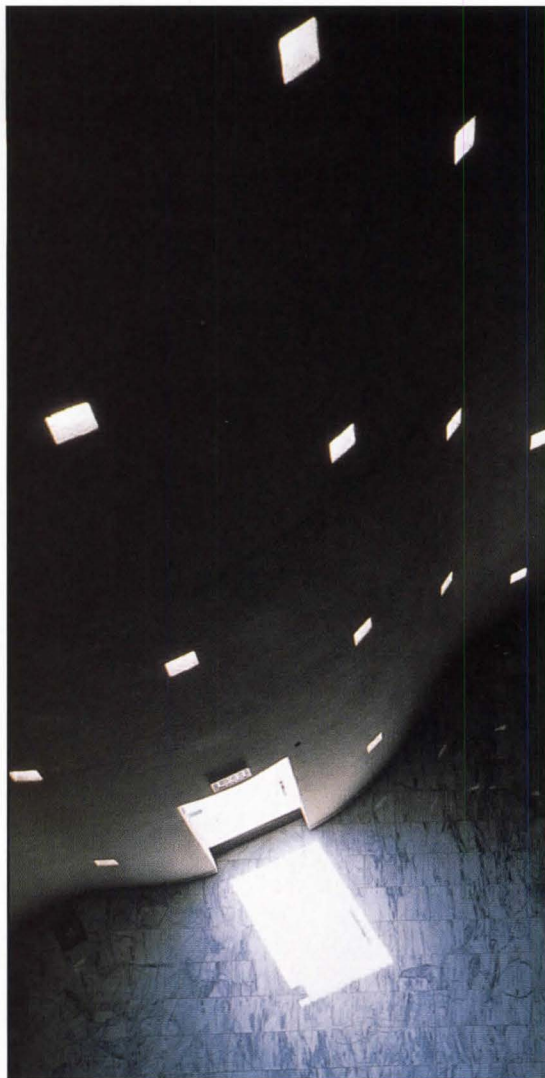
Costs: about \$80 per sq ft.

Photos: HNK Architectural Photography.

South Pasadena, California, architect Michael Burch was asked by Jonathan Martin Inc., a women's clothing producer, to renovate and expand an existing 65,000-square-foot industrial building in downtown Los Angeles (this page, bottom right) for its manufacturing, shipping, and office facilities. The existing brick building contains manufacturing, warehouse, and office space (facing page, bottom); the addition houses loading, shipping, and warehouse areas, as well as the circulation and services for both buildings.

Burch wanted the addition to appear as a set of individual forms that played off the mass of the existing building. The new building is clad in stripes of alternating plain and split-face concrete block in two shades of gray. And the entrance and triple-height lobby are contained in a piano-curved volume (right), clad in stucco and punctuated by tiny glass block "windows," that has a distinctly Corbusian lineage. Burch intended the curved side to be the "soft" public side of this volume. Its more industrial looking "hard" side (large photo), with its blue-glazed concrete "towers" (that denote the locations of stairs and elevators) relates it to the new building. The resulting assemblage of forms lends a good deal of style to the buildings' less-than-friendly surroundings, while their tough materials are appropriate to the other industrial buildings in the neighborhood. The existing brick building looks particularly "contextual," since its first- and second-floor street-side windows have been sealed with welded steel plates to foil burglars.

The interiors were done on a budget that could charitably be called slim; the marble floors in the lobby and office reception areas are the only concessions to luxury. But the architect's resourcefulness in creating a lively play of form, texture, and color did not go unnoticed; the project won a Citation in the AIA's Los Angeles Chapter 1988 Design Awards program. The jury called the project "a simple but memorable renovation," and admired the "clarity and boldness of the parts and the way in which they are interrelated." *Pilar Viladas*





Project: Jonathan Martin Inc., Los Angeles.

Architect: Michael Burch, Architect, South Pasadena, Calif. (Daniel Vergara, Krystal McKerracher, Heather Johnston, Michael Kendrick, assistants).

Client: Harkham Industries.

Site: 55,000 sq ft, including an existing 65,000-sq-ft, three-story loft building.

Program: addition of 20,000 sq ft and renovation of existing building for a clothing company.

Structural system (addition): slab on grade; precast upper floors on block walls and precast columns and beams; wood roof on open-web joists.

Major materials (addition): concrete block; stucco; gypsum board,

vinyl tile; carpet (see *Building Materials*, p. 153).

Mechanical system: electric heat pumps with fan coil units; electric package A/C units; gas heaters for warehouse.

Consultants: William McKerracher (new), Vahdani & Associates (existing), structural; Downey Heating & Air Conditioning, mechanical; Amelect, electrical.

General contractor: Hoffman Construction.

Costs: \$3,500,000.

Photos: Stanley Klimek, except as noted.



P/A Technics Energy Conservation Update

A panel of experts covers the latest developments in daylighting, below-grade construction, utility incentives, HVAC, and radiant barriers.

DESPITE the fact that per capita consumption of energy in America remains twice that of industrialized nations such as West Germany, energy conservation in this country is alive and well, and apparently on the upswing. Admittedly, researchers have faced declining financial support during the 1980s. But the incentives to conserve existing energy resources and develop new ones seem to be increasing as the energy agenda shifts from strictly economic concerns to more global environmental ones.

In light of atmospheric problems closely linked to electricity generation and manufacturing processes, some predict the magnitude of changes soon facing business will dwarf the conservation efforts of the 1970s. Already the use of chlorofluorocarbons, which deplete the ozone level when released, is being cut back gradually under EPA supervision. A 95 percent reduction in production of CFCs is sought within the next 14 years. Alarm over the much-debated warming of the earth, known as the greenhouse effect, also has spurred the search for replacements to fossil fuels.

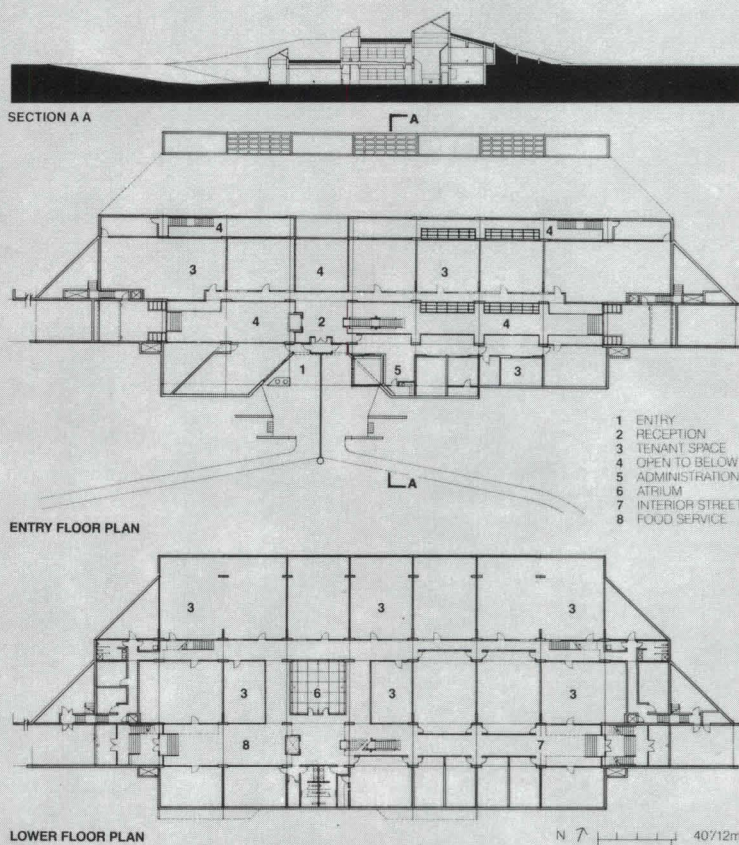
The AIA recently acknowledged the continued importance of energy when its directors voted to resume, after three years of inactivity, the institute's role in energy matters. By creating the AIA Energy and Environmental Quality Task Group, an advisory board that will focus on both energy conservation and indoor air quality, the AIA has taken a critically important step, says task group member Steven Winter, a Newport Beach, California, energy consultant. Revisions now pending to ANSI/ASHRAE/IES energy standards signal a change in current practice while placing more stringent guidelines on commercial lighting design. Some researchers argue, too, that only now, 15 years after the Arab oil embargo, has the energy industry matured enough to offer the broad range of products and detailed knowledge required to design well in energy terms.

Current developments on the consumption side include breakthroughs in glass technology, improved insulation materials, and a wider availability of energy-efficient lighting sources. On the supply side, environmental concerns have rejuvenated proponents of nuclear power, a "clean" production source with troublesome waste disposal problems. One alternative—still too expensive—is photovoltaics, the direct conversion of sunlight into electricity.

That's only some of the good news. The following pages contain more detailed reports on advances in daylighting and below-grade construction, financial incentives by utilities to reduce consumption, changes in HVAC systems, and ways to lower heat gain in buildings by blocking the radiation of solar energy. These issues touch every architect who is concerned with a building's capacity to conserve—or consume—precious energy. *Vernon Mays* ■



Photos: James Dow



Earth Sheltering
How else to build with optimum efficiency in frigid Edmonton, Alberta (where winter temperatures drop to -30°F), than to take advantage of the earth's insulating capabilities? The Edmonton Advanced Technology Center (top), a multitenant laboratory designed by Barry Johns Architect Ltd., of Edmonton, takes full advantage of the sculptural possibilities of berming, as well. The building's basic form is energy-efficient, with programmed spaces organized along a central circulation spine (photo, bottom left). Insulation values are comparatively

low, because the earth berming holds temperatures relatively constant six inches below the surface. Twelve inches of soil on the roof covers R20 insulation laid over a waterproof membrane. Walls below grade are 12-inch concrete, waterproofed and insulated to frost-line depth with R12 foam. The heat produced from people, lights, and equipment is sufficient to maintain comfortable temperatures inside the building, which is equipped with a small gas-fired heating plant. Extensive skylighting (photo, above left) and a light court provide daylight throughout.

New Strides in Daylighting: Improved glass, sophisticated shading systems, and pending breakthroughs expand the range of solutions.

WHILE concern over energy use has stimulated much recent interest in daylighting, the built record of achieved energy efficiency is unclear, especially in light of the lack of published energy evaluations. Anecdotal information suggests that a number of problems have been encountered, some of which have been resolved, others not.

Architects will be aided in the future by better technology and design tools. New glazing products, for example, make it possible to admit adequate daylight while controlling cooling loads and glare. Although designers have had choices of a range of glass transmittance values, many of yesterday's glazings do not distinguish between transmittance of light and solar heat (half the energy in sunlight is infrared heat). Some new coated glazings now provide "cool" light with about half the associated solar heat gain.

Most daylighting designs rely on diffuse light from the sky, because the intensity of direct sunlight exceeds visual and thermal comfort levels. Of the fixed and operable shading systems now used to control sunlight intensities, fixed solutions are often preferred for their simplicity. But operable solutions provide more responsive control of hourly, seasonal, and climatic variations. Many extensively used motorized shading systems have a good track record in Europe and are now being specified in the U.S. Within a decade, new coated glazings should be available to allow glass transmittance to be varied from 10 to 80 percent by an applied electric signal. Prototypes of such "smart windows" already have been demonstrated. Other advances on the horizon, such as glazings incorporating optical lens systems or holographic coatings, are aimed at directing sunlight farther into buildings than is now practical.

Concerns over heat loss control have made double glazing the standard and low-E coatings increasingly common. New double-glazed units with low-E coatings (R3 windows) provide equal or better performance than conventional triple glazing, and triple-layer windows with low-E-coated plastic center layers outperform them both. This year will see the large-scale introduction of gas-filled, low-E double-glazed windows with R4 ratings. And prototype R6- to R10-rated "superwindows" are being tested now.

But building technology alone won't address all the shortcomings that frustrate good daylighting design. Better design data and tools that allow efficient access to that data are needed. Computer-based hardware and software now in the works promise to bridge the gap between quantitative and qualitative aspects of design that are inherent in currently available tools. Simulations that accurately render luminous environments (indicating points of glare, for example) are becoming possible through software that provides realistic high-resolution, quantitatively accurate images. But to be effectively used, images, data, and new expert advice systems must be accommodated within the design process—a nonlinear, multisensory, and visually-oriented activity.

Whatever the past record of attempts to achieve substantial energy savings through daylighting, the incentives to keep trying are great (\$140 billion per year spent for energy in American buildings). Continued interest has produced a new wave of technology and design tool development that will long benefit architects, owners, and building occupants. **Stephen E. Selkowitz** ■

The author is group leader of the Windows and Daylighting Group, Applied Science Division, Lawrence Berkeley Laboratory, Berkeley, Calif.

Cutting Electricity Usage: Utilities are now offering rebates for approved equipment, incentives for lower consumption, and free design services.

WHILE the trend toward lower fuel costs has benefited owners of buildings that depend mostly on fossil fuel, those responsible for buildings that rely on electricity find themselves facing energy costs that have steadily increased.

The introduction of rate structures pegged to peak demand only makes much-needed power more pricey. But utilities are finding other ways to discourage peak-hour usage, offering direct financial incentives to stimulate reductions. The most common incentives are rebate or design assistance programs. In the rebate programs a utility typically pays for all or part of certain energy-conserving equipment, or pays the owner an amount for each kilowatt the building offsets from its peak demand. Experiments with incentives began in the early 1980s at the residential scale, but they have not always proven to be cost-effective for the utilities.

The focus has shifted lately to commercial rebate programs. For the small customer, these programs often are structured similarly to residential rebates, in which payments to the customer are made following the purchase of approved products. Of the nearly 50 existing commercial rebate programs, no two offer identical rebates. But, an informal survey of several programs revealed typical payments of 50 cents per efficient fluorescent tube, \$5 per compact (screw-in) fluorescent lamp, \$10 per energy-efficient ballast, and \$40 per ton of energy-efficient refrigeration. Lighting efficiency has emerged as the utilities' least costly strategy and the customers' easiest to use.

Programs for larger customers include a broader range of equipment and a more complex rebate structure. While most of these programs provide rebates as a percentage of the installed cost of approved equipment, in a growing number of cases the rebate is based on a fixed payment per peak kilowatt saved. Although rebate payments vary widely among utilities, a recent study funded by the Electric Power Research Institute documented rebates of 30 to 50 percent of the cost of installed equipment and, in the case of fixed payments, an average of \$300 per peak kilowatt saved. To qualify for these programs, large customers usually must prepare an energy conservation study following the utility's calculation methods. Most utilities will assist customers in preparing the study or suggest a consultant, often underwriting all or part of the cost. Some utilities help customers select a contractor and supervise installation.

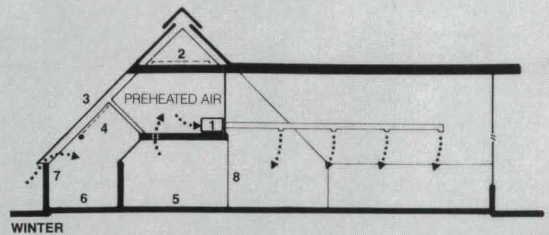
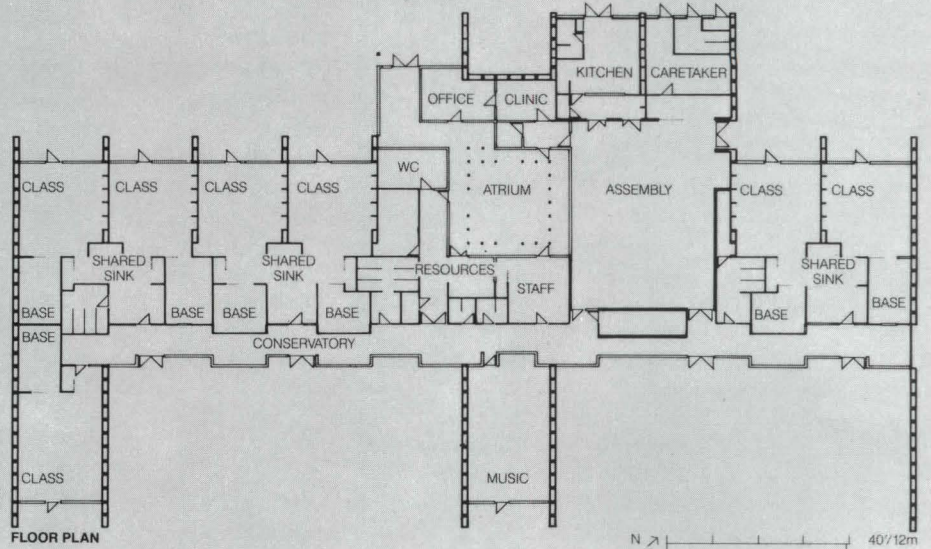
Unlike rebate programs that emphasize the retrofit of existing buildings, design assistance programs encourage energy-conscious design in new buildings. Typically, a utility sets the amount it will pay a prospective building owner for each peak kilowatt the design team can subtract from a target peak calculated according to building size and function. The utility often pays for a portion of the design services in areas that promise significant peak savings, particularly thermal storage, energy management systems, daylighting, and lighting. While the few buildings completed under design assistance programs have reduced peak demand, the increased supervision that is required may limit the participation of utilities in such programs.

Given the success utilities have had in reducing peak loads this way, one can only speculate that more incentives will develop. Designers who avail themselves of these programs will find they can give clients highly energy-efficient buildings with support from local utilities. **Harvey Bryan** ■

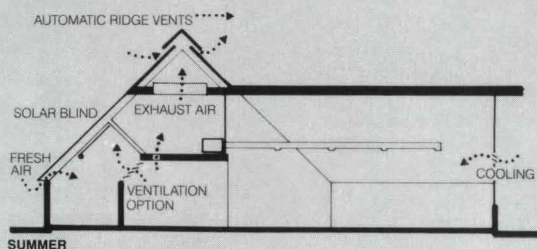
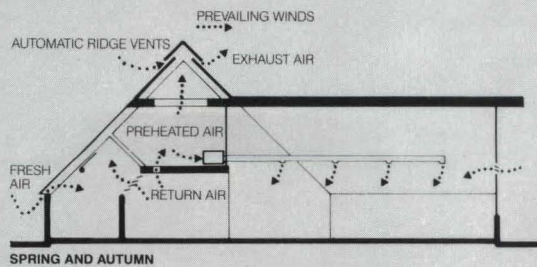
The author, an associate professor at the Harvard University Graduate School of Design, is an architect, researcher, and frequent contributor to P/A.



Photos: Martin Charles



- 1 AIR HANDLING UNIT
- 2 AUTOMATIC VENT
- 3 DOUBLE POLYCARBONATE GLAZING
- 4 SOLAR BLIND
- 5 CARPETING
- 6 PRECAST SLABS
- 7 MANUAL LOUVERS
- 8 USER CONTROLS



Daylighting/Ventilation
Armed with results from field studies, designers of the Netley Abbey Infants' School (top) in Hampshire, England, took a position contrary to popular wisdom: that building users can intelligently operate the shading and venting systems critical to a building's thermal performance. In designing the school, the Hampshire County Architects' Department used a southeast-facing conservatory (bottom left) as the organizing element. Though classrooms and assembly spaces open onto this circulation spine, giving it a functional coherence, its energy role is more crucial. In winter it preheats intake air and reduces heat loss from the rest of the building; in spring and fall it serves as a source for desirable warm air or is isolated when it overheats; in summer it shields the hot sun (diagrams, left). Paired classrooms (photo, middle left) are heated by overhead ducts that feed from air-handling units located above the conservatory.

Underground Design: New technology has led the way for products and practices that touch on everyday design issues, including foundations.

THE underground building alternative has evolved in 20 years from a novel idea to a practice that is well established in the architectural mainstream, as evidenced by recent gallery additions to the Louvre and Smithsonian Institution. Likewise, the technology of underground construction has developed, becoming increasingly accessible through new products and information and more relevant to all architects through advances in foundation design.

Proper drainage, for example, is aided by new filter fabrics ("geotextiles" that are used to protect drain pipes and trenches from clogging) and wall-mounted backfill drainage blankets. New insulating concrete masonry units made from lightweight aggregate are available. And a variety of standard weight concrete blocks produced with foam inserts, greatly increasing R-value over older systems, have recently entered the market. Among other new products are foam insulations that serve as concrete forms for foundation walls and slab edges, fiberglass panels for protecting exterior foundation insulation above grade, and rigid foams with a protective weathering surface.

Increasing construction cost is renewing interest in insulated shallow footings for slab floors in cold regions. Design guidelines for such footings were published in the U.S. in 1973, but the idea never caught on in America (as it did in Scandinavia). New computer studies included in the recently published reference, *Building Foundation Design Handbook*, show that the horizontal exterior ("flowerbed") insulation required to prevent frost penetration to footings is both energy- and cost-efficient. Field studies of cracking in unreinforced concrete masonry walls reveal that existing recommendations for allowable height of unbalanced fill are inadequate for many soil types. New guidelines are given in the handbook.

Building below grade has been further complicated by other issues. Radon, for example, is both a real concern and potential liability. Control measures involve sealing cracks and joints against infiltration of soil gas and, in some cases, using the perimeter drain system to vacuum the soil. Energy efficiency, too, is getting new respect in the design of house foundations, neglected while other parts of the building shell were being upgraded. There is little evidence of new or retrofit insulation causing structural (frost-induced) damage, as was once a concern, although it is prudent to avoid interior insulation on walls with existing structural or moisture problems.

A new level of understanding is beginning to be reflected in the literature, as well. The new edition of *Architectural Graphic Standards*, for example, increases its coverage and level of detail for earth-sheltered design. Available from the Government Printing Office is the Environmental Protection Agency's volume, *Radon Reduction in New Construction* (#716-001/60673). Another new source is the *Building Foundation Design Handbook*, the first comprehensive text aimed, in both scope and format, specifically at architects. It contains topical chapters on structure, waterproofing, drainage, thermal design, and radon and termite control. Summary chapters address basements, crawl spaces, and slab foundations. The handbook is available by writing to the Underground Space Center, 500 Pillsbury Drive S.E., Minneapolis, Minn. 55455. **Kenneth Labs and John Carmody** ■

Kenneth Labs is a lecturer in environmental technology at the Yale University School of Architecture. John Carmody is associate director of the Underground Space Center, University of Minnesota.

Energy's Impact on HVAC: Better thermal envelopes change the way we heat and cool, and new attitudes prompt the use of decentralized fan systems.

DURING the evolution of buildings between 1945 and 1975 from structures of brick and mortar to veritable machines, few bothered to consider the energy resources required to power them. But the building design professions responded positively to the energy crisis of the mid-1970s, with startling changes in building and systems designs. The most evident and direct impact upon architecture has been the improved thermal envelope—better insulated wall and roof systems, improved fenestration systems, and joining and sealing methods that are virtually infiltration free. Interestingly, in some climates the architect receives a bonus from these improved envelopes in that the improved thermal characteristics remove the need for perimeter radiation, a heating system that often interfered with space flexibility. A more universal bonus for the improved envelopes was that the resultant reduction in cooling and heating loads reduced both the construction cost of the mechanical systems and their ongoing operating costs.

Aside from envelope designs, the architectural impact of energy-efficient design is less evident, but nonetheless significant. In larger institutional and commercial buildings constructed between 1945 and 1975, the two major energy-consuming systems (almost equal in quantity) were lighting and fans (supply, return, and exhaust). The tendency in these buildings was to centralize the fan systems in penthouses and basements and use high-pressure, high-velocity ducting systems with constant volume air delivery—the combination of which consumed large quantities of energy. As the understanding of this aspect of energy systems matures, building air systems assume new configurations that have an impact on architectural design. Typically, fan systems are being decentralized (thus, there will be a multitude of smaller units). Low-pressure, low-velocity duct systems are being installed and, with rare exception, those duct systems are the variable-volume type (a change that already has taken place). A separate system provides controlled quantities of conditioned outdoor air to the buildings.

What effect will these changes have on the architectural design? Rather than providing a single room, such as a penthouse that accommodates a central system serving the entire building, schemes will be required to include small decentralized fan rooms throughout a building. While this may appear to be contrary to earlier concepts of volumetric efficiency, it is mandatory if the energy costs and consumption objectives being mandated by tomorrow's building owners are to be met.

Many other changes taking place in mechanical/electrical energy systems will have considerably less impact upon the architectural design. These include on-line computer systems using digital logic to control the environment (so-called "smart buildings"), a new generation of rotary refrigeration machines, high-efficiency boilers and thermal refrigeration systems, variable speed technology, and improved techniques of air distribution. Probably the most significant aspect of energy-conserving design is that the architecture/engineering community has matured in its understanding of the need to address energy consumption. And with this maturity have come two important principles: first, that an energy-conservative building need not cost more than any other building and, second, that it need not be less comfortable. **William J. Coad** ■

The author is president of McClure Engineering Associates, St. Louis, and an affiliate Professor of Mechanical Engineering at Washington University.

Radiant Barrier Systems: A layer of foil, properly placed, goes a long way in reducing solar gain in buildings plagued with too much sun.

WHEN planning strategies to keep heat out of buildings, designers have focused primarily on impeding conduction or convection. Until recently, a third method of heat transfer—radiation—was largely ignored. But recent research illuminates the potential for reducing heat gain in buildings by controlling radiation transfer in walls, roofs, and ceilings through the use of radiant barrier systems.

As commonly installed, a radiant barrier is a layer of foil facing an open air space in the building envelope. By reflecting radiation that strikes it and, at the same time, not radiating that energy, such a barrier is effective in impeding heat transfer and gain. With an emissivity of only about 0.05, aluminum foil makes an excellent radiant barrier, eliminating 95 percent of the radiant transfer potential. In most installations, the aluminum foil is applied to a reinforcing substrate such as kraft paper or polypropylene. Fiberglass webbing is sometimes sandwiched between the materials for added strength.

In residential construction, there are three recommended ways to install radiant barrier systems. The first involves simply placing the foil material across the attic floor, though dust accumulation on the foil surface compromises the barrier by reducing reflectivity and raising surface emissivity. Preferred methods of installation are to drape the foil over the top of the truss system prior to installation of the roof decking or to attach the material to the bottom of the roof decking before nailing it in place. The two methods have roughly equivalent success. Yet a third location, recommended for retrofit applications, is to staple the barrier material beneath the top chord of the roof truss. In all types of installation, the foil side of the barrier must face an open air space. Yet, it is unnecessary to form airtight seals with radiant barrier systems, because radiant energy travels in a straight line. In fact, if the foil is attached to the roof decking, it should be perforated to allow vapor to pass through. Installing radiant barriers in exposed-beam ceilings usually requires special treatment such as a "vent-skin" roof construction—two distinct sheathing layers bounding a vented air space.

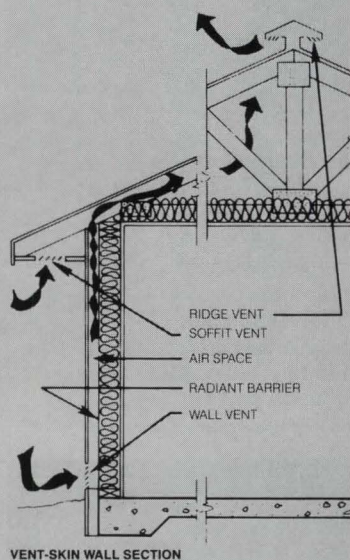
Radiant barriers also offer thermal energy protection in commercial buildings with flat, built-up roofs and suspended ceilings that enclose plenums for ducting, wiring, and lighting systems. By draping the barrier above the ceiling plenum, duct losses in the plenum are greatly reduced. The barrier shades the ceiling insulation from radiant heat gains, as well.

In walls, radiant barrier systems can be constructed on building exteriors or interiors. In northern climates, a wall radiant barrier on the interior may be more cost-effective and efficient. And, it can form a superior interior vapor barrier. In cooling-dominated climates, an external radiant barrier can be constructed by creating an air space between the foil surface (which is attached to the wall structure) and the exterior skin of the building through the use of vertical 2x2s. Such an air space may be vented or unvented. More detailed information on radiant barrier systems is available by writing the Florida Solar Energy Center, 300 State Road 401, Cape Canaveral, Florida 32920. **Philip Fairey**

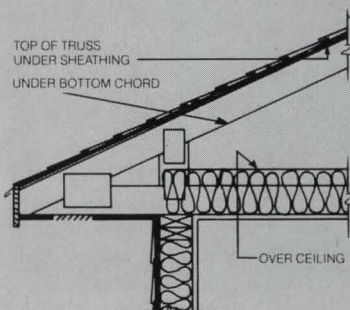
The author, an architect, is program director for building research at the Florida Solar Energy Center.



