

NEW ACCENTED WALLS

Standard acoustical panels. Accents install anywhere. Beveled "T" or half-round profiles. Available in seven colors or can be painted to match interiors. You customize the insert. Call 1 800 233-3823 and ask for Soundsoak [™] Duets [™]. At last count, McDonald's was operating nearly 11,000 restaurants around the globe and had sold over 70 billion hamburgers. They open a new restaurant every 15 hours, but their commitment to the company's standards quality, service, cleanliness, and value—hasn't changed in 35 years. They expect the same kind of commitment from their suppliers whether they're supplying beef, potatoes, or office furniture.

Four years ago, Bonnie Kos, McDonald's VP of Facilities and Systems, began searching for the ideal furniture system to put in their new 300,000-square-foot home office. Bonnie and her task force researched dozens of manufacturers. They were looking for a 20-year relationship, not a one-time deal. A key issue was flexibility. Could a manufacturer grow with McDonald's? Could they turn on a dime? That narrowed the field considerably. Stow & Davis^{*®®} Elective Elements made the short list, but winning out was another story.



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

McDonald's pushed the two finalists to the wall. They assessed capacity, finishing, shipping, services, accessibility, and price.

Then, Bonnie decided to take apart and reassemble their panels herself. She found that the Elective Elements panel had fewer parts and was a lot easier to put together.

When Bonnie took her final decision to management, she described Elective Elements as "not just a workhorse—a great-looking workhorse."

"Beauty is more than skin deep," Bonnie says. "Elective Elements totally won us over, from the steel guts of the panel to the warmth of the wood finish. In my opinion, it will pay for itself again and again and again."



Color Design Performance

For further information contact: HEWI, INC. 2851 Old Tree Drive Lancaster, PA 17603 Telephone 717-293-1313 Telecopier 717-293-3270



Circle No. 341

Progressive Architecture

Cover: Church of the Light by Tadao Ando, Ibaraki, Japan, Photo by Mitsuo Matsuoka

itor		Design		
hn Morris Dixon, FAIA ecutive Editor				
omas Fisher	83	Case Study: Abstraction Serving Reality		
ofession and Industry Editor mes A. Murphy, FAIA		Old/New Building, I House, Galleria [akka	i], Church of the Lig	ght, Chapel on the Water/Tadao Ando/Japan · John Dixon
anaging Editor				
lerie Kanter Sisca nior Editor				
a Freiman, Interior design				
sociate Editors ark Alden Branch, News				
nneth Labs, Technics			Contraction of the second	
ilip Arcidi, <i>Features</i>				
mela Van Zandt Gillmor				
itorial Assistants drea E. Monfried	98	Design Feature: A Non-precious Image		
axine Konrad		Herman Miller Design Yard/Meyer, Scher	or 9. Dookoostlo /LL	alload Minhigan I Mark
by Bussel lie Meidinger	100		er & nuckcastie/ n	oliand, Michigan - James Murphy
ine treatinger	106	Interior Design Feature: Mind over Matter		
t Director		Otto Tootsi Plohound/Walz Design Inc./N	lew York · Ziva Fre	eiman
rek Bacchus sociate Art Director				
a M. Mangano				
sistant Art Director stin L. Reid			>	
Star L. HOIG			1	
ntributing Editors				
rman Coplan, Hon. AIA, <i>Law</i> Iliam T. Lohmann, AIA, FCSI,	112	Portfolio: The Chicago School		
ecifications		Municipal Fueling Facility/Lubotsky Meth	er Worthington & L	.aw/Glenview, Illinois
alter Rosenfeld, AIA, CSI,		Illinois Bell Telephone Remote Switching		
ecifications c Teicholz, Computers	116	Selected Detail		
rrespondents		Wall Sections/Illinois Bell Telephone Ren	note Switching Uni	
lly Woodbridge, San Francisco ter Papademetriou, AIA, at-large	117	Books	ioto ownorning on	
omas Vonier, AIA, Washington		Civic Art: A Model Restored?		
onica Pidgeon, Hon. FAIA, <i>London</i> natella Smetana, <i>Milan</i>	110			
ne Holtz Kay, Boston	118	Perspectives		
el Warren Barna, <i>Austin</i> eryl Kent, <i>Chicago</i>		Reappraisal: Esther McCoy		
ralice D. Boles, at-large		Interview: Jerzy Soltan		
		Critique: Cityfront Center		
ce President—Editorial rry Pascarella		Excerpt: Charles Eames		
ny rascarena	123	Projects:		
ce President and Publisher		French Library Competition		
bert J. Osborn				
niel H. Desimone				
Iministrative Assistant		Technics		Departments
rol Zezima omotion Manager				
bra L. Jones	43	Technics Topics: Finishing Concrete	9	Editorial: A Better P/A for the 1990's
omotion Director	47	Building Science Brief: Joints	11	Views
ck Budd		Technics Feature: Building Tops	21	News
ck Rudd oduction Manager	10	Interneties Frequence During U.U.S.		10003
oduction Manager	49			Calandar
oduction Manager rry Lynch Katz oduction Assistant elyn S. Blum	49 147	Technics-Related Products	29	Calendar Bradusta Fractures Westwoold
oduction Manager rry Lynch Katz oduction Assistant elyn S. Blum ce President—Circulation			29 135	Products Feature: Westweek
oduction Manager rry Lynch Katz oduction Assistant elyn S. Blum		Technics-Related Products	29 135 136	Products Feature: Westweek Products and Literature
oduction Manager rry Lynch Katz oduction Assistant elyn S. Blum ce President—Circulation oria Adams rculation Manager di Guba-Svenson			29 135 136 149	Products Feature: Westweek Products and Literature Building Materials
oduction Manager rry Lynch Katz oduction Assistant elyn S. Blum ce President—Circulation oria Adams rculation Manager di Guba-Svenson rculation Marketing Manager		Technics-Related Products	29 135 136	Products Feature: Westweek Products and Literature
oduction Manager rry: Lynch Katz oduction Assistant elyn S. Blum ce President—Circulation oria Adams rculation Manager di Guba-Svenson rculation Marketing Manager anne M. Improta		Technics-Related Products	29 135 136 149	Products Feature: Westweek Products and Literature Building Materials
oduction Manager rry Lynch Katz oduction Assistant elyn S. Blum ce President—Circulation oria Adams rculation Manager di Guba-Svenson rculation Marketing Manager anne M. Improta enton Publishing	147	Technics-Related Products Practice Law: Keeping your License	29 135 136 149 156	Products Feature: Westweek Products and Literature Building Materials P/A Classified
oduction Manager rry: Lynch Katz oduction Assistant elyn S. Blum ce President—Circulation oria Adams rculation Manager di Guba-Svenson rculation Marketing Manager anne M. Improta enton Publishing ogressive Architecture (ISSN 0033-0752) published monthly, except semimonthly	147 57 59	Technics-Related Products Practice Law: Keeping your License Specifications: Project Manuals	29 135 136 149 156 157	Products Feature: Westweek Products and Literature Building Materials P/A Classified Young Architects Announcement
oduction Manager rry Lynch Katz oduction Assistant elyn S. Blum ce President—Circulation pria Adams rculation Manager di Guba-Svenson rculation Marketing Manager anne M. Improta mton Publishing ngressive Architecture (ISSN 0033-0752) published monthly, except semimonthly October, by Reinhold Publishing, A	147 57 59 61	Technics-Related Products Practice Law: Keeping your License Specifications: Project Manuals Computers: Animation and Rendering	29 135 136 149 156 157 159 160	Products Feature: Westweek Products and Literature Building Materials P/A Classified Young Architects Announcement Furthermore
oduction Manager rry Lynch Katz oduction Assistant elyn S. Blum ce President—Circulation oria Adams rculation Manager di Guba-Svenson rculation Marketing Manager anne M. Improta enton Publishing ogressive Architecture (ISSN 0033-0752) published monthly, except semimonthly October, by Reinhold Publishing, A vision of Penton Publishing, 1100 perior Ave., Cleveland, OH 44114:	147 57 59	Technics-Related Products Practice Law: Keeping your License Specifications: Project Manuals Computers: Animation and Rendering Reader Poll: Architect-Client Relations	29 135 136 149 156 157 159	Products Feature: Westweek Products and Literature Building Materials P/A Classified Young Architects Announcement Furthermore Advertiser's Index
oduction Manager rry Lynch Katz oduction Assistant elyn S. Blum ce President—Circulation oria Adams rculation Manager di Guba-Svenson rculation Marketing Manager anne M. Improta enton Publishing ngressive Architecture (ISSN 0033-0752) published monthly, except semimonthly October, by Reinhold Publishing, A vision of Penton Publishing, Hubbard, Jr., President; Robert J.	147 57 59 61 63	Technics-Related Products Practice Law: Keeping your License Specifications: Project Manuals Computers: Animation and Rendering Reader Poll: Architect-Client Relations Questionnaire: Architects' Lifestyles	29 135 136 149 156 157 159 160	Products Feature: Westweek Products and Literature Building Materials P/A Classified Young Architects Announcement Furthermore Advertiser's Index
oduction Manager rry Lynch Katz oduction Assistant elyn S. Blum ce President—Circulation oria Adams rculation Manager di Guba-Svenson rculation Marketing Manager anne M. Improta mon Publishing ogressive Architecture (ISSN 0033-0752) published monthly, except semimonthly October, by Reinhold Publishing, A vision of Penton Publishing, 1100 perior Ave., Cleveland, OH 44114: ilip H. Hubbard, Jr., President; Robert J. born, Vice President; Penton; Thomas Demosey. Chairman: Sal E. Marino.	147 57 59 61	Technics-Related Products Practice Law: Keeping your License Specifications: Project Manuals Computers: Animation and Rendering Reader Poll: Architect-Client Relations	29 135 136 149 156 157 159 160	Products Feature: Westweek Products and Literature Building Materials P/A Classified Young Architects Announcement Furthermore Advertiser's Index Reader Service Card
oduction Manager rry Lynch Katz oduction Assistant elyn S. Blum ce President—Circulation oria Adams rculation Manager di Guba-Svenson rculation Marketing Manager anne M. Improta mton Publishing ogressive Architecture (ISSN 0033-0752) published monthly, except semimonthly October, by Reinhold Publishing, A vision of Penton Publishing, ToO perior Ave, Cleveland, OH 44114: ilip H. Hubbard, Jr., President; Robert J. born, Vice President; Penton: Thomas Dempsey, Chairman; Sal F. Marino, seident and CEO; Daniel J. Ramella,	147 57 59 61 63	Technics-Related Products Practice Law: Keeping your License Specifications: Project Manuals Computers: Animation and Rendering Reader Poll: Architect-Client Relations Questionnaire: Architects' Lifestyles	29 135 136 149 156 157 159 160	Products Feature: Westweek Products and Literature Building Materials P/A Classified Young Architects Announcement Furthermore Advertiser's Index
oduction Manager rry Lynch Katz oduction Assistant lelyn S. Blum ce President—Circulation oria Adams rculation Manager di Guba-Svenson rculation Marketing Manager anne M. Improta mton Publishing ngressive Architecture (ISSN 0033-0752) published monthly, except semimonthly October, by Reinhold Publishing, A vision of Penton Publishing, Hauthar born, Vice President; Penton: Thomas Dempsey, Chairman; Sal F. Marino, esident and CEO; Daniel J. Ramella, nior Vice President; Philip H. Hubbard,	147 57 59 61 63	Technics-Related Products Practice Law: Keeping your License Specifications: Project Manuals Computers: Animation and Rendering Reader Poll: Architect-Client Relations Questionnaire: Architects' Lifestyles	29 135 136 149 156 157 159 160 161	Products Feature: Westweek Products and Literature Building Materials P/A Classified Young Architects Announcement Furthermore Advertiser's Index Reader Service Card
oduction Manager rry Lynch Katz oduction Assistant elyn S. Blum ce President—Circulation oria Adams crulation Manager di Guba-Svenson crulation Marketing Manager anne M. Improta nton Publishing ogressive Architecture (ISSN 0033-0752) opublished monthly, except semimonthly October, by Reinhold Publishing, A vision of Penton Publishing, 1100 perior Ave., Cleveland, OH 44114: ilip H. Hubbard, Jr., President; Robert J. borm, Vice President; Penton: Thomas Dempsey, Chairman; Sai F. Marino, esident and CEO; Daniel J. Ramella, nior Vice President; Philip H. Hubbard, , Group Vice President.	147 57 59 61 63	Technics-Related Products Practice Law: Keeping your License Specifications: Project Manuals Computers: Animation and Rendering Reader Poll: Architect-Client Relations Questionnaire: Architects' Lifestyles	29 135 136 149 156 157 159 160	Products Feature: Westweek Products and Literature Building Materials P/A Classified Young Architects Announcement Furthermore Advertiser's Index Reader Service Card Executives on the Go Fitness resorts recharge executives and shape
bduction Manager rry Lynch Katz bduction Assistant alyn S. Blum ze President—Circulation bria Adams cculation Manager di Guba-Svenson cculation Marketing Manager anne M. Improta nton Publishing nton Publishing gressive Architecture (ISSN 0033-0752) published monthly, except semimonthly October, by Reinhold Publishing, A ision of Penton Publishing, 1100 perior Ave., Cleveland, OH 44114: Ilip H. Hubbard, Jr., President; Robert J. born, Vice President; Penton: Thomas Dempsey, Chairman; Sal F. Marino, sident and CEO; Daniel J. Ramella, nior Vice President; Philip H. Hubbard, , Group Vice President: ecutive and editorial offices D Summer St., P.O. Box 1361	147 57 59 61 63	Technics-Related Products Practice Law: Keeping your License Specifications: Project Manuals Computers: Animation and Rendering Reader Poll: Architect-Client Relations Questionnaire: Architects' Lifestyles	29 135 136 149 156 157 159 160 161	Products Feature: Westweek Products and Literature Building Materials P/A Classified Young Architects Announcement Furthermore Advertiser's Index Reader Service Card
oduction Manager rry Lynch Katz oduction Assistant alyn S. Blum ce President—Circulation oria Adams rculation Manager di Guba-Svenson rculation Marketing Manager anne M. Improta nton Publishing ogressive Architecture (ISSN 0033-0752) opublished monthly, except semimonthly October, by Reinhold Publishing, A vision of Penton Publishing, 1100 perior Ave., Cleveland, OH 44114: dip H. Hubbard, Jr., President; Robert J. born, Vice President; Penton: Thomas Dempsey, Chairman; Sal F. Marino, esident and CEO; Daniel J. Ramella, nior Vice President, Philip H. Hubbard, , Group Vice President. ecutive and editorial offices 0 Summer St., P.0. Box 1361 amford, CT 06904 13-348-7531).	147 57 59 61 63 144	Technics-Related Products Practice Law: Keeping your License Specifications: Project Manuals Computers: Animation and Rendering Reader Poll: Architect-Client Relations Questionnaire: Architects' Lifestyles Computer-Related Products	29 135 136 149 156 157 159 160 161 128A	Products Feature: Westweek Products and Literature Building Materials P/A Classified Young Architects Announcement Furthermore Advertiser's Index Reader Service Card Executives on the Go Fitness resorts recharge executives and shape lifestyle changes
butction Manager ry Lynch Katz oduction Assistant typ S. Blum te President—Circulation ria Adams culation Manager di Guba-Svenson culation Marketing Manager nnne M. Improta nton Publishing gressive Architecture (ISSN 0033-0752) published monthly, except semimonthly Databer, by Reinhold Publishing, A sision of Penton Publishing, 100 berior Ave., Cleveland, OH 44114: tip H. Hubbard, Jr., President; Robert J. born, Vice President; Penton: Thomas Dempsey, Chairman; Sal F. Marino, sident and CEO; Daniel J. Ramella, nior Vice President; Publip H. Hubbard, Group Vice President. ecutive and editorial offices D Summer St., P.O. Box 1361 amford, CT 06904	147 57 59 61 63 144	Technics-Related Products Practice Law: Keeping your License Specifications: Project Manuals Computers: Animation and Rendering Reader Poll: Architect-Client Relations Questionnaire: Architects' Lifestyles Computer-Related Products	29 135 136 149 156 157 159 160 161 128A	Products Feature: Westweek Products and Literature Building Materials P/A Classified Young Architects Announcement Furthermore Advertiser's Index Reader Service Card Executives on the Go Fitness resorts recharge executives and shape

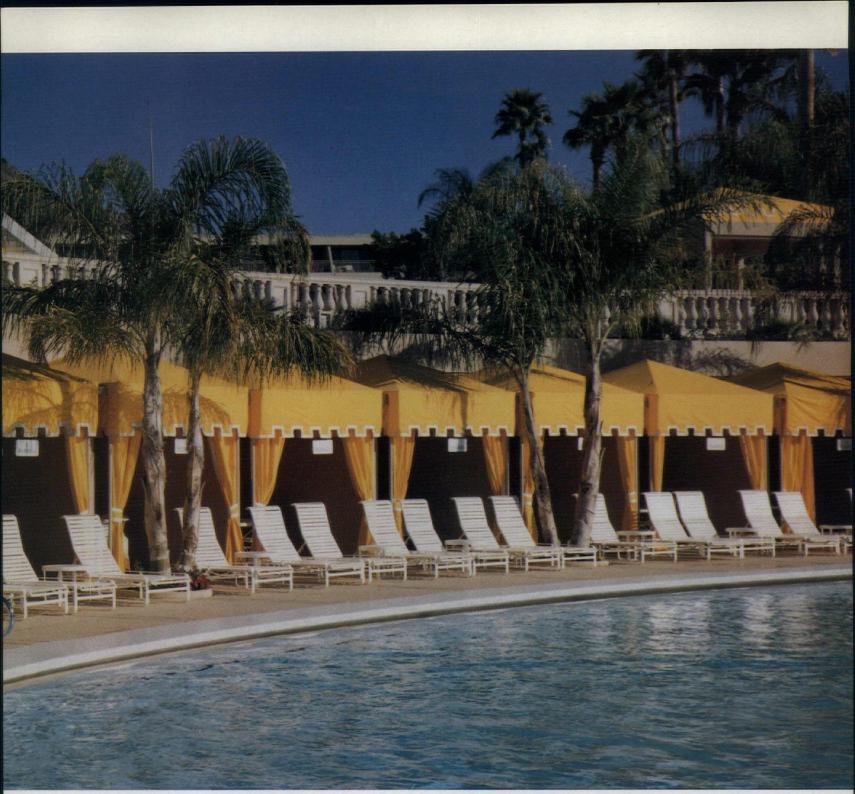
Subscription information: Send all subscription orders, payments and changes of address to Progressive Architecture, P.O. Box 95759, Cleveland, OH 44101 (216-696-7000). When filing change of address, give former as well as new address and zip codes, and include recent address label if possible. Allow two months for change. Publisher reserves right to refuse unqualified subscriptions. Professionals include architectural and architecturalers label if possible. Allow two months for change. Publisher reserves right to refuse unqualified subscriptions. Professionals include architectural and architectural and architectural and architects, designers, engineers, and draftsmen employed in alled fields. Subscription rates for U.S. professionals are \$36. for 1 year (\$45 in Canada, \$80 for foreign); \$55 for 1 year (\$75 in Canada, \$10 for foreign); \$85 for 1 year (\$45 in Canada, \$81 for foreign); \$55 for 1 year (\$60 in Canada, \$80 for foreign); \$55 for 1 year (\$60 in Canada, \$10 for foreign); \$80 for 3 years (\$100 in Canada, \$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, 1 Congres \$55, Susc. \$10, 90, 003-075289 \$1.00 + .50 Indexed in Architext Construction Index, Art Index, Architectural Index, Engineering Index. Second class postage paid at Cleveland, Ohio, and additional mailing offices. Volume LXXI, No. 2. Printed in U.S.A. Copyright © 1990 by Penton Publishing Inc. POSTMASTER: Send address changes to PROGRESSIVE ARCHITECTURE, 1100 Superior Avenue, Cleveland, OH 44114.

Table of Contents

5



The Phoenician Resort, Scottsdale, Arizona



Sunbrella acrylic fabric and Sunbrella Firesist[®] fabric make a beautiful place like this even more beautiful. And there are so many uses for Sunbrella. From cabana covers to awnings to canopies to dividers and more. You can specify it for indoors or out too. And fire codes aren't a problem, because Sunbrella Firesist meets the requirements of the National Fire Protection Association and the California Fire Marshal's test.

Sunbrella Firesist is available in 22 beautiful styles. Regular Sunbrella fabric is available in 88. But beauty is only part of the story. Our fabrics are incredibly tough.

AVAIIADIE Subbread GLEN RAVEN MILLS, INC. Quality...every. statch of the way MADE IN U.S.A.

They retain their colorfastness and strength for years, even under the most extreme conditions. They have superior water repellency characteristics too. And they resist damaging mildew and mold attacks. So it's no wonder we offer the best five-year limited warranty in the business.

And it's no wonder Sunbrella is the number one selling canvas fabric in America.

> So look in the Yellow Pages under "Awnings & Canopies" for the name of a dealer near you. And start specifying Sunbrella, around the pool, and everywhere else too.

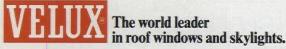
Glen Raven Mills, Inc., Glen Raven, NC 27215 ® Registered trademark Glen Raven Mills, Inc.

Circle No. 338 on Reader Service Card

SUNBRELLA FIRESIST







Na

Fir

Ad

Cit

VE: short for ventilation – LUX: Latin for light That's what VELUX[®] roof windows and skylights are all about. With VELUX, an exciting new world of architecture unfolds bringing nat-

ural light and fresh air to even the most remote corners of the home or business. The aesthetic lines of VELUX roof windows and skylights keep a low profile in the roof giving a crystal clear view to the outside world. With VELUX double glazing, insulation and energy efficiency becomes a

reality. And our beautifully crafted wood frames will be a compliment to any interior.

VELUX invites you to mail the coupon for fresh ideas to brighten your next project. ©1990 VELUX-AMERICA INC VELUX* is a registered trademark

Mail this coupon. We'll send you our FREE full-color brochure featuring all VELUX roof windows, skylights, and accessories along with a price list. This coupon answered within 24 hours.

VELUX-AMERICA INC. P.O. Box 3268 Greenwood, SC 29648

VELUX-CANADA INC. 16817 Hymus Blvd. Kirkland, Qc., Canada H9H 3L4

ne	
n	
ress	
/State/Zip	

A magazine is a continually evolving thing. Every issue is both a product and a measure of reader satisfaction. Right now, we have reason to be very happy with the P/A we have been publishing. Monthly surveys show continually increasing reader approval, and the number of our subscribers has been climbing steadily, far surpassing those of either major competitor.

Still, reader responses also indicated some significant needs, both to make our contents clearer and to address some unmet reader interests. After months of intense analysis, discussion, and planning, here in this issue are the revisions we have undertaken.

Design Content: P/A is definitely seen as the leader among architectural magazines in its coverage of design – architectural, urban, and interior design – but our design articles have been scattered throughout the magazine. Then too, readers had indicated a desire for increased critical and reflective writing. In the new P/A, design coverage is consolidated in one central block of pages that will typically open with a Case Study, of greater depth than a typical building feature. Included in this section will be other building and interior design features, pages on new projects, book reviews, selected details, and a totally new section called Perspectives (a name we were using before, but are applying more appropriately here), which presents the critical thoughts of our editors and of outside authorities. Perspectives may include critiques and reappraisals, interviews and excerpts; in this section, the words take precedence, the images provide essential illustrations.

Technical and Practice Content: Here too, we have taken established, effective types of articles and consolidated them in one zone, in the first half of the magazine, which includes Technics, Technics Topics, Practice, and Reader Poll articles. Additions in this area are a new Building Science Brief page, reviewing some basics, a newsy Tech Notes column, and regular coverage of computers in practice.

Other Departments: In the very front of the magazine, Editorial, Views, and News Report will stay more or less in place; toward the end of the issue will be Products and Literature pages – with special sections for Technics-related products and a new place for computer products. On the last editorial page will be an all new department called Furthermore, which will be assembled of various editors' observations – not necessarily momentous – on the development of the current issue and on plans for issues to come.

Graphic Redesign: To accommodate the reorganized contents of P/A, we have developed a graphic format that is not totally new. We have kept elements that worked best – the combination of wide and narrow columns on our pages, for instance, to suit different kinds of information. And we have refined this system to make it easier than before to read P/A at different layers of depth. Bold "decks" and excerpts, captions, and columns of quick-bite information modeled after our Pencil Points will give the hurried reader the essentials. Easily identified blocks of text will go deeper into a story, then separate "sidebar" copy will offer optional excursions into background information, critical assessments, interviews, and various special aspects of the work under discussion.

The new graphic treatment is on the whole very conservative. At a time when magazines generally tend to burden their pages with overscaled type and other distractions, our typography has been scaled back and made more consistent to allow photographs and drawings the attention they deserve.

To identify the reorganized, redesigned P/A on the front cover, we developed a new logo emphasizing the name we are really known by, P/A. The old logo -23 letters marching across the cover - never had enough visual identity, and it interfered more with cover subjects than the new one will.

The Process: Our first decision in this redesign was to develop it with our own staff, led by art director Derek Bacchus and executive editor Thomas Fisher, both of whom have had years of experience in architectural firms. Although outside experts can contribute a lot to such a process, they can never bring to it day-to-day experience with our content or familiarity with P/A readers' preferences, which our staff regularly monitors and discusses.

The Outcome: We have made these changes with the reactions of readers as background, to give you a more lively and rewarding magazine. Now we want to hear how the revised magazine suits you. So please send us your reactions, from general impressions to specific suggestions, as your contribution to a better P/A.

John Maris Difn

Visible changes in this month's P/A grow out of some carefully considered revision and additions to our contents to make them more informative and easier to use.

9

Editorial

The first floor tile that warrants a 10 or 15 year warranty.





Finally there's a floor covering product that's especially made for today, the 90's and beyond. A floor covering product that can take the constant pounding and grinding of daily wear, yet continue to clean as easily as the first day it was installed. It's a ceramic tile called Marazzi Enduro® and it carries a 10 year limited warranty on its "Gloss" and "Ocean" series, and a 15 year limited warranty on its "Matt" series, for both wear and cleanability. If it wears out or becomes uncleanable before the warranty expires, it's on us. We'll replace it. We'll also pay for the material and the labor cost. . For more information on the available colors, sizes and textures call or write the company that invented and patented this revolutionary flooring product, and receive your personal product kit along with our certificate of promise. We guarantee ... it warrants your attention.

359 Clay Road Sunnyvale, Texas 75182-9710 (214) 226-0110

10

Views

Wexner Center Zeitgeist

It is only since the self-centered sixties that architects have had the indulgence (usually in the outerdirected provinces) to create architecture that reflects society as it is rather than as we wished it were, as a goal to achieve. One does not need thick glasses to perceive that we are in a time of "incompleteness, fragmentation, and dismemberment," to quote Charles Wright's undergraduate essay in support of Eisenman's builtonanism in Ohio [P/A, Oct. 1989, presumably].

Yet there has never been a time when it was not so, except as seen through the most superficial way of viewing history - the one architecture students get. Via the unintegrated slide survey of larger artifacts from the Middle Ages, one gets the impression of cultural unity and halcyon centuries in which future tourist attractions are sleepily piled up by people not unlike the Seven Dwarfs. Beneath the Kodachrome surface, however, princes popped out each other's eyes with poniards, there were virtually continuous peasant uprisings, and technical invention in boring areas such as agriculture ran rampant. If Eisenman worked in the 12th Century he would have pooh-poohed cathedral building as not having the right "zeitgeist," as it were. Instead he would have courageously reflected the times, building witty mastabas of filth, plague-ridden bodies, and hacked off body parts. I'm sure he could have found an obscure tract by St. Anselm's half-brother to back him up.

David Clarke, AIA Place & Occasion Carbondale, Illinois

Princely Vision

What a pleasant shock it was to find myself agreeing with most of your December issue editorial "The Princely Vision." In addition to your many valid observations, I would wonder how the Prince thinks that his "ordinary citizens" can afford acceptable facsimiles of his regurgitated "Classical" architecture.

G. Gregory Dovey, AIA Chambersburg, Pennsylvania

The Prince and the Prevalent

I have enjoyed P/A for more years than I like to tell, and have found your more recent issues to be especially entertaining, in the vein of Pogo, HUD scandals, Batman and other current outrageous literature. Getting old in architecture simply whets your appetite for ridiculous and arcane things, and what was once serious undertaking has adopted the genre of the laughably sardonic:

Chairs on which one cannot sit; houses that require occupants to seriously alter their ways of life; tables inviting barked shins; offices defying work.

While you are fond of attributing a little knowledge as a dangerous thing to Prince Charles, his distaste for the contemporary design scene (I hesitate to use the word Architecture) is certainly understandable and is, I am certain, borne more out of frustration than of any special knowledge. That he should use his unique rostrum for such sillyness is, of course, regrettable; but, even to a seasoned practitioner, the "state of the art" is truly terrible, and it is too bad that a journal of the stature of P/A should encourage the vernacular. John B. Hackler FAIA

Peoria, Illinois

Getting the Prince's Message

Our first temptation was to say, "How can Thomas Fisher (Progressive Architecture's Executive Editor) accuse Prince Charles of being naïve when in the same issue [P/A, December 1989] he proposes that Rem Koolhaas has ably continued a tradition, begun by Vermeer no less, by designing a duplex, which strikingly resembles a cheap roadside motel?" It would be fun to go tit for tat with Mr. Fisher, but to what constructive end would that bring us? Wouldn't such an exercise merely reinforce the self-destructive, name-calling arguments which the architectural journals call dialogue?

We strongly feel that by taking immediate defensive postures against the view of Prince Charles, current architectural journals are missing the architectural conversa-(continued on page 13)

SPACEBIRD

Imagine this Spacebird airborne and soaring, elegantly floating in orbit, it s brilliant light beam emulating the sun. When docked to LSI track, it's identified as our SB16.

For a SB16 series information kit, write on your letterhead to: Lighting Services Inc Industrial Park, Route 9W, Stony Point, N.Y. 10980

Circle No. 350



BEGA







Low Voltage

Bollards





Wall luminaires

New outdoor lighting from Bega. . . Illuminating the outdoors with products distinguished by superb quality, design excellence and reliable performance.

BEGA/FS

Box 50442 Santa Barbara, CA 93150 (805) 684-0533 Fax (805) 684-6682









Pole top luminaires

(continued from page 11)

tion of the century. Such posturing is as immature and passé as the Cold War.

We have all known for quite some time that the architectural profession has been swimming around in its own muck, unsure of its direction, lacking a collective motivating force, splintering itself into myriad intellectual camps all vying for public recognition. This atmosphere is typical of any time when the old school can no longer answer new questions, when theoretical and practical challenges can no longer be absorbed. Such a time is perfectly characterized by the old guard, in this case embodied by "Progressive" Architecture, attempting to scare architects away from Prince Charles by equating anyone who might agree with the Prince as one of his pawns. This is surely the argument of a fading establishment on the run!

Architects must now face a new world and decide whether or not to be a part of it. This new world is pregnant with the potential of a highly variegated human family at last dwelling in peace with one another. The architecture of this new world has everything to do with beauty, life enhancement, harmony, strength, and inspiration – all that the Prince has identified as lacking in Modern Architecture.

It is time to move forward, away from architecture as fashion, away from destruction, away from ugliness rationalized by abstract mumbo jumbo. Simply ask your heart, "In what kind of place can I be most fully alive." We'll bet our last two bits that it won't be the Wexner Center.