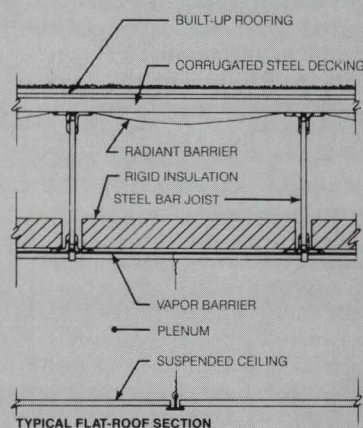
Herb Beatty



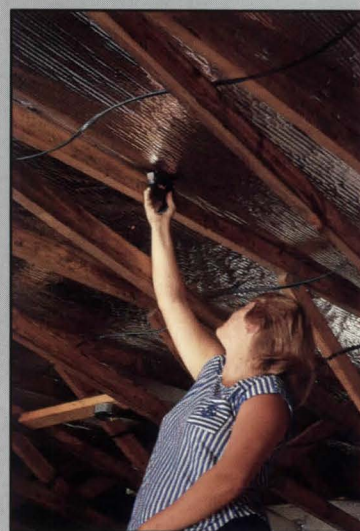
VENT-SKIN WALL SECTION



ATTIC RADIANT BARRIER OPTIONS



TYPICAL FLAT-ROOF SECTION



Florida Solar Energy Center

Radiant Barriers
Architect Herb Beatty's design for his Fort Myers, Florida, house was governed by the rules of low-energy design in hot, humid climates. But he went beyond the basics of site orientation and roof overhangs by including vent-skin walls and roofs, and radiant barriers. When designing a vent-skin wall, one option (drawing, above left) is to use a cupola to help draw warm air upward. But Beatty turned the cupola into a loft, venting the house's walls and roof at the loft's base instead.

For simpler installations in buildings without vent-skin walls, three locations for radiant barriers in attic spaces are recommended (drawing, middle). Key to the technique's success is keeping the barrier's foil surface facing toward an open air space (photo, above). An alternative commercial roofing practice for one-story buildings (drawing, bottom) incorporates a continuous vapor barrier below the bar joists, with the ceiling plenum serving as a common return system.

**ONLY ONE
WINDOW COMPANY
DARED TO TAKE
ON THIS CITY HALL.**





When Baltimore decided to replace the windows in its 120 year-old City Hall, Baltimore talked to all of the major window companies.

Then Baltimore chose Marvin. Baltimore chose Marvin because no one had more experience at making windows to order. Because no one was better-equipped to actually make all of the different shapes and sizes. Because no one else could incorporate more maintenance and energy-efficiency features into such historically accurate replicas.

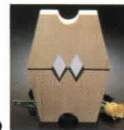
And because we make windows to order, we could apply more know-how and technical support to the job. We could deliver on a schedule and in an order that let the contractor do his job quickly and cost-efficiently.

No other window company could have handled this job as well as we did. The proof is right there at Baltimore City Hall.

And nobody can argue with City Hall.

For more information, call us toll-free at 1-800-328-0268 (in Minnesota, dial 1-612-854-1464). Or just write Marvin Windows, 8043 24th Avenue South, Minneapolis, MN 55425.

**MARVIN WINDOWS
ARE MADE TO ORDER.**



Circle No. 350 on Reader Service Card



MANY COMPANIES OFFER THIS.



ONLY SENERGY OFFERS THIS.

When you build or remodel exterior walls, you want durability. Reliability. No maintenance. Quick installation. Value.

Many companies offer energy-saving exterior insulation and finish systems. But it takes more than material. It takes experience. Training. Technical service. Commitment.

Only Senergy offers both SENERFLEX™ (polymer base) and SENERTHIK™ (polymer modified) systems.

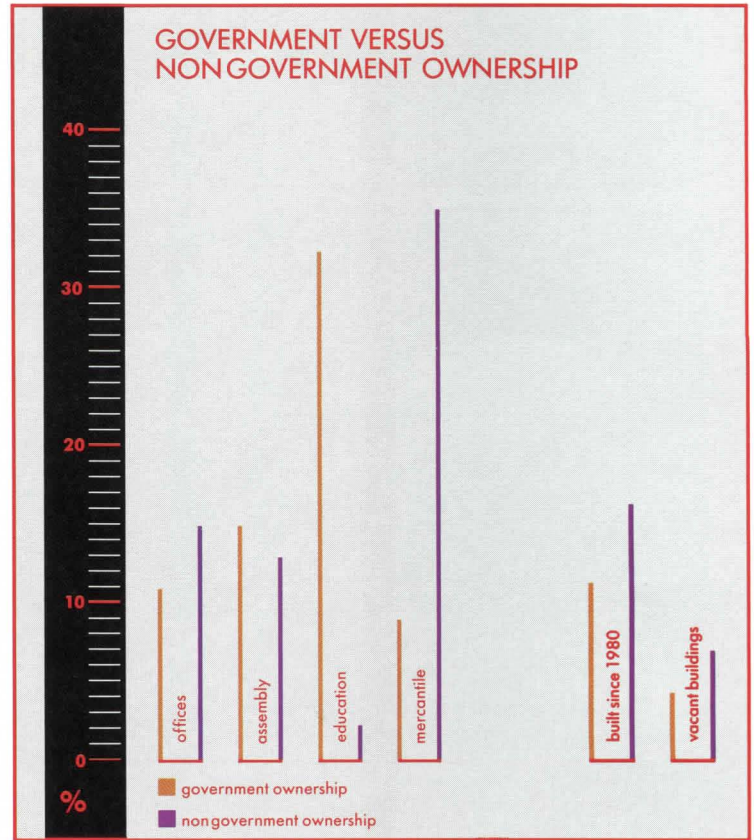
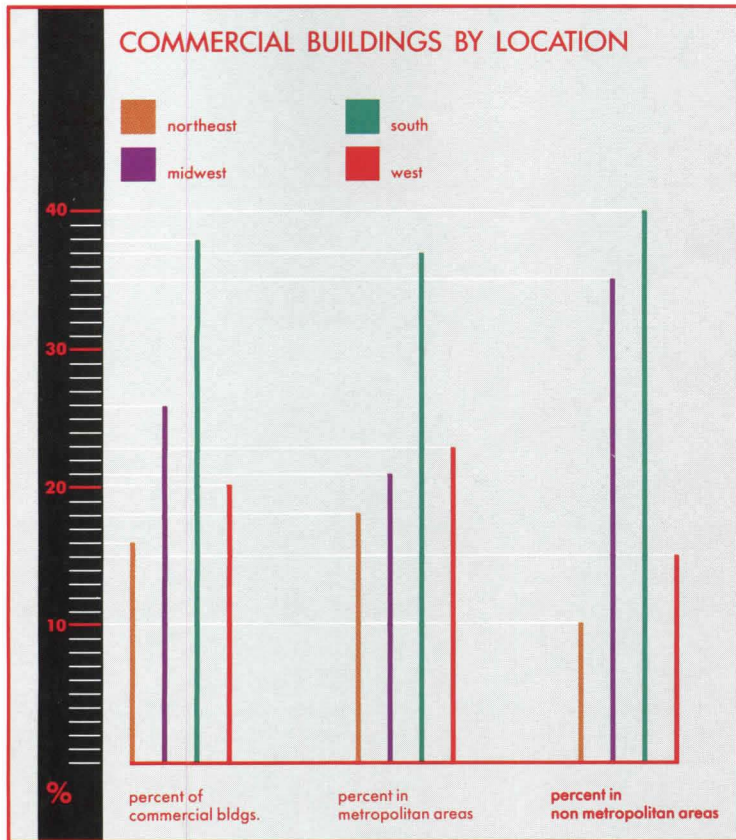
Only Senergy combines both systems on the same project. Only Senergy offers an unlimited array of colors at no additional charge. Only Senergy offers a five-year labor and material warranty. Only Senergy offers the ability to see things differently.

Contact Bob Olson, Vice President, Senergy, Inc., 1367 Elmwood Avenue, Cranston, RI 02910, or call 1-800-221-WALL.



SENERGY™

Circle No. 362 on Reader Service Card



Commercial Building Myths

- Most commercial buildings are steel-framed.
- Workers in the Northeast have less floor space than those in the West.
- Of the existing commercial buildings over three floors tall, most of them were built after World War II.

These statements may ring true, but each is false according to the survey "Characteristics of Commercial Buildings, 1986" recently released by the Department of Energy. Of the 4.15 million commercial buildings in the U.S. over 1000 square feet, only 19 percent are steel framed; 38 percent have a concrete or masonry frame. Of the 58.2 billion square feet of commercial space in the U.S., there is a median of 1000 square feet per worker in the Northeast and only 833 square feet in the West.

And of the 165,000 commercial buildings in the U.S. over three stories tall, 65 percent were built prior to 1945.

Location

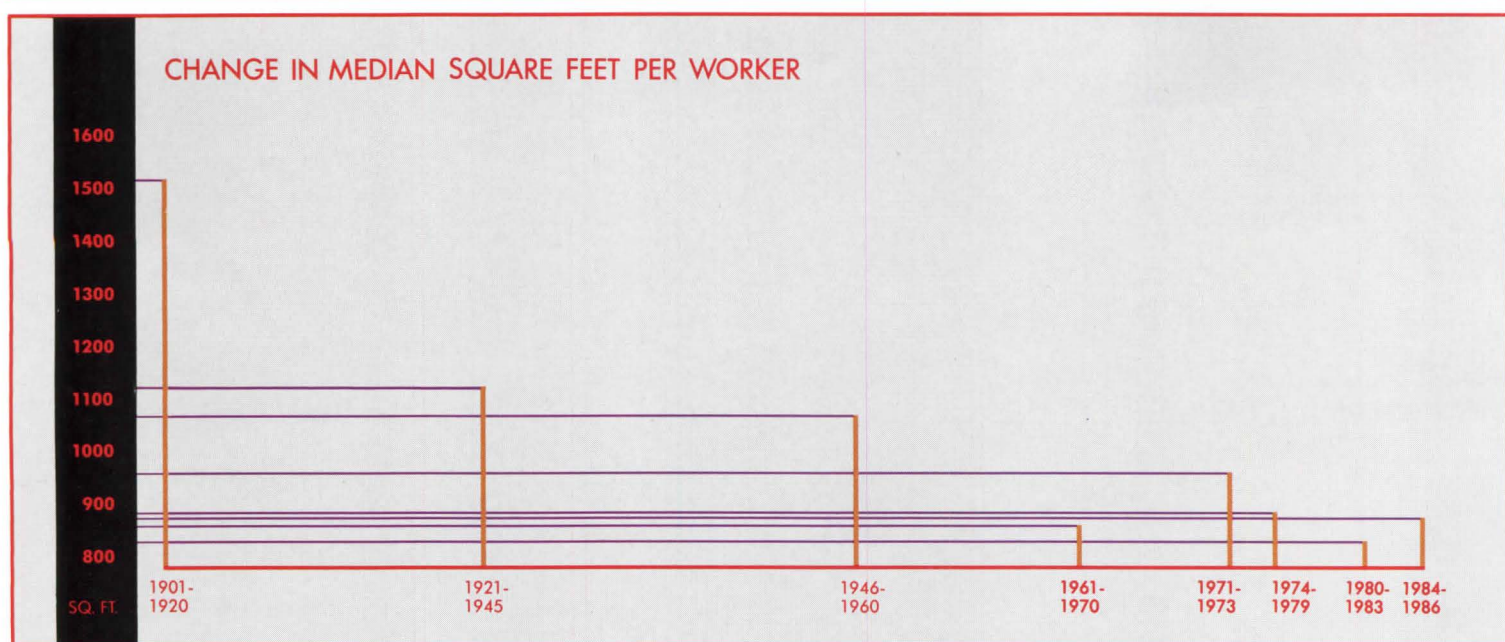
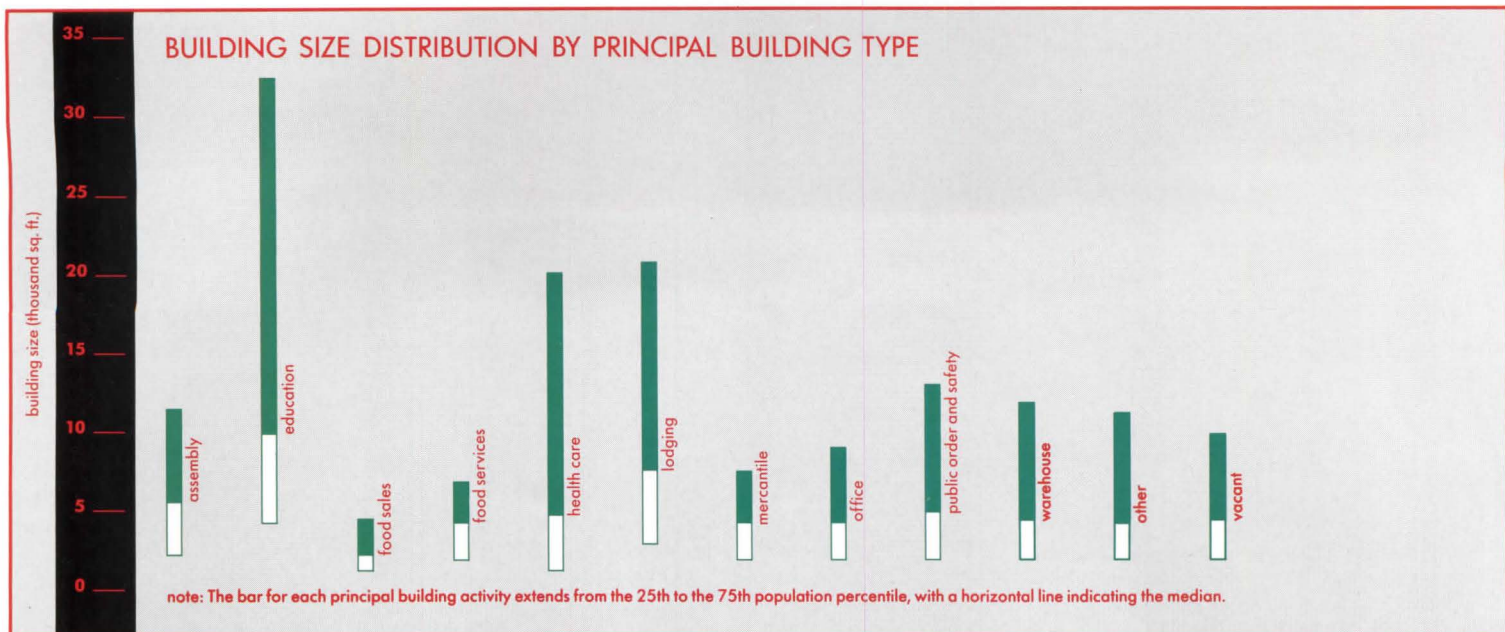
The location of new work has considerable bearing upon where a firm practices, or at least markets its services. This survey shows a significant shift in commercial building construction since 1979 away from the Northeast and Midwest toward the South and West. The South saw a 2 percent increase in its share of commercial buildings, and the West a 4 percent increase. Commercial buildings are accordingly newer in the South and West. Twenty percent of them in the South, for example, have been constructed since 1980, compared with 16 percent nationwide and 12 percent in the Northeast. The median age of commercial buildings in the South and West is 19.5 and 18.5 years respectively, versus 28.5 years in the Northeast.

The types and sizes of buildings also differ among the various regions of the country. The Northeast, with 15 percent of all commercial buildings but 20 percent of the floor space, has relatively larger buildings than other regions; the South, in contrast, has 37 percent of the buildings, but only 33 percent of the floor space.

The Northeast and South also are polarized in terms of building height. The Northeast has the largest number of commercial buildings over three floors in height, and the South the largest number of one-story structures.

Ownership

The survey, while recognizing only government and non-government owners, does identify some important differences between them. For example, nongovernment owners control over three times as many mercantile buildings as do governments, but the latter own over 15 times as many educational build-



ings. Offices and assembly buildings are almost evenly split, with private owners having a slight lead with offices, and public owners a slight lead with buildings used for assembly purposes.

Government buildings tend to be larger than private-sector buildings. Five percent of them are over 100,000 square feet in size, compared with 1 percent among nongovernmental buildings. Put another way, government buildings constitute only 12 percent of all nonresidential buildings, but 21 percent of the total floor space.

Government buildings also tend to be older and more fully used. Of all publicly owned structures, 61 percent were built between 1921 and 1970 (versus 52 percent of those privately owned) and only 11 percent were built since 1980 (versus 16 percent in the private sector). Four percent of the floor space in public buildings is vacant, compared with 7 percent in private commercial buildings.

Size and Use

Major changes in the size of commercial buildings also emerge from the survey. It shows a 6 percent increase in buildings over 100,000 square feet since 1979. Since 1980, 14 percent of the commercial buildings erected have been over 500,000 square feet, compared with 1 percent of those built between 1921 and 1960.

Sizes of commercial buildings vary considerably according to their use as well as the era in which they were constructed. Only 1 percent of all stores and warehouses are over three floors high, while 7 percent of the offices and over 13 percent of the hospitals and hotels are over that height.

Buildings used for education have the highest median size (10,000 square feet), and grocery stores have the lowest (2500 square feet). Schools also have the widest range of sizes. The middle 50 percent of such buildings vary from 5000 to 33,000

square feet, compared to a range of 3000 to 21,000 square feet for hotels and of 2000 to 5000 square feet for grocery stores.

One of the most disturbing statistics to come out of the survey is the dramatic decline in the square footage allocated to each employee in commercial buildings. Before 1900, the median amount of space per worker was 1874 square feet, by 1946 it had dropped to 1066 square feet, and by 1980 to 850. The number had increased slightly to 961 square feet in the 1960s and appears to be on the rise again, with an increase from 850 to 895 square feet in the 1980s.

Not surprisingly, metropolitan areas offer less space per worker than nonmetropolitan areas: 856 square feet versus 1341 square feet. More of a surprise is that the West has the lowest space allocation (833 square feet per worker) and the Northeast and Midwest the highest (1000 square feet and 1251 square feet respectively).

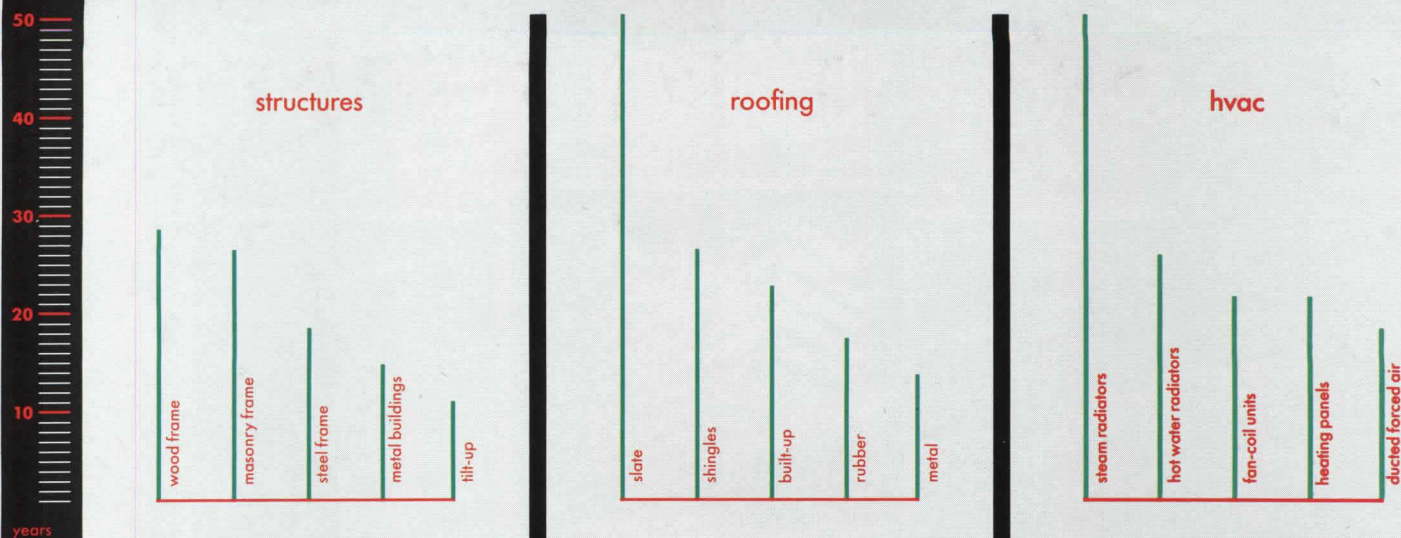
The survey also shows some changes in the number and size of nonresidential buildings. When comparing buildings completed between 1921 and 1960 and those completed between 1980 and 1986:

- The relative number and square footage of buildings used for assembly purposes have decreased.
- The relative number and size of office buildings have increased.
- The relative number of stores has remained about the same but they have increased in size.
- The relative number of warehouses has remained about the same in number but they have decreased in size.

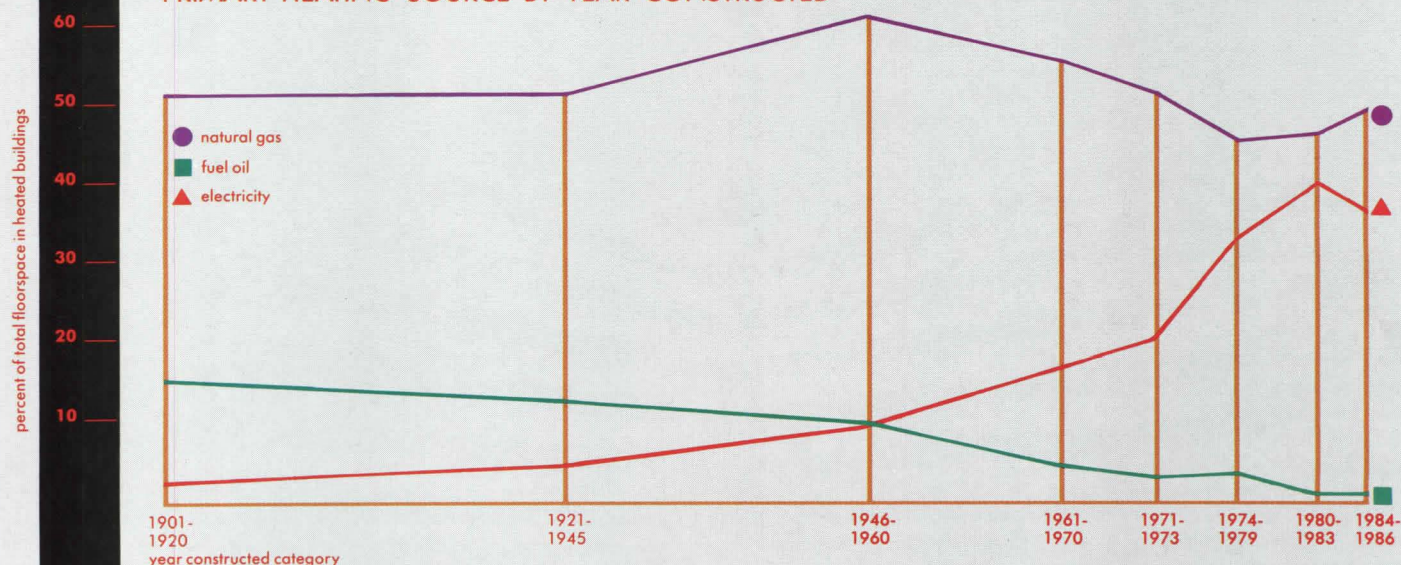
Structural Systems

The study also found a wide variation in the type of structural systems used. Masonry or concrete framing accounts for 36 percent of all nonresidential buildings; wood framing, 34 percent; steel framing, 19 per-

MEDIAN AGE OF BUILDINGS WITH VARIOUS TECHNOLOGIES



PRIMARY HEATING SOURCE BY YEAR CONSTRUCTED



cent; and tilt-up concrete, 3 percent. Those percentages, however, do not account for the changes in use of those systems over time. Wood framing, for example, is more common in older buildings, with a median age of 28.5 years. Metal buildings and tilt-up systems are more common in newer structures, with median ages of 12.5 years and 14.5 years respectively.

Geographical differences in the use of various structural systems also emerge in this survey. Tilt-up concrete systems are more than twice as common in the West as in other regions, while metal buildings are at least twice as common in the South as in the Northeast or West. And masonry structures constitute a larger percentage of the commercial building market in the Northeast and Midwest than in the South.

Building Components

Among the items tracked by the survey was the use of various

building components, particularly glass, roofing, HVAC systems, and energy-related items such as insulation and weatherstripping. The majority of commercial buildings (84 percent) have glass on 25 percent or less of their exterior envelope. However, the survey points to an increase in the number of glazed envelopes, since the median age for buildings less than one-quarter glazed is 21.5 years, while that for those more than three-quarters glazed is 14.5 years.

Roofing materials, too, show significant changes over time. Built-up roofing accounts for 42 percent of the roofing on commercial buildings; shingles, 26 percent; metal, 20 percent; single-ply membranes, 3 percent; and slate and tile, 3 percent. But slate and tile have dramatically declined in use, and metal and single-ply roofing are more frequently used.

The survey also shows changes in use of some heating systems and fuels. The median age of

buildings with steam radiators is 50.5 years; hot-water radiant systems, 25.5 years; and forced hot-air systems, 15.5 years. In the last 50 years, the market share of natural gas heating has declined slightly (55 to 49 percent); that of oil heating has declined dramatically (20 to 4 percent); and that of electricity has soared (10 to 42 percent). When cooling is added to the equation, electricity is a fuel in 97 percent of the buildings; gas, in 54 percent; and oil, in 13 percent. Alternative sources of energy, such as solar heating, are found in only 3 percent of commercial buildings.