We challenge *Progressive Architecture* to stop squirreling opposing viewpoints away in the "Views" section and to summon up the guts to ask Prince Charles to write an open, uncensored letter to American architects. Such a move on P/A's part would prove its desire to truly open up the discussion of the future of architecture. *Kubala Washatko Architects Cedarburg, Wisconsin*

Tom Kubala, Allen Washatko, Pamela Fritz, Michael Garber, Terry R. Hausmann, J.T. Heater, Howard Hinterthuer, Sharron Holder, Joel Krueger, Albin E. Kubala, Vince Micha, James Mladucky, James Read, Don Stauss, Karen Washatko

[The Prince's "open letter" is already available in the form of the book "A Vision of Britain" (Doubleday, New York), cited in our December Editorial—Editor]

Wayfinding: Further Sources

Although providing a reading list, the article "Wayfinding: An Orientation System for Hospitals," in P/A's November Technic Topics department did not mention three very important resources for wayfinding.

Jan Carpman's extensive research findings, published in her book *Design That Cares* (American Hospital Publishing, Inc. 1986), are a standard resource for wayfinding in hospitals. *Design That Cares* exceeds Ms. Carpman's earlier study *No More Mazes*, mentioned in the article.

The second important resource is the Society of Environmental Graphic Designers (SEGD), located in Cambridge, Massachusetts, which devoted its 1988 national conference to wayfinding. Jan Carpman was one of the conference speakers as well as Gerald Weisman, Romedi Passini, and Paul Arthur, all experts in the field. SEGD has a bibliography on wayfinding books and articles, bulletins and publications dealing with wayfinding, and a Professional Firm Directory which lists 74 designer firms, many of them specializing in wayfinding. For more information, contact SEGD at 47 Third Street, Cambridge, Massachusetts 02141, 617/577-8225, fax 617/577-1769.

And finally, the Environmental Research Association (EDRA) encourages research related to improving environmental design methods and techniques and helps to increase the understanding of the social and behavioral aspects of relationships between people and environments. Wayfinding has been one of their research topics. For more information, contact EDRA, P.O. Box 24083, Oklahoma City, Oklahoma 73124, 405/ 848-9762.

We feel strongly that these resources should be part of any article or reading list related to wayfinding. Sarah Speare Executive Director Society of Environmental Graphic

Designers Cambridge, Massachusetts

Asbestos Surveys Full Design Services

Construction Management

Comprehensive Insurance Coverage From Our Firm

Full Indemnification For Your Firm



Asbestos Abatement Services, Inc. A Professional Environmental Engineering Firm

Toll-free Number: (800) 247-8518

Corporate Headquarters 4801 Massachusetts Avenue, N.W. Washington, D.C. 20016 (202) 362-2525

Institute for

(617) 935-7370

Environmental Education

Boston (Woburn), MA 01801

208 West Cummings Park

Offices in: Atlanta, New York City, Boston, Detroit & Washington, D.C. Progressive Architecture 2.90

13

Views

© 1990

WE OFFER CUSTOM-MADE WINDOWS TO FIT ANY FRAME OF MIND.

If you think Andersen[®] windows only come in stock sizes, here's our stock answer: wrong. Flexiframe[®] windows are custom-made to almost any shape or size. They'll allow you to create a glass area as large as 60 square feet. Or even a commercial window unit with angles as sharp as 14 degrees.

What's more, they're made with something other

than ordinary aluminum. Namely, a glassfiber-enhanced polymer—a special version of our exclusive Perma-Shield® window. This enhanced polymer material is so strong, durable, and corrosionresistant, it's actually used in buildings along the seacoasts as a substitute for structural steel.

On the inside, our Flexiframe windows offer you yet another revolutionary material in commercial windows: wood. Warm Ponderosa pine gives office interiors a feeling cold metal can't.

So if you need a custom commercial window, look to the company you may have thought didn't even make one: Andersen. We'll help you explore your options. No matter what you have in mind. For more information call 1-800-635-7500 for the name of your Andersen commercial representative.

ANDERSEN

GROUP

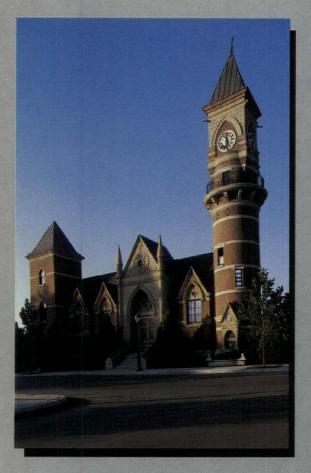
COMMERCIAL

Andersen

Or you can write to Andersen Commercial Group, Box 12, Bayport, MN 55003. 89126 © 1989 Andersen Corp. Gircle No. 319

BREAK OUT OF A DESIGN RUT

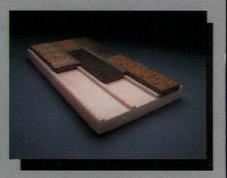




The new age exterior INSULATED KILN-FIRED CLAY BRICK

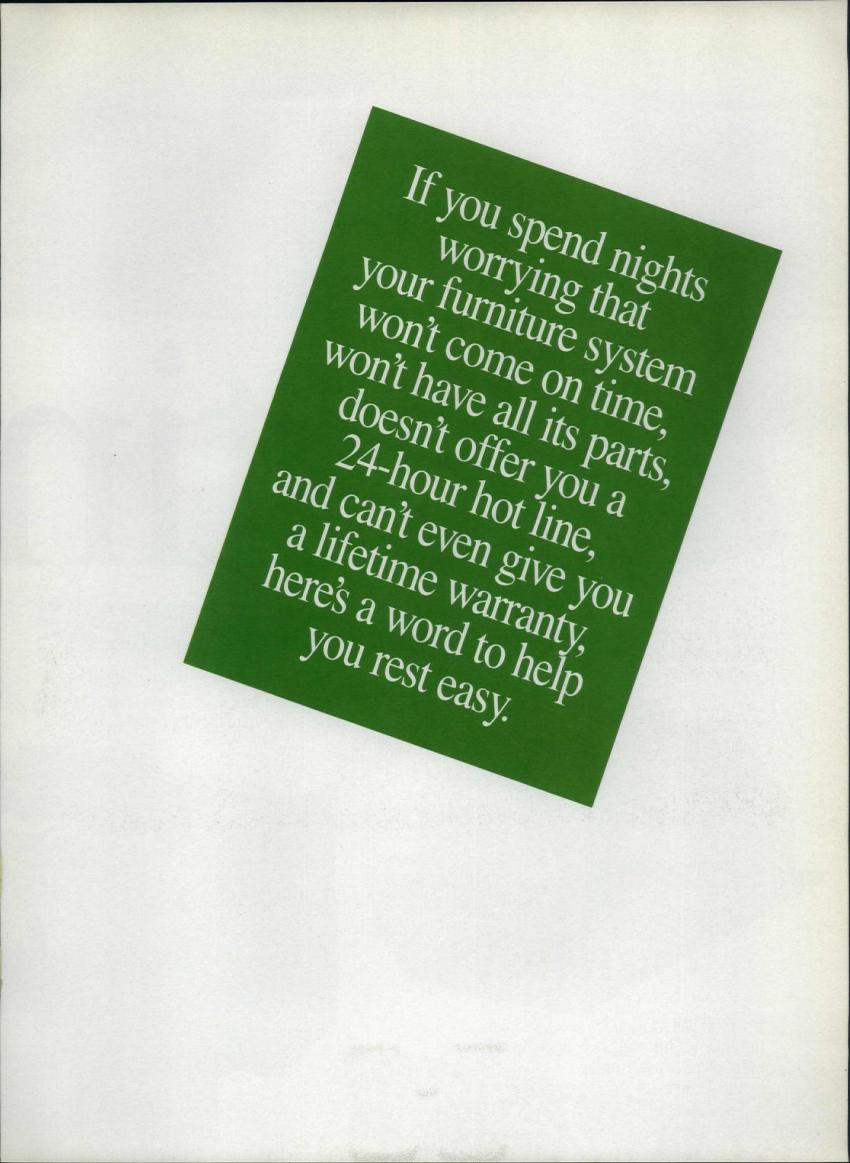


- Lightweight (6 lbs. per sq. foot)
- R-6 Energy Resistance
- Maintenance Free
- Impervious to moisture
- 50 year limited warranty



Circle No. 376

U S BRICK, INC. • REAL BRICK PRODUCTS GROUP • PO BOX 907 • OWOSSO, MI. 48867 • 1-800-447-7440 (IN MI. 517-723-8380)



Everyone talks on-time delivery, but when was the last time you heard 98.5% on-time?

What makes a system easy to install? Engineer it so you do it with fewer tools and in less time than the other guys.

It's 10:00 P.M., do you know where your furniture is? Just call, and our computer tracks every piece of every order by the second.



The design is perfect, now bring on the furniture.

EFARRA D.O

This is the new Equation system. Intelligent design plus fine detailing. It's a striking option for your master plan.

Do you worry about your order? Have trouble sleeping? Go ahead, call our V.P. of Customer Assurance

at home. If his wife answers, don't hang up.



Westinghouse.

We've been building office furniture for more than thirty years. Along the way, we've also built a name for ourselves. But unless you're already a Westinghouse customer, you probably don't know all the ways we stand behind our name.

You don't know about our lifetime warranty, or that it's the only one in the business. You don't know how we design systems for unlimited growth, so nothing becomes obsolete.

You couldn't be aware that our orders are delivered on time and complete 98.5% of the time. Or how the intelligent engineering behind our centerline designs saves you space, time, and money.

It's all part of our commitment to helping every customer make the intelligent decisions that make an office a pleasant, productive, and attractive place to work.

To find out more about the service you can expect as a Westinghouse customer, call 1-800-445-5045. Or write Westinghouse Furniture Systems, 4300 36th Street, S.E., Grand Rapids, Michigan 49508, for the name of your local dealer.

And see why choosing the intelligent name in furniture can make you, and your office, look very good.



© 1989, WESTINGHOUSE FURNITURE SYSTEMS

20

"For Esther, to live was to write; sentences were breath." -Joseph Giovannini on the late Esther McCoy.

(See page 22)

Switch in Berlin Library Competition

Steven Holl's competition-winning design for an addition to the American Memorial Library, which won a 1990 P/A Award (P/A, Jan. 1990, p. 80), has been set aside in favor of a revised design by one of the competition's finalists, Karen Van Lengen of New York. Van Lengen's design was chosen in Phase III of a twice-extended competition after Senator Wolfgang Nagel of Berlin rejected the second-phase jury's decision to award the project to Holl.

The competition was conceived as a gesture of German-American friendship mirroring that of the library's beginnings in 1950. American money built the



Karen Van Lengen's library scheme: winner after three rounds.

original library, and a competition among German architects was held, with Fritz Bornemann chosen as the winner. The City of Berlin returned the favor in 1988 by asking 14 American architects to compete for the design of a German-financed addition. Van Lengen, Holl, and Lars Lerup of Berkeley, California, were chosen as first-place winners in the first phase of the competition in November 1988; the three were asked to develop the schemes further, and in April 1989 Holl's design was selected.

But political changes in Berlin, including the defeat of the Social Democratic city government that had steered the original competition (and the sudden need for housing units created by the opening of East Germany's borders) led to the rejection of the Holl scheme by Nagel, the new Senator in charge of building. The finalists were asked to revise the designs and develop an urban planning scheme with housing and commercial space for the library's surrounding area. A jury composed of Nagel and other local officials chose Van



Holl's design, recommended but ultimately rejected.

Lengen's entry from the revised designs.

The turn of events, which Holl's office calls "serious mishandling" and "manipulation" on Nagel's part, has caused a rift in Berlin's design community, already angry over the government's handling of design competitions. The Bund Deutscher Architekten (BDA) and other professional groups have taken out newspaper ads and written letters protesting the decision, and Holl's office reports that the BDA may sue the Senate. Since the second-phase jury's decision apparently constitutes only a recommendation, though, it is unlikely that there are means (save public outcry) to restore the commission to Holl.

All this is not to say that Van Lengen's scheme is not worthy; on the contrary, it is, at the least, a more overt response to site conditions on this important local spot. It will, no doubt, be a powerful presence on a site that, through the ravages of war and the disarray of Modern planning, has lost a great deal of definition. What is most unfortunate about this affair, as seems to be happening more and more, is that a politician has abused the competition process, breaking a bond with a jury and architects acting in good faith. It is necessary for governments to rethink why they hold design competitions and architects why they enter them. Mark Alden Branch

AIA Names Honorary Fellows

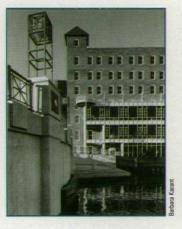
Twelve architects from around the world have been selected as Honorary Fellows of the AIA, an honor given to distinguished architects from outside of the United States. The new Honorary Fellows, who will be invested at the AIA National Convention in May, are as follows:

Gae Aulenti, Rome, the well-known architect of the Musée d'Orsay, Paris, among other projects; Essy Baniassad, Halifax, Nova Scotia, president of the Royal Architectural Institute of Canada; Jacob Blegvad, Aalborg, Denmark, former president of the Danish Federation of Architects; David Davies, London, cited as a pioneer of the "one-stop consultancy" firm; Kiril L. Doytchev, Sofia, Bulgaria, known for his design of healthcare facilities; Dato I. Hisham Albakri, Kuala Lumpur, Malaysia, president of the 31-nation Commonwealth Association of Architects; Daryl Jackson, Melbourne, Australia, who the jury said was "one of the most important Australian architects with a world-class achievement"; Reiichiro Kitadai, Tokyo, president and founder of the Japan Institute of Architects; Jorge Nunez Verdugo, Mexico City, president of the Federation of the Colleges of Architects of the Republic of Mexico; Yuri P. Platonov, Moscow, president of the Union of Architects of the USSR (P/A, June 1989, p. 21); Eva H. Vecsei, Montreal, president of the Ordre des Architectes du Quebec; and Wu Lianyong, Beijing, who the jury called one of the "pioneers of architecture and urban planning in modern China."

The ambitious program for Paris's "Tres Grande Bibliotheque" yielded responses as diverse as its competitors.

See Projects, page 123.

21



In the currently rising Cityfront

guidelines come to Chicago-

Center (below), design

with mixed results. See

Perspectives, page 121.

Pencil Points

London's controversial Paternoster Square redevelopment plans have been put into the hands of a team of architects that includes Hammond, Beeby & Babka, Terry Farrell Partnership, and John Simpson & Partners. Prince Charles's intervention – prompted by the presence of St. Paul's Cathedral adjoining the site – apparently led to the appointment of the Classicistminded group of designers.

In other royal news, the Prince is scheduled as the star attraction at the first annual "Accent on Architecture," an AIA-sponsored celebration of the profession to be held February 18–22 in Washington, D.C. He will attend an awards "gala" – the Gold Medal, Honor Awards, and 25-Year-Award will be presented – and officially open the AIA's Christopher Wren exhibition.

Sylvester Damianos was inaugurated in December as the 1990 president of the American Institute of Architects. Damianos, chairman of Damianos Brown Andrews, Pittsburgh, spoke in his inaugural address of the need for social programs and education to react to changing social conditions. First vice president/president-elect C. James Lawler, West Hartford, Connecticut, also took office.

On the other side of the world, AIA representatives met with members of the Japan Institute of Architects in Nagoya, Japan, in December to discuss and subsequently sign an agreement (the AIA-JIA Accord on Professionalism) that will set the wheels in motion for the exchange of information on practice, design, and construction technology; an exchange of publications and exhibitions is also planned.

St. Bartholomew's Church has lost its nearly decade-long lawsuit against the City of New York. The church sued claiming that the landmark status of its community house violated First Amendment rights to freedom of religion by prohibiting the demolition of the community house structure to make room for a 47-story office tower.