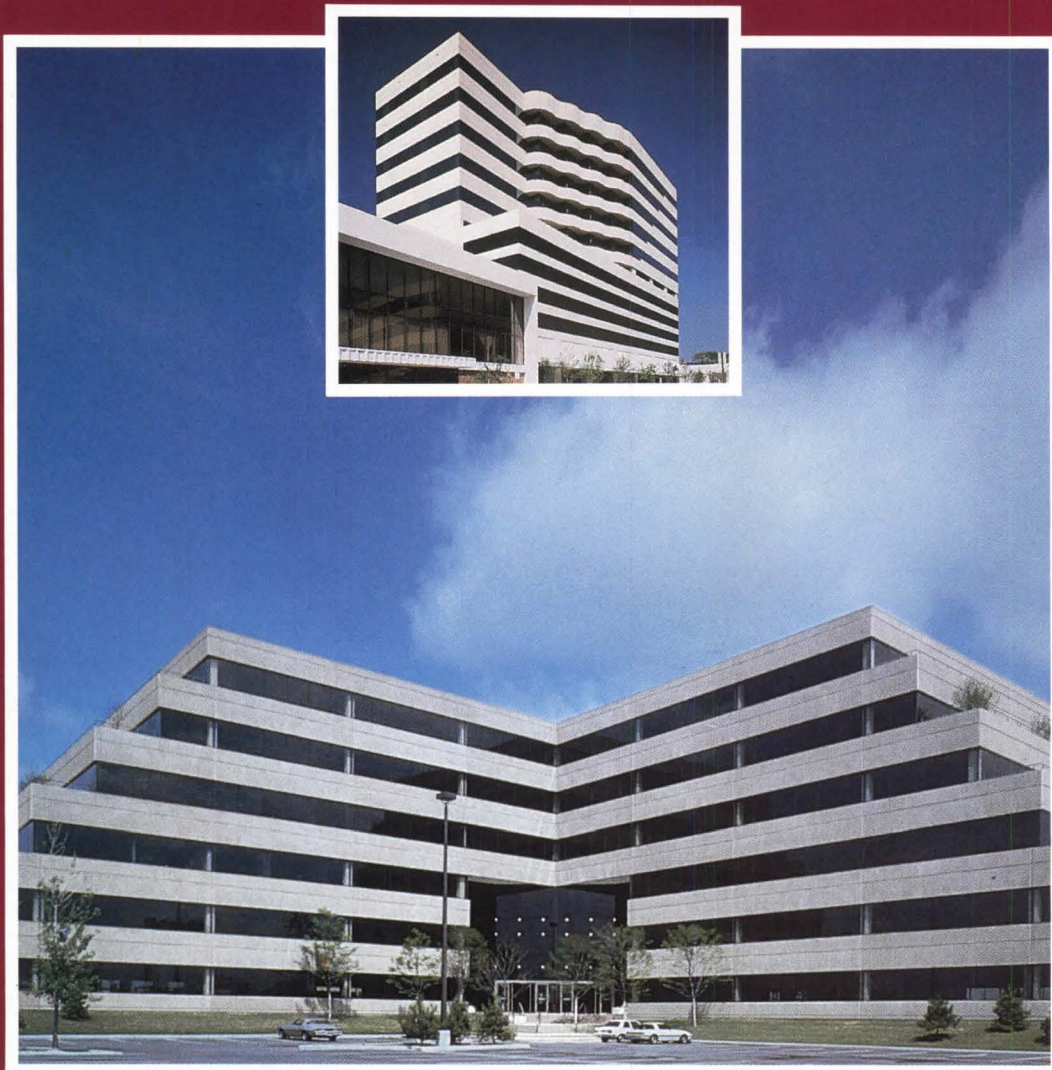
Of the conservation measures typically made to the shell of buildings, roof insulation, caulking, and weatherstripping were employed in about three-quarters of the buildings. Wall insulation was added in a little more than half of the structures. Some 35 percent of the buildings had acquired storm glazing and exterior or interior shades or awn-

ings, and 25 percent had windows fitted with tinted or reflective film.

If one were to draw a composite picture of nonresidential construction from this survey, the typical building would be a one-story, masonry-framed, privately owned structure that is less than 10,000 square feet in size and used for mercantile purposes. It would be located in a Southern metropolitan region, and heated by natural gas. What may be more useful, though, are the trends that emerge from this study: the shift in building construction toward the South and West, the growing size and increased glazing of buildings, the turnaround in the square footage allocated per worker, the decline of oil and rise of electricity as an energy source, and the increased use of steel and concrete construction.

Thomas Fisher

NEW SPACE, NEW OFFICE, ON TIME...



With Precast/Prestressed Concrete

The building must be ready. The space available and productive—on time.
With precast/prestressed concrete you can keep your space program on schedule.
Quick construction time, advantageous interim financing and on time occupancy
are only three of the precast/prestressed concrete benefits package.
The appearance of your new building is limited only by the imagination.
Energy efficiency is a given. Fire protection is a promise.
Precast/prestressed concrete is the beautiful and economical way
to complete your space program on schedule.

Your next office building...think about it in concrete terms.



Prestressed Concrete Institute, 175 W. Jackson Blvd., Chicago, IL 60604

Phone: (312) 786-0300 Fax: (312) 786-0353

PCI Plant Certification—Your guarantee of confirmed capability to produce quality precast/prestressed concrete products.

Circle No. 358 on Reader Service Card

Giving Rise to Better Elevators

Most of the two million elevators worldwide are so safe—statistically, five times safer than taking stairs—and so efficient—computer guidance has cut one-floor door-to-door travel time from $5\frac{1}{2}$ to $4\frac{1}{2}$ seconds in the last decade—that they have become virtually invisible to their riders.

But that kind of success hasn't kept industry leaders from reaching for new heights of efficiency, particularly in nonhydraulic elevators used in high-rise buildings.

Start, for example, with an elevator's energy efficiency. If a

nearly full elevator is descending or a nearly empty elevator is rising, the driving motor generates, rather than drains, electricity. The ultimate result: Elevators use only 3 or 4 percent of a building's energy.

While refinements in "landing" elevator cabs have reduced floor-to-floor travel time, the real efficiency gains are coming from better dispatching and distribution of groups of cabs by computer.

For example, during the afternoon rush hour, a computer distributes elevator arrivals strategically, favoring heavily populated floors over others and ensuring that the building

doesn't empty from the top down. Such computer-controlled elevators can weigh their contents to know when they're full and must bypass waiting hall calls. By the same method, they can sense when rush-time crowds have thinned. Then they revert to unbiased response to calls throughout the building.

Computer dispatching has reduced service time (an industry term meaning the wait for an elevator plus the time spent in it) by 25 percent, says Merton Meeker, Jr., of Otis Elevator Co., the leading supplier of nonhydraulic elevators. Software acts like "an airplane flight recorder," tracking and locating glitches like faulty door closing sensors that stall or slow service, he adds.

The latest evolution applies artificial intelligence to elevators. An advanced computer controller will note how traffic moves within the building, automatically adjusting hourly distribution of cabs and floor-response preferences to developments such as changing tenants or tenant use. Such advanced models can yield an additional 10 to 15 percent cut in service time. "As the performance of the whole industry gets better, it will be reducing the number of elevators necessary to do a given job," Meeker says.

New Otis systems get their trial runs at the company's research tower in Bristol, Connecticut. A surreal sight, the 29-story tower is half the girth of a normal high-rise and virtually windowless. It is covered with gill-like vents that can be used to pull in cold or hot air, creating special conditions in its 11 test shafts.

Advances in vertical transport tend to be limited more by human foibles than technological ones. For example, people push both the up and down buttons, damaging system efficiency by adding unnecessary calls. And, despite the polite entreaties of the digitized elevator voices, passengers tend to shuffle on and off. Based on experience, Otis leaves elevator doors open for at least three seconds for people to get on board at an upper floor. Up to 10 seconds are allowed for the lobby crowd to pack its way in.

Also, elevator safety codes protect passengers by limiting the amount of kinetic energy the cab and hallway doors can exert when closing. That energy, the equivalent of half the door's mass times its speed squared, means that heavier doors must close more slowly. The result of all this? During rush periods, elevators spend half their time stopped.

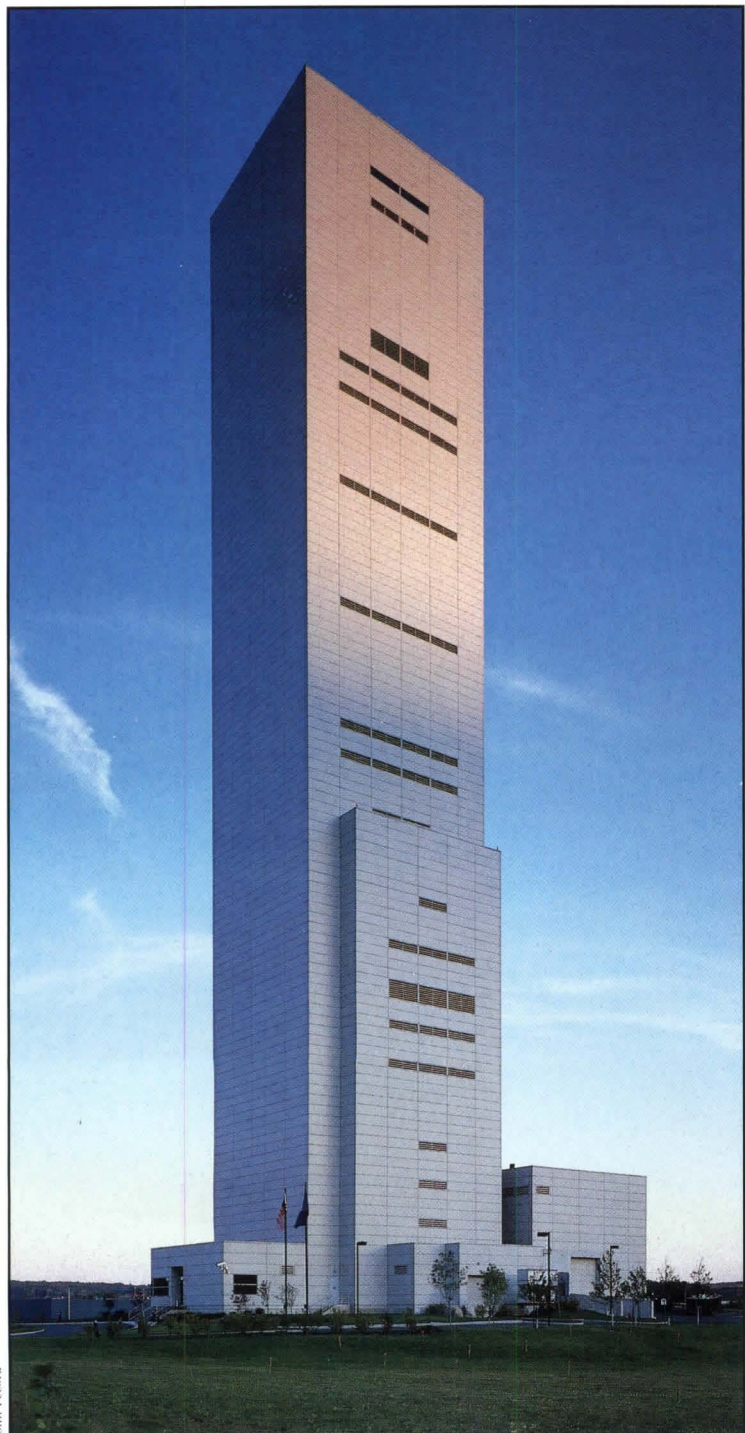
Advanced elevator technology is also enhancing creature comfort. At the Otis research tower, seismograph charts reveal a renewed interest in ride comfort that is wrought in part by increased competition from the Japanese, who as a culture demand smoother rides.

Their bane is the bumpy ride that occurs when the vertical elevator rails are not perfectly smooth and when air buffets the cab as it passes floor landings. To smooth things out, elevator manufacturers offer option packages that include shaped and extended "toe guards," metal lips that extend several feet below the cab's door sill, to reduce floor-door wind buffeting.

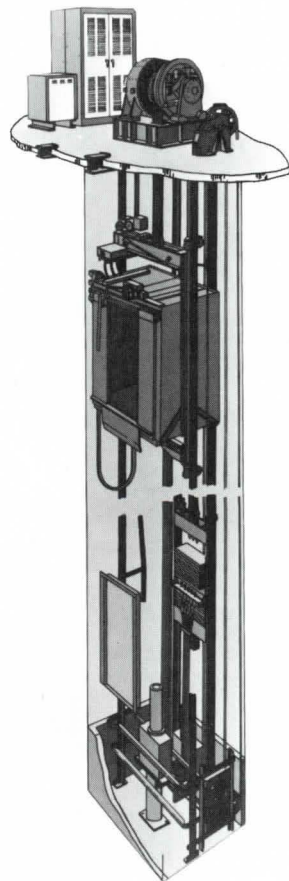
One package also includes bigger rubber roller guides, larger shock absorbers, and an extended cab frame. The latter, in effect, extends the elevator's wheelbase and places passengers in its center so that an elevator ride might approach something akin to limousine comfort.

David Jacobson

The author is a feature writer at The Hartford Courant.



Otis Elevator's 29-story research tower contains 11 test shafts.



A typical counterweight elevator.

The Beauty of
Track Lighting...
without the Beasts!

RECESSED•TRAK™

From ALKCO

Track systems for accent lighting used to mean that the most noticeable (and distracting) accents were the track fixtures themselves!

Those days are over. New Recessed•Trak™ fits flush into any ceiling system...turns corners, runs to any length you desire. It tracks without distraction!

Totally concealed inside the housing, lightmodules can be placed anywhere along the track, rotated 380° and adjusted up to 40° from vertical.

You can pinspot, accent, highlight or flood. Optional lenses and filters produce special effects and vivid colors. Twin circuits allow individual control of lightmodules for maximum flexibility.

Miniaturized quartz halogen lamps emit true white light with exceptional color rendering.

Now, when your accent lighting message isn't the system itself, your medium most surely should be Recessed•Trak, from Alkco.

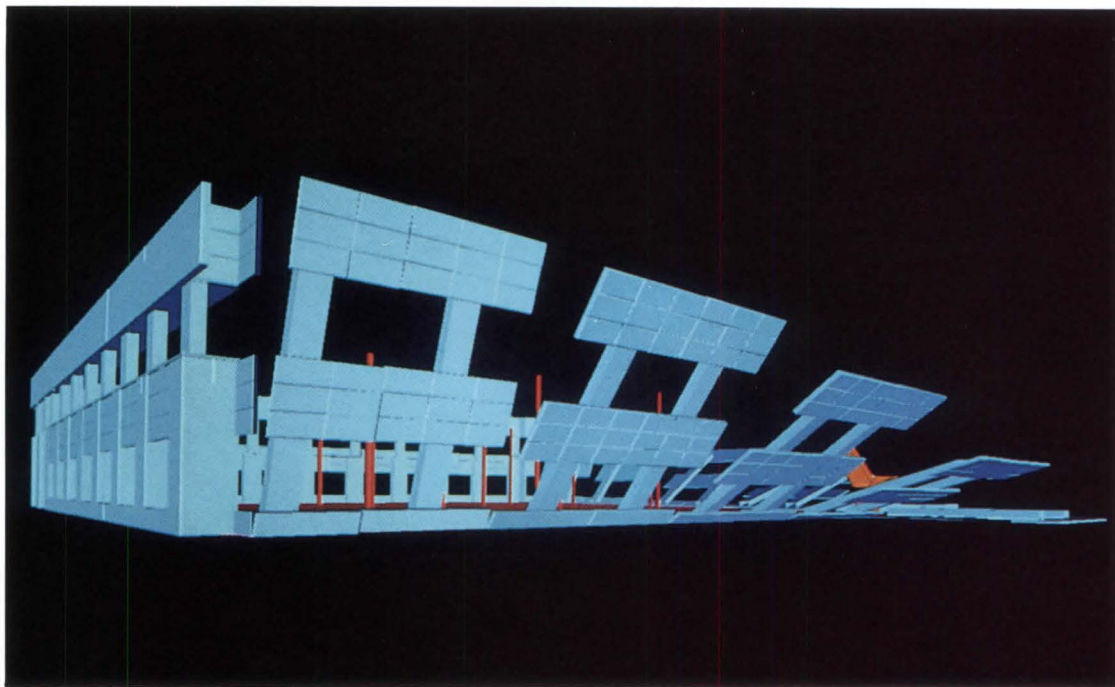
For your copy of Alkco's new condensed Space Enhancers catalog, write to the address below.

ALKCO
where quality
comes to light

Circle No. 311



ALKCO A SUBSIDIARY OF JAC JACOBSEN INDUSTRIES, INC. 11500 West Melrose Avenue, Franklin Park, Illinois 60131 (312) 451-0700



Early generation of the tilt-up wall panels at Irvine Spectrum 3.



Final design added an exposed tilt-up grid along one façade.

A New Twist for Tilt-Up

Recent structural advances and new architectural treatments have ushered tilt-up construction into a new era, producing buildings that—when compared to earlier structures built using the same basic technique—are more flexible in their floor plans and window treatments, better looking inside and out, and more economical to construct.

Only a few years ago, this quick and inexpensive construction method was usually restricted to utilitarian one-story warehouses and industrial buildings. The method was simple: Workers poured concrete panels on a flat slab or casting surface that had been treated with a bond-breaker; window and door openings were framed in wood; and, after the concrete panels had set sufficiently, they were tilted up into position as walls.

Little has changed in the basic tilt-up construction method. But in recent years architects have made strides in improving the severe aesthetic that once was the rule in tilt-up construction. Additions such as freestanding walls, canopies, and trellises, for example, have been used in mixed-use projects to lend tilt-up buildings an image that is more acceptable to tenants.

Still, such changes were mostly cosmetic, failing to address the inherent limitations of tilt-up construction. A recent departure from that pattern was the design for buildings in the 415-acre Irvine Spectrum 3 development in Irvine, California, plans for which include 1 million square feet of research-and-development, industrial, and warehouse space in 26 tilt-up buildings. Designers for the project are Leason Pomeroy Associates of Orange and Los Angeles, with the Irvine Company; joint venture developers are the Irvine Com-

pany and the Koll Company.

From the developer's point of view, these buildings represent a breakthrough in tilt-up construction techniques that both reduces construction costs and creates structures that can command higher rents. One such advance in the technique involves the placement of the concrete pilasters that support the tilt-up panels. In traditional tilt-up construction, the pilasters are located near the end of each concrete panel. When these panels are connected to create the building's façade, the paired pilasters at the ends of the adjacent panels form solid five-foot sections that cannot be pierced by windows.

Formerly, the typical tilt-up building façade was characterized by an alternating series of concrete solids and strip windows, an arrangement that constrained office planning and future flexibility. With the method used at the Spectrum 3

project, however, the pilasters are moved inward about one-fourth of the distance from the end of each 30-foot panel, thus avoiding the pairing of structural elements where two panels join. The pilasters are made less obtrusive by making them narrower (but deeper, for structural purposes) than conventional ones. Thus, the solid elements on the façade become more delicate and are evenly distributed.

Using this method, the ratio of solid space to windows is reduced. Glazing is redistributed across the building façade in an even rhythm. And the pilasters, standing by themselves every 15 feet, resemble traditional structural columns when it comes to planning window treatments or office layouts.

The inducement to developers to support this construction method is reduced cost. When the pilasters are spaced at 15-foot intervals, rather than paired at spacings of 30 feet, the tilt-up concrete panels become more efficient structural elements. Hence, the panels can be thinner, with significant savings in materials and construction costs. Moreover, panel-to-panel connections are simpler and more economical without the pilasters at the edges.

For those who ultimately foot the bill, this design approach offers the best of both worlds—the high image and value of office and R&D buildings, plus the economies of fast, low-cost tilt-up construction.

Dan Heinfeld, AIA

The author is regional president in the Orange County, Calif., offices of Leason Pomeroy Associates, architects.

QUALITY FOR LESS

INNERSPACE™

**CONCEPTS
MAKES YOUR
DOLLARS
GO FURTHER**

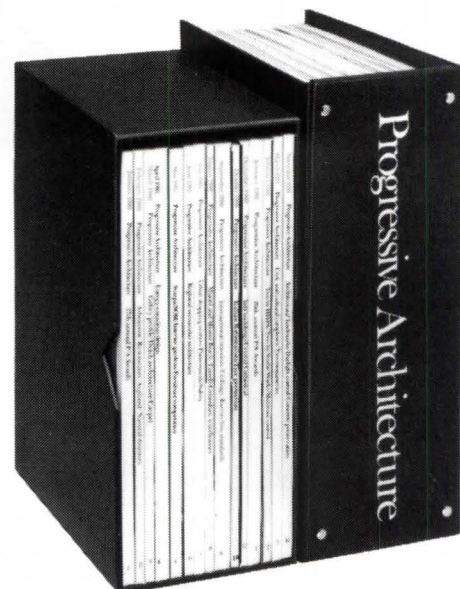
OPEN-PLAN PARTITIONING

Why pay high-dollar for your office partitions ... NATIONAL'S economical system offers quality 3" thick panels for superior rigidity and sound conditioning. Modular in design, panels conceal electrics and are available in various widths, heights and styles, full or half glass with pre-hung doors. A full line of affordable wall-hung and stand-alone desks, pedestals, storage units and accessories also available. **NEW 28-PAGE CATALOG COVERS COMPLETE LINE.**



340 W. 78th Road / Hialeah, FL 33014 / FAX: 305-362-5688
Circle No. 001

**CALL TOLL-FREE 800-327-3697
FOR OUR FREE VIDEO
"THE PRACTICAL SOLUTION"**



Now—Two Ways To Save and Organize Your Copies of P/A.

Protect your P/A issues from soil and damage. Choose either the attractive library case or the all new binder. Both are custom designed in blue simulated leather with the magazine's logo handsomely embossed in white.

What is a Best Western?



The right place at the right price.

Ask about our frequent guest awards program...
Gold Crown®

Make reservations at any Best Western,
see your travel agent, or call toll-free
1-800-528-1234



*"World's largest chain of
independently owned
and operated
hotels, motor inns and resorts"*

Jesse Jones Box Corporation
Dept. P/A
499 East Erie Avenue
Philadelphia, Pa. 19134

My check or money order for
\$ _____ is enclosed.

Please send P/A library cases

____ One for \$7.95
____ Three for \$21.95
____ Six for \$39.95

binders

____ One for \$9.95
____ Three for \$27.95
____ Six for \$52.95

Name _____

Company _____

Street _____

City _____

State & Zip _____

Check must accompany order.
Call 800-972-5858 for credit card
orders. Add \$1.00 per item for post-
age and handling. (\$2.50 per item
outside U.S.A.) PA residents add
6% sales tax.

Allow 4-6 weeks delivery

WestWeek 89

speakers:

Kalef Alaton
Orlando Diaz-Azcuy
Sam Donaldson
April Greiman AIGA
Mark Hampton ASID
David Hockney
Dakota Jackson
Joan Kron
Kisho Kurokawa
Ricardo Legorreta
Richard Meier FAIA
Toshiko Mori AIA
Ed Moses
Brian Murphy
Jean Nouvel
Renzo Piano AIA
John Saladino ASID
Shigeru Uchida
Jean-Michel Wilmotte
Richard Saul Wurman FAIA

speakers:

Stanley Abercrombie, AIA
Dabhi Baran
Warren Bennis, Ph.D.
Adriana Bitter
Daralisa Bales
Michael H. Bourque, IBID
Walton E. Brown
Muriel Chase, ASID
Jeffrey Chusid, AIA
Jill Cole
Jeffrey Daniele, AIA
Hugh M. Davies
Steven Ehrlich, AIA
Anne Fallucci
Michael Gella
Elyse Guisot
Annette Hanna
Elizabeth Howard, ASID
Joanna Jaffe
Tiber Kaiman, AIGA
Sam Hall Kaplan
Carol Soucek King, Ph.D.
Joyce MacRae
M.J. Madigan
Nancy Novogrod
Sina Pearson
Joan Penn
Paula Polledri
Robert Allen Reed, AIA
Jay Rounds
Beverly Russell, ASID, IBID
John Sanday, AIA
Hazel Siegel
Mauro Staccioli
Krislie Strasen
Susan Stenney
Ted Tokio Tanaka, AIA
Marc Treib, AIGA
Richard Wagner
Richard Weinstein

14th Annual Design Symposium
7th Annual Business Conference

for designers, architects and
corporate specifiers of contract
and residential furnishings

WestWeek 89

critical choices:

intuition
and reason
in the
design process

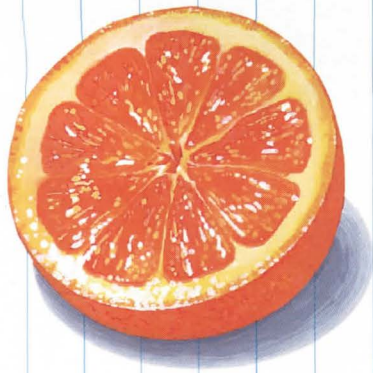
March 29, 30, 31, 1989

Pacific Design Center

Los Angeles

For registration information, please write:

WestWeek 89
Pacific Design Center
8687 Melrose Avenue
Los Angeles, CA 90069



**ONE FURNITURE SYSTEM
FITS YOUR DESIGN NEEDS
FROM EVERY ANGLE.**

WESTINGHOUSE.



The growing challenge for designers is to accommodate people in technical work areas, while maintaining the aesthetics of the key design elements.

That's where Westinghouse can help, with Centerline Radial Clusters,[™] the system concept that addresses com-

puter and telecommunications task functions...efficiently and beautifully.

The "wrap-around" style workstation brings people within easy reach of equipment and materials. And the design flexibility of Westinghouse gives you unlimited options while saving you valuable floor

space. Centerline Radial Clusters, getting the most out of performance and design.

For details, call your Westinghouse dealer or contact Westinghouse Furniture Systems, 4300 36th St., S.E., Grand Rapids, Michigan 49508, **1-800-445-5045.**

You can be sure . . . if it's Westinghouse

Circle No. 370 on Reader Service Card



Showroom Directory

March

29

30

31

WestWeek 89

B527 Alba Industries
213/659-9160
B377 Allsteel
213/659-2000
B134 American Seating
213/652-6531
B241 Arc-Com Fabrics
213/659-0376
G176 Architex International
213/659-0958
G281 Armstrong
213/659-9566
B250 Atelier International
213/659-9402
B525 Baker, Knapp & Tubbs
213/652-7252
G294 Benedetti Corp.
213/659-2930
G387 Bernhardt
213/652-8600
B504 Boyd (Kneeder-Fauchere)
B209 Brueton (Salem Assoc.)
213/659-1434
B309 Brayton International
213/652-3152
B653 Brunschwig & Fils
213/659-9800
B682 Manuel Canovas
213/657-0587
B605 China Seas
213/854-1030
B146 Conde House (Janus et Cie)
B110 CorryHiebert
213/657-6051
B213 DesignTex Fabrics West
213/659-9900
G196 Donghia
213/657-6060
G469 ERG International
213/652-3566
B338 Eldon Office Products
213/659-2221
B226 Executive Office Concepts
213/659-6566
B267 Fixtures Furniture
213/659-8302
B245 Forms + Surfaces
213/659-9566
B253 Geiger International
213/659-7411
B200, B300 GF Office Furniture
213/655-0001

G393 Gunlocke
213/657-8922
B261 Harter Contract
213/657-5780
B444 Hastings Tile & Il Bagno
(Zone)
213/652-7360
B193 Haworth
213/652-2210
B396 Howe
213/657-0800
B239 ICF/Unika Vaev
213/659-1387
B260 Interna Designs
213/657-1391
B146 Janus et Cie
213/652-7090
G480 Kimball/Artec
213/659-1543
B600 Kneeder-Fauchere
213/855-1313
B203 Knoll International
B482 Knoll Studio
213/658-8686
B639 Koch + Lowy/PAF
213/659-5660
B404 George Kovacs (Kenro
Light)
213/659-6510
B222 Krueger International
213/659-2133
B146 Kusch U.S.A. (Janus et Cie)
B601 Jack Lenor Larsen
213/659-7770
B678 LeeJofa/Groundworks
213/659-7777
B384 Lees Carpet (Paul Singer)
213/657-8101
B209 Lunstead (Salem Assoc.)
213/659-1434
B370 Maharam/Vertical Surfaces
213/659-9575
G192 Massini
213/652-1060
BM-16 Meridian (Coordinated
Resources)
213/655-8421
B362 Metropolitan
213/659-4981
B229 Herman Miller
213/659-7600

B298 Modern Mode
213/659-3192
B261 Modular Designs
213/652-3374
B275 Monteverdi-Young
213/659-7220
G288 Mueller Furniture
213/854-5867
M11 Nienkämper
213/659-0733
B373 Panel Concepts
800/422-2101
G387 Pleion Corp.
213/652-9715
B119 Poggenpohl
(La Cuisine 2000)
213/652-3472
B211 Ben Rose
213/655-8790
B499 Saxony Carpet
(Schumacher)
G886 Scalamandré
213/278-2050
B499 F. Schumacher
213/652-5353
B368 Shaw-Walker
213/659-2299
B629 Stark Carpet
213/657-8275
B305 Steelcase
213/659-5005
B201 Stendig/Vitra Seating
213/659-7955
B380 Stow & Davis
213/659-5005
B526 Stroheim & Romann
213/659-7700
B206 SunarHauserman
213/657-2030
B382 Taylor Companies
213/854-5867
B274 Thonet/Madison
213/657-8687
G385 Vecta
213/657-0683
G380 Westinghouse Furniture
Systems
213/659-4280

Avenues of Design and other locations

American Standard

116 No. Robertson Blvd.
213/657-7600

Artemide

4200 Sepulveda Blvd.
Culver City, Calif.
213/836-1572

Gretchen Bellinger at

J. Robert Scott & Associates
8737 Melrose Ave.
213/659-4910

Cumberland at

Alberti Associates
23755 Vista Azul
Capistrano Beach, Calif.
714/661-4088

Davis Furniture at

Source
1441 Butler Ave.
213/477-2744

Domore

8739 Melrose Ave.
213/659-1827

Dunbar at

Panageas/Shannen
120 So. Robertson Blvd.
213/652-5450

Harden

1041 Bonnie Ann Ct.
213/694-1506

Kinetics at

Panageas/Shannen
120 So. Robertson Blvd.
213/652-5450

LigneRoset

8840 Beverly Blvd.
213/273-5425

Pace Collection

8996 Beverly Blvd.
213/273-5901

Palazzetti

9008 Beverly Blvd.
213/273-2225

Unifor at

Palmer & Co.
554 Norwich Ave.
213/657-7101

Xception at

A & M Marketing
7280 Melrose Ave.
213/937-0492

Schedule of Events

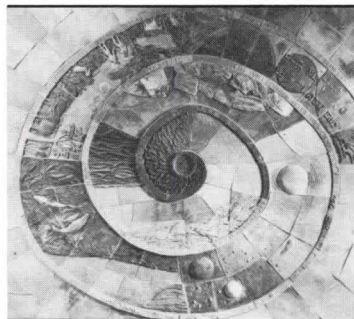
WestWeek 89

March

29

30

31



Maquette for Sackler Wing Mural, Smithsonian Institution, on view in Architectural Art.