Esther McCoy.

Esther McCoy 1904-1989

Editor's Note: Architectural historian and critic Esther McCoy, P/A's Los Angeles correspondent since 1969, died of emphysema on December 30, at the age of 85. Her close friend, architect and author Joseph Giovannini, offers this tribute. Another article on Ms. McCoy's legacy (written before her death) by Robert Venturi and Denise Scott Brown appears on page 118.

She read floor plans like lines of a palm, interpreting social history through the evolution of the layout. She built her arguments from hard facts, revealed always in transparent prose. A life-long student of human nature, she was a Geiger counter for authenticity and character, and glided between generations, transcending her own to discover the young and encourage the unestablished. She had the audacity to argue – and the dates to prove – that Modernism developed in America and California as early as in Europe, that Adolf Loos did not precede Irving Gill.

When Esther McCoy died on December 30, architecture lost a great and eloquent gift. She had migrated to architecture from literature, via drafting at Douglas Aircraft during the war, then at the R.M. Schindler office, and brought with her not only her

A New Terminal Taking Off

Murphy/Jahn upped the ante for airports when its United Airlines terminal at O'Hare Airport opened (P/A, Nov. 1987, p. 95). With its model efficiency and jauntily celebratory air, the space pleased almost everyone. Clearly, Ralph Johnson of Perkins & Will has taken up the challenge with his new one-millionsquare-foot International Terminal, which goes into construction at O'Hare next October.

The \$275-million terminal will be paid for by the city of Chicago and by the 22 international airlines that will use its 20 gates on an as-needed basis. Given this financing one would expect few architectural flourishes, but the design has a real richness.

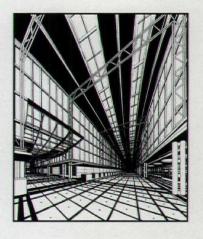
The terminal is roughly semi-circular in plan, with the concourses wrapping around the back and kicking out in long thin spurs to either side. The 825-foot-long departure hall, an open arcing glass and steel form rising three stories and 55 feet at its highest point, will be the signature space. Like Eero Saarinen's TWA terminal at Kennedy Airport, the new terminal's imagery is based on flight, suggesting the refined and utilitarian silhouette of the airplane hangar. From the departure hall, a corridor will cut through the depth and height of the terminal, past the offices and support areas on each side, and lead to the concourses. intelligence, but also a novelist's technique. She understood architecture as an expression of the times, and of the individual, his background and character. She always set the facts in a scene, with a time and place – the concreteness of her language made it seem possible to touch buildings. In 1960, *Five California Architects* and *Richard Neutra* were both published, and suddenly California – land of the future – had a distinguished architectural past. This self-instructed historian wrote with passion and authority.

She almost quit; she couldn't afford to continue. "In 1962, I said I will never, never write about architecture again. It was almost like – you know – casting off a lover." But with the encouragement of grants, she went on to four more books, assembling from what she called "the small canvas" a full literary cycle focused on the California avant-garde from the early 20th Century through the 1960s.

Architects know this panorama best, but there were a couple of novels on the shelf, a dozen television scripts, hundreds of articles published here and abroad, and the memoirs on which she was working. But common to her careers was the taut prose: For Esther, to live was to write; sentences were breath.

Too charged to settle back into her own growing legend, she remained compassionate, ever curious and acerbic: "They'll say I was sharp to the end." It did become clear that the end was approaching as the pace of her obituaries for dear friends and colleagues accelerated – Gregory Ain, Luis Barrágan, Ray Eames, John Entenza, Juan O'Gorman, Reyner Banham. People came to life on her page because her paced and understated language, dense with verbs, delivered the idea, feeling, and moment without the interference of a writer: Esther was absent. The stillness made small sounds audible.

She cropped her white hair short; she smoked like a fireman; she took her Bloody Marys with gin. She loved greatly and was greatly loved. She was radiant. Joseph Giovannini



Ticketing pavilion at O'Hare's International Terminal.

The long, deadly corridors habitually found in airports will be broken by simple means of curves and drums that punctuate the concourses, giving a sense of progression, destination, and arrival.

Circulation within the building will be complex, constrained partly by customs' security requirements, and partly by the transit line and functional plan that had been determined before the architect was chosen. There are three principal levels, the upper one for departures, the middle – at grade level – for baggage handling, and the below-apron level for arrivals, with

22

customs and a special waiting area for people meeting travelers.

International passengers at O'Hare have long used temporary facilities that gradually acquired an air of permanence. This new terminal has been delayed for ten years by political squabbling. Perkins & Will finally won the commission in October 1988 on the basis of a schematic design. Four other firms competed, including the design/build, Chicago-based Austin Group; Pei Cobb Freed & Partners; Skidmore, Owings & Merrill; and Harry Weese & Associates.

The new terminal opens in February 1994. With the completion of this and several other airport projects on the boards at Perkins & Will and Murphy/Jahn, travelers traditionally treated like larger, more awkward and recalcitrant pieces of luggage – may have to get used to being treated well. **Cheryl Kent**



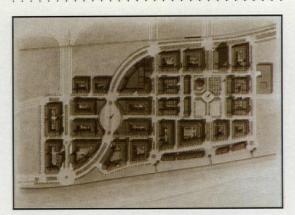
Aerial view of Perkins & Will's International Terminal.

Abandoned Arverne Beach to be Revived

Approval is pending for New York City's largest new housing project in the Arverne section of Queens. The two-mile stretch of abandoned beachfront property will be developed over the next decade into an entirely new moderate income residential neighborhood that is expected to revitalize this part of the depressed Rockaways.

At the turn of the century Arverne was New York City's premiere beach resort community, with luxury hotels and summer homes catering to the city's wealthiest citizens. With the advent of the automobile in the 1920s and 1930s, Arverne Beach was passed by for more fashionable Long Island destinations.

Over time, the once chic summer cottages were rented to the city's poor for year-round use. During the 1940s and 1950s, residents displaced from urban renewal areas in Harlem and the Bronx took refuge in Arverne's beach houses. Because of Arverne's seasonal origins, the city never provided the necessary infrastructure to support its more permanent population, and by 1969, unsanitary conditions and the density of displaced poor led the city to declare Arverne



Site plan of Arverne's first phase.

an urban renewal district. In 1971, the 278-acre site was razed. At that time several towering brick housing projects were built on part of the site.

After ten years of false starts and ill-conceived proposals, the city government, with the help of the neighborhood community board, drafted a rigorous set of design guidelines that would address the issues of building an entirely new community within the existing city plan. The goal of the scheme was to create an urban residential neighborhood that would meet the housing needs of moderate income New Yorkers, yet allow the beachfront to be as open as possible. A checklist of design elements, including building height limitations, provision of view corridors to the ocean, a 25-acre park, and the extension of the city's street grid into the site, was provided to candidates in the city's second request for proposals on the project.

The scheme prepared by Ehrenkranz, Eckstut & Whitelaw in conjunction with the Liebman Melting Partnership with the joint venture Oceanview Associates was the winning submission. Their proposal calls for residential blocks of four-story rowhouses that open both to the street and into courtyards that are raised over one level of parking. Wide "seam streets" between these blocks provide shopping, midrise apartment buildings, connection with the city beyond and views of the ocean. Housing costs will be held to moderate levels by the application of modular building techniques and bulk construction of the site.

The resulting built community will resemble many of the high-density, low-rise communities that are common in Queens, such as Sunnyside Gardens, Jackson Heights, or Brighton Beach. (Parking underneath the rowhouses, however, is an innovation here.) The urban plan of Arverne and the design of its buildings may be nothing startling, but the careful consideration of the historical, environmental, economic, and social aspects of the site make it a model project for the city that will serve as a guide for future projects of this scale. Construction of the infrastructure is expected to begin early this year. Julie Meidinger

P/A Honors Award Winners

The Plaza Hotel in New York was once again the scene for the presentation of winners in the 37th Annual P/A Awards program on January 12. The winners (P/A, Jan. 1990, pp. 75–128) received their awards and citations in a luncheon attended by close to 250 architects and other professionals.

The 20 winners, in the categories of Architectural Design, Research, and Urban Design, were selected by a jury of eight professionals from among 788 entries in the 1990 program. Unlike past years, in which the luncheon has taken place after the mailing of the January issue, this year's ceremony constituted the first public look at the winning projects.

Before the program began, Peter Eisenman, one of the award winners, spoke briefly in tribute to the late architect Paul Kennon, who had died in the previous week, and asked for a moment of silence in his memory.



P/A guests fill the Plaza ballroom.



Steven Holl (left) and John Gaunt (right) receive award from Jim Murphy; P/A's John Dixon (far left) looks on.



Peter Eisenman (left) with P/A's Jim Murphy.



Rendering of Arverne project with seaside boardwalk.

News Report

Williams & Tsien's Walker Experiments

Seldom do architects have the luxury of building full-scale mockups of intended ideas. But the Walker Art Center has given architects Tod Williams and Billie Tsien that rare opportunity in an exhibition entitled "Domestic Arrangements, A Lab Report," the third in a series of six shows under the heading of Architecture Tomorrow (P/A, Aug. 1988, p. 25). However, Williams and Tsien caution us that these are not mock-ups, but full-size pieces of a proposed house.

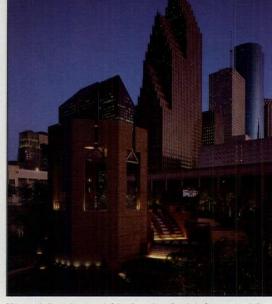
The architects have created a kit of parts at actual size from low-cost materials commonly used in buildings, such as foam insulation, laminated craft paper, molded woodchip pallets, perforated hardboard, stacked and glued sheets of Homasote, clear pine planks and untufted carpet backings. These are intended for reuse in any number of combinations - three of which are suggested by small models displayed throughout the gallery, one each for a generic urban, suburban, and rural site. And the germ of some intriguing ideas for the future is suggested, but not fully explored, in these models - particularly with the suburban site, where Williams and Tsien have proposed that parts from their kit be scattered around suburban houses as a solution to future land use needs. Emphasis has clearly been placed on the larger exhibit, which fills the gallery with huge foam roof elements and dense, velvety walls of Homasote, the whole surprisingly light in treatment despite the mass.

Progressive Architecture 2.90

24

Experimentation with inexpensive materials used in unique ways is a popular theme of late. With more testing and investigation by architects at the level shown here, we can look forward to a rich and varied future for tomorrow's architecture. The exhibition will be at the Whitney Museum at Federal Reserve Plaza, New York, from March 14 to May 18. **Bruce Wright**

The author is editor of INFORM Design Journal and teaches at the Minneapolis College of Art & Design.



Houston's Sesquicentennial Park against the city's downtown skyline.

Houston Park Phased into Reality

Houston has shown that it is possible to translate image into reality with the completion of the 2.2-acre Phase One of the 9.6-acre Sesquicentennial Park. Progress has been slow on the implementation of Team HOU's winning design, chosen from a national competition (P/A, July 1986, p. 25) for improvements along Buffalo Bayou in the city's cultural district.

This phase of the project, designed to highlight a projected network of waterfront parkways by linkage to the performing arts district, is the most expensive park per square foot in Houston. Soils are essentially unstable fill, requiring deep pilings to protect adjacent structures, while retaining walls use a reinforced earth system acting much like traditional gravity walls. Freestanding fascia walls are of materials that become more refined as one rises from the bayou, from broken concrete at water's edge, to split-face concrete masonry, to red brick. Part of the construction involved the rerouting of two underground access ramps serving the Civic Center parking garage.

Dominating the first phase is an entrance pavilion that effects the transition down the 40-foot elevation change from the Wortham Plaza to the bayou. A cascading water garden draws pedestrians into the parkway. Constructed of steel frame (partially exposed), its brick veneer matches that of the Wortham Theater (P/A, January 1988, p. 29). A smaller pavilion "gatehouse" identifies a handicapped access ramp, useful also for bicyclists, strollers, and skaters. Integrated

night lighting extends the use.

Phase Two of the plan, which includes a series of seven vertical pylons that define a Promenade along the western edge of the Wortham Theater, has been approved, and construction is scheduled to begin this summer, with targeted completion in June 1992. **Peter Papademetriou**

Czech Conference Targets Consumption

.

While the East Germans were tearing down the wall, the International Prague Assembly of Architects, Planners, and Designers were convening to develop plans for building a better world. The conference, held in Prague November 6-11, was co-sponsored by the International Architects/Designers/Planners for the Prevention of Nuclear War (IADPPNW) and the Union of Czechoslovak Architects, and was attended by over 350 delegates from 42 countries.

IADPPNW's main goals are to convert national economies from war to peace, to create a healthy natural environment, and to construct, protect, and preserve the built environment. "We must use the weight of our profession to achieve these goals. The fate of people cannot be left in the hands of a few who think they know what's best," stated Tichian Papachristou, FAIA, co-chairman of IADPPNW.

The Secretary General of the Union of Czechoslovak Architects, Ivan Horky, in speaking of the role of architects today, stated that the architect has a "profoundly humanistic essence. Architects' existence depends on construction rather than destruction, and their inherent meaning is to satisfy people's material and spiritual needs as well as possible."

Delegates presented numerous papers on the role of architects and planners in solving global, ecological, and social issues. Speakers included visionary architect Paolo Soleri, who asserted that "unlimited consumption is the real enemy and, as it has been said, the enemy is us, the compulsive buyer pursuing happiness via hedonism, if not downright materialism." As reforms in Eastern Europe are aimed at unleashing a wave of increased consumption and production similar to Western standards, an earth already strained by acid rain, air pollution, and destruction of the natural environment will be further burdened. "To help conquer the impending ecological disaster, building activities have to fundamentally change and a concern for environmental ethics integrated into our work," said Dutch architect Peter Schmid.

At the plenary session the Assembly agreed that the delegates should return to their respective countries as international environmental advocates and, through their work as architects, designers, and planners, promote the principle that ecological and social criteria are indivisible from professional responsibilities. This new focus will be the theme of the International Union of Architects (UIA) World Congress at Montreal in May 1990. Sally Siddiqi

The author is president of a New York marketing firm for architects and designers. She is a member of the board of directors of Architects/ Designers/Planners for Social Responsibility.



Full-size pieces of a proposed house from Tod Williams and Billie Tsien's "lab report" at the Walker Art Center, Minneapolis.

Making more elevators makes Dover No.1.