Exhibitions (March 28-31)

Architectural Art: Affirming the Design Relationship.

Organizer: American Craft Museum, New York (see P/A, July 1988, p. 28).

French Tradition in L.A.

Organizers: Association pour la Sauvegarde et la Promotion du Patrimoine Français under the auspices of the French Trade Commission, Los Angeles

Best in Museum Graphics: Eighteenth Annual Design Competition. Organizers: The American Federation of the Arts

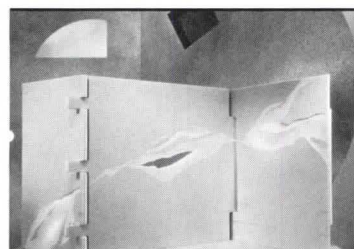
Architectural Elements Take on Graphic Design

Organizer: Kirsten Kiser Gallery for Architecture, Los Angeles

From Table to Tablescape, featuring "Water Palace," designed by Sheila Klein and A2Z

Organizer: Susan Grant Lewin and Design Communications International

Designing Textiles: Intuition/Reason
Organizer: Association of Contract Textiles

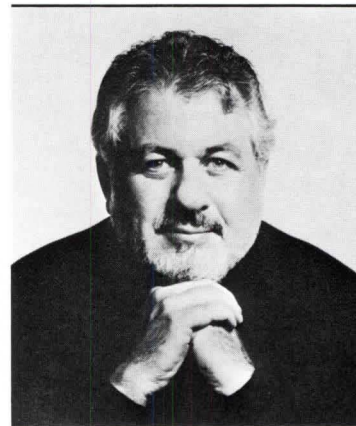


Billie Tsien's glass screen design for "From Tables to Tablescapes."

Wednesday, March 29

8:30 A.M.—9:15 A.M.

"Access to Information in the Design Process." Introduction: Richard T. Norfolk, President, Pacific Design Center. Speaker: Richard Saul Wurman, FAIA, Creative Director, Access Press Limited and The Understanding Business, Inc.



Richard Saul Wurman

9:45 A.M.—10:45 A.M.

"Intuition & Reason: A Balancing Act in the Learning Process, Part I." Introduction: Michael H. Bourque, National President, Institute of Business Designers. Speaker: Michael Gelb, Director, High Performance Learning, Washington, D.C. Sponsor: IBD, Southern California Chapter; Monsanto.



Jeffrey Chusid

11:15 A.M.—12:00 P.M.

"Restoration: In India, Nepal, Katmandu, and Los Angeles and the Houses of Frank Lloyd Wright."

Introduction: Jay Rounds, Executive Director, Los Angeles Conservancy. Speakers: John Sanday, AIA, Program Officer, Getty Grant Program for Architectural Conservation, J. Paul Getty Trust; Jeffrey Chusid, AIA, Administrator, Frank Lloyd Wright's Samuel and Harriett Freeman House.

2:00 P.M.—3:00 P.M.

"Choices in Detailing in the Design of Interiors." Introduction: Joyce MacRae, West Coast Editor, HG. Moderator: Nancy Novogrod, Editor-in-Chief, HG. Speakers: Brian Murphy, Architect; Mark Hampton, ASID, Interior and furniture designer. Sponsors: HG, Mirak.

2:00 P.M.—3:00 P.M.

"Intuition and Reason: A Balancing Act in the Learning Process, Part II." Introduction: Anne Fallucchi, Editor/co-Publisher, Facilities Design and Management. Speaker: Michael Gelb, Founder/Director, High Performance Learning.

3:30 P.M.—4:30 P.M.

"Designing Textiles: Intuition and Reason." Introduction: Walter E. Brown, Publisher, Designers West. Moderators: Debbi Baron, Designer, Gensler & Associates; Jill Cole, Designer, Cole Martinez Curtis. Speakers: Adriana Bitter, Designer, Scalamandrè; Kristie Strassen, Designer, Hendrick Textiles; Hazel Siegel, Designer, Design-Tex; Richard Wagner, Designer, Knoll Textiles; Sina Pearson, Designer, Unika Vaev. Sponsors: Association of Contract Textiles, Designers West.

5:00 P.M.—6:00 P.M.

"Daily Dialogue with the WESTWEEK Speakers." Chair: Daralice D. Boles, Senior Editor, Progressive Architecture. Participants: Jeffrey Chusid, AIA; Michael Gelb; Mark Hampton, ASID; Brian Murphy; John Sanday, FAIA; Jean-Michel Wilmotte; Richard Saul Wurman, FAIA.

Thursday, March 30

8:00 A.M.—10:30 A.M.

"Will the New Administration Work for the Pacific Rim?" Welcome:

Richard Norfolk, President, Pacific Design Center. Introduction: Beth Brown, President, PDC2, Contract Manufacturers Association. Part I: "A View from Washington." Sam Donaldson, Chief White House Correspondent, ABC News.



Kathleen K. Wiegner

Part II: "The California Viewpoint." Howard Fish, President and Editorial Director and Michael Kolbenschlag, Editor-in-chief, *California Business*; Ronald Grover, Los Angeles Bureau Manager, *Business Week*; Steve L. Hawkins, West Coast News Manager, *U.S. News & World Report*; Kathleen K. Wiegner, Senior Editor, *International Technology*, *Forbes*. Sponsors: *California Business*, Pacific Design Center.

9:00 A.M.—10:15 A.M.

"Designers West Designer of the Year: Kalef Alaton." Introduction: Carol Soucek King, Ph.D., Editor-in-Chief, *Designers West*. Speaker: Kalef Alaton, Designer. Sponsor: *Designers West*.

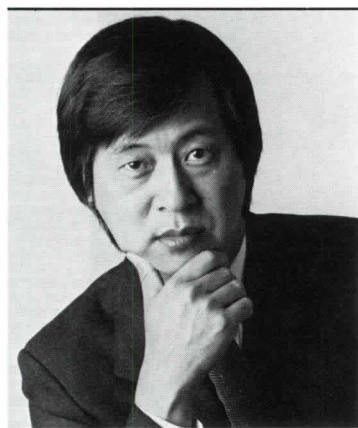
11:15 A.M.—12:15 P.M.

"Leaders . . . The Strategies for Taking Charge." Introduction: Muriel Chess, ASID, Editor, *Professional Office Design*. Speakers: Dr. Warren Bennis, Ph.D., Distinguished Professor of Business Administration, University of Southern California. Sponsors: IFMA, Steelcase.

2:00 P.M.—3:00 P.M.

"Hospitality Design in Japan, France, and the United States." Moderator: M.J. Madigan, Editor-in-Chief, *Restaurant & Hotel Design*.

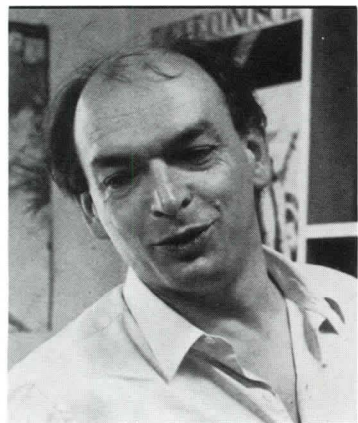
Speakers: Ted Tokio Tanaka, AIA, Architect; Jean-Michel Wilmotte, Architect. Sponsor: Mirak.



Ted Tokio Tanaka

3:00 P.M.—4:15 P.M.

"Home Psych: Psychology Motivations in Residential Decorating." Introduction: Jean Penn, Senior Editor, *Los Angeles*. Moderator: Joan Kron, Editor-in-Chief and author, *Avenue and Home Psych: The Social Psychology of Home and Decoration*. Speakers: Kalef Alaton, Designer; John Saladino, Designer.



Jean Nouvel

3:30 P.M.—4:45 P.M.

"Important Contemporary Directions in Global Architecture." Introduction: Sam Hall Kaplan, Design Critic, *Los Angeles Times*. Moderator: Richard Weinstein, Dean, Graduate School of Architecture and Urban Planning, University of California, Los Angeles. Speakers: Kisho Kurokawa, Architect; Ricardo

Legorreta, Architect; Jean Nouvel, Architect. Sponsor: AIA, Los Angeles Chapter.

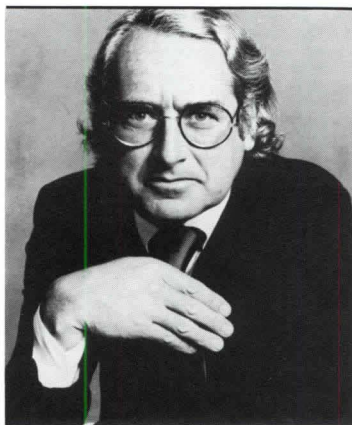
5:00 P.M.—6:00 P.M.

"Daily Dialogue with WESTWEEK Speakers." Chair: Stanley Abercrombie, AIA, Editor, *Interior Design*. Participants: Kalef Alaton; Kisho Kurokawa; Ricardo Legorreta, Jean Nouvel; John Saladino; Ted Tokio Tanaka, AIA; Jean-Michel Wilmotte.

Friday, March 31

9:00 A.M.—10:15 A.M.

"Architecture for Southern California's New Museums." Introduction: Susan Szenasy, Editor, *Metropolis*. Moderator: Paolo Polledri, Curator of Architecture and Design, San Francisco Museum of Modern Art. Speakers: Richard Meier, AIA; Renzo Piano, AIA, RIBA. Sponsor: Knoll International.



Richard Meier

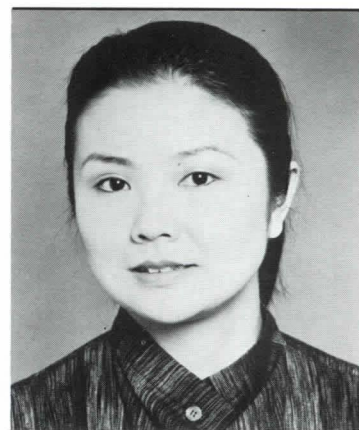
10:45 A.M.—12:00 P.M.

"Graphic Design: East Collides with West." Introduction: April Greiman, Designer and President, American Institute of Graphic Artists, Los Angeles Chapter. Speakers: Tibor Kalman, Principal, M & Co.; Marc Treib, Professor of Architecture, University of California, Berkeley. Sponsor: AIGA, Los Angeles.

2:00 P.M.—2:45 P.M.

"Interiors and Products Inspired by Japan." Introduction: Annetta Hanna, Editor, *ID*. Speakers:

Toshiko Mori, AIA; Shigeru Uchida, Architect. Sponsor: ASID Industry Foundation.



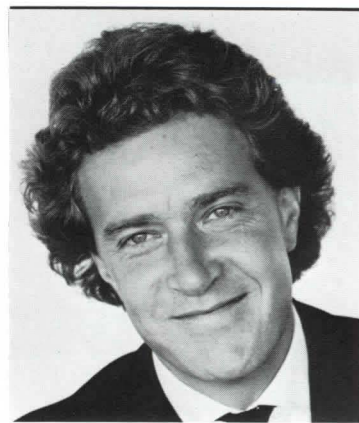
Toshiko Mori

3:15 P.M.—4:30 P.M.

"The Design of Artists' Studios in Los Angeles: Art and Architecture." Moderator: Joanne Jaffe, Editor, *Angeles*. Speakers: David Hockney, Artist; Ed Moses, Artist; Elyse Grinstein and Jeffrey Daniels, AIA, Partners, Grinstein/Daniels, Inc.; Steven Ehrlich, AIA. Sponsor: *Angeles*.

5:00 P.M.—5:30 P.M.

"An Unveiling: A New Sculpture by Mauro Staccioli." (Champagne reception sponsored by *L.A. Style* will follow.) Introduction: Hugh M. Davies, Director, La Jolla Museum of Contemporary Art. Artist: Mauro Staccioli, Milan. Sponsors: Italian Cultural Institute, Du Pont, Ramada West Hollywood.



Hugh M. Davies

“Our business is built on long-term relationships, not just orders. We’ve found that the only way to keep our customers satisfied over the long run is through dealers who take good care of them—whenever, for whatever reason.

“Sometimes, prospective clients ask: ‘Why can’t I deal with Steelcase® directly? Why do I have to go through a dealer?’

“I tell them: ‘Sure, we could get you the furniture. But next week, next year, if something breaks or you need to reconfigure, where do you go?’

“If we told you we could serve you out of Grand Rapids, we’d be lying. So would anybody else who told you they could do it long distance.

“But your Steelcase dealer is down the street. You call them up, they send

somebody right over. They’re your office environment resource.

“We work together with our dealers and our customers as a team. If you’ve got a complaint against the dealer, you’ve got a complaint against Steelcase.

Whatever the problem, we’ll solve it together.

“Every so often one of our competitors will redo their whole distribution system, trying to find our secret. The secret is having a dealer in your hometown whose livelihood depends on servicing your business.

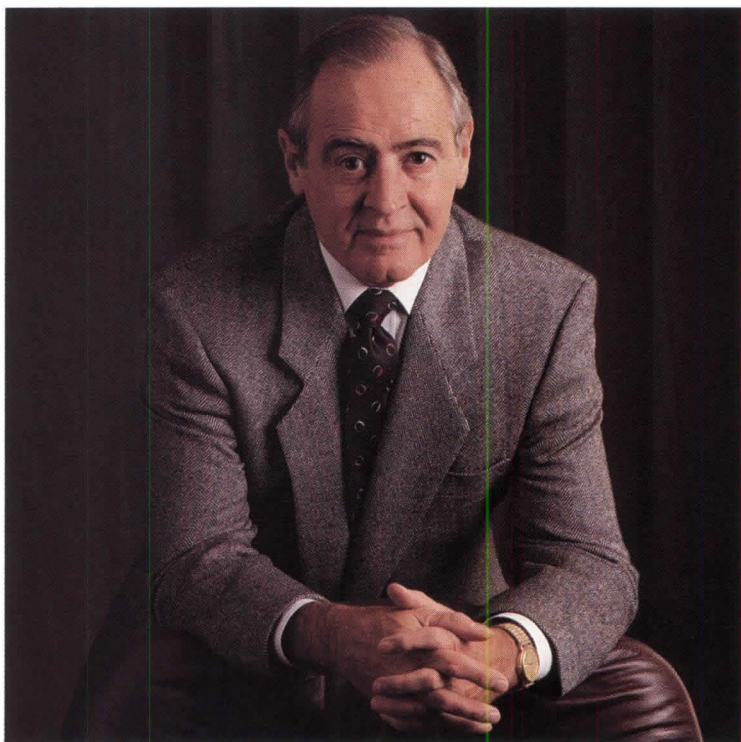
“And that’s why, if someone puts it to me, ‘Either take our order direct or we don’t do business,’ I have to say, ‘Well, it’s been nice talking with you...’

“That’s it, chapter and verse.”

Being frank.

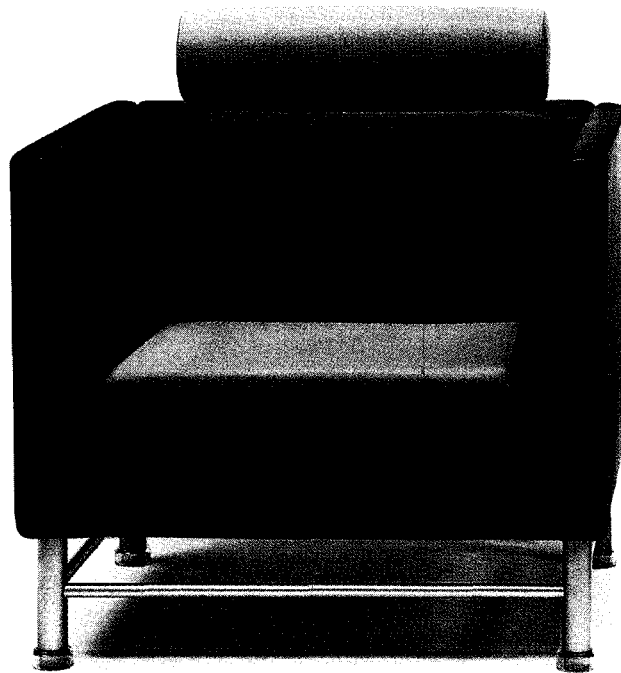


Frank H. Merlotti
President & CEO



Steelcase
The Office Environment Company™

For more information, call 1-800-333-9939



Presenting the
Eastside Lounge Chair
designed by
Ettore Sottsass.



Presenting the
you-know-what chair
designed by
you-know-who.

KnollStudio

Introducing the Eastside Lounge Chair by Ettore Sottsass. Re-introducing the 1929 Barcelona Chair by Mies van der Rohe.
Two of the 87 new and classic designs that are now a new collection from Knoll.

Circle No. 343 on Reader Service Card

Product Introductions

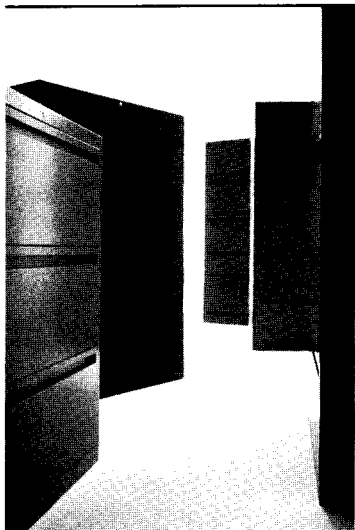
March

29

30

31

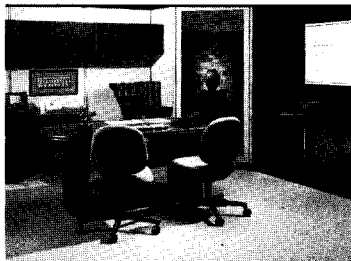
WestWeek 89



Allsteel

Lateral files are one option in Allsteel's paper management system. The files are available in various sizes, and interior drawer configurations can accommodate different paper sizes.

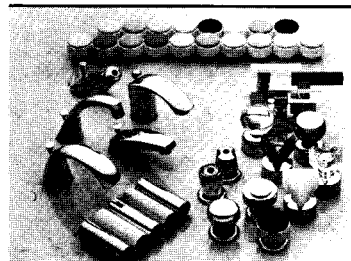
Circle 100 on reader service card



American Seating

Invitation is a new furniture system sharing the frame-and-insert construction of System R, thus allowing a furniture progression within a facility. It is made of veneer-clad wood.

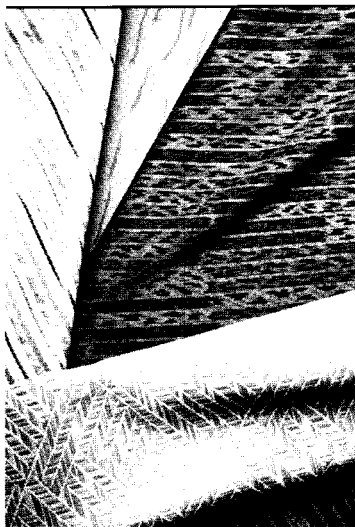
Circle 101 on reader service card



American Standard

Additions to the Amarilis line of faucets, new handles, and spouts, which are available in chrome, gold, polished brass, white, and bone. Five new ceramic colors have also been added for the inserts.

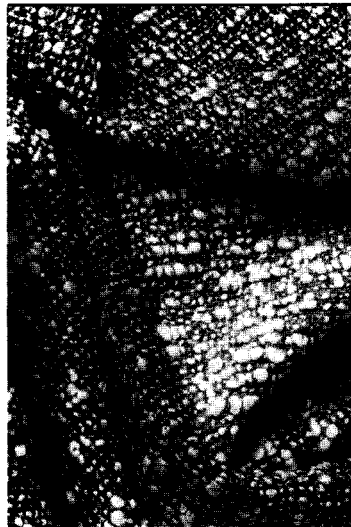
Circle 102 on reader service card



Architex

Four new patterns, Tamaro, Brushstrokes, Garenza, and Imagination, from the Liz Jordan-Hill line, match overdyed coloration with yarn combinations such as viscose and polyamide. The fabrics are 54 inches wide.

Circle 103 on reader service card



Arc-Com

Fresco Wool, a 98 percent wool and 2 percent nylon upholstery fabric, is offered in eight colorways. Multicolored yarns create a hand-woven textured look.

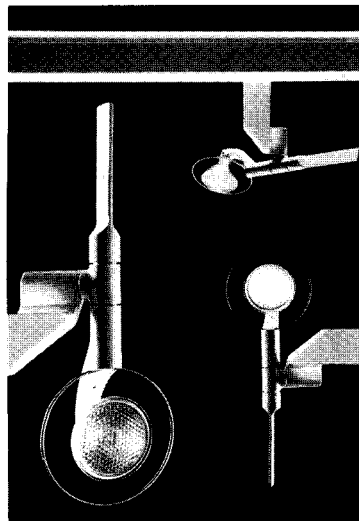
Circle 104 on reader service card



Armstrong

Syllables Grid Accents (System J) is a family of acoustical ceiling panels that can create many custom design variations. The accent provides a focus at the grid intersections.

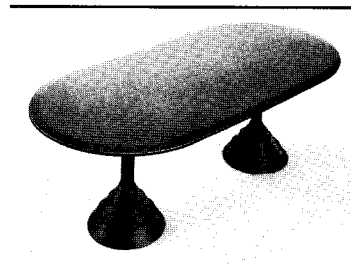
Circle 105 on reader service card



Artemide

The Argo system, designed by Richard Sapper, consists of an aluminum extrusion track and a die-cast aluminum spotlight, which revolves in all directions. Both are finished in white epoxy paint and are suitable for shop windows and galleries.

Circle 106 on reader service card

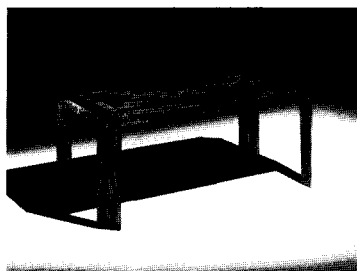


Atelier International

Cassina Research and Design Group of Milan designed the Ingot Table Collection. Modular cast-iron bases allow over 12,000 standard shape, size, height, finish, and edge options.

Circle 107 on reader service card

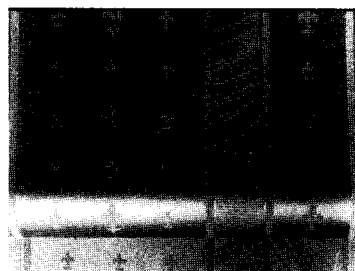
WestWeek 89



Baker Executive Office

The Pfister Collection includes a table desk, a swivel chair, and a credenza. The desk is made of figured Pomelle and quartered mahogany with American walnut inlays.

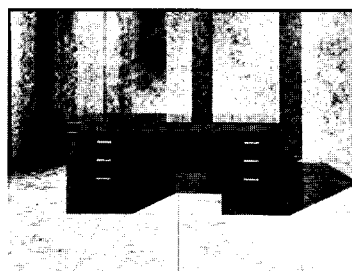
Circle 108 on reader service card



Gretchen Bellinger

Royale Royale™ is a 100 percent wool damask suited for medium duty upholstery, window applications, and wall installations. The fabric is available in tones of ivory, travertine, and silver.

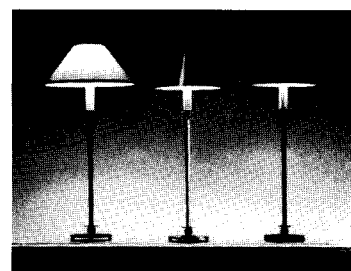
Circle 109 on reader service card



Bernhardt

Designed by Davis Allen, Brandon is a double pedestal desk that stands 30 inches high. A coordinating table desk is also available.

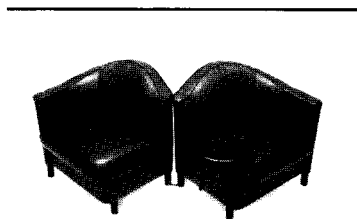
Circle 110 on reader service card



Boyd

The St. Regis brass lamp features a sloped shade, accommodates incandescent bulbs, and is finished in polished brass, polished chrome, silver, granite, or green.

Circle 111 on reader service card



Brayton

The Club unit consists of two pieces joined by a hinge that allows the pieces to pivot, offering separate seating, or a matched two-seat version. An optional table, a chair, and two sofas make up the collection.

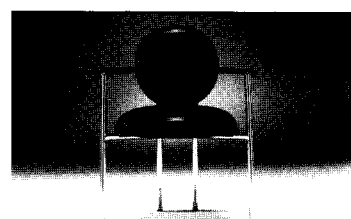
Circle 112 on reader service card



Brickel

Timothy de Fiebre designed the Emile chair, named after Jacques-Emile Ruhlmann. Features include cherry legs and upholstery detailing.

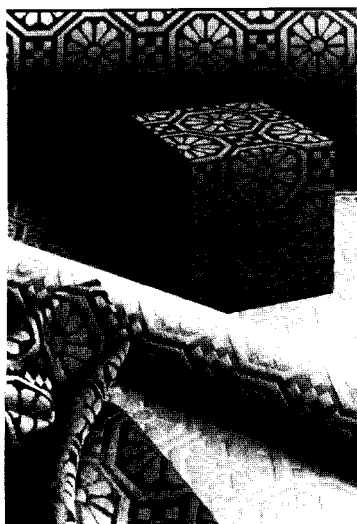
Circle 113 on reader service card



Brueton

Stanley Jay Friedman's Moon Chair design was inspired by Frank Lloyd Wright and by Japanese architecture. Both the upholstery and the stainless steel frame are available in a variety of choices.

Circle 114 on reader service card



Brunschwig & Fils

Clinton Damask features a stylized daisy in an octagon. The new pattern is available in eight colorways, both monochromatic and two-color.

Circle 115 on reader service card



Carnegie

The Nuance collection includes five designs. Special jacquard looms allow the use of 16 different colors in the filling direction; 28 colors are available in all.

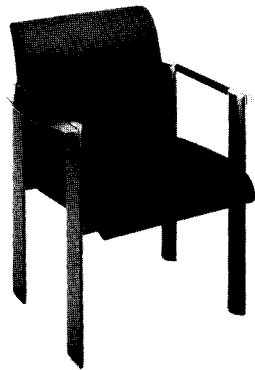
Circle 116 on reader service card



China Seas

Natik and Seya are hand-screened on 100 percent linen in coordinating colors. Natik was adapted from an Indonesian motif and Seya was designed by Bill Blass and Geoffrey Beene.

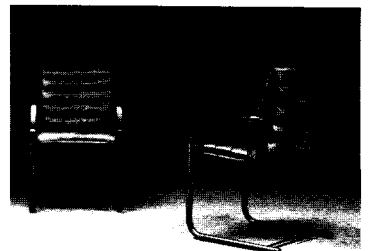
Circle 117 on reader service card



Conde House

Paul Haigh designed Regent, a wood-framed stacking side chair that complements the Kiwara Table series. Finishes include both wood and color options.