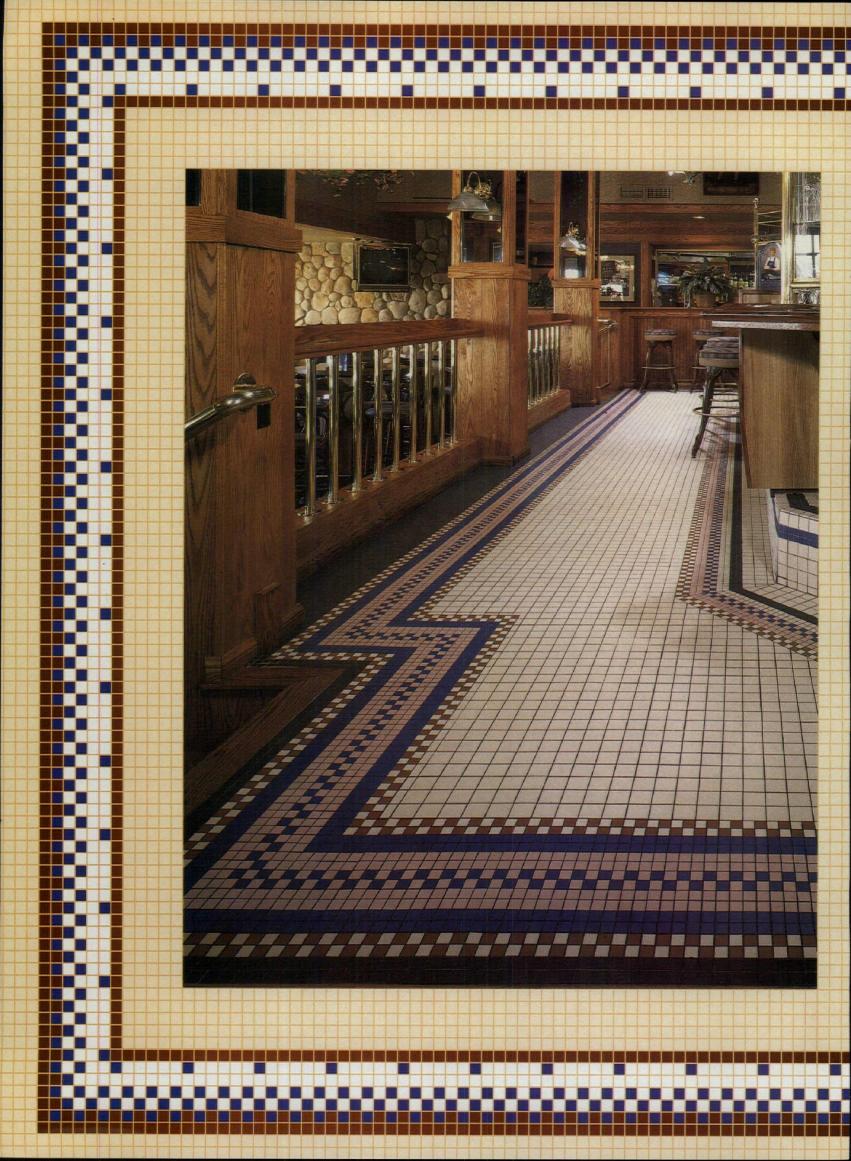
Ask Greg Osbourne, General Manager of One Buckhead Plaza. about his sixteen Dover elevators and his reply is short but sweet. "Perfect." And what about Dover service? "Perfect." It's this kind of customer satisfaction that has propelled Dover to the top spot in elevator sales. Each year we design, build and install more elevators than anyone else

in America. And every job we do aims for one result perfection. Just ask Greg Osbourne.

For more information or help on any elevator project call your local Dover office. Or write Dover Elevator Systems, Inc., P.O. Box 2177, Memphis, TN 38101.

One Buckhead Plaza, Atlanta, Georgia Owners: Taylor & Mathis, Metropolitan Life Ins. Co. Architect: Thompson, Ventulett, Stainback and Associates Contractor: Turner Construction Company Elevators sold and installed by Dover Elevator Company, Atlanta, Georgia





PORCELAIN CERAMIC MOSAICS BORDER ON YOUR IMAGINATION

Choose from a variety of Dal-Keystone small unit porcelain ceramic mosaics in sizes...shapes...textures...and colors that are all highly weather, fade, and stain resistant. Specify our standard pattern designs and borders in your choice of colors. Create custom borders...field patterns...logos...signage...or decorative floor and wall designs...with the help of our custom design department. Your choice is limited only by our standard unit sizes...and your imagination.



7834 Hawn Freeway Dallas, TX 75217 (214) 398-1411



Circle No. 326 on Reader Service Card

The Great Taste of

McDonald's Chose a **Carlisle Roofing System** Single-ply roof helps maintain

the integrity of the adjacent landscape.

Development of McDonald's corporate office campus in Oak Brook,

IL, planned for completion by the year 2000, is moving right along. The latest addition on the 81-acre site is a multi-level executive office building. The owner, and Chicago architect Lohan Associates selected a Carlisle system to secure the 100,000 square-foot roof structure. According to Dirk Lohan, FAIA, "Carlisle's ballasted system was an According to Dirk Lonari, 1747, Cample's Journatics system was an ideal solution to McDonald's roofing requirements. The EPDM mem-

brane protects the structure from the effects of wind, snow, water and the cold midwest winter environment . . . and at a reasonable cost." Attractive, Secure, Weatherproof. This Carlisle ballasted system incorporates an inverted membrane

assembly designed for flat or nearly flat roofs where ballast load is not a problem. It utilizes a .045 in. thick Sure-Seal EPDM membrane loose laid over a post tensioned smooth finished concrete deck. Splicing laid over a post tensioned smooth innisned condete deck. Spliding Cement and In-Seam SealantTM are applied to secure the field splices. Next, the perimeter is secured and insulation installed above the

membrane. Finally, a protective fabric scrim and ballast are added. Other Innovative Systems To Choose From. Carlisle has many systems available to meet your roofing needs.

Included are the new Design "A" Fully-Adhered and innovative Mechanically-Eastened Roofing Surface Dest Mechanically-Fastened Roofing Systems. Both systems utilize the unique .045 in. thick polyester-reinforced EPDM membrane and are unique .045 in. thick polyester-reinforced thom membrane and an available in either Sure-Seal[®] (black) or Brite-PlyTM (white) membranes. Carlisle, Sure-Seal, Brite-Pty and In-Seam Sealant are trademarks of Carlisle Corporation.

Circle No. 323 on Reader Service Card

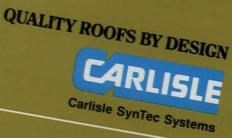
Architect: Lohan Associates Roofing Contractor: Oisson Roofing Company Carlisle Manufacturer's Representative: Cambric Corporation

THE LEADER IN SINGLE-PLY

RUS

McDonald's — over seventy billion hamburgers served. Carlisle — over 70,000 roofs warranted and over two billion square feet of membrane installed by authorized Need More Information? Call a Carlisle manufacturer's representative/distributor. Or call Carlisle SynTec Systems toll free at 1-800-233-0551

In Pennsylvania 1-800-932-4626. In Canada 1-416-564-5557. Or write Carlisle SynTec Systems, P. O. Box 7000, Carlisle, PA 17013.



© 1989 Carlisle Corporation

New Schools for New York Through March 15

Emilio Ambasz Through March 25

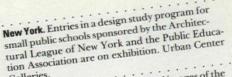
> Wright Drawings Through April 8

Stanley Tigerman Through April 15

> Bank Architecture Through April 15

Scogin Elam & Bray February 11–April 9

> Architecture and Its Image February 18–May 13



Galleries. Akron. Models and two-dimensional images of the architect's projects, both built and proposed, will be among the exhibits shown. His industrial and product designs will also be on display. Akron Art

Museum. **Phoenix.** A retrospective of drawings and sketches done between 1887 and 1959 celebrates Wright's all-encompassing vision. The exhibition is the first in a year-long series of events honoring the architect. Phoenix Art Museum.

Calendar

Chicago. With his housing project in Fukuoka (P/A, Oct. 1989, p. 39) and the yet-to-be-completed Chicago Bar Association Building, Tigerman's design ethic now spans, and sometimes blends, the diverse worlds of deconstructivism and historidiverse worlds of deconstruc

Houston. "Money Matters: A Critical Look at Bank Architecture" will survey the history of bank design in Canada and the United States. Photographers were commissioned to shoot 40 banks by architects from Samuel Blodgett to Louis Sullivan to Philip Johnson. Museum of Fine Arts.

to Philip Johnson. Muse San Francisco. While the Atlanta firm's work is difficult to categorize, their diverse design sensibility from project to project and their use of material as a stage for experimentation rarely lacks excitement. Art and Architecture Exhibition Space.

Dallas. The inaugural exhibition at the Canadian Centre for Architecture will travel to Dallas and, in the spring, to Paris. The show is a sampling from the CCA's collection. Dallas Museum of Art. (continued on page 30)

PFLOW INTRODUCES LOW COST 500* CAPACIT VERTICAL VERTICAL

For Mezzanines and Through-Floor Applications

Telescoping mast is raised and lowered by direct-acting hydraulic rams eliminating chains and cables. When retracted, entire mechanism is below 2nd floor permitting fast, easy, low-cost installation.

TL-500 is factory preassembled, and has a vertical rise to 12'6". Cantilever carriage permits "C"-"Z" and 90° loading or unloading. Carriages are available in sizes from 3' × 3' to 5' × 5' with speeds from 20 to 26 FPM. A velocity-sensing valve prevents uncontrolled carriage descent. Unit includes all necessary safety gates and enclosures.

Circle No. 361 on Reader Service Card

Get the complete facts. Contact:



.....

Calendar

Tod Williams/Billie Tsien Through February 11

Reichert and Millet Through March 11

> Kahn's Museums Through March 11

> > Architects' Art Through March 12

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

Seattle. "Architecture in the House" compares the residential work of two generations of Seattle architects: Robert Reichert, who brought a Modernist aesthetic based on the use of graphics to the region in the 1950s; and Mark Millet, whose use of low-cost materials and dissected volumes represents a present-day Gehryesque sensibility. Each architect has designed his own installation for the show. Seattle Art Museum.

Show. Seattle Arten and Status Sta

Santa Monica. Architects from the U.S., Europe, and Japan – Eric Moss, Coop Himmelblau, and Sinya Okayama among them – were asked to design furniture and other functional objects to "serve as the first letter in a possible new vocabulary of building design, or as prototypes for limited or mass production." Gallery of Functional Art.

Calendar (continued from page 29)

Christopher Wren February 21-May 8

Washington, D.C. Sir Christopher Wren's legendary design for St. Paul's Cathedral, completed in 1711, will be documented in an exhibition of rarely seen original drawings and plans, manuscripts, and artifacts. The Octagon.

Competitions

AIA Photography Contest Entry deadline March 11

Architectural Monument Registration deadline March 30 Entry deadline June 29

AIDS Center Resistration deadline April 2, Submission deadline June 1

Vietnam Memorial Registration deadline April 10 St. Louis. The St. Louis Chapter of the AIA is once again sponsoring an architectural photography contest. Photographs, which must "contain a building or part of the man-made environment" are judged on their aesthetic value. AIA members and component affiliate members - except professional photographers - are eligible. Contact St. Louis AIA, 911 Washington, suite 225, St. Louis, Mo. 63101-1203 (314) 621-3484.

New York. "A Choragic Monument to Twentieth Century Architecture" is a national competition calling for entries in the form of computer drawings, hand-embellished computer drawings, or computer-embellished hand drawings; \$6000 in prizes will be awarded. Contact NYC/AIA, Choragic Monument, 457 Madison Avenue, New York, New York 10022.

San Francisco. This competition calls for a design to house an AIDS Service Provider Network and provide a permanent space for The AIDS Memorial Quilt. Architects, designers, artists, students and other interested parties are eligible. An exhibition and publication will include all entries. Contact Jonathan Pearlman, 2338 Market Street, San Francisco, Calif. 94114 (415) 626-0931.

Minnesota. An open national competition for the design of a memorial honoring Minnesotans killed in Vietnam calls for a design that will "evoke a reflective mood" and "express a sense of regionalism." Contact Minnesota Vietnam Veterans Memorial, Professional Advisor, Capitol Area Architectural and Planning Board, Room B-46, State Capitol, St. Paul, Minn, 55155 (612) 296-7138.

Conferences

Barrier-Free Design March 8-9

ACSA Annual Meeting March 17-20

Westweek 90 March 21-23

Gaithersburg, Md. In response to the pending 1989 Americans With Disabilities Act (which will require all public accommodations and places of work to comply with federal barrier-free design standards) the Institute for Technology Development is sponsoring "Barrier-Free Design: A Conference and Charrette" at the Gaithersburg Marriott Hotel, Gaithersburg, Md. Contact Margaret A. Wylde, Institute for Technology Development, Advanced Living Systems Division, 428 North Lamar Boulevard, Oxford, Miss. 38655-3204 (601) 234-0158.

San Francisco. "Architecture of the In-Between" is the theme of the 78th annual meeting. The meaning of the "in-between" will be discussed in terms of education, design, technology, practice, and social responsibility. Contact ACSA, 1735 New York Avenue, N.W., Washington, D.C. 20006.

Los Angeles. Members of the contract furniture industry will convene once again at the 15th annual Westweek, "LA 20/21: Design, Business, The Next Century," to be held at the Pacific Design Center, will focus on Los Angeles as an influential venue of American architecture and design. Contact Pacific Design Center, Marketing and Design, 8687 Melrose Avenue, Los Angeles, Calif. 90069 (213) 657-0800.

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.

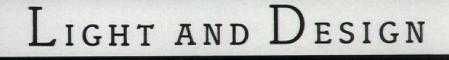
New addition! Tractionfloer Smooth and Studded in "Jet Black." Shown right, it is used in a custom design inlay to add dramatic impact to a stairwell and hall.

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



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

Circle No. 333 on Reader Service Card







Nyhavn Extended Wall





PH Artichoke (H.I.D.)



PH Louvre (H.I.D.)

UL/CSA

Poulsen Lighting, Inc. 5407 NW. 163 Street Miami, Florida 33014-6130 Telephone - 305-625-1009 Telefax - 305-625-1213 Call Toll Free - 800-342-2310

Circle No. 364 on Reader Service Card



Design: Mario Barbaglia Marco Colombo

(UL)

Halogen table lamp 50 watts Colours: black, white, blue, yellow, red

PAF esrl A Chartwell Company Via Edison, 118 20019 Settimo Milanese Italy Telefono (02) 3287321 Telex 315031 Paf I Telefax (02) 3288137

IDC/NY Ctr. Two, 7th Fl. (w/ICF) 30-20 Thomson Ave. L.I.C. N.Y. 11101 718-937-0722

Factory and Office 21-24 39th Ave. L.I.C. N.Y. 11101 - 3687 718-786-3520 Telex 620056 Fax 718-937-7968

New York 200 Lexington Ave. New York, N.Y. 10016 212-889-3860

Y A Chartwell Company

Chicago 1245 Mdse. Mart Chicago, IL 60654 312-467-5911

High Point Commerce & Design Bldg. 201 W. Commerce Ave. High Point, N.C. 27260

Dallas 9038 W.T.C. Dallas, TX. 75258 214-747-0420

Florida DCOTA, B-494 1855 Griffen Rd. Dania, Fl. 33004

Los Angeles 639 PD.C. 8687 Melrose Ave. L.A., CA. 90069 213-659-5660

See us at WESTWEEK - Space #639, P.D.C.

San Francisco 380 Galleria Des. Ctr. 101 Henry Adams S.F., CA. 94103 415-863-2233

Italy PAF srl 10, Via Pietro Verri 20121 Milano Italy Tel. (02) 3287321 Telex 315031 Fax. (02) 3288137

Circle No. 355 on Reader Service Card

The P-touch is a compact electronic Lettering System that can create reproducible quality lettering at the touch of a button.

Its speed, ease, versatility, and portability make it hard to resist. And its price makes it impossible to resist.

Its business and personal applications are virtually unlimited. It's as simple as dialing the selector knob to the letter, number or symbol you want and pressing a button. That's all it



takes to create razor-sharp lettering in a choice of three colors or black and white.

THE DELETE

REPORTS



brother

LABORATO

Low

INVOICES

Plus, with its 45 character memory and editing capabilities, you can make changes or take out any errors before you print it out.

Another big plus: the P-touch operates on AC or batteries so it's ready to go to work anytime and everywhere.

Mr. Dean F. Shulman, V.P. Marketing Brother International Corporation 8 Corporate Place, Piscataway, NJ 0885 Dear Mr. Shulman: Please send me additional information on the Brother P-touch Lettering System.
NAME
ADDRESS
CITY STATEZIP
TELEPHONE DEPT. DAG

PA9

Sells for less than \$20000

PROPER

BUDGE

PRESENTA

poration

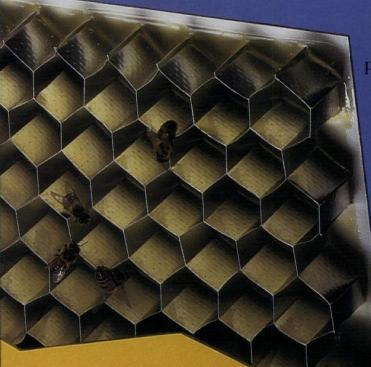
We're at your side.