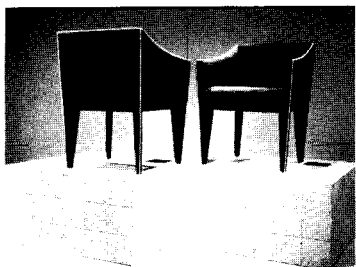
Circle 118 on reader service card



Cumberland

Niko, a new conference/dining chair designed by Berghold Voges, features solid wood arms, which can be finished in mahogany or black. The base is steel with a black baked finish.

Circle 119 on reader service card



Davis Furniture

Smith/Choros designed this seating group, consisting of a chair and sofa series, to fit into smaller office spaces. The solid walnut taper leg is accentuated by the contrasting welt.

Circle 120 on reader service card



Domore

System Seven was developed by architect Robert Reuter. Recent modifications include an integrated electrical system, double-walled solid steel pedestals, and resized work surfaces.

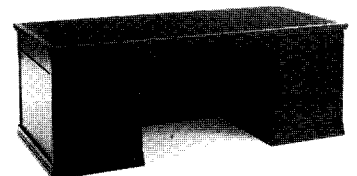
Circle 121 on reader service card



Donghia Furniture

The San Marco sofa is part of the new Rococo collection, designed by John Hutton and inspired by 18th-Century Italian designers. The collection includes the Luciano Club chair and Danieli Day Bed.

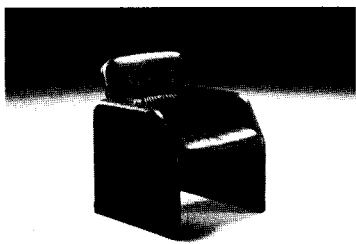
Circle 122 on reader service card



Dunbar

The 2200 Desk collection, designed by the Enloen Summers Group, combines solid cherry wood with diamond-shaped ebony pulls. The two-pedestal desk measures 77 inches long and stands 29½ inches high.

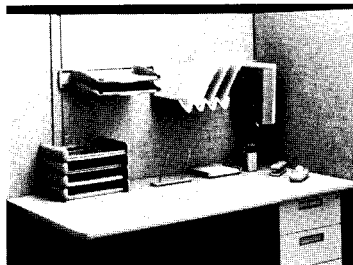
Circle 123 on reader service card



ERG International

The Annie collection is available in single-, two-, and three-seat versions. The lounge features elasticized seat and back panels, tailored seams, and a slanted seat cushion for optimum leg circulation.

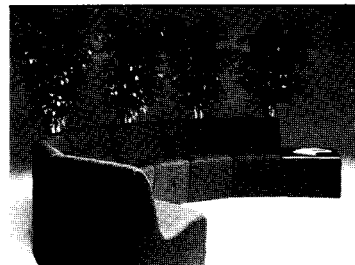
Circle 124 on reader service card



Eldon

Eldonwal is a series of organizers, including letter trays, sorters, files, and shelves, which utilize wall space. The series is available in three-, four-, and five-foot starter sets, as well as individually.

Circle 125 on reader service card



Executive Office Concepts

A fully upholstered system, 2000 Modular Seating can create rectilinear, curved, and free-formed seating. A variety of seat widths, bench, and table units may be specified.

Circle 126 on reader service card



Fixtures Furniture

Albi, an armless color seating system designed by Don Albinson, features a wraparound back that forms short, upturn armrests. Various models may be specified.

Circle 127 on reader service card



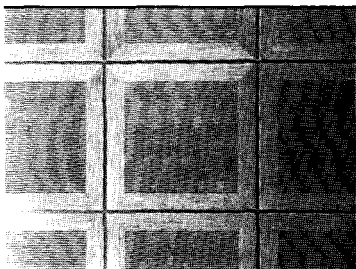
March

29

30

31

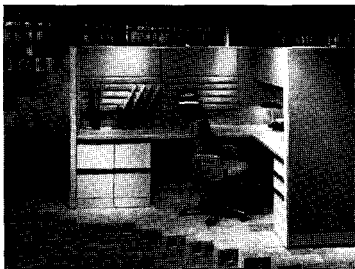
WestWeek 89



Forms + Surfaces

Wood Panel ceilings are lay-in panels for a 2' x 2' T-bar grid, featured in plain or diamond face, or in band with border. Red oak, oak/teak, mahogany, and gray axially-laminated veneers may be specified.

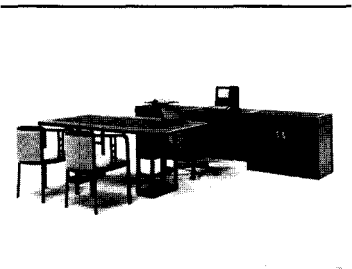
Circle 128 on reader service card



GF Office Furniture

The Stratum Panel System offers workstation customization with a variety of components that use the desk as a foundation. Data Wall offers a complete collection of paper management components and accessories.

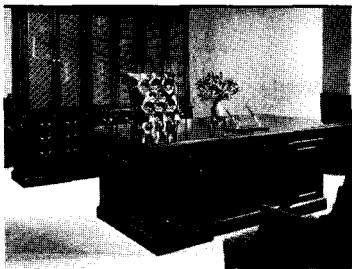
Circle 129 on reader service card



Geiger International

Jugendstil is a collection of executive furniture recreated from original designs by Josef Hoffmann and Koloman Moser. The collection's many pieces are available in red, black, and natural mahogany finishes.

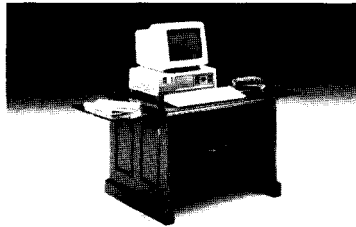
Circle 130 on reader service card



Gunlocke

Traditional casegoods use historic elements like ogee tops, plinth bases, and detailed grille doors, trim molding, and period hardware. The hand-rubbed cherry finish is available in four colors.

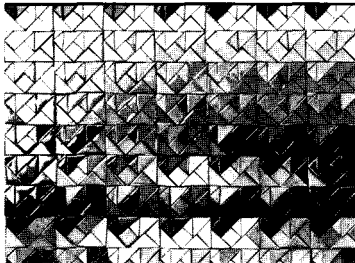
Circle 131 on reader service card



Harden

The Computer Support Table extends working space by providing pull-out slides on both sides. The table is made of solid cherrywood, available in eight finishes, and accompanies traditional desks and credenzas.

Circle 132 on reader service card



Hastings Tile & Il Bagno

The Cotto Nef collection consists of 13 patterns of multisized and shaped tile sections. Custom-assembled and mesh-mounted, the 12-inch-long sections can be used as borders or joined to create wall murals.

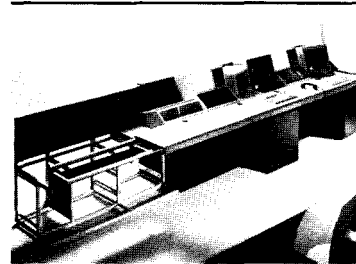
Circle 133 on reader service card



Haworth

The Catalyst® Task Stool features a knee-tilt/cantle mechanism. The seat and the foot ring adjust independently to accommodate any work surface.

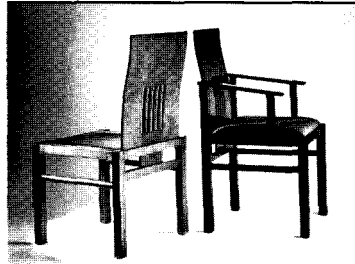
Circle 134 on reader service card



ICF

Gerd Althofer designed Axial to accommodate communications equipment. The steel frame and modular workstations can be configured into single or double rows, or small workstations.

Circle 135 on reader service card



Interna

Richard Penney designed the Next chair. Available in a wide choice of finish combinations, the chair is made of solid maple, with a molded plywood back that is contoured to provide support with a small amount of flex.


Circle 136 on reader service card



Kimball/Artec

The highback Executive is a new addition to the Connex selection of chairs. Each model features a fully upholstered shell and upholstery-wrapped open armrests and may be specified to match accompanying finishes.

Circle 137 on reader service card



Bacchus wool damask on the Régence chair, worthy of the executive suite

Brunschwig & Fils

75 Virginia Road, North White Plains, New York 10603 Through architects and interior designers.

Circle No. 319 on Reader Service Card

Brandon

Casegoods

Series.

Designed

by

Davis Allen/GN

for

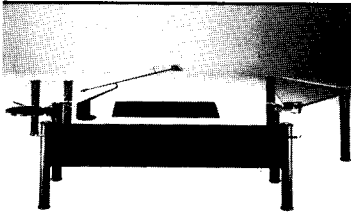
Bernhardt.

Circle No. 318



B E R N H A R D T

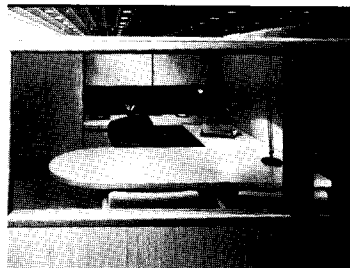




Kinetics

The Ring desk allows removable molded rings in both front legs to be replaced with supports for side top returns and various accessories. The desk top is tempered glass; a black leather desk pad is offered.

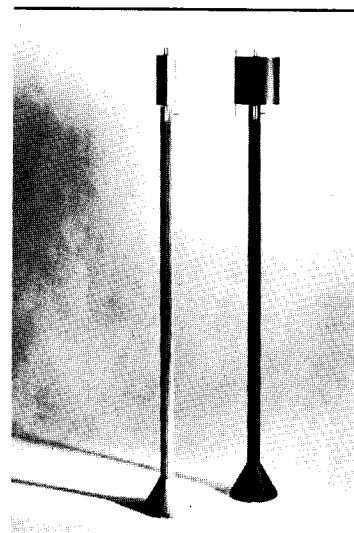
Circle 138 on reader service card



Knoll

The Morrison Window is an addition to the Morrison System. It can be installed as an individual window, in a high/low configuration, or in a clerestory. Clear, smoked, or tempered glass may be selected.

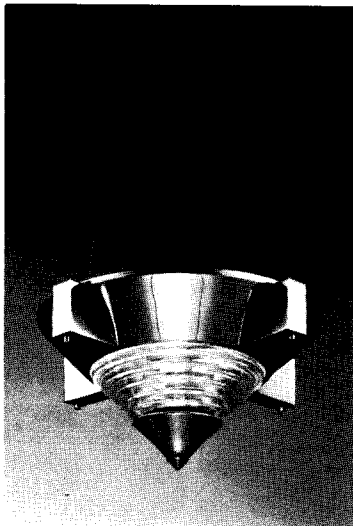
Circle 139 on reader service card



Koch + Lowy

The Gibraltar floor lamp, designed by Piotr Sierakowski, is finished in aluminum or black with stainless steel rods. It is 74 inches tall and features a hi-low switch.

Circle 140 on reader service card



George Kovacs

Architect Kevin Schopfer designed the Zarno lighting series, available as a table lamp, floor lamp, torchiere, or pendant. It is finished in polished brass, with a matte black and brass base and stepped glass shade.

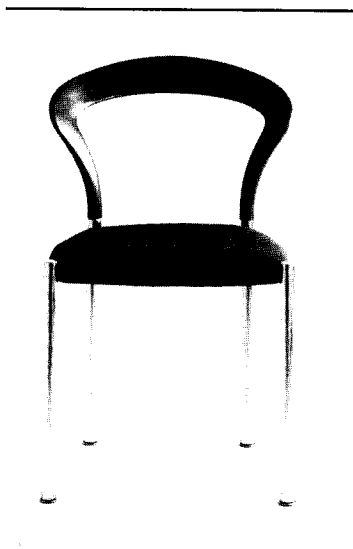
Circle 141 on reader service card



Krueger International

The Piretti stack chair offers responsive ergonomics through its back and seat, which move in tandem, adjusting to the user's weight. Seven frame finishes are available and the seat and back can be upholstered or polypropylene.

Circle 142 on reader service card



Kusch USA

The Lotus stacking chair combines a steel frame with a molded wood back. The chair is available in a range of aniline dyes, woodtone stains, powder coats, and chrome finishes.

Circle 143 on reader service card



Jack Lenor Larsen

James Howell designed the Elan Chair, useful for occasional and dining seating. It is a fully upholstered design and is 31 1/4 inches high.

Circle 144 on reader service card

Tailored Responses For Your Special Needs



System R's chemistry
brings life to the
laboratory.



**Acton Stackers® and
Solar Tables** team up
for a cordial cafeteria.



**System R® lends
order to high-tech
assembly.**

**Centrum® adds drama
to the auditorium.**



Whether you choose to specify System R and BioChairs® for a variety of office needs and looks, or Centrum for an auditorium, or Acton Stackers and Solar Tables for a dining area, or TEChairs® and furniture systems for a laboratory ... the broad range of tailored responses from American Seating will help you give special attention to many of the most challenging areas in your next project.

Over a hundred years of designing and building quality into tailored furniture for people at work make American Seating the responsive and responsible resource for your diverse and specialized needs. Take a closer look.



AMERICAN SEATING

Interior Systems Group

Support Systems for Responsive Working Environments™

For a closer look at a variety of tailored responses for your special needs, write American Seating Co., 901 Broadway N.W., Grand Rapids, Michigan 49504; or call 800-253-8104.

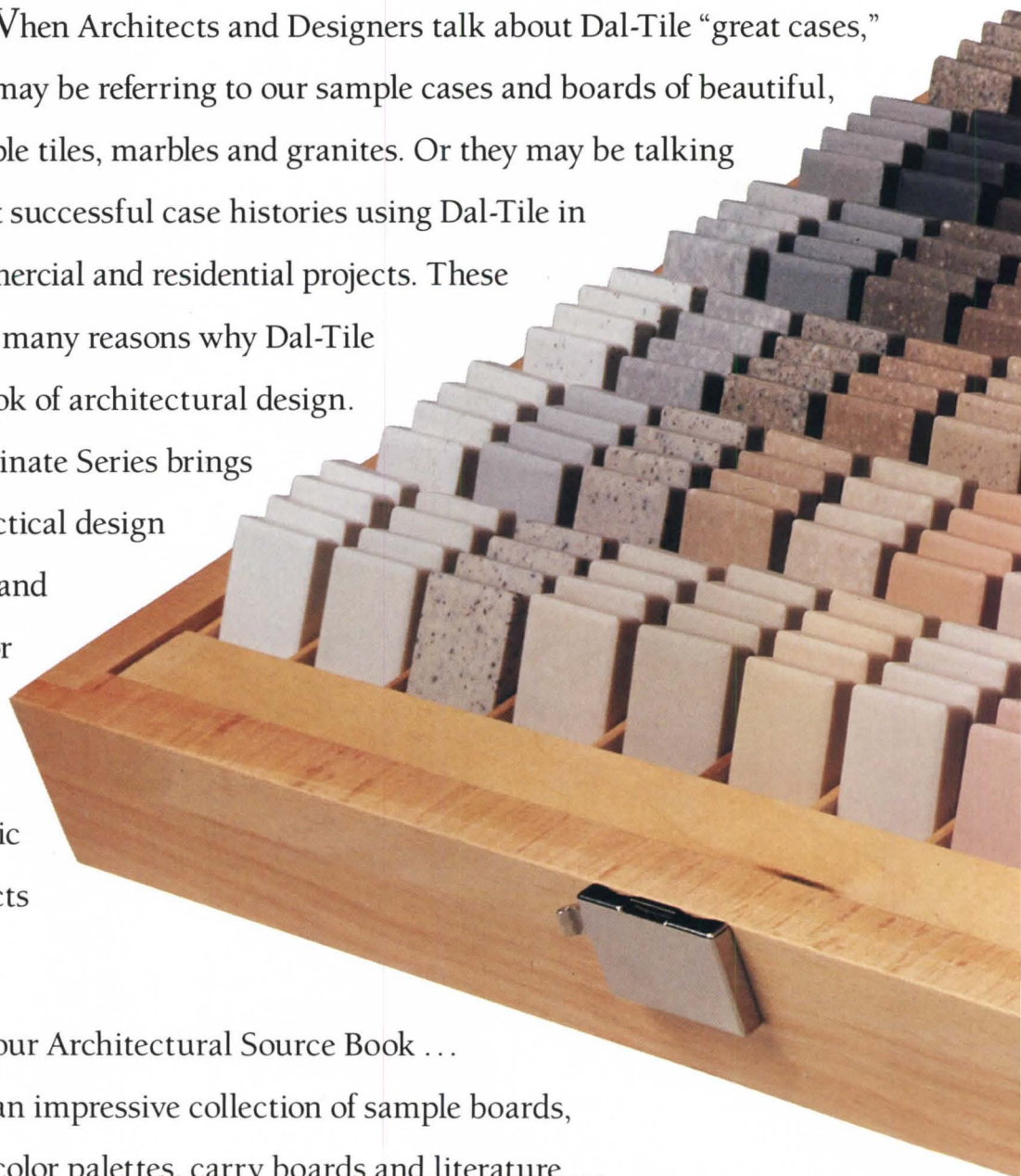
We've Put Together A Great Case For Using Dal-Tile.



When Architects and Designers talk about Dal-Tile "great cases," they may be referring to our sample cases and boards of beautiful, durable tiles, marbles and granites. Or they may be talking about successful case histories using Dal-Tile in commercial and residential projects. These

great cases are just two of the many reasons why Dal-Tile complements the changing look of architectural design.

Case in point: The Dal-Coordinate Series brings together a new concept in practical design with Dal-Duramics wall tiles and Dal-Keystone Coordinate floor tiles for perfect grout joint alignment. Dal-Tile backs up its spectacular array of ceramic tiles and natural stone products with great resources ...




- ☑ our Architectural Source Book ...
- ☑ an impressive collection of sample boards, color palettes, carry boards and literature ...
- ☑ a nationwide network of architectural representatives just a toll-free phone call away.

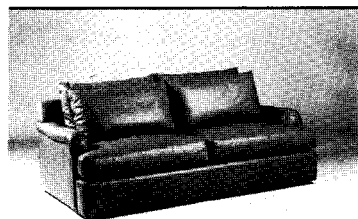


Hundreds of technically and creatively trained Dal-Tile personnel are ready to meet your sample requirements and help spark your creative genius. Call Architect/Designer Assist Line today: (800) 527-1

THE EXCITING WORLD OF

DAL-TILE

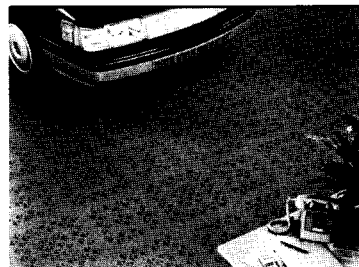
A participant in the Kohler Color Coordinates Program.  Progressive Architecture



Lee Jofa

The Tuscan couch, designed for residential and office applications, features deep cushioning and club-arm styling. It is available in a variety of fabrics and stands 29 inches high.

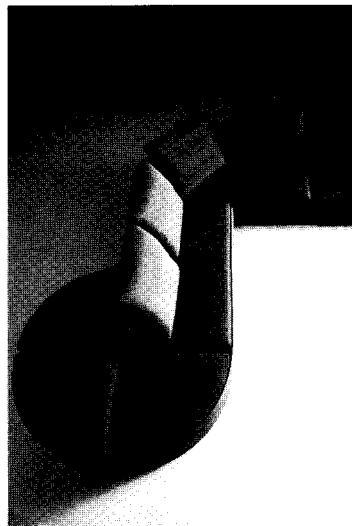
Circle 145 on reader service card



Lees Commercial Carpets

Patterned carpet tiles offer four textures, including loop pile and frieze, dimensions to fit an 18-inch or a 24-inch grid, and custom pattern capabilities.

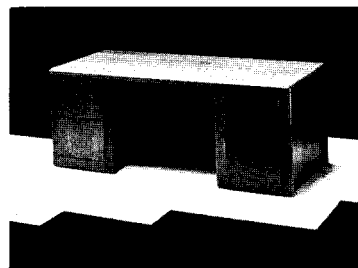
Circle 146 on reader service card



LigneRoset

Designed by Annie Hieronimus, the Scala collection has elements that can be grouped in many combinations. Each piece has piping along the length, as well as edging on each cushion.

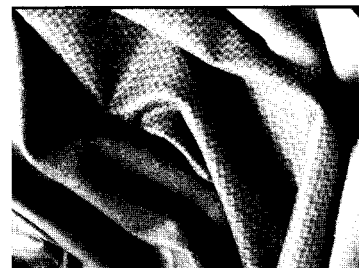
Circle 147 on reader service card



Lunstead

The Palladia casegood series, a traditional collection designed by Larry Rouch, may be specified in walnut or cherry veneers in eight standard finishes.

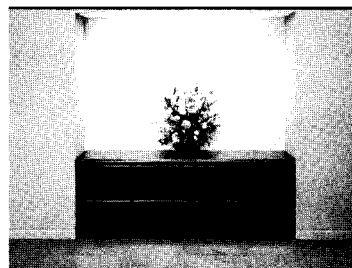
Circle 148 on reader service card



Maharam

Wool Chromatics is a new wool and wool blend upholstery collection, which consists of six patterns. The collection offers 164 color choices, and contains Wool Broadcloth Solid, available in 64 colors.

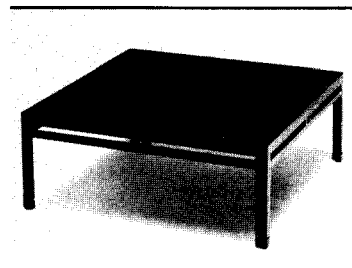
Circle 149 on reader service card



Meridian

The Stackable Storage System of modules, tops, and bases can be stacked on top or alongside each unit. The exterior surfaces are finished in nonglare, embossed steel matte, available in 37 standard colors.

Circle 150 on reader service card



Metropolitan

The Manhattan collection features unique frame details and consists of side chairs, lounge chairs and settees, occasional tables, conference tables, and credenzas.

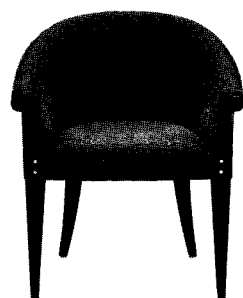
Circle 151 on reader service card



Herman Miller

Ethospace support cabinets are multifunctional storage units that include coat cabinets, space for hanging files, and units that can accommodate more bulky items.

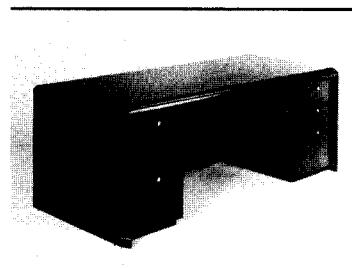
Circle 152 on reader service card



Modern Mode

The Round Chair, designed by David Ebert, offers a curvilinear shape with legs tapered both toward the arm and toward the foot. Oak, walnut, cherry, mahogany, and maple chairs, with a variety of fabric offerings, are available.

Circle 153 on reader service card



Modular

The Via Veneto casegood series offers slimmed detailing and rounded edges. Leather, stone, or wood tops may be specified for the desk, which is available in oak, walnut, or maple.

Circle 154 on reader service card



BLACK MAGIC.

Whether you drench our Tilche™ pedestal lavatory in it, submerge it under a sea of bubbles in our whirlpool or put it on any piece in any of our suites, black is magic.

But the real secret to this trick is doing every one of the fixtures in black. All of a sudden, you'll realize an ordinary space has taken on a certain drama it's never had before.

The American Standard black. It's anything but basic.

To find out how successful our products can be for you, see your local American Standard wholesaler or call 1-800-821-7700 (ext. 4023) for your local showroom.

For our Luxury Products Brochures, write to American Standard, Department TRA, P.O. Box 6820, Piscataway, NJ 08855-6820.

*American
Standard*
PURE LUXURY

Circle No. 313 on Reader Service Card

VISIT OUR SHOWPLACES: CHICAGO (III CROSSROADS OF COMMERCE, SUITE 100, ROLLING MEADOWS) 312-506-0800; DALLAS (12344 INWOOD RD.) 214-991-0841
LOS ANGELES (116 N. ROBERTSON BLVD.) 213-657-7600; NEW YORK (40 W. 40TH ST.) 212-703-5484; PITTSBURGH (100 ROSS ST.) 412-471-8200. ©1988 AMERICAN STANDARD INC.

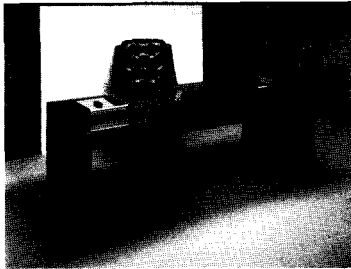
March

29

30

31

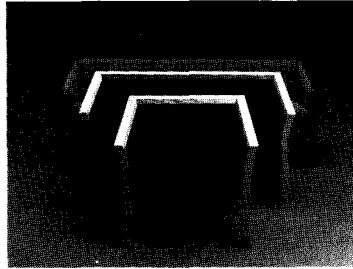
WestWeek 89



Monteverdi-Young

The Writing Desk is made of high-polish walnut. The bronze glass insert can be made to order in various sizes.

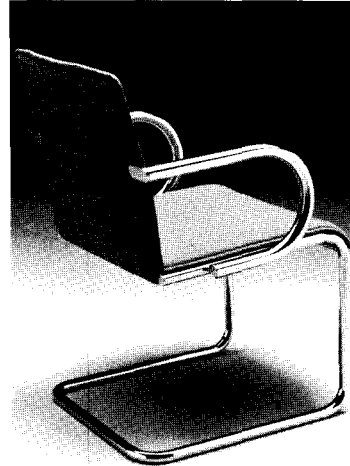
Circle 155 on reader service card



Mueller

The Cara Lounge series includes a chair, settee, and sofa. The maple frame is available in 19 finishes, and the upholstery is Dacron over polyfoam cushions.

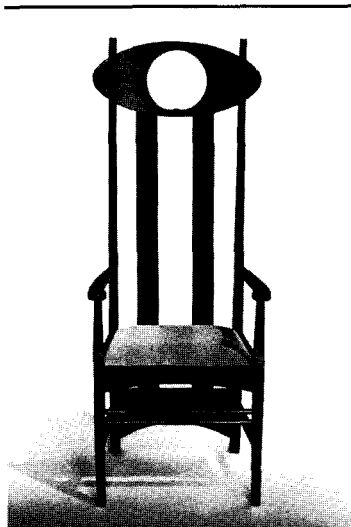
Circle 156 on reader service card



Nienkämper

Richard Schultz designed the Sled Base Chair, with a cantilevered base and a waterfall seat-front edge. The chair is available in polished chrome, high gloss black, and pewter finishes, with a nylon-mesh upholstered seat and back.

Circle 157 on reader service card



Palazzetti

The Argyle chair, originally designed in 1897 by Charles Rennie Mackintosh, is constructed of ebony-dyed ashwood. The chair is available with or without arms, and the seat may be finished in velvet or leather.

Circle 158 on reader service card



Panel Concepts

The Omnific Tech Stool offers features especially for technical seating users, including separate articulating arms, forward-and-back tilt control, pneumatic seat height adjustment, and a fixed foot ring.

Circle 159 on reader service card



Pace

Atlas, designed by Danny Lane for Fiam, is a small table with an inclined surface. The legs are composed of layers of crystal sheets, each of which has been shattered with a hammer.

Circle 160 on reader service card



Pleion

A new collection of panel fabrics, made from Du Pont Dacron polyester continuous filament fibers, can be specified in 47 colors. Five styles are offered: solid, heather, pin dot, basket-weave, and linen-look.

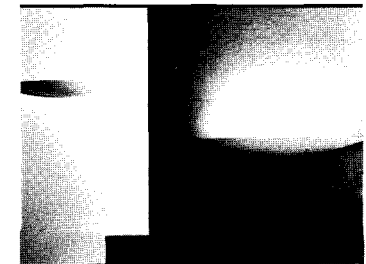
Circle 161 on reader service card



Poggenpohl

Program 2000 kitchen design includes high-gloss lacquered fronts accented by bow handles and horizontal trim. The line offers chromium-plated wire shelving and glass shelves with chrome supports.

Circle 162 on reader service card



Ron Rezek

Cirrus, a wall-mounted, cast-aluminum sconce, accommodates incandescent, fluorescent, or halogen bulbs. It is available in white or custom colors and gold or silver leaf.

Circle 163 on reader service card

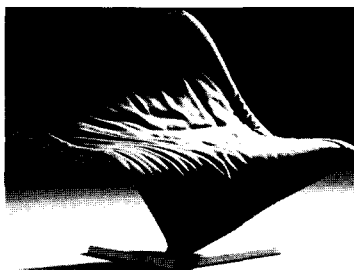
DESIGNTEX

Upholstery Fabrics



ANKARA is a small scale jacquard weave that recalls the pattern and texture of turkish tapestries. It is a handsome transitional fabric designed for heavy duty service on high-use seating. ANKARA is one among hundreds of selections from the DesignTex Collection of fine fabrics all designed to satisfy virtually any customer need.

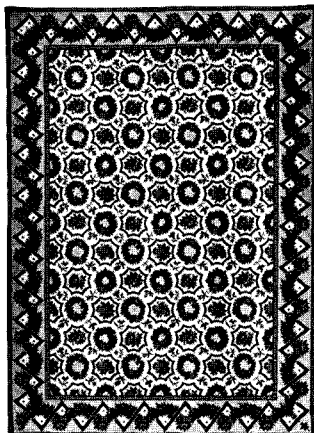
Circle No. 322 on Reader Service Card



Rosenthal

Designed by Simon Desanta, Flying Carpet is a cantilever chair based on a rectangle contoured to the shape of the body. Nine zip-fastened, replaceable covers are available.

Circle 164 on reader service card



Saxony Carpet

A new, 100 percent wool Wilton carpet is available in two colorways, either as 27-inch broadloom or as an area rug with a coordinating border.

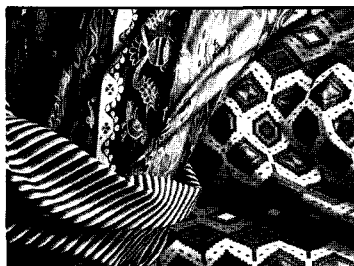
Circle 200 on reader service card



Scalamandré

Georgian is a 100 percent silk damask upholstery fabric, available in blue, red, green, or copper, which also can be used for wallcoverings or draperies.

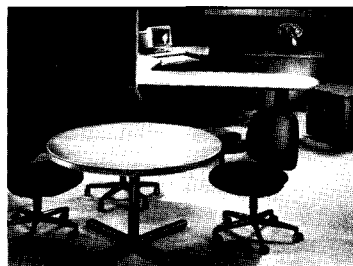
Circle 201 on reader service card



F. Schumacher

Treasures of the Ancient Andes is a collection incorporating images and designs of the Inca, Chancay, Paracas, and Nasca cultures. The patterns are used for woven and printed fabrics and for wallcoverings.

Circle 202 on reader service card



Shaw-Walker

The 36 models of the Radius Conference Table line complement the Tempo 3 open plan system and freestanding steel furniture. The tables are available with round, rectangular, oval, or boat-shaped tops.

Circle 203 on reader service card



Spec'built

The mahogany run-off desk and curved mahogany shelving are two custom designs. The cabinets are finished in Polane, a textured, durable paint requiring minimum care.

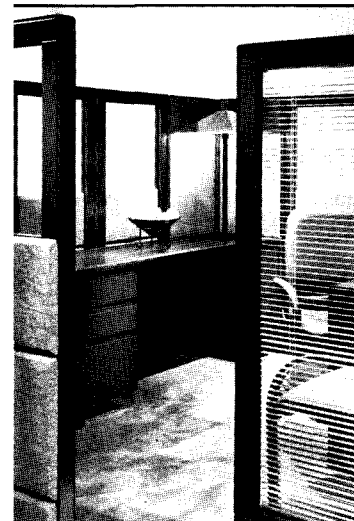
Circle 204 on reader service card



Stark Carpets

Water Lilies, part of the Mexicana Collection featuring 100 percent wool hand-hooked rugs and carpets, is in shades of peach, pale blues and greens, and lilac. The pattern is available in both standard and custom designs and sizes.

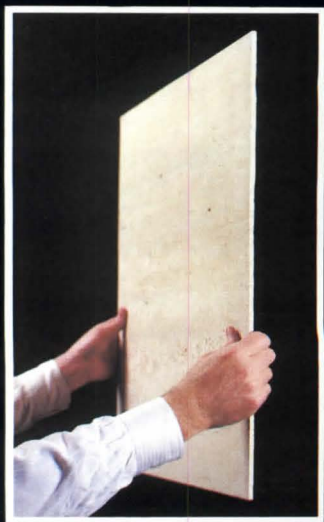
Circle 205 on reader service card



Steelcase

Accent panels were designed to complement Series 9000 structural panels. The accent panels add a horizontal design element that can span single or multiple panels already in place.

Circle 206 on reader service card



GL Marble Natural Marble Only 1/4" Thick Thin • Lightweight • Strong

Marble... A Timeless Ancient Material... Now A Revolutionary New Product

GL Marble, a 1/4" thin veneer of real marble reinforced with a fiberglass backing, is a remarkable and versatile new product. Available in sizes 1' x 2', 2' x 2', and 2' x 4', it can be easily installed, like tile, on walls and floors with thin-set adhesives over any level surface.

MARBLE TECHNIQS LTD

ARCHITECTS & DESIGNERS BLDG • 150 EAST 58 ST. NEW YORK, NY 10155 • 212 750 9189
PACIFIC DESIGN CENTER • 8687 MELROSE AVE. LOS ANGELES CA 90069 • 213 657 0648

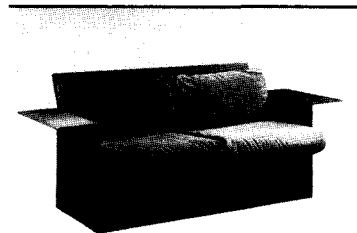
IN JAPAN

ジーエーインターナショナル株式会社

本社/東京都中央区日本橋3-2-13 中條ビル 〒103 電話03-273-2755
大阪営業所/大阪市東区北久宝寺町5-45-2-210 〒541 電話06-251-5620

Circle No. 349 on Reader Service Card

WestWeek 89



Stendig

Venice, designed by Lella and Massimo Vignelli with David Law, is one of the New Scale series of sofas, designed to fit into smaller office spaces. It measures 78 inches wide, 33½ inches deep.

Circle 207 on reader service card



Stow & Davis

The Paradigm line consists of management- and conference-style chairs, with high or low backs. Four finish options are available.

Circle 208 on reader service card

Stroheim & Romann

Nogales is one of the contemporary patterns from the Atrisco Collection. The design recalls the geometric patterns of Southwestern art work.

Circle 209 on reader service card



Taylor Chair

Tornero is a group of nine seating styles designed with steam-bent open-wood sculptured arms, waterfall front seats, sculptured backs, and pneumatic lifts. The chairs may be upholstered in a variety of materials and are available in any standard or custom finish.


Circle 210 on reader service card

Only available at the following locations:

- | | |
|--|---|
| ATLANTA
Studio Ligne Roset
At Innovations
1011 Monroe
Atlanta, GA 30306
(404) 881-8115 | MINNEAPOLIS
Metropolis
125 S.E. Main Street
Minneapolis, MN 55414
(612) 331-7217 |
| BOSTON
Adesso
At the Four Seasons
Boston, MA 02116
(617) 451-2212 | MONTREAL
Ligne Roset
Centre Decor Decarie
6900 boul. Decarie
Montreal, H3N 2T8
(514) 733-8414 |
| CALGARY
Kilian Internatl. Design
1110 Kensington Rd. N.W.
Calgary, T2N 1P3
(403) 270-8800 | Maison Corbeil
1215 ouest, boul. Cremazie
Montreal, H4N 2W1
(514) 382-1443 |
| CHESTNUT HILL
Adesso
The Mall at Chestnut Hill
Chestnut Hill, MA 02167
(617) 969-2285 | NEW ORLEANS
Ligne Roset
At Canal Place
333 Canal Street
New Orleans, LA 70130
(504) 522-8630 |
| CHICAGO
City
361 W. Chestnut
Orleans & Chestnut
Chicago, IL 60610
(312) 664-9581 | NEW YORK
Ligne Roset
200 Lexington Ave.
New York, NY 10016
(212) 685-1099 |
| CINCINNATI
AudioVision Plus
At Kenwood Galleria
8118 Montgomery Road
Cincinnati, OH 45236
(513) 891-7444 | PHILADELPHIA
Ligne Roset
152-154 N. Third St.
Philadelphia, PA 19106
(215) 923-6085 |
| CLEVELAND
Ligne Roset
20600 Chagrin Blvd.
Shaker Heights,
OH 44122
(216) 991-2700 | PITTSBURGH
Dept. Of The Interior
Motor Square Garden
Pittsburgh, PA 15206
(412) 361-8853 |
| COLUMBUS
Ligne Roset
At Dublin Village Center
6620 Dublin Center Dr.
Dublin, OH 43017
(614) 792-7774 | ROCHESTER
Ligne Roset
363 East Avenue
Rochester, NY 14604
(716) 325-4880 |
| DETROIT
Gorman's
29145 Telegraph Rd.
Southfield, MI 48034
(313) 353-9880 | SAN FRANCISCO
Ligne Roset
At Limn
821 Sansome
San Francisco, CA 94111
(415) 397-7471 |
| INDIANAPOLIS
Ligne Roset
At Luminatae
8515 Keystone Cross'g Ave.
Indianapolis, IN 46240
(317) 251-1100 | SEATTLE
Current
1201 Western Ave.
Seattle, WA 98101
(206) 622-2433 |
| LAVAL
Maison Corbeil
1946 boul. Le Corbusier
Laval, H7S 2K1
(514) 682-3022 | SYRACUSE
Massimo
259 West Fayette St.
Syracuse, NY 13202
(315) 422-4123 |
| LOS ANGELES
Ligne Roset
8840-A Beverly Blvd.
Los Angeles, CA 90048
(213) 273-5425 | TORONTO
Ligne Roset
Ontario Design Center
260 King St. East
Toronto, M5A 1K3
(416) 362-7404 |
| MIAMI
Ligne Roset
4001 N.E. Second Ave.
Miami, FL 33137
(305) 573-6493 | WASHINGTON, D.C.
Ligne Roset
300 D Street, S.W.
Washington, D.C. 20024
(202) 488-0955 |

ligneroset®

For further information contact:
ROSET USA CORP.
NY Design Center
200 Lexington Ave.
New York, NY 10016
(212) 685-2238
or your interior designer or architect.



*When you build your next home,
build it around the furniture.*

ligne roset[®]

DUPONT
ACRON[®]
POLYESTER

Du Pont's registered trademark for the polyester fiber made only by Du Pont.

Because your space is uniquely yours, Variations modular cabinets come in a variety of sizes and shapes. You choose from a combination of four different depths, heights and widths to fill your space exactly as you want it filled. Fine woods, including colored lacquers, ash and elm, and metal modules in varied colors let you see your space exactly as you want it seen. Variations modular cabinets created and made by Ligne Roset, designed by Peter Maly.

Circle No. 346 on Reader Service Card

Progressive Architecture 2:89 31WW



Thonet/Madison

Komplot Design created the stacking Polar chair, which features a molded plywood back, a bentwood arm/leg, and steel wire rear legs.

Circle 211 on reader service card



Unika Vaev

Carolina is a 54-inch-wide textured crepe weave, woven entirely of worsted wool fibers. It can be colored to specification, in addition to standard colors.

Circle 212 on reader service card



Vecta

The Grand Class is a new group of chairs in the Wilkhahn FS+ seating series, which features automatic adjustment for constant lumbar support. High- and mid-back versions and two upholstery styles may be specified.

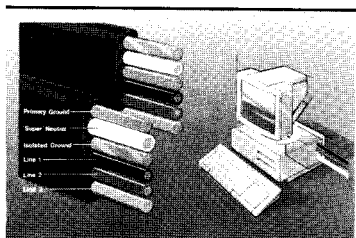
Circle 213 on reader service card



Vitra

A new office chair, Persona, automatically adjusts to each user's height and weight; there is no need to reset levers, wheels, or knobs.

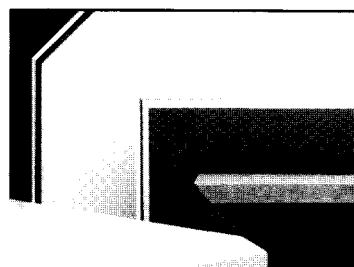
Circle 214 on reader service card



Westinghouse Furniture Systems

A new six-wire system includes an enlarged neutral wire, while an eight-wire system features the option of a dedicated circuit for sensitive equipment.

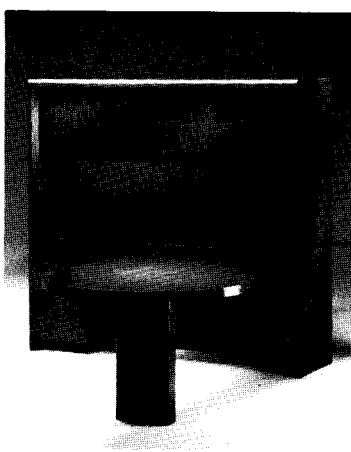
Circle 215 on reader service card



Wilsonart

Decorative moldings are offered in over 100 color laminates and solid wood options in eight species. The moldings can be customized for any project.

Circle 216 on reader service card



Xception

Storage and file units from the GPX line feature a detailed radius edge and can be linked by a black anodized aluminum bracket to meet a variety of storage needs.

Circle 217 on reader service card

THE COMMERCIAL FLOOR THAT GOES THE DISTANCE. MARATHON FROM CONGOLEUM.

Congoleum, the color and design leader in floors for America's homes, is now the name to beat in commercial flooring with Marathon.

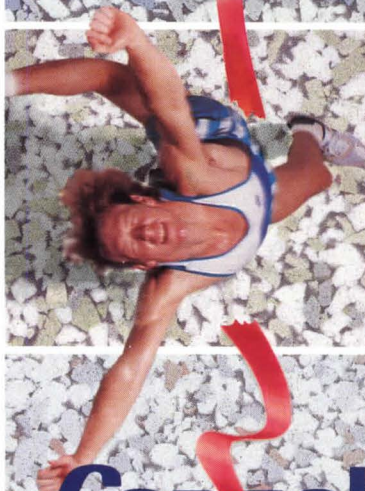
Marathon is a heavy-duty inlaid floor specifically engineered for your commercial applications. A 55 mil, inlaid vinyl that exceeds Federal Specification L-F-475a(3), Type II, Grade A. The "gold standard" of commercial flooring. Now, quality at its best. With superior flexibility that resists cracking. Flooring that installs so easily, it significantly reduces time and labor costs. And outstanding contract colors that capture today's smartest commercial interior design trends.

Now you have choices when you consider flooring for any commercial building or facility. A superb combination of maximum performance and maximum beauty. Before you make any decision, put Marathon in the running.

The terms CONGOLEUM and MARATHON are registered trademarks of Congoleum Corporation.
©1988 Congoleum Corporation

Marathon flooring shown to actual design scale.

Circle No. 321 on Reader Service Card



Congoleum®
The Beauty Endures



Metro
WestWeek '89

Manhattan Lounge

See the new additions to
the Manhattan Collection
by Brian Kane
Space B-362, Pacific Design Center

Metro, Member, Steelcase Design Partnership 245 East Harris Avenue, South San Francisco, CA 94080 (415) 871-6222
Photography: Burns & Associates

Circle No. 352 on Reader Service Card

Books

Villas of the Veneto, by Peter Lauritzen with photographs by Reinhart Wolf. Introduction by Sir Harold Acton. New York: Abrams, 1988. 200 pp., illus., \$49.50.

Hassan Fathy: An Architectural Monograph by James Steele. New York, St. Martin's Press, 1988. 149 pp., illus., \$24.95.

This rather wordy study of a worthy subject traces Fathy's difficult role as the main spokesman for a contemporary Islamic architecture.

Built by Japan: Competitive Strategies of the Japanese Construction Industry, by Fumio Hasegawa and the Shimizu Group. New York, John Wiley & Sons, 1988. 205 pp., \$24.95.

The Japanese construction industry seen from within. For those doing business in Japan—and the U.S., where Japanese firms won \$1.7 billion worth of business in 1987.

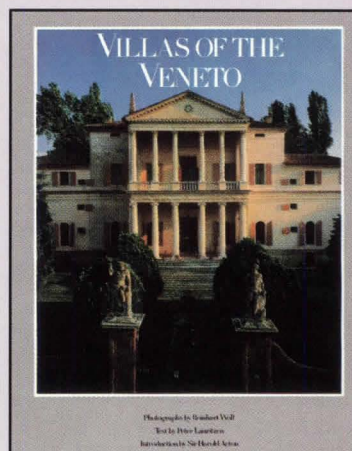
The Architect's Handbook of Professional Practice. Washington, D.C., The American Institute of Architects Press, 1988. Four volumes, \$140 (\$126, members).

This 11th edition includes new liability alerts, revised AIA contract documents, and other updated information on the practice of architecture. An Instructor's Guide and Student Edition of the Handbook are also available.

Architecture, by Joseph Maria Olbrich, with new introductions by Peter Haiko and Bernd Krimmel. New York, Rizzoli, 1988. 356 pp., illus., \$95.

Originally published in three volumes between 1901 and 1908 and reproduced here for the first time in their entirety, these plates document designs for villas, train stations, and public buildings by the influential cofounder of the Vienna Secession. Photographs of finished buildings are accompanied by Olbrich's own exquisite drawings.

The north side of Palladio's Villa Malcontenta (top); the maze at Villa Pisani at Stra (left).



Palladio and his Peers

Villas of the Veneto, a handsome photographic survey of the subject by German photographer Reinhart Wolf accompanied by the discrete text of American expatriate Peter Lauritzen, inspires at once a sense of awe and of envy. For the more avid one's appreciation of the villas shown in this volume, the stronger the wish to see first hand these extraordinary works, as concentrated in time as they are in (continued on page 148)



Photos: Reinhart Wolf

		
Perforated Metal	Expanded Metal	Wire Cloth
		
Grip Strut®	Bar Grating	Open Grip®

**SHOPPING FOR METAL
WITH "HOLES"?**

Then Call the 'Hole Store®'!
Complete Stocks - Fast Shipment

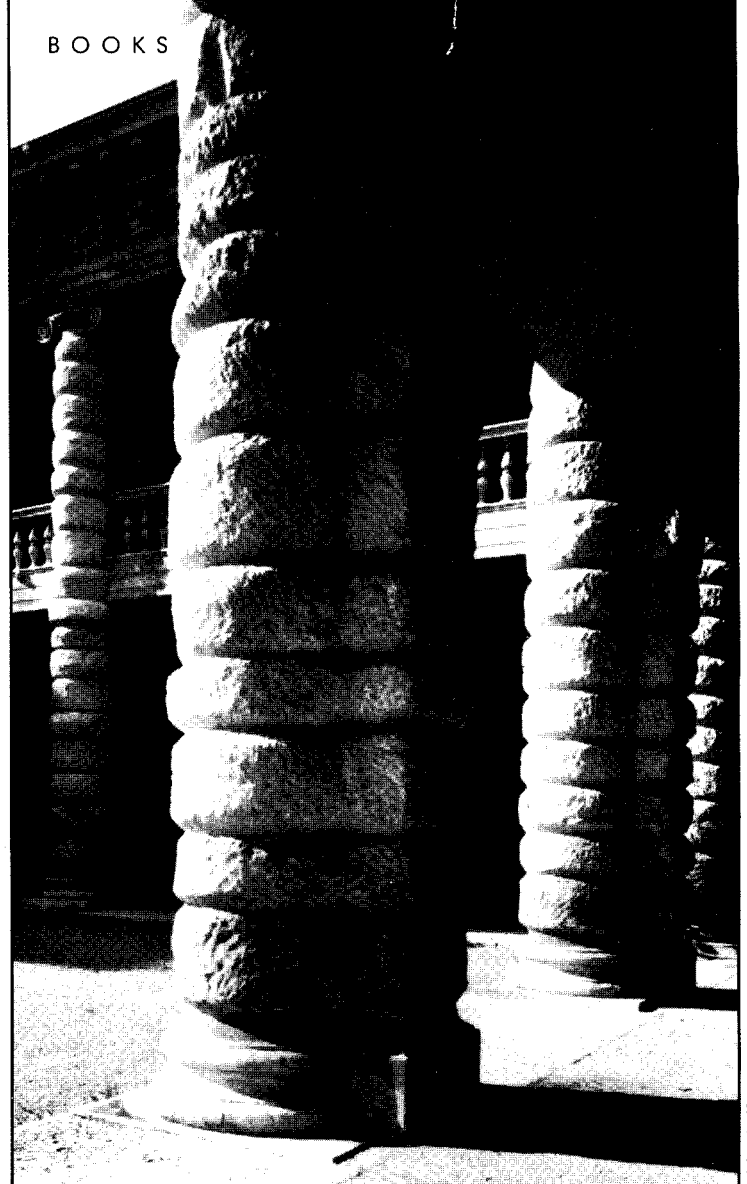
FREE CATALOG

National
Toll Free: **800-237-3820**

McNICHOLS CO.
FAX: 813-289-7884 Telex: 52706

Cleveland • Chicago • Dallas • Atlanta • Newark • Boston • Tampa

Circle No. 351 on Reader Service Card



Colonnade at Villa Serego near Verona.

(continued from page 147)

place. But, as any traveler knows who has tried—and likely failed—to figure out the hours and days for which La Rotonda is open, these villas can be supremely elusive.

Thus this distilled presentation, which captures 30 villas in 200 pages, is likely to find an audience not only among those who know little about Palladio and his period but also among those who know the work through scattered sources. Although the designs of Palladio and to a lesser extent his disciple Scamozzi dominate, the balance of the book includes works by lesser known architects. Palladio's work is thus placed in the context of his contemporaries.

The actual physical or natural context of these villas is also explored in photographs of their gardens and landscape. In a further subtheme, the integration of art and architecture is examined through sculpture and fresco.

Lauritzen devotes his introduction to the evolution of the 16th-Century farm villa in the Veneto and "Palladio's role in

perfecting it." Thereafter, the author wisely lets his subjects speak for themselves, so that the heart of the book—a full 154 pages—is given over to photographs with only the briefest of captions. These are followed by a map locating the villas shown and a glossary that gives a brief history and description of each.

The presentation is impressionistic, and there is no attempt to document a given villa fully. Nevertheless, the photography follows a pattern—abbreviated for some subjects, expanded for others—that moves from an overview, say, of the Villa Pisani at Stra by Paduan architect Girolamo Frigimelica, to its atrium, frescos, and gardens.

Two caveats mar this otherwise happy review. Not all of the generally luscious photographs are up to the quality of their subjects, and an occasionally fuzzy focus is compounded by less than perfect production. Still the villas survive these shortcomings, and the volume as a whole manages to put Palladio in his place without in any way diminishing his achievement.

Daralice D. Boles

Announcement Request for Proposals and Qualifications State Street Mall Revitalization Project

The Greater State Street Council, on behalf of the City of Chicago, intends to retain a consultant team to develop an improvement program for the State Street Area and preliminary designs for selected improvements, including the renovation of the Mall itself, the State/Lake elevated station, selected subway stations, and landscaping and lighting improvements on certain other streets within the study area. The objective is to enhance the retailing environment while upgrading the transit infrastructure and public spaces that serve the area.

At this time, proposals are being sought only from architecture, urban design, or landscape architecture design firms who would serve as prime contractor for the project. The balance of the consultant team will be selected at a later time in consultation with, and with the approval of, the prime contractor.

Architectural/Engineering and Planning firms who have extensive experience in downtown retail developments, streetscape design, project execution in northern climates, management of multi-disciplinary teams, dealing with public/private consortium clients, and specialized skills in urban design, may request an RFP by contacting:

Ernest Brown, Project Administrator
State Street Mall REVITALIZATION Project,
Greater State Street Council
36 South State Street, Suite 902, Chicago, IL 60603
(312) 782-9160

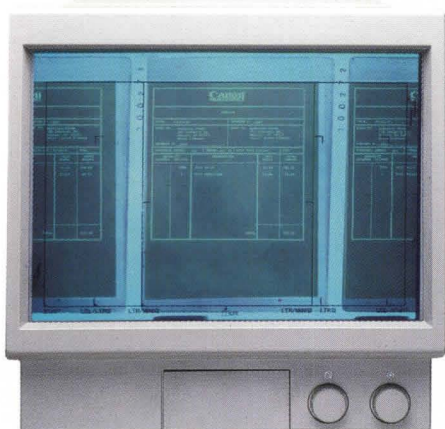
RFP's will be available January 1989. MBE/WBE requirements shall apply. Pre-proposal conference February 16, 1989
Proposals due March 15, 1989

Circle No. 334 on Reader Service Card

Presenting the fastest way to get from here



to here



to here.

Canon MICROGRAPHICS				
INVOICE				
DATE: 03/02/87	INVOICE # 2189			
SOLD TO: ABC Inc. 420 Industry Road Murray, UT 84155 Attn: Douglas Carter	SHIP TO: ABC Inc. 420 Industry Road Murray, UT 84155 Attn: Douglas Carter			
ACCOUNT # 1001				
PURCHASE ORDER: 123	TERMS: Net 30	SHIP VIA: Collect	FOB:	
QUANTITY	DESCRIPTION	UNIT PRICE	TOTAL AMOUNT	
2000	Golf Balls	24.00	480.00	
2	Golf Umbrellas	22.50	45.00	
TOTAL			525.00	

Canon's high-speed, high-volume NP 780 FSII makes high productivity easy.

Our NP 780 FSII retrieval reader/printer is built for speed. So no matter how much or how little information you need to access, you can retrieve it—and print it—faster and easier than ever before.

You'll locate information instantly, using the NP 780 FSII's user-friendly control keyboard. With nine pre-programmed search modes, Direct Search, Automatic Odometer Search and more, all it takes is the touch of a key.

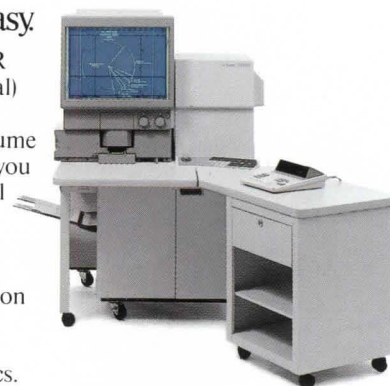
Once you find what you're looking for, the NP 780 FSII prints it faster than any other plain paper reader/printer on the market. From a first print speed of only 8 seconds, the NP 780 FSII produces multiples in an amazing 3 seconds per page, or 6 seconds per page with automatic sequential printing.

And when you want to expand your information management capabilities, the NP 780 FSII is ready to be integrated

directly into the Canon CAR (Computer Assisted Retrieval) System.

The high-speed, high-volume NP 780 FSII. The less time you spend with it, the more you'll appreciate it.

For more information, check the Yellow Pages for your nearest authorized Canon Micrographics dealer, or call toll-free **1-800-453-5500**. Ask for Canon Micrographics.



Canon **NP 780 FSII**
MICROGRAPHICS **READER PRINTER**
Bringing information management down to size.

Canon Enjoy easy extended payments with the Canon Credit Card. Ask for details at participating Canon dealers and retailers. Available only in U.S. © 1989 Canon U.S.A., Inc.

Circle No. 320 on Reader Service Card

A FEW REASONS WHY A 350 TUFFLINE ENTRANCE LIVES UP TO ITS NAME.

A $\frac{3}{16}$ " minimum wall thickness in door and frame

High performance welded door corner joinery

Security interlocks at door jambs

Rugged 2" deep stile sections

Heavy duty standard hardware designed for high abuse areas

Thru bolt and direct hardware attachment where applicable

Heavy duty frame to complete the entrance package

Katy O.