ACME

BROTHER INDUSTRIES LTD., NAGOYA, JAPAN

We borrowed one of from some very

our best panel ideas good designers.



We're not ashamed to admit it. Our engineers got the idea for our Alveus™ panels and curtain walls from somewhere else.

They took it from nature.

The honeycomb core in a beehive is a masterpiece of engineering and art. It can support 25 times its weight in spite of its ultra thin shell.

Which is just what we were looking for. So inside Alveus panel products you'll find a rigid aluminum honeycomb core. Making them lightweight, yet still able to maintain exceptionally high strength-to-weight ratios.

It also gives you surfaces with absolute flatness.

And lets you curve them into almost any configuration you want. From rounded corners to column covers.

So when you need a smooth surface design that blends with glass to create an uninterrupted flush, monolithic surface, look for Alveus panel and curtain wall.

The ones with the honeycomb core. After all, four-hundred million bees can't be wrong.

For complete architectural design specifications, contact Kawneer Company, Inc., Department C, Technology Park-Atlanta, 555 Guthridge Court, Norcross, GA 30092.





AN SHE

325

Question? Call us at 1-800-448-9835.

The fun of having the world's biggest selection of carpets to play with. And the comfort of knowing that every one is made of the toughest, most resilient type of carpet nylon. That's what designing with Du Pont certified carpets of ANTRON® nylon feels like. But you already knew that, didn't you?

Curry Control

24

Circle No. 329

ANTRON®





Red faces.

On a Tuesday evening Mike Gelfand, VP of Sales at Waldner's, the Steelcase[®] dealership in Farmingdale, NY, was having dinner with his family when the phone rang. "Mike, we're in trouble. You're my only hope!"

The caller, the facility manager at one of New York's largest banks, was seeing red. Actually, red-red orange.

His bank had ordered half a million dollars' worth of Steelcase open-office panel systems, but somewhere along the line someone had keyed in the wrong color number.

"When the first 500 panels came in," Mike recalls, "the poor guy at the bank took one look and nearly



died. 'Those aren't my panels! I ordered beige!'"

The carpeting was down, the walls were painted, the door bucks were stained. Important clients would be coming to see the installation in a week. Disaster.

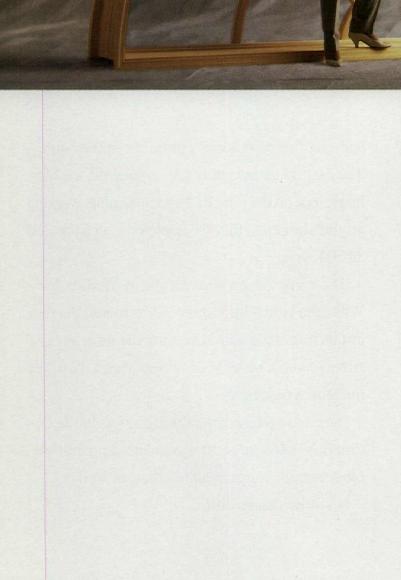
Mike called Jane Williamson, his Steelcase rep, and she got on the phone to Dealer Services in Grand Rapids. They authorized the panel factory to do whatever was necessary to correct the rest of the order, but the 500 red-red orange panels that were already at the bank had to be fixed on-site.

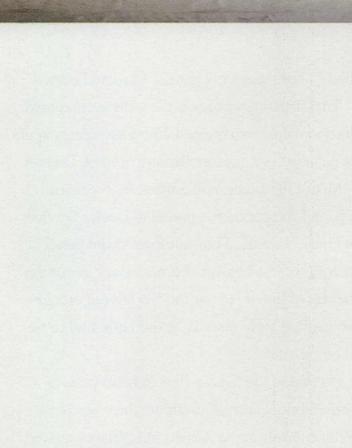
On Friday, the factory flew in 1,800 yards of beige fabric. Saturday morning, three Steelcase technicians from the Athens, AL, factory arrived and met five of Waldner's installers at the bank. They set up an assembly line, ripped off the old fabric, put on the new. By Sunday evening, working around the clock, they'd completely reupholstered all 500 panels.

The bank was up and running by Wednesday. While the bank's important clients toured the new installation, Jane and Mike took the guys from Athens, who'd never been to New York City, to see the Statue of Liberty.

"Steelcase really came through in a clutch situation," Mike says. "It was an amazing job. No other manufacturer could do that, or would." No other dealer, either.

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.

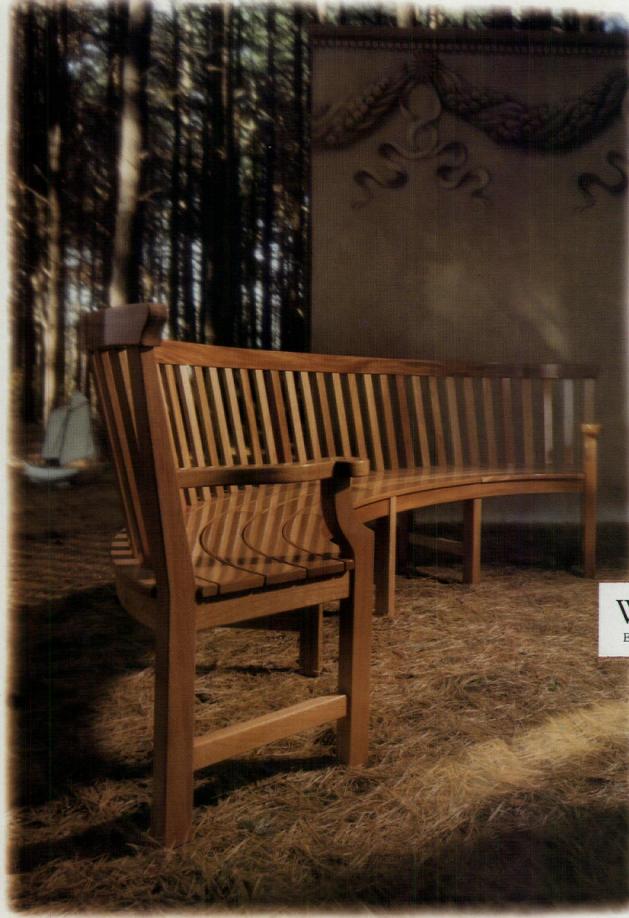
You see, we make windows to order. Which means you can specify the features you want us to build in. And you can specify the features you want us to leave out.

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.



Circle No. 353 on Reader Service Card



to the story of Weatherend that began once around a time on the coast of Maine where a certain groundskeeper designed furniture whose graceful curves mirrored the lines of the sea. That was long ago but the story

continues today as

skilled artisans use

time honored boat-

building techniques

to make Weatherend

furniture as durable

as it is beautiful.

Listen

Weatherend® ESTATE FURNITURE

> We've told our story now you tell yours and tell it with Weatherend furniture to create a room or landscape destined to become a legend in its own time.

Tell your own story.

For a portfolio of our complete collection write Weatherend* Estate Furniture, P.O. Box 648, Rockland, Maine 04841 or call 207/596-6483.

Technics Topics

William C. Panarese of the Portland Cement Association

shows how to attain near-perfect concrete finishes.

Perfecting Architectural Concrete

Exacting methods and few deviations drive the quest for the perfect product. But when the product is cast-in-place architectural concrete, even the most extreme measures might not yield perfection. Interior and exterior architectural concrete is sitecrafted from manual labor. It is to concrete what millwork is to carpentry. And measurement of its impeccability must reflect the distance between factory precision and field production.

As in many other businesses, specialization has guided the architectural concrete industry. Specialists employ turnkey systems that evaluate available labor, form schedules within the construction program, test preliminary and on-going concrete mixes, cast sample panels and mock up structures, and inspect the work on site. The best systems secure consistent surfaces for exposed columns, walls, and other components.

Specifications Initiatives

Architectural concrete can be grouped into classes of treated and untreated surfaces, both representing inflexible and unforgiving job-site conditions. The treated class involves primarily exposed aggregate surfaces. It offers many aggregate color and size options but requires more field steps than the untreated or "off the form" class. The latter covers both smooth and lightly sand-blasted surfaces.

What constitutes a realistic standard for cast-in-place architectural concrete? Some consultants have argued that a standard or specification could only be drawn



Natural gray architectural concrete was specified for Christ the King Garden Crypt Mausoleum, designed by Harley Ellington Pierce Yee Associates. A project for which limestone or marble might traditionally have been chosen, the 21,000-crypt mausoleum in Hillside, Ill. adapts exposed concrete to smoked glass and tubular steel and aluminum in a network of sharp angles, circular and quarter-round forms. Joints, rustications, and formwork tie holes are emphasized inside and outside the mausoleum.

"Contractor input allowed us to produce a design compatible with the material," says Harold VanDine, senior vice president of architecture and design for the Southfield, Michigan, firm. "We knew where the pours and form sections would begin and end and curtailed negative surface effects with proper detailing." The architectural concrete was cast in winter. And while low temperatures and the elements were overcome, VanDine adds, the skilled concrete tradesmen and construction program might not have generated a product of similar quality in another climate and region. This underscores how, in the final analysis, local factors shape architectural concrete. for exposed aggregate projects, as untreated-surface installations are too contingent on flawless execution. Others contend that exposed aggregate becomes a Pandora's box, netting too many potential levels of quality or unsatisfactory product. However one may view exposed aggregate finishes, few experts dispute the difficulty of achieving extraordinarily smooth, untreated surfaces.

Contracts usually designate end product quality level. And, while parameters drawn by the architect, owner, and contractor will continually influence project management and quality control, the industry's first architectural concrete specification should be published within two years.

The American Concrete Institute's architectural concrete committee is drafting specifications based on a guide contained in its *Manual of Concrete Practice*. The new document will establish acceptance criteria, currently defined as a finished product with a "pleasing appearance with minimal color and texture variations and minimal surface defects when viewed at a distance of 20 feet or as otherwise specified."

Quality control will be covered in the specifications, along with tints and coloring pigments, admixtures, form release agents, and surface treatments - all issues affecting appearance and uniformity, explains Californiabased Joseph Dobrowolski, committee chairman. A consultant and author of the U.S. Army Corps of Engineers' Engineering and Design: Architectural Concrete manual, Dobrowolski notes that the specifications will express ACI research and committee positions regarding the influence of superplasticizers and other admixtures on color and surface characteristics.

Exposed high-strength concrete applications and color variations from fly ash additives will also be examined. High-strength concrete mixes yield an inherently darker product as a result of in-(continued on page 45)

Technics

.

Technics Topics43Building Science Brief47Technics Feature49Technics-Related Products147

Tech Notes

Guideline for Work Station Design is a 151-page analysis of computer work stations by Arthur Rubin and Gary Gillette of the National Institute of Standards and Technology. National Technical Information Service, (703) 487-4600, \$24.95.

The Intelligent Buildings Institute has released its new, quarterly *IBI Journal*, which will cover trends in the intelligent buildings marketplace and technology in commercial intelligent buildings. IBI, (202) 457-8477.

The Directory of Information Resources in Housing and Urban Development contains information on 54 online databases and 150 profit and nonprofit groups, educational institutions, libraries, and public agencies having a national interest in the subject. HUD User, (800) 245-2691, \$25.

The American Institute for Hollow Structural Sections has been formed to advance and improve the use of structural steel tubing in buildings, bridges, and other applications. Frederick J. Palmer, Director, (412) 221-8880.

The 820-page Thermal Performance of the Exterior Envelopes of Buildings IV proceedings is available for \$98 from ASHRAE, (404) 636-8400. The December 1989 meeting brought together researchers in roofing, wall, glazing, and foundation systems. Last held in 1985, this conference is the best single-source review of the state-of-the-art.

The Architectural Precast Concrete Design Manual has been released as a second edition. Details, specifications, checklists, shapes, finishes, joints, tolerances, and over 100 color photos. Precast/Prestressed Concrete Institute, (312) 786-0300, \$50.

More Colors. More Freedom.

Roppe has always been known for the finest quality in a broad line of rubber and vinyl flooring products. And now we're building a reputation for a growing selection of designer colors ... colors that create new design opportunities for you. In the past year, Roppe has added many new color choices for all product lines, including rubber floor tile, rubber and vinyl cove base and accessories, and stair treads...with even more colors to come. So whatever your flooring needs, Roppe lets you handle them with quality *and* style. Add some color to your life. Contact your Roppe distributor. Or call us toll-free. Roppe Rubber Corporation, 1602 N. Union Street, Box X, Fostoria, Ohio 44830.



FOR MORE INFORMATION, SEE YOUR SWEETS CATALOG, SECTION 09650, BUY-LINE 0176.

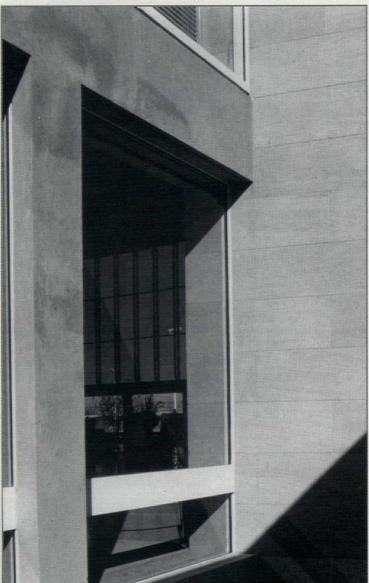


Circle No. 366 on Reader Service Card



The pursuit of perfection was a way of life during construction – and especially throughout the pouring schedule – of I.M. Pei's Morton H. Meyerson Symphony Center in Dallas. Pei's geometrically complex center combines exposed concrete columns, soffits, and conventional and curved beams (including a sweeping, 270-degree ring beam) with interior and exterior limestone. without mimicking, the color of the limestone. Architectural concrete expresses the elements that hold the building up while limestone textures the walls. Tireless inspections (particularly those by the concrete supplier's on-site quality control representative), testing, and formwork evaluation netted a product as near perfect as architectural concrete can get.

A buff-colored cement approaches,



Juxtaposition of concrete and limestone shows the extraordinary quality of finish achieved in the Meyerson Symphony Center.

(continued from page 43)

creased cement content, lower water-cement ratios, and the employment of silica fume or other admixtures. Excessive use of fly ash for applications other than general building construction may lower concrete quality and performance. Fly ash is either specified according to color availability and local sourcing or specifically written out of mix designs by those who are more cautious.

A Matter of Form

Color and formwork are key, particularly with untreated surfaces. Perfection demands keeping a close watch on processes affecting color. Alternatives to natural gray architectural concrete are achieved with white or lightly buffcolored portland cements or a host of oxide mineral pigments affording blues, browns, greens, and reds. Although the use of white portland cement increases the sensitivity of mixing, placing, and other job site details, the results can be dramatic.

Coarse aggregate and sand possibilities augment the concrete color spectrum, as do forms and form-liners in a host of textures and patterns using today's chemically-treated or plastic-impregnated plywood, lumber, conventional and exotic hardwoods, plastic, fiberglass, aluminum, steel, and magnesium. Specifiers must take the same active role in formwork selection as they do in color determination. Generic statements like "formwork shall be smooth and uniform" do not assure a near-perfect finish, much less acceptable results, asserts James Shilstone, Sr., a Dallas concrete consultant. A lack of clearly defined formwork specifications, he suggests, can produce "structural concrete, architecturally expressed."

If form and formliner materials are instrumental in perfecting architectural concrete, other factors such as joints, caulking and gaskets, form release agents, and economic considerations also play a role. The most uniform applications, in color and surface terms, result from tight formwork that is caulked and gasketed to prevent leakage and that minimizes use of even highly compatible form release agents. Construction and form joints, rustications, tie holes, and forming tolerances are other factors which, aside from working drawing details, should be reviewed in pre-bid discussion between architect, owner, and prospective contractor. Formwork costs, furthermore, must be weighed against the budget and final product expectations.