Joe S.

James W.

Rocco D'

Betsy G.

Sam S.

Ken T.

Julie L.

AND A FEW REASONS WHY IT HAS TO.

350 Tuffline. Educational tool for the 80's. And beyond. For new and replacement doors at schools, college campuses, and in other high traffic and abuse-prone installations. Tuffline entrances are all their name says they are. Tested in the educational market,

Tuffline is offered as single-acting entrances in both singles and pairs to 8' heights. With durable butts, pivots, closers and panics to resist vulnerability and increase security when school's out. And design options such as Paneline® to customize without compromise.

Tuffline. At the head of the class.

Kawneer

For technical specifications contact:
Kawneer Company, Inc. Department C,
Technology Park-Atlanta,
555 Guthridge Court, Norcross, GA 30092

New Products and Literature

7WW WESTWEEK Products
98 Technics-Related Products
152 Products and Literature
continued

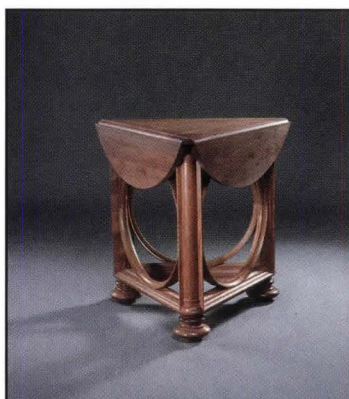
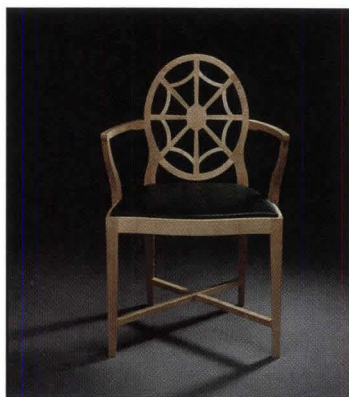


New outdoor lighting for landscape and architectural applications includes tectonic metal shapes, sculptural redwood forms, and ceramic designs. Wall sconces, pendants, garden accents, bollards, and walkway and post lights are available. Liteforms

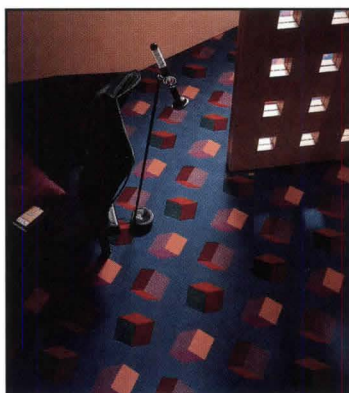
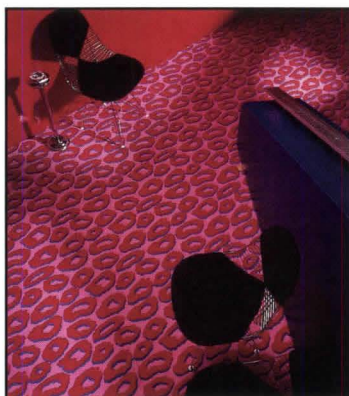
Circle 218 on reader service card

Residential and commercial carpets designed by eleven internationally known architects and artists and fabricated with ICI Timrelle fibers make up the Dialog collection. Some patterns are offered in multiple colorways. Clockwise from top left the designs are by: Matteo Thun; Gerhard Richter; Sol LeWitt; and Roy Lichtenstein. Furniture of the Twentieth Century.

Circle 219 on reader service card



A table and chair replicated from Sir Edward Lutyens' original drawings are part of an extensive new collection. The walnut Palm table consists of three leaves which rest on the points of a triangular base. The Spider chair, also made of walnut, is hand-tooled and finished. The drop-in seat is upholstered in leather. Lutyens Design Assoc., 11 Redcliffe Place, London SW10, England.



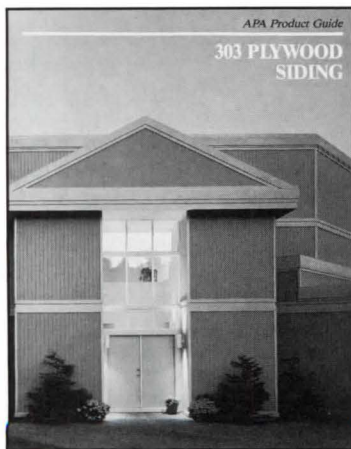


Woven wallcoverings for contract applications ranging from executive offices to boardrooms make up Color Weave, a collection of 72 coordinated colorways in four separate patterns. A sample book describes the entire palette. OJVM.

Circle 220 on reader service card

Telescopic seating designed for multi-function facilities is flexible and comfortable. A 10-minute video demonstrates the seating system in operation. Hussey Seating.

Circle 221 on reader service card



Plywood siding for residential and commercial applications is discussed in an illustrated, full-color product guide. Finishing tips, refinishing and maintenance information, specifications, and application recommendations are covered. American Plywood Association.

Circle 222 on reader service card



Spherical floodlights from the Infranor series provide 16 preset rectangular beam patterns. They are the subject of a four-page brochure that also discusses specifications, components, beam classification, and ordering information.

Sterner Lighting Systems.

Circle 223 on reader service card

An architectural coating called Flurodize™ is an alternative to anodizing. The process, which provides the durability of fluoropolymer chemistry, is available for both spray and coil application to aluminum. The metal coating can be used in curtain walls, window and door cladding, roofing, storefronts, skylights, and many other applications. DeSoto.

Circle 224 on reader service card

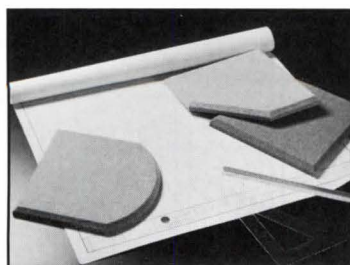
Parking structure repair and maintenance guidelines are contained in a new 80-page, illustrated publication. Precast deck systems, post-tensioned systems, patching and overlays, and surface preparation are some of the topics covered.

Structural Preservation Systems.

Circle 225 on reader service card

Occupancy sensors that control incandescent and fluorescent lights up to 1800 watts weigh only seven ounces, measure 3" x 5", and are only 1/2 inch thick. Some models can be operated by remote control receivers. UEC.

Circle 226 on reader service card



Acoustical wall panels from the new Hard Side collection feature a molded fiberglass core with chemically hardened sides that

can be rounded, squared, beveled, or mitered for custom design applications. Five standard widths are offered.

Peabody Noise Control.

Circle 227 on reader service card

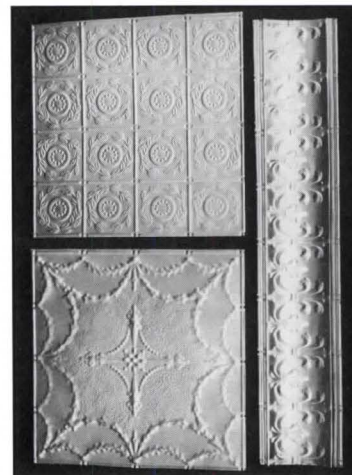
A snow and ice melting system called Snoflow uses a patented thermoplastic heating cable that emits heat in only one direction. A control panel monitors the system, which is ideal for shopping malls, business complexes, hospitals, sports stadiums, and other public facilities.

Heat Trace USA.

Circle 228 on reader service card

An entrance handle called Dallas, which is part of the complete Designer's Series of door hardware, features brass and steel construction throughout and a lifetime warranty. Master Lock.

Circle 229 on reader service card



Decorative pressed-tin ceilings and cornices for architectural applications are now available in three Victorian patterns, which are offered in 2' x 4' sizes.

Chelsea Decorative Metal.

Circle 230 on reader service card

Vinyl siding in light or medium gray tones has been added to the company's complete line of siding for residential applications.

Gold Bond Building Products.

Circle 231 on reader service card

Sound-reduction doors for broadcast studios, theaters, test labs, and other acoustical applications are featured in a new 8-page brochure. Drawings and photographs illustrate design features, size and type options, and other information. Jamison.

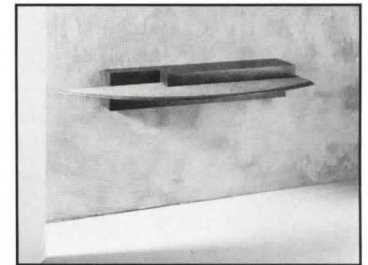
Circle 232 on reader service card

A demountable wall system called the Eliminator uses standard drywall materials and construction methods and is available for either 2 1/2-inch or 3 5/8-inch framed walls. Metal studs at

25-gauge replace the standard top track, snap in and out of position without measuring or fastening, and allow Gypsum wallboard to be hung and removed easily.

Clinch-On Products.

Circle 233 on reader service card



A wall-hung console called Amelior has a faux bois lacquer finish, a flamed granite top, and polished edge details. Specifiers may choose from several size and finish options. Devin.

Circle 234 on reader service card

Marble and granite are illustrated on two full-color posters, which identify more than 180 types of dimensional stones quarried in Italy.

The Italian Trade Commission.

Circle 235 on reader service card

Wood windows and doors are the subject of a new catalog designed to facilitate the specification process. The publication, which can be purchased for \$25, consolidates information about standards, test methods, and promotional literature. Write National Wood Window and Door Association, 1400 E. Touhy Ave., Suite G-54, Des Plaines, Ill. 60018.



A residential door called Fiber Classic is made from a compression-molded fiberglass product that looks like wood but is three to four times more energy-efficient. The plastic doors accept screws and nails and can be finished or stained like conventional wood doors.

Therma-Tru.

Circle 236 on reader service card

Signage and canopies featuring AlucobondTM, aluminum sheets with a thermoplastic core, are illustrated in a new brochure. Technical data and specifications are included.

Alucobond Technologies.

Circle 237 on reader service card

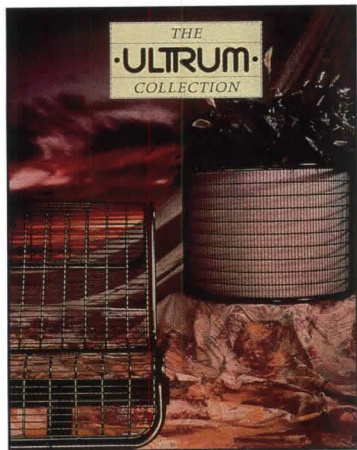


A removable ceiling allows access to connections and concealed wires. Special springs, precise grooving around the edges, and a stepped perimeter ensure fast and simple removal of the veneered panels, which are available in beech, oak, and ash finishes. Lambri BV, % Netherlands Consulate General.

Circle 238 on reader service card

Conductive carpet, designed to control electrostatic discharge from today's office equipment, is the subject of a new eight-page brochure written in a question-and-answer format. The dangers of electrostatic discharge to office computers are also addressed. BASF Fibers.

Circle 239 on reader service card



Site furniture from the 1989 Ultrum Collection includes metal, wire, and wood pieces for office buildings, parks, malls, and other public spaces. Many models—in-ground, flush-mount, wall-mount, or portable units—may be specified. GameTime.

Circle 240 on reader service card

Clay Mini-Bricks are illustrated in a new color brochure, which also includes specifications, tolerances, and square footage information. One-seventh the size and weight of ordinary brick, Mini-Brick installs up to three times as fast as ordinary brick and can be used in freeze/thaw

applications. Huntington/Pacific.

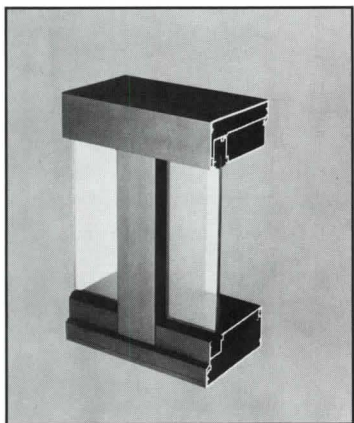
Circle 241 on reader service card

Sliding wall systems can be stacked at 90 degrees or hung parallel with the closing plane. The walls are top hung and slide on tracks of durable cold zinc-coated steel or solid brass, depending upon the weight of the panel. Steel guide pins are located in the bottom tracks. Hafele.

Circle 242 on reader service card

Wood ceilings are offered in 11 species and can be finished with clear sealers, wood stains, or 150 standard and custom colors. A patented clip-and-rail suspension provides a quick economical installation. Rulon.

Circle 243 on reader service card



A strip window system developed for low- and medium-rise buildings, called the Front Set Express window system, features a 2-inch-wide frame and 4 1/2-inch-deep units. Amarlite.

Circle 244 on reader service card

Building Materials

3401 Walnut Street, Philadelphia (p. 86). Architects: Geddes Brecher Qualls Cunningham, Philadelphia. Reinforced concrete: Allentown Portland Cement. Filigree plank formwork: Mid-State Filigree. Limestone: Indiana Limestone. Aluminum doors and windows: Tubelite. Aluminum skylights: Super Sky. Overhead door: Atlas Door. Asphalt paving: Hastings Pavers. Quarry tile: Metropolitan. Membrane roof: Carlisle. Caulking: Tremco. Paint: MAB. Hardware: Stanley. Raised floor: Donn. Signage: Metro Sign. Elevators: Westinghouse. Exterior lighting: Streetlighting Equipment. Fluorescent fixtures: Keystone Lighting. Metal halide fixtures: Zumtobel. Lavatories and water closets: American Standard. Plumbing fittings: Speakman. Flush valves: Sloan. Water fountains: Haws.

Water heater: A.O. Smith.

Boiler: Weil-McLain. Carpeting: Stratton. Blinds: Louver Drape.

360 Newbury Street, Boston (p. 68). Architects: Frank O. Gehry & Associates, Santa Monica, Calif. Associated Architects: Schwartz/Silver Architects, Boston. Steel framing fabricator: Ocean Steel. Lead-coated copper: Revere Copper. Copper fabricator: Titan Roofing. Aluminum windows: Vistawall. Interior doors: Algoma. Roofing: Firestone. Sealant: Tremco. Roof insulation: N.R.G. Systems. Gypsum board: Gold Bond. Paint: Pratt & Lambert. Hardware: Schlage, Von Duprin. Elevators: Schindler. Stair fabricator: American Architectural Iron. Exterior lighting: Spaulding. Interior lighting: Kurt Versen. Lavatories: Kohler. Faucets: Chicago Faucet. Washroom accessories: Bobrick. Boiler: Cleaver Brooks. Cooling Tower: Baltimore Air Coil. Blinds: Levolor.

Jonathan Martin Inc., Los Angeles (p. 90). Architect: Michael Burch, Architect, South Pasadena, Calif. Concrete: Cal Mat. Precast concrete: Spancrete. Concrete block: Orco Block. Glazed block: Spectra-Glaze. Wood joists: Truss Joist. Stucco: La Habra Stucco. Drywall: U.S. Gypsum. Doors: Timely, Cookson. Vinyl tile: Kentile. Roofing: GAF. Glass block: Pittsburgh Corning. Paint: Sinclair. Hardware: Mont-Hard, Schlage, LCN, Von Duprin, Trimco. Plumbing fixtures: American Standard. Sprinklers: Viking. HVAC system: Carrier. Chairs: AllSteel.

Schiller Street Residences, Chicago (p. 88). Architects: Nagle Hartray & Associates, Chicago. Wood trusses: Truss Joist Corp. Gypsum board: U.S. Gypsum. Windows, fixed and awning: Weathershield. Wood doors: Weyerhaeuser. Insulation (polystyrene board, unfaced mineral batt, isocyanurate board): Johns Manville. Entry locks: Schlage. Mail slot: Ironmonger. Ovens: Thermador. Refrigerator/freezers: Subzero. Sinks, triple compartment: Lustertone. Fireplace: Superior. Wall-mounted luminaires and floodlighting: Bega. Upper cabinet lighting: Alko. Downlights: Progress. Exhaust fan: Broan. Bathroom fixtures: Kohler. Kitchen faucet: Grohe. Whirlpool tub: Jacuzzi. Forced-air heating: Bryant. Water heater: A.O. Smith.

NCNB Plaza, Tampa, Florida (p. 59). Architects: Harry Wolf, FAIA, Charlotte, N.C./New York;

Associated Architects: Odell Associates, Charlotte. 100-ton pipe piles: Gulf Foundation. Post-tensioned concrete beams: National Post-Tensioning. Reinforcing: Florida Steel. Three-dimensional steel frame, banking hall: Mosher Steel. Concrete: Florida Rock Industries. St. Maximin limestone, tower walls: Sigma France. Cordova shell limestone, lower walls: Featherlite. Botocino Fiorito marble: Sigma France. Precast concrete: Universal Concrete. Window glass, insulating, rose-tinted: Saint Gobain. Aluminum window frames: Jamco/Gems. Entrance glass framing: EPI Architectural Systems. Glass entry doors: Brite-View Glass Systems. Teak veneer wood doors: Weyerhaeuser. Lobby fire-separation doors: Cookson. Limestone paving, Hauteville Chandore: Sigma France. Acoustical ceiling: Armstrong. Fluid-applied waterproofing: Mameco. Caulking: Rexnord, GE, Dow Corning. Gypsum board: Gold Bond. Paint, steel beam covers, banking hall: TNEMIC. Interior paint: Devoe. Hinges: Stanley. Locksets and door closers: Corbin. Panic exit hardware: Von Duprin. Kitchen equipment: Vulcan/Hobart. Communications equipment: Aiphone. Fire alarm: Simplex. Security: Security Control Systems. Telelift mail distribution: Translogic. Custom aluminum signage: T.O.G. Graphics. Closed-circuit TV: Panasonic. Elevators: Westinghouse. Elevator cabs, teak and stainless: Globe-Van Doorn. Stair treads and handrails: M&J Materials. Tower accent lighting: Pichel Industries and Prescolite. Plaza tree lighting: Hubbell. Custom lighting: Edison Price and Bergen Art Metals. Electrical distribution: Square-D. Du Pont Corian lavatory and integral sinks: Busch Code-Pruf. Water closets, wall hung: Kohler. Lavatory faucets: Kroin. Flush valves: Sloan Royal. Du Pont Corian toilet partitions: Busch Code-Pruf. Washroom accessories: Bobrick. Water fountains: Filtrine. Sprinklers: Brown Automatic Sprinklers. Plenum heaters: Environmental Technology. Air conditioning equipment and cooling towers: Carrier, Marley. Energy management: Johnson Controls. Wool carpet: Rodeo Mills. Carpet tile: Interface. Office systems and furniture: Sunar/Hauserman, Wood Work Corp. of America. Custom benches: Zographos, Dunbar. Chairs: Knoll, Steelcase, ILL. Wallcovering: Stretchwall. Audio-visual, boardroom, rear screen: Audio Visual Innovators.

DORMA Door Closers...

field-proven around the world

Some buildings require concealed door closers in order to meet the architect's design. Others call for heavy-duty closers because of hard daily usage. Still others require special intricate functions to meet fire and safety codes. Whatever *your* need is, DORMA has an extensive line of door closers for nearly any application — anywhere in the world.

Having the best products is not the *only* reason DORMA is the fastest growing door control manufacturer in North America. Our reputation for customer service and on-time delivery reflects a level of customer satisfaction which we feel is the ultimate measure of our success. **Our commitment shows.**



Conrad International Hotel,
Queensland, Australia

Architects: Buchan Laird
Bowden



University of Texas, Austin
Memorial Stadium



Deutsche Bank, Frankfurt,
West Germany

Architects: Hahnich, Schmidt, Scheidt

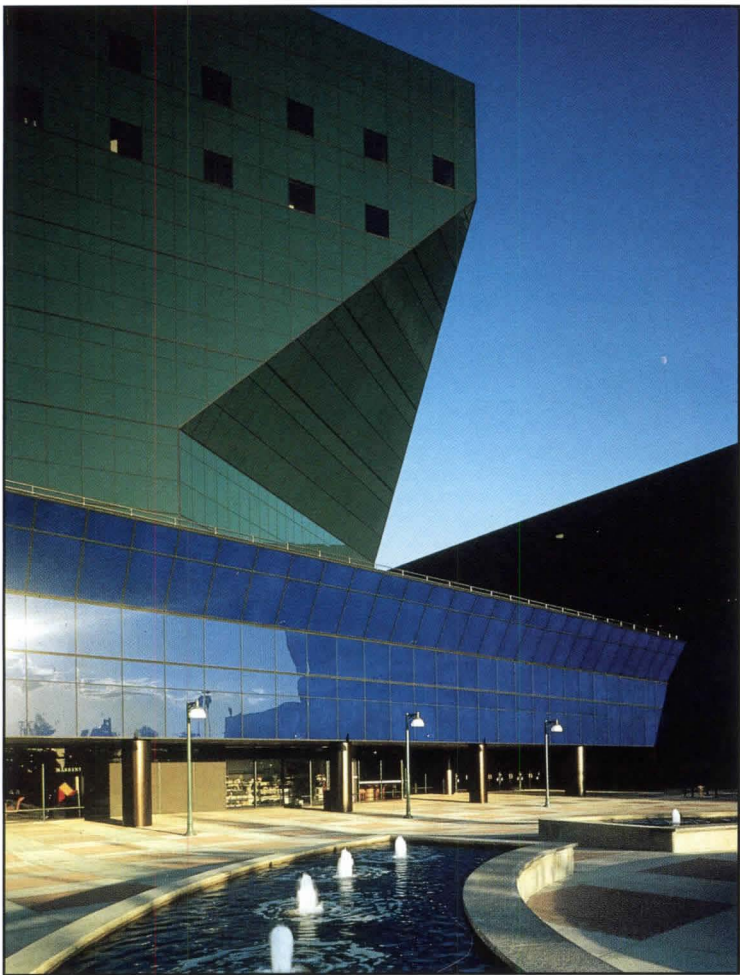


DORMA Door Controls Inc.
Dorma Drive, Reamstown, PA 17567
Telephone (215) 267-3881 • FAX (215) 267-2106

DORMA Door Controls Ltd.
1680 Courtney Park Drive, Unit 13
Mississauga, Ontario L5T 1R4
Telephone (416) 673-1281 • FAX (416) 673-5850

Circle No. 324 on Reader Service Card

P/A in March



The Phase II expansion of the Pacific Design Center.

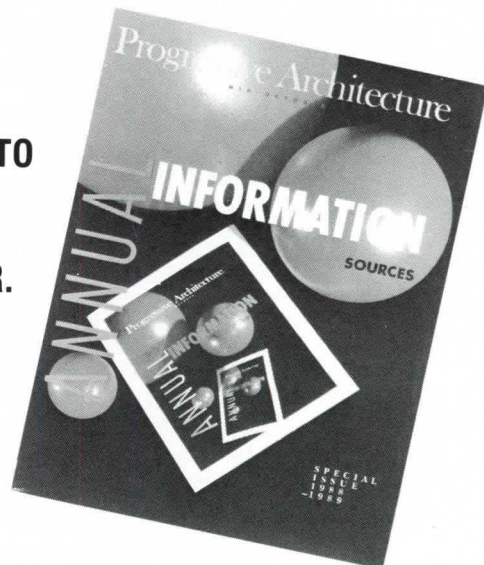
Two Pelli Projects/Two Award Winners

Two very different projects by Cesar Pelli & Associates will lead off the March issue. The Norwest Center is a 55-story office tower in Minneapolis that harks back to the Modernistic towers of the 1930s, while the Phase II expansion of West Hollywood's Pacific Design Center, winner of a 1987 P/A Design Award, elaborates upon Pelli's glass-skinned first-phase building. Another former P/A Award winner dating from 1973, Myriad Gardens in Oklahoma City by Conklin Rossant, will also be in March.

Other Features

Mario Botta's new library at Villeurbanne, France, inserts a regular geometry into an irregular, urban site. Artist Charles Arnoldi, in the Santa Monica restaurant DCThree, places sculptural forms in a rectilinear space. The P/A Technics article will examine the uses of glass and glass block.

**WHEN YOU GO TO
THE SOURCE
YOU GET THE
RIGHT ANSWER.**



Time and time again, architectural professionals find the right place, product, service and person through Information Sources. It's all in a single issue . . . over 4,000 major information sources are listed.

Additional copies are available at \$12 each or as part of your subscription to P/A. Orders good only for U.S. addresses.

Contact:

Progressive Architecture
P.O. Box 1361
Stamford, CT 06904

Maryland Department of Transportation State Highway Administration

Severn River Bridge Design Competition Annapolis, Maryland

The Maryland State Highway Administration invites interested engineering firms to enter a competition for the privilege of designing a bridge carrying Maryland Route 450 across the Severn River in Annapolis, Maryland. The bridge will be approximately 2700 feet long, with a minimum main span of 300 feet, and a vertical clearance of between 65 and 75 feet. (Exact dimension to be determined by the U.S. Coast Guard.) It will be located about 20 feet south of the existing bridge, which will be partially removed. The estimated construction cost is approximately \$30 million.

The bridge will span the Severn, a scenic tidal river, near its entrance to the Chesapeake Bay, and will be the eastern gateway to Maryland's capital city. The site adjoins the U.S. Naval Academy, a state park, and the historic areas of Annapolis. Entrants must be engineering firms experienced in long span bridge design or joint ventures of such firms with other engineering firms, with individual engineers, or with related professionals, such as architects, urban designers and landscape architects. Entry must be made by *submission* of an application form and a letter of interest and qualifications in a specified format.

A maximum of six finalists will be selected from among the initial entrants. State Highway Administration will contribute a fee of \$20,000 to each finalist toward the preparation of a preliminary design of the bridge. A jury made up of eminent professionals and state and local representatives will rank the preliminary designs. It is the intent that the Maryland State Highway Administration will award a contract to the winning firm to perform the final engineering design for the bridge. The estimated fee is \$700,000 to \$1,000,000 depending on the type of bridge proposed. Twenty-five thousand dollars in prize money will also be awarded by the jury.

For application forms and other required information write S. Donald Sherin, Chief, Bureau of Consultant Services, Room 414, Maryland State Highway Administration, 707 North Calvert Street, Baltimore, Maryland 21203-0717. Applications must be received by 4:00 p.m. Eastern time, April 3, 1989.

CHAIRPERSONS

School Of Architecture

Pratt Institute seeks energetic, committee individuals with experience in academic administration and teaching to oversee its progressive educational curricula, and help plan, develop and guide new program initiatives. Reporting to the Dean, each Chairperson will coordinate his/her respective programs with the other programs offered by the School and Pratt Institute's Center for Community and Environmental Development; will direct and actively participate in the Studio teaching of their own programs. The selected candidates will assume responsibility for the academic leadership and administration of the following programs:

GRADUATE CITY & REGIONAL PLANNING

Applicants must have the MSCP degree (Doctorate preferred), plus at least seven (7) years related experience. A working knowledge of both community development, urban design and planning is required.

GRADUATE ARCHITECTURE & URBAN DESIGN

A Master's in Architecture and/or Urban Design, with at least seven (7) years related experience in both disciplines is necessary. Candidates must have a working knowledge of both architecture and urban design, as well as an architecture license.

Salary is commensurate with qualifications. We provide excellent benefits. Review of resumes to begin immediately and accepted until the positions are filled. Please submit applications, indicating position sought to: Personnel Department, NYGA, PRATT INSTITUTE, 200 Willoughby Avenue, Brooklyn, NY 11205. An AA/EOE.

pratt
INSTITUTE

Urban Design Officer City of Long Beach Salary up to \$55,000

The City of Long Beach seeks an urban design officer to promote the highest design standards in the planning, development and redevelopment of the City. He or she will establish and manage the City's design review function within the City's development permitting process, work with developers and their architects in refining building designs to respond positively to community goals, and insure that City plans and land use controls foster a high quality urban environment. Current design issues range from the placement and design of office towers in a highly successful downtown redevelopment program to achieving compatibility between new and existing residential development in established neighborhoods.

Applicants should hold academic degrees in a design field and have 10 years practical experience in architecture or urban design. They should be sensitive and creative designers who possess the communication skills required to operate successfully in the public arena. Excellent employee benefits/affirmative action employer/civil service requirements. Send resume immediately to Robert Paternoster, Director of Planning and Building, City of Long Beach, 333 West Ocean Blvd., Long Beach, CA 90802.