Quality architectural concrete demands accuracy in formwork alignment and consistency in concrete mix proportioning and use of coloring agents. Accuracy in detailing and execution delivers a product of high standards, observes Theodore Amberg, AIA, formerly a Dallas-based associate partner with I.M. Pei & Partners, but serving as a vice president with A. Epstein & Sons of Chicago.

Twenty-plus years' association with I.M. Pei leads Amberg to underscore these fundamentals:

• Adequate preparation of formwork, ranging from selection of form materials to preparation of final drawings.

• Uniformity and consistency of concrete mix, verified by site-cast test panels.

• Sealing and gasketing of forms to prevent leakage and irreparable blemishes and inconsistencies.

• Consistent placement to assure even distribution of concrete.

• Proper treatment of placed concrete, with all curing procedures followed.

 Careful formwork removal – patchwork will always show.

When coupled with expert detailing and a carefully chosen concrete mix, these recommendations can help the architect approach perfection in exposed architectural concrete.

William C. Panarese

The author is manager of construction information services for the Portland Cement Association.

Recommended Reading

Guide to Cast-in-Place Architectural Concrete Practice, 303R-74(82), American Concrete Institute, Detroit, (313) 966-2600

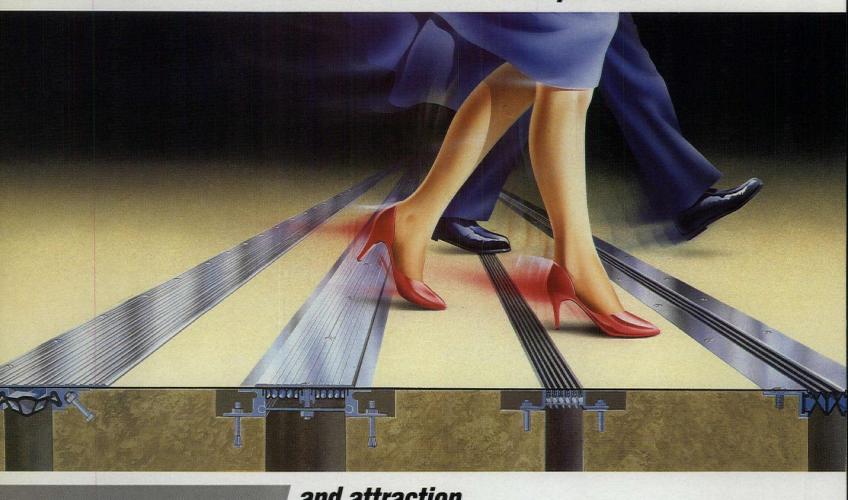
Color and Texture in Architectural Concrete, SP021A, Portland Cement Association, Skokie, Ill., (312) 966-9559

"Architectural Concrete Contract Documents," James Shilstone, Jr., *Concrete International*, November 1985 (reprints from PCA)

Architectural Concrete: Design and Construction Practice, 1010, and Guide to Troubleshooting Site-Cast Architectural Concrete Problems, 4050, Concrete Construction Publications, Addison, Ill., (800) 323-2576 Progressive Architecture 2.90

45

Finally, the missing link between expansion



and attraction.

Admittedly, an expansion joint isn't the most aesthetic part of a building. Very few, in fact none, have ever been known to gather a crowd.

So when you specify an expansion joint, concerns such as seismic and fire ratings, and even a flat surface for pedestrians, are of a higher priority than aesthetics.

However, the new WABO[®] VIP expansion joint (third from the left) is beginning to change the way architects look at expansion joints. Designed by Watson Bowman Acme, America's most experienced manufacturer of expansion joints, the VIP is both functional and aesthetic.

It consists of a series of elastomeric moving seals spaced evenly between metal separators to create a look that is not only aesthetic but also meets the strictest fire codes and can handle seismic movements of up to 6 inches.

Furthermore, it comes in standard colors with a host of custom colors which will integrate well with any design requirement.

Ask Watson Bowman Acme for more information or assistance in specifying the expansion joint that not only meets your needs but can also do it beautifully. Or write for our free architectural catalog.

* Registered trademark of Watson Bowman Acme Corporation



YOUR BEST CONNECTION

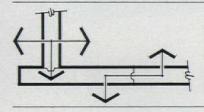
WATSON BOWMAN ACME CORP. 95 PINEVIEW DRIVE, AMHERST, NEW YORK 14120, (716) 691-7566 TELEX: 64-6533 FAX: 691-9239 WATSON BOWMAN ACME INC. 4205 FAIRVIEW STREET, BURLINGTON, ONTARIO, CANADA L7L 2A4 (416) 639-1691 FAX: (416) 639-7187

Circle No. 385 on Reader Service Card

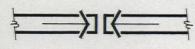
This first Building Science Brief begins a series of occasional one-page reference sheets intended for the practitioner's file. The focus is on principles and their application and where to find authoritative information.

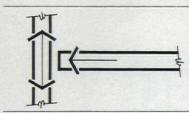
. Buildings move and failures occur when joints aren't provided to accommodate this movement or transfer the loads driving it. Architects must: 1) recognize the need for joints; 2) understand the nature of movements at joints; 3) be able to detail or know when to seek advice about joint width, load transfer and closure devices; 4) coordinate locations of joints in substrates and finishes; 5) know what information must be conveyed in drawings and specs.

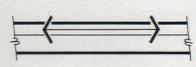
Architects should not assume that proper joint treatment will be improvised in the field by trades-

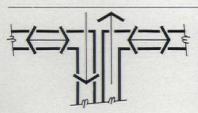












men. Preconstruction conferences with contractors can help identify problems before they happen. Kenneth Labs

Recommended Reading

.

Building Movements and Joints, Portland Cement Association, Skokie, Ill. (312) 966-6200, 1982.

Cracks, Movements and Joints in Buildings, 15477, National Research Council Canada, Ottawa (613) 993-2051, 1976.

The Science and Technology of Building Materials, H.J. Cowan and P.R. Smith, VNR, New York (800) 926-BOOK, 1988.

Construction (cold) joints are static connections between mem-

bers created by job conditions, not by intent. Construction joints must transfer loads so that the jointed material behaves as if it were mon-

Control (contraction) joints may

be thought of as articulated cracks. They are commonly used in masonry and cementitious materials that shrink while curing. The joints relieve shrinkage stresses at

Expansion joints are separations between members that accommodate elongation and contraction in the plane of the members because of daily and/or seasonal temperature and moisture changes. Gap

Isolation joints are separations between two members that allow each to move independently. Although often called expansion joints, they are used to accommodate non-thermal movement be-

Cleavage planes (slip sheets, isolation membranes, and bond breakers) are used to separate and allow independent movement of adjacent materials of a wall, floor, or roof assembly because of tem-

Seismic (separation) joints are separations between assemblies that allow them to move independently during earthquakes. Joint width for structural systems must be engineered to prevent sepa-

Coefficients of	dimensional	change	(inches	per inch, x	10-0)

Material	Curing	Moisture (per % MC)*	Thermal (per °F)†
Aluminum			12.8
Acrylic and polycarbonate sheets			40-45
Brick masonry	(swells) 300-500		3.6
Concrete, unreinforced	(shrinks) 500-600		5.5-6.5
Concrete masonry (sand and gravel)	(shrinks) 190-270		5.2±
Framing lumber, radial to grain		1300-1700	26
Framing lumber, tangential to grain		2000-3000	35
Glass			4.5-5.0
Granite, limestone			3.8-4.7
Red oak, radial to grain		1700	31
Red oak, tangential to grain		3800	40
PVC (vinyl siding & gutters)			30-35
Steel			6.7

*Interior wood moisture content (MC) varies seasonally by 2-10 percent. † Exterior cladding temperature varies seasonally by 100-150°F.

olithic. Keyways, reinforcing, adhesives, cements, and roughened surfaces are used to increase the friction or bond at the joint. Construction must be staged so that cold joints do not occur at

In finishes, cold joints may be articulated to reduce the problem of matching color and texture from one application to another.

structurally undesirable locations.

predetermined locations and irreversible contraction in the mathereby reduce random cracking. terial and are created by forming, They help maintain watertightness tooling, or cutting to create a plane of exterior claddings and are used of weakness within it. Reinforcing for aesthetic reasons indoors. Conmay or may not be carried across trol joints accommodate a single, the joint. size must account for the physical jointed members, while too large a properties, dimensions, and angap may exceed the working limits chorage locations of the members of closure devices. Reinforcing is and for conditions during installanot carried across the joint. tion. Too small a gap can cause damage to the seal and buckling of cause of settlement, creep, heaving sidewalks and foundation walls, due to frost or moisture-related and between the top of non-strucsoil expansion, and vibration, for example. Isolation joints are required between columns and floor slabs, slabs and foundation walls,

perature- or moisture-induced dimensional change or curing shrinkage. Cleavage planes are usually applied at the surface of the structural substrate and typically consist of polyethylene film,

rated members from pounding one another. Seismic joints should be considered for partitions, ceilings, pipes, ducts, and other members within and passing between separated structures. Seismic joints tural partitions and cast concrete overhead slabs. Reinforcing is not carried across the joint.

roll roofing, or building paper. On a smaller scale, bond-breaking tapes are applied to the base of sealant joints, so that the sealant adheres only to the sides of the ioint.

must accommodate movement in the plane of the separated members as well as in the plane of the joint, plus rotational and racking movements. Engineering advice may be necessary for their design.



....from CARLISLE.

(single-ply, .045 in., reinforced membrane based on Hypalon®)

Highly Resistant

Environmentally resistant HyChoiceTM is a lightweight reinforced membrane based on Hypalon, a synthetic rubber from Du Pont. This CSPE (*Chlorosulfonated Polyethylene*) membrane is resistant to oil, flame propagation, ultraviolet, ozone, corrosive chemicals, pollutants, acid rain, and abrasion.

Highly Efficient

HyChoice's heat-welded field seams can be closed by hot-air welding at a rate of seven to ten feet per minute. When properly fused together, the two seam sheets make a completed seam as strong as the membrane itself.

Carlisle's HyChoice (white) reflects nearly 80% of the sun's radiant energy and the surface temperature of the Hypalon-based sheet is much less than other roofing materials ... which can reduce cooling equipment costs and operational expenses.

Highly Beneficial

HyChoice's physical properties allow for design versatility. A correctly applied HyChoice roof from Carlisle is UL classified and exceeds Factory Mutual's I-90 rating by 50%. And you receive Carlisle warranties with HyChoice Roofing Systems. Also, Carlisle has available all the quality accessories needed to properly install a HyChoice roof.

Plus Carlisle...

HyChoice delivers all the above plus Carlisle's Design Assistance, Distribution Network, Service, Training, Authorized Applicators, Technical Expertise and More. For additional information write Carlisle SynTec Systems, PO Box 7000, Carlisle, PA 17013. Or call toll-free 1-800-233-0551. In PA 1-800-932-4626. In Canada 416-564-5557.

QUALITY ROOFS BY DESIGN



Carlisle's HyChoice is a lightweight, reinforced, single-ply membrane based on Hypalon.

CARLISLE

Carlisle SynTec Systems

HyChoice Reinforced Membrane

Polyester-Reinforcement

HyChoice Membrane

Carlisle and HyChoice are trademarks of Carlisle Corporation Hypalon is a trademark of E.I. du Pont de Nemours & Co., Inc.

© Carlisle Corporation 1989

Technics: High Profiles

Decorative building crowns are hard to miss and even harder to construct.

When the Moderns built this country's skyscrapers, flat roofs and sheer sides abounded. These design decisions simplified construction, as well as the installation of mechanical, HVAC, lighting, and window washing systems. But in 1978, the completion of The Stubbins Associates' Citicorp Center and the appearance of Philip Johnson and John Burgee's AT&T design changed all that. Johnson's Post-Modern gesture started the trend toward building tops of every size and shape.

Tall buildings with articulated tops are becoming common in most U.S. cities. San Francisco even has laws intended to create an interesting skyline, developed as part of a 1983 downtown plan (P/A, Jan. 1986, p. 122). Planning Director Dean Macris says that San Francisco was victimized by "benching of the skyline," a result of boxy International Style skycrapers built to the maximum zoning height, and this is certainly one of the factors changing the skyscraper aesthetic to shaped tops nationwide.

Architects cite numerous other reasons. Ralph Johnson of Perkins & Will says that the "trend is to look back." Especially in cities with strong design heritages, designers are rebuilding regional archetypes – on a bigger scale – to bring back the articulated skylines common prior to the 1960s. Developers also play a role in redefining the building top. They want a "distinctive image," says Johnson, "to sell it as a corporate headquarters."

Articulated tops almost by definition necessitate special construction methods. Prefabricated "caps" can be installed by cranes or even helicopters. Sometimes the components for building crowns are delivered in this way, and the tops are built in place. Traditional materials – metal roofing, steel trusses, curtain walls – have to be adapted to new forms. For each crown in this article, several construction methods were explored, sometimes for more than a year, to provide both construction certainty and the desired visual effect.

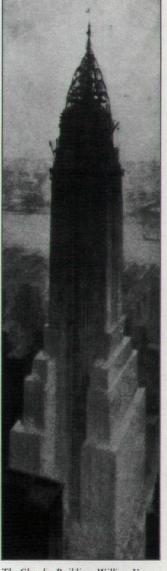
Tall buildings' profiles are often enhanced by noticeable night lighting. Richard Eisenberg of Jaros, Baum & Bolles says that owners use lighting to set their buildings apart. While he stresses that the lighting is driven by the architecture, Eisenberg says that many buildings with distinctive silhouettes either start their lighting plans with the lobby and "reflect the rest of the way up" to the top or simply light the top. Increasingly, unusual forms of lighting – lasers, fiber optics, and luminous pipes – are being used.

New profile forms, however, create difficulties for certain building functions, including HVAC systems. As cooling towers move into enclosed building crowns, special provisions must be made for sufficient fresh air intake, says engineer Theodore Pannkoke. Some solutions simply mask the cooling tower while leaving it open to air, while others provide an extensive system of vents or louvers as part of the design. Another option is to move the cooling tower into the middle of the building or below grade. With a mid-building location, extra care must be taken to study the wind pressure, says Valentine Lehr of Lehr Associates, and there is extra expense because leasable space is used. In addition, special attention must be paid to waterproofing. Pannkoke also stresses that when the cooling tower is enclosed, the location of intake and exhaust vents must be carefully considered so as not to "short circuit" the system.

Materials and methods often present their own difficulties. Thomas Smith of the National Roofing Contractors Association says that nested or mechanically interlocked standing seam roofing is probably the best choice for a steep roof on a high rise, but that the dangers of wind loading or falling ice and snow can render these roofs problematic. For instance, a retaining wall to hold back snow can create waterproofing problems; Smith says that only a carefully detailed system can solve that problem.

Engineers stress the importance of access to the building top after construction is finished. Maintaining the roof and cooling tower and replacing burnedout lights is difficult if the means of access to the roof exterior was closed when construction ended. Eisenberg says that he designs redundancy into his lighting systems so that replacement is not necessary every time a lamp burns out.

The six case studies here address a variety of design and construction issues. Their resolutions prove that as the trend toward decorative building crowns continues, new construction methods and materials will be at the forefront on our redefined skyline. Andrea E. Monfried



The Chrysler Building, William Van Alen, Architect, from The Metropolis of Tomorrow by Hugh Ferriss, reprinted by the Princeton Architectural Press.