Interiors Editor

Immediate opening for an editor to cover both interior and architectural design. Familiarity with the interiors industry and experience writing about architecture and design desirable. Submit resume, writing samples, and salary requirements. Reply to Job Mart, Box 522, Progressive Architecture, 600 Summer Street, P.O. Box 1361, Stamford, CT 06904.

The School of the Art Institute Faculty Positions in Interior Architecture

The School of the Art Institute of Chicago, Department of Interior Architecture, invites applicants for two faculty positions in the Department of Interior Architecture, starting in the fall of 1989. One is tenure track and one is a full-time visiting appointment. A Masters degree in Architecture or Interior Architecture, and a minimum of five years of teaching and or practice is desirable. Responsibilities will include team teaching a core design studio, graduate advising/technology class, drawing or history studio. Salary will be commensurate with experience. Please send resume, examples of work, and names of three references to John Kurtich, Divisional Chair, School of the Art Institute of Chicago, Columbus Drive and Jackson Boulevard, Chicago, IL 60603. Deadline: March 15, 1989. Notification April 15, 1989.

ARCHITECT/ENGINEER

Career position with the Postal Service. Professional degree or license required. Salary: \$29,000-\$47,000 (depending on experience). For application contact: Human Resources Office, U.S. Postal Service, 141 Weston Street, Hartford, CT 06101-9422.

DIRECTOR OF MARKETING AND DEVELOPMENT

An award-winning architectural and engineering firm in the Northeast is currently seeking a Director of Marketing to strengthen our marketing staff and to ensure continued growth in a variety of markets.

The successful candidate will be a highly motivated, articulate, growth-oriented professional with a strong academic background in architecture and prior experience in marketing professional design services.

The marketing director will be responsible for developing client leads, proposals, response to RFPs and project marketing strategy. This position is highly visible and offers significant opportunity of both personal and professional advancement. Travel required. We offer competitive salaries with incentive bonuses and outstanding benefits.

Please forward a cover letter, resume and examples of written proposals to PROGRESSIVE ARCHITECTURE, Job Mart, Box 524.

Penn State's Department of Architecture anticipates availability of tenure track and visiting positions at the assistant or associate professor levels to teach architectural design beginning Fall 1989.

Emphasis is on design and criticism with ability to teach in related areas of technology, theory, history or management. Desirable credentials include: advanced professional degree in architecture, or equivalent education, practice and teaching; evidence of teaching competence; high quality design; research and publications; and professional registration.

Closing date: March 1, 1989 or until suitable candidates are located. Submit curriculum vitae and names and addresses of three references to: John Lucas, Chairman, Search Committee, 206 Engineering C, Box JB, University Park, PA 16802. Affirmative Action/Equal Opportunity Employer. Women and Minorities are Encouraged to Apply.

To enable major qualitative growth, UNC Charlotte, seeks faculty for four new positions with expertise in: Architectural Lighting Design, Urban Design, Computer Aided Design, and Contemporary Architectural History and Theory at the rank of Assistant or Associate Professor.

Persons must be committed to working with other faculty to provide a holistic, innovative, architectural education while providing leadership in developing the area of expertise. The persons will teach in a studio and seminar. The College will be initiating a graduate research program in theory of architectural and technology design.

Prefer persons with teaching and practice experience. Masters in Architecture degree or equivalent and in-depth knowledge of the subject are required. Salary and rank commensurate with qualifications. Forward letter describing approach to teaching and area of expertise with vitae to: Dean Charles C. Hight, College of Architecture, UNC Charlotte, Charlotte, NC 28223. Deadline for receipt of applications is February 15, 1989. Affirmative Action/Equal Opportunity Employer.

Princeton University School of Architecture is seeking candidates for the full-time position of Assistant Professor of Architecture. The position is tenure-track. Teaching duties include participation in undergraduate, professional (M. Arch) and doctoral programs. Desirable qualifications are: teaching experience at the level of assistant professor or above, background in architectural design and one of the following: urban design, building technology, history and theory, and computer graphics. Position to be filled September 1989. Application letter and vitae should be sent before February 28, 1989 to:

**Faculty Search Committee
Princeton University
School of Architecture
Princeton, NJ 08544**

Princeton University is an Equal Opportunity/Affirmative Action Employer.

ENGINEERING

ELECTRICAL ENGINEER

GEE & JENSON Engineers-Architects-Planners, Inc. has an opportunity for a senior level Design Engineer in our West Palm Beach headquarters. You will be involved in all aspects of professional practice and will be given the chance to use all your talents and abilities. You must be registered and have at least 8 years architectural project experience, with an emphasis on power supply and distribution, and creative lighting systems design.

Now is the time to advance your career. Send your resume to Joe Sowards, Human Resources Manager, GEE & JENSON, P.O. Box 24600, West Palm Beach, FL 33416-4600.

Equal Opportunity Employer

Princeton University School of Architecture is seeking candidates for the position of Professor of Architecture, full-time and with tenure.

Teaching duties will include participation in undergraduate, professional and doctoral degree teaching, with an emphasis on the professional program.

The University is seeking a person of distinction, who has made recognized contributions in the fields of architectural design and architectural theory, and/or urbanism. Previous experience as adjunct or visiting professor in University courses, and as principal in practice, is desirable. The position is open from September 1989. Application letter and vitae should be sent before February 15, 1989 to:

**Faculty Search Committee
Princeton University
School of Architecture
Princeton, NJ 08544**

*Princeton University is an
Equal Opportunity/Affirmative
Action Employer.*

DREXEL UNIVERSITY

Tenure track position anticipated 9/89, FIDER-accred. Interior Design prog. Commitment to design ed. with conceptual viewpoint. MS or MFA +4 yrs field exp. (BS +7 yrs) in ID, Arch., Prod./CAD/Lighting Design. Teach basic undergrad thru grad. ID studios. Salary competitive. Send by 3/1/89: resume, 12-15 slides prof. & student work, 3 refs, SASE to K. Sundstedt, IGS Dept., 13-300, Coll. of Design Arts, Drex. Univ., Phila., PA 19104. EO/AA employer.

Situations Wanted

Accredited degree (B. Arch.), 4 yrs A/E experience abroad seeking position in a licensed architect's office. Write to: Progressive Architecture, Job Mart, Box 523.

Services

ARCHITECTS

Fox-Morris specializes in the placement of architectural talent with nationally recognized firms. Current openings include:

•PROJECT ARCHITECTS	to \$38k
•PROJECT MANAGERS	to \$48k
•CAD MANAGER	to \$37k

All positions require a degree, registration a strong plus. Fee paid by client firms. For information on these and other opportunities reply in confidence to Chip Saltsman.

FOX-MORRIS

409 Washington Ave, Suite 704
Baltimore, MD 21204
(301) 296-4500

RitaSue Siegel Agency™

A recruiting service to find architects, interior, graphic and industrial designers, marketing and sales support people for consultants and business. Confidential. Nationwide, International.

60 W. 55 St., New York, NY 10019
212/586-4750

ARCHITECTS - \$25,000-85,000 GROUP ONE SEARCH

Executive Architectural Recruiters. Superb positions Nationwide at all levels with Regional and National firms. Confidential. NEVER A FEE. P.O. Box 5199, Marietta, GA 30064-0544.
(404)423-1827 or (813)969-0544

ARCHITECTURAL OPPORTUNITIES

We have national openings with well known firms for Architects, Designers and Civil Engineers seeking new career growth and increased income. Call/send resume to: **ACTION EMPLOYMENT AGENCY**, 1913 Sheridan Dr., Buffalo, NY 14223, (716) 876-3193.

Educational Opportunities

FULLY APPROVED UNIVERSITY DEGREES!! Economical home study for Bachelor's, Master's, Ph.D., fully approved by California State Department of Education. Prestigious faculty counsels for independent study and life experience credits (5,100 enrolled students, 500 faculty). **Free information** — Richard Crews, M.D. (Harvard), President, Columbia Pacific University, Department 2A62, 1415 Third Street, San Rafael, CA 94901. Toll Free: (800) 227-0119; California: (800) 552-5522; or (415) 459-1650.

Studios For Sale

QUIET TROPICAL MIAMI suburb. HUGE 5200 ft. 15 Rm-5/4 HOME STUDIOS. Private Pool, Patios, Decks, sep OFFICE. Intcom/alarm. Tiled LIVrm/stainglass FYR. Spirl Stair/Lg his-hers LOFT SUITE. ROOFTop JCZZI/nr airport. \$465K/owner 305-233-7211.

Notice

Please address all correspondence to box numbered advertisements as follows:

Progressive Architecture
Job Mart—(Assigned Number)
P.O. Box 1361
600 Summer Street
Stamford, Connecticut 06904

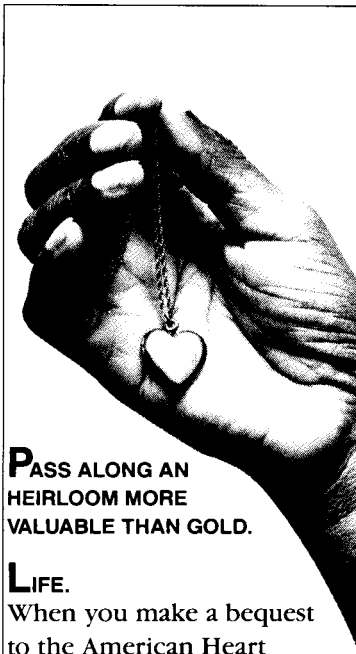
Advertising Rates

Situation Open advertisements: \$180 per column inch, per your layout. Maximum 30 words per column inch. Maximum 6 column inches. Display style advertisements are also available in fractional page units starting at 1/4 page and running to full page. Commissionable to recognized advertising agencies. No charge for use of box number.

Situation Wanted advertisements: \$75 per column inch. Maximum 30 words per column inch. Noncommissionable. No charge for box number.

Check should accompany the advertisement and be mailed to Mary Mulach, Progressive Architecture Classifieds, 1100 Superior Ave., Cleveland, OH 44114. Ads may be telecopied: 216-696-8765. (Telephone 216/696-7000, Ext. 2584).

Insertions will be accepted no later than the 1st of the month preceding month of publication. Copy to be set due seven days earlier.



**PASS ALONG AN
HEIRLOOM MORE
VALUABLE THAN GOLD.**

LIFE.

When you make a bequest to the American Heart Association, you're passing along a precious legacy. The gift of life. That's because your contribution supports research that could save your descendants from America's number one killer.

What's more, your gift doesn't have to diminish the estate you leave to your family. It may, in fact, reduce estate taxes and current taxes as well.

To learn more about the Planned Giving Program, call us today. It's the first step in making a memory that lasts beyond a lifetime.

**If there's a pain in
your chest, be a pain
in the neck.
Complain to a doctor.**



Chest pain could be a sign of heart disease. The sooner you see a doctor, the better your chances for life.



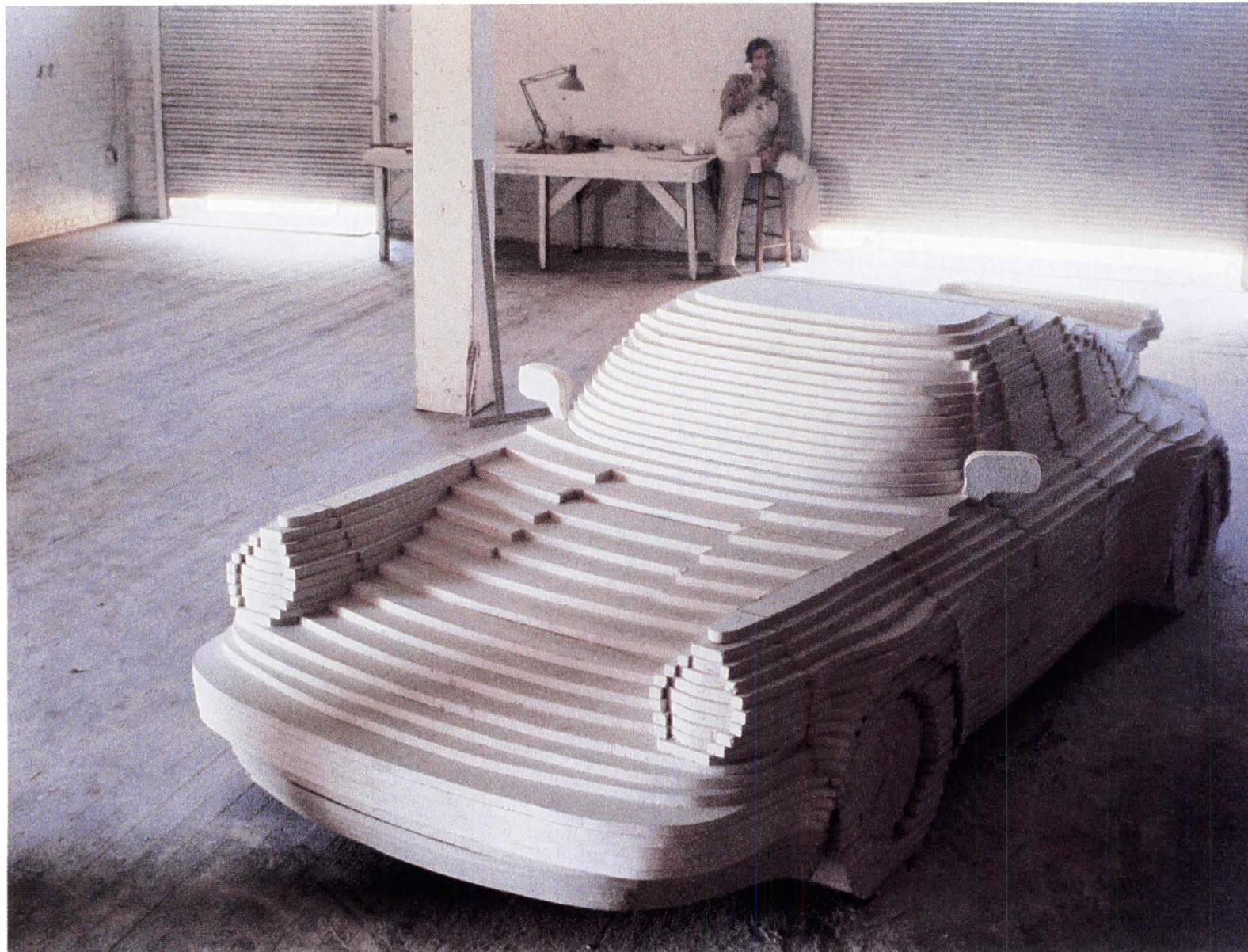
American Heart Association
WE'RE FIGHTING FOR YOUR LIFE

WE'RE FIGHTING FOR
YOUR LIFE



**American Heart
Association**

This space provided as a public service.



Uncommon Performance.

We demand the very best performance from our products... and our people. We take that uncommon extra step to assure our customers the highest possible quality products and service.

We're building the future. Ours...and yours.

Gyproc® gypsum board products • Shaftwall/Stairwall Systems • Actionwall® demountable partition systems • Area Separation Wall Systems • Designer Series glazing and door frame systems • Curvall® flexible fiberboard wall panels

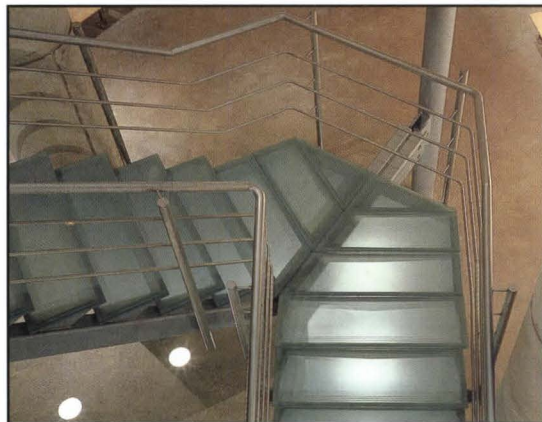
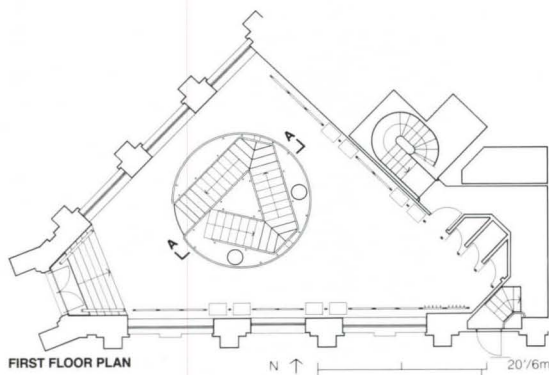
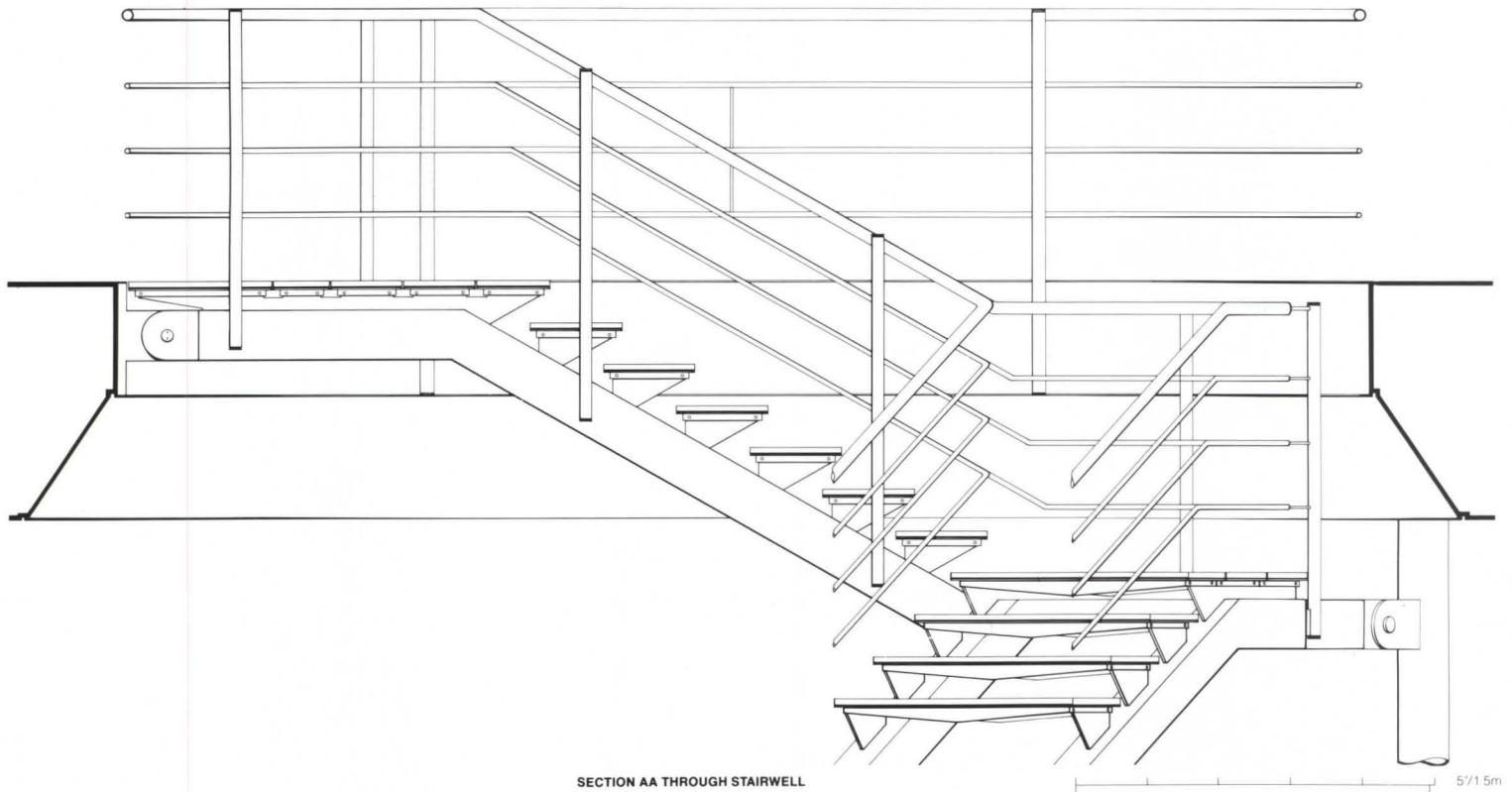
P.O. Box 543
Ann Arbor, MI 48016
(313) 930-4700

Circle No. 326

Domtar[®] GYPSUM 

*Registered trademarks of Domtar

Selected Details



VIEW OF GLASS TREADS AND LANDING



VIEW OF STAIR FROM BASEMENT

Glass Staircase Esprit Store London

Rarely does an architectural firm get to redesign its own project, but that very opportunity came to Foster Associates with this commission. They had designed the previous shop in 1978, and were asked by the new owners to redo the store and add retail space in the basement. The architects tied the two levels together by cutting a large, circular opening in the concrete floor and running a triangulated stair through it (above, left). The structure of the stair consists of steel box-sections, finished in micaceous iron-oxide paint and bolted to steel pipe-columns. Fabricated of stainless steel, the tubular handrails have welded joints and a grit-blasted finish, while the stair treads, made of float glass nearly an inch thick, have a sand-blasted finish and polished edges. Clear silicon bonds the glass treads to the grit-blasted stainless steel stringers, which are bolted to the stair's main structure. If, as Foster Associates say, "the shop is close in spirit to theatre," then this stair is its stage, the glass treads its drama.

Photos: Sharon Riscodorph

P/A Advertisers' Index

Above View, Inc.	36	Jack Lenor Larsen	35
Air Vent, Inc.	29	Lighting World International	48
ALKCO, A Subsidiary of Jac Jacobsen Industries, Inc.	108	Ligne Roset	30, 31WW
American Seating Co.	17WW	McNichols Co.	148
American Standard	21WW	Marble Technics	29WW
Amoco Chemical Co.	48A-48H	Marvin Windows	30, 31, 100, 101
Amoco Fabrics & Fibers Co./ Patchogue Plymouth Co.	42	Metropolitan Furniture Corp.	146
Andersen Corp.	40, 41	National Concrete Masonry Association	12, 13
Aristocast Originals, Inc.	50	National Partitions & Interiors Inc.	110
Armstrong World Industries . C2, 1, 2, 3		Omnia Industries, Inc.	4
Artemide, Inc.	22, 23WW	Pflow Industries	52
Bernhardt Furniture	14, 15WW	Poulsen Lighting, Inc.	27
Best Western International	110	Prestressed Concrete Institute	106
Bilco Company	10	Progressive Architecture Bookstore	26, 27WW
Brunschwig & Fils	13WW	Red Cedar Shingle & Handsplit Shake Bureau	50
Building Technologies Corp.	99	Roppe Rubber Co.	54
Canon Micrographics	149	Santa Fe Collection	26, 27WWR
Congoleum Corp.	145	Senergy, Inc.	102
DPIC Companies	56, 57	Sitecraft, Inc.	32
Dal-Tile Corp.	18, 19WW	Steelcase, Inc.	6, 7; 4, 5WW
Design Competition: Greater State Street Council	148	Tischler Und Sohn	25
Design Competition: Maryland Department of Transportation ..	155	Viking Ice Arena Systems	36
Design Tex Fabrics, Inc.	25WW	W & W Glass Products, Ltd.	8
Domtar Gypsum	158	Wayne-Dalton Corp.	C4
Dorma Door Controls, Inc.	154	Wausau Tile	11
Flexco Co.	39	Westinghouse Furniture Systems ..	112
Forbo North America	28	Weyerhaeuser Commercial Door	58
Forrer Chemical	55	Ralph Wilson Plastics Co., Inc. (WILSONART®)	10, 11WW
GE-C & I Lamps	46, 47	Wolverine Technologies, Inc.	18, 19
GameTime, Inc.	53		
General Polymers Corp.	37		
Glen Raven Mills	20		
W.P. Hickman	38		
Homasote Co.	26		
Italian Trade Commission	51		
KDI Paragon, Inc.	27		
Kawneer Co., Inc.	44, 45, 150		
Kentile Floors	C3		
Kim Lighting	14		
Knoll International	6WW		

Note: R or W after numbers denotes material that appears in regional editions only.

Advertising Sales Offices

Stamford, Connecticut 06904:

600 Summer Street, P.O. Box 1361
203-348-7531 Fax 203 348 4023

Robert J. Osborn
Vice President and Publisher

Richard A. Strachan,
Sales Manager

Francis X. Roberts, James J. O'Brien,
Thomas K. Healy, District Managers

Atlanta, Georgia 30326:

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

Boston, Massachusetts:

600 Summer Street, P.O. Box 1361
Stamford, CT 06904 203-348-7531
Thomas K. Healy,
District Manager

Chicago, Illinois 60601:

2 Illinois Center Bldg, Suite 1300
312-861-0880 Fax 312 861 0874
Patrick J. Carroll, Brian Keenan
District Managers
Gail Lisac, Sales Service

Cleveland, Ohio 44114:

1100 Superior Ave.
216-696-7000 Fax 216 696 8765
John F. Kelly, Western Sales Manager

Dallas, Texas; St. Louis, Missouri:

2 Illinois Center Bldg, Suite 1300
Chicago, IL 60601
312-861-0880 Fax 312 861 0874
Brian Keenan, District Manager

Denver, Colorado 80222:

4155 East Jewell
Suite 202
303-753-1901
Albert Ross, District Manager

Los Angeles, California 91436:

16255 Ventura Blvd, Suite 300
818-990-9000 Fax 818 905 1206
Barbara Couchois, District Manager

New York, New York 10168:

Chanin Building, Suite 900
122 East 42nd Street
212-867-9191 Fax 212 867 5893
James J. O'Brien, District Manager

Philadelphia, Pennsylvania:

600 Summer Street, P.O. Box 1361
Stamford, CT 06904 203-348-7531
Francis X. Roberts, District Manager

Paris, France:

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

Tokyo, Japan 101:

Bancho Media Service
Dai-Ichi Nisawa Bldg, 5th Fl.
3-1 Kanda Tacho 2-chome
Chiyoda-Ku
03-252-2721
Genzo Uchida, President

United Kingdom:

Wood Cottage, Shurlock Row
Reading, RG10 0QE, England
0734-343302
Telex 848800 Techno G
Fax 0-734-343848
Malcolm M. Thiele
Managing Director, U.K.



Kentile Terrazzo.

A professional way to beautiful floors.

**the
Kentile
decision.**
It's the easiest one you'll ever make.

When it's time to recommend a solid vinyl tile that offers beauty and durability, your best bet is Kentile® Terrazzo. Available in 8 contemporary colors, 12" x 12", 1/8" thick, Kentile Terrazzo is ideally suited for commercial, residential and even such demanding institutional installations as hospitals. It will give your clients all the beauty and long-lasting qualities of a terrazzo floor

without the expense and bother of an involved installation.

Kentile Terrazzo solid vinyl tile, the professional way to beautiful floors. Call your Kentile representative.



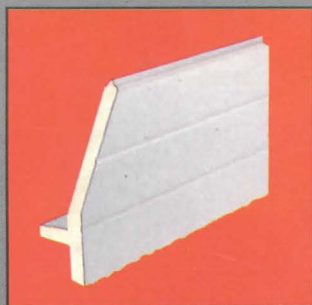
For additional information see Sweet's 1988 Catalog File: "General Building and Renovation," or call 800-447-1982 for nearest Kentile Sales Office.

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

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

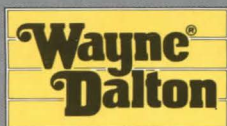


Thermospan 100



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

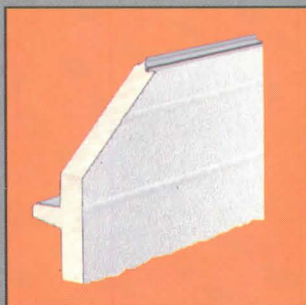
Call or write immediately for complete information (because there's nothing worse than discovering too late that you've paid too much for too little).



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



Thermospan 150



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



Thermospan 200



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

Thermospan quality features:

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

963-105