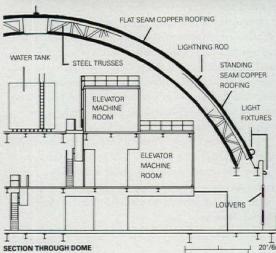
900 N. Michigan, Chicago

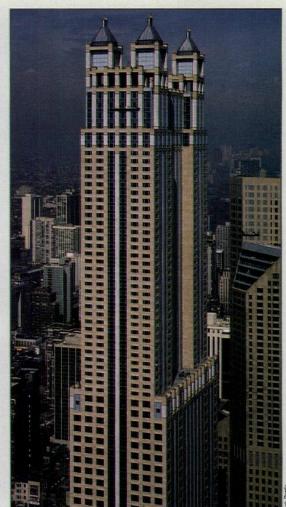
While conceived as the upper portion of a classic American tripartite skyscraper design, the four turrets atop Kohn Pedersen Fox's Chicago building (right) required up-to-date technical ingenuity. Originally, the turrets were meant to be built in place, but scheduling constraints (Chicago law limits top-of-building construction after partial occupancy) led the J.A. Jones Construction Company to propose what they dubbed the "Star Wars" approach. The turrets structural steel frames topped with metal decking, plywood, and leadcoated copper standing seam roofing, each weighing close to 30 tons - were fabricated on the tower's ninth floor setback. They were raised to the roof level with a stiff-legged derrick and lowered onto anchor bolts embedded in square concrete slabs - fighting Chicago's winds all the way (left, above and below). Finally, skyline touches - steel-framed glass in the lower lanterns and limestone cladding - were added in place before the building was occupied.

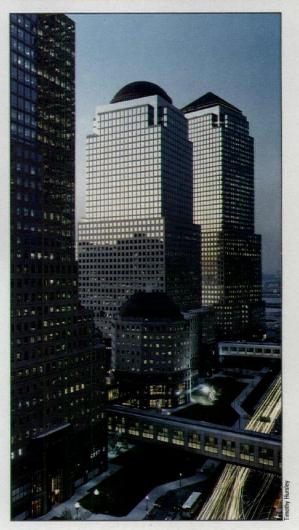










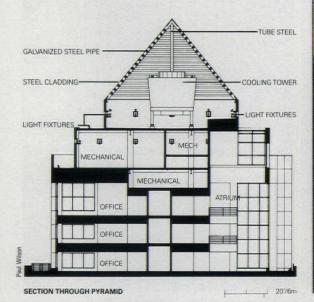


Building B, World Financial Center, N.Y.

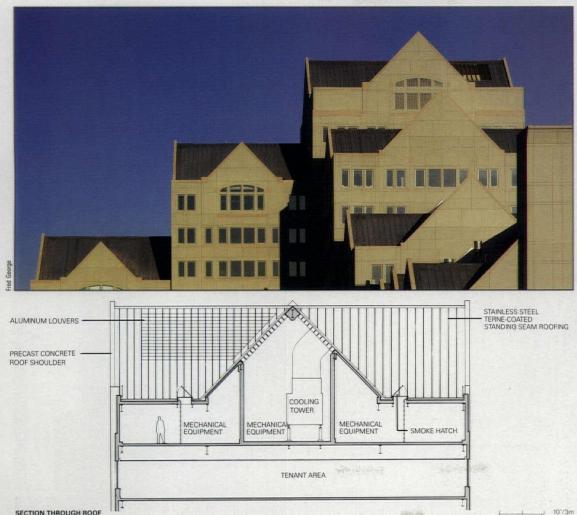
Of the four building top forms in Cesar Pelli & Associates' World Financial Center (Buildings B and C, right), the dome was the most difficult to construct, says senior associate Jeffrey L. Paine. While the final roofing material was selected early in the design process - a combination of flat and standing seam copper roofing, which will oxidize in approximately ten years - a number of options were considered for the structure, including precast concrete and steel deck. The final choice was prefabricated bent steel trusses, which were lifted in by crane, says Dominic Carola, senior project architect with architects-of-record Haines Lundberg Waehler. The trusses were bolted at the bottom (the dome sits on a drum) and to a five-foot-deep steel center ring (above left). Steel plates were welded to the trusses and topped with wood sleepers, exterior plywood, and the copper roofing. All mechanical equipment for the building was squeezed into the dome's limited headroom, says Carola, and ventilation is provided by continuous louvers running around the drum.

50









123 N. Wacker, Chicago

Design principal Ralph Johnson of Perkins & Will says that both he and the developer wanted a distinctive profile for the Chicago tower (right): The developer wanted a distinctive image for marketing purposes, while Johnson had a "personal interest in recalling traditions of earlier architecture," especially Chicago's Art-Deco tradition. Many shapes were considered for the crown, but Johnson says that the pyramid was a logical termination of the massing. To provide fresh air for the cooling towers (as well as to camouflage them), the pyramid was constructed of 12-inch steel pipes, which were the focus of consultant Richard Eisenberg's exterior lighting treatment. Lights striking the bottom portion of the pipes from the inside reflect onto the next row, turning the pipes into diffusers. Eisenberg alternated metal halide and high-pressure sodium fixtures to light the pyramid evenly from top to bottom (left). Elevator equipment and pump rooms are located in a series of smaller mechanical penthouses.

An 1892 church neighboring the site influenced the design of

Perkins Geddis Eastman's multi-use building. To provide the mechanical functions for the office tower portion of Canterbury Green without compromising its distinctive roofline (above), the architects set the mechanical penthouse beneath the pitched roof of the 14th floor. The cooling towers, however, required overhead openings to function properly, says senior associate Richard Northway. Custom-made aluminum louvers, to provide air intake and discharge, were prefabricated and installed into openings in the terne-coated stainless steel standing-seam roofing; narrower vents were also set into the window openings on that level. (The cooling tower stands on built-up roofing.) The louvers are set into the roof on the back side of the building, and their blades make a grid - the vertical blades are aligned with the roofing's seams, while the horizontal blades are level - which combine to minimize the appearance of the openings from street level.

Canterbury Green,

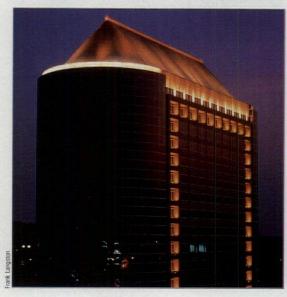
Cumberland Center II, Atlanta

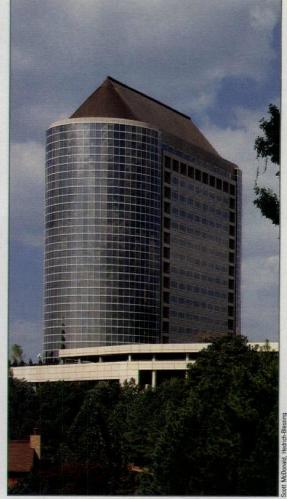
The standing-seam roof atop Cooper Carry & Associates' tower (right and below left) was constructed like any other - structural steel, steel decking, gypboard, insulation, plywood, copper - if the building's 55-degree slope and curved ends are disregarded. Design director Jerome Cooper chose the silhouette to ensure that taller buildings in the area would look down on "something interesting, a design that meets the sky." That simple concept did not make for a simple installation. Gary Voth, president of the roofing contractor, Armetco Copper, says that although they used unmodified seaming machines, their safety equipment was more elaborate: The workers used mountain-climbing gear and tree-trimming belts to secure themselves to the roof as they installed the copper roofing (above left, installing steel decking). The roofing on the curved portions, the most difficult to install, had to be seamed by hand because the machines did not fit. Elevator equipment is located under the roof; mechanical functions are housed in the basement and vented at the ground level.

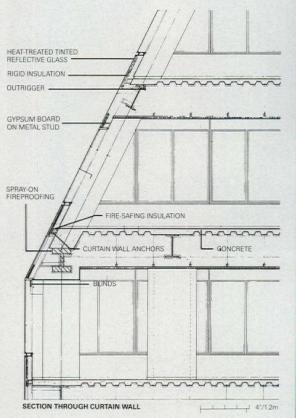
Allied Bank Tower, Dallas

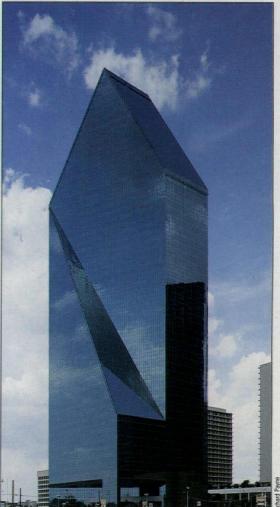
Pei Cobb Freed & Partners have taken the articulation of building tops in a different direction from others pictured here: in one sense, the building has no top, while in another, the curtain wall has become a roof. According to partner Michael Flynn, the flush glazing system was designed to serve vertical and sloping planes equally well. While the slope required some additional aluminum extrusions, this did not significantly affect the cost or complexity of the design. The roofless scheme did demand a novel window washing system, however. The upper edges of vertically contiguous facets are fitted with rails (see photo, right) from which the washing scaffolding is hung. The washing platforms - six in all - push out through operable windows just beneath each rail; Flynn likens the system operation to that of an upward-acting, rollaway lateral file cabinet drawer. These windows are indistinguishable from the rest of the curtain wall. Cooling towers for the building are located on the ground, while air intake louvers fit into the curtain wall grid above the entrances.











52

Consultant Lee B. Herzog discusses the difference among types of exterior maintenance equipment

From the Top, Down

The trend toward articulating the tops of tall buildings often makes the job of designing rooftop exterior maintenance equipment more challenging. While novel solutions have been tailored for very unusual building geometries, the better architects understand the standard solutions, the better prepared they are to avoid costly difficulties later on. Too often, provisions for washing windows are added as an afterthought, forgoing the opportunity to use the scaffold as a staging platform for construction. Many experienced building owners consider the use of the platform for sealing and repair of the façade as important as its washing function.

In designing building maintenance equipment, the architect may get advice or input from numerous sources, all of whom have their own agendas:

• Contract window washers will often suggest the minimum amount of equipment. They often bring their own portable, manual or powered scaffold to the job. These units may be of dubious design and safety and have had an alarming rate of fatal accidents.

• Building maintenance equipment suppliers will typically design a system around their own equipment, and will emphasize equipment cost.

• Independent consultants will usually provide schematic design studies including equipment required, performance data, and approximate costs; determining the most efficient system for the least money is the justification for their fees.

Equipment Selection

Most exterior building surfaces above 36 feet can only be safely and effectively maintained from above. Many codes limit the use of ladders to 36 feet. In my opinion, most tall buildings of about eight stories or higher need at least one permanent scaffold because the unit will be almost constantly in use.

Three types of platforms are generally used on high rise buildings. They are the type "T" (denotes two suspension ropes) self-powered platform with the hoisting machine mounted on the platform; the type "T" roof-powered platform with the hoisting machine mounted on a roof car; and the type "F" (denotes four



suspension ropes) roof-powered platform. ANSI A39.1-1987 specifically prohibits use of descent equipment – equipment that is operational in the down direction only – for window cleaning.

Self-Powered Platform

Self-powered platforms often have a traction hoist mounted on the platform, which climbs a wire rope suspended from davits or outriggers anchored to the roof. These units are somewhat more dangerous to operate than roof-powered platforms, since the traction machine pinches the hoist ropes, which may deform or kink. An alternate type of self-powered hoist is a multi-wrap unit; it accumulates ropes on a small drum mounted under or on the platform. OSHA regulations require each operator on any type-T selfpowered platform to wear a separate safety belt attached to a separate safety line, which in turn is attached to the building structure.

Self-powered platforms travel at about 18 to 30 feet per minute. The units are usually not guided in building mullions, unless the building height exceeds 130 feet. Instead, they are generally equipped with rollers and angled roping to apply some pressure to the building face and to keep the platform aligned with the building façade.

Roof-mounted pedestals, permanent or portable socket assemblies, and portable davits are used to provide suspension for the self-powered platform and are designed to permit the self-powered platform to be brought inboard over the building parapet for transfer. Although davit and socket systems are certainly a good solution, they are not, contrary to popular opinion, the best option for all buildings. A standard davit may weigh 130 pounds or more and can cause back injuries to workers and roof damage from mishandling. In one case I know of, a davit was actually dropped from a roof.

Roof-Powered Platform System

A roof-powered platform with a roof car is typically used on buildings over 45 floors or when building design dictates. The roof-powered platform system often includes a roof car, which operates either on a concrete runway or a roof track, or can be mounted on the parapet. Roof cars can either be hand-powered



Workers position davit into roofmounted socket (left). Davits may also be mounted on rails secured to parapets (right). This self-propelled roof car (right) has integral counterweights and can be clamped to its track to resist overturning.

Rubber-tired roof cars (left) operate on a concrete platform and may be self-powered or pushed. They require tie-backs to the roof to resist overturning. The switch (right) routes a rail-mounted roof car out of sight in a penthouse garage.





(pushed) or hydraulically- or electrically-powered with a friction drive. They are designed to maintain the platform in working positions over the side of the building. If a concrete runway is used, the roof car is usually provided with rubber tires or solid casters and is counter-balanced to minimize the possibility of overturning when the fully loaded platform is placed in working position. Roof cars on concrete runways usually must be equipped with interlocked, tie-back anchors attached to building pad hooks to prevent accidental overturning. A 4:1 safety factor is required.

With most roof-powered platforms, I prefer steel tracks mounted on the roof or parapet. The railmounted car is easier to maneuver and more accurately positioned within the window bay drop points than platforms on a runway. When the roof car is equipped with track clips, the possibility of overturning is virtually eliminated.

Often a garage or interior siding is provided for the roof car and retracted platform, to hide and protect the unit. Roof tracks should be equipped with a track switch so that the car can go in the garage from either side of the building. Alternately, the carriage may be lowered below the roof line. Lee B. Herzog

The author is president of Lerch, Bates and Associates, Exterior Maintenance Equipment, Lomita, California. Herzog has over 23 years of experience in design, manufacture, and installation of window washing equipment and is Chairman of the ANSI A120.1 Code Committee.



BUILDING	WINDOW WASHING
HEIGHTS	EQUIPMENT REQUIRED
3-STORIES &	LADDER OR TEMPORARY
UNDER	EQUIPMENT
3-7 STORIES	TEMPORARY EQUIPMENT
8-45	PERMANENT SYSTEM
STORIES	(PROBABLY SELF-POWERED)
OVER	PERMANENT (PROBABLY
45 STORIES	ROOF-POWERED) SYSTEM

Window Washing Equipment Service Ranges

PAN-A-LUX: Unequaled efficiency for important public spaces.



40 W.13th ST. NEW YORK NY 10011 (212) 675-0400 FAX:(212) 620-4687



Circle No. 365 on Reader Service Card

Two masterpieces. The painting is one of a kind. The dimmer is one of 350.

Leviton offers a line of box mounted dimmers that master the art of lighting control.

A wide range of box mounted dimmers with a breadth and depth like no other. Leviton dimmers are available for all types of residential and commercial applications. Slide, touch, rotary, or toggle dimmers are easily installed in standard wall boxes. To complete the picture, our NEW line of preset slide dimmers for incandescent, fluorescent, low voltage and fan speed control applications, from 600W to 2000W, are the perfect touch for interiors where slide controls are desired.

The most complete dimmer product line also offers local and remote dimming with Leviton's Decora Electronic Controls, or can be combined with our Decora designer devices for unlimited lighting design possibilities. And



the Leviton two-year Limited Warranty covers it all.

Take advantage of the one manufacturer with the largest selection of box mounted dimmers in the industry — with over 350 color and design variations to choose from. Round out your literature file by sending us your business card to receive a FREE copy of our comprehensive dimmer catalog. Leviton lighting controls...not just well-known but well-made.

Leviton Manufacturing Co., Inc., 59-25 Little Neck Parkway, Little Neck, NY 11362, (718) 229-4040, Ext. 6486. In Canada, Leviton Manufacturing of Canada Ltd., 165 Hymus Blvd., Point Claire, Quebec, H9R 1G2.



Circle No. 348 on Reader Service Card

Practice

C. Jaye Berger tells how you can lose your license.

Eric Teicholz reviews the state of computer rendering and animation.

Walter Rosenfeld scrutinizes the details of project manuals.

Law: Getting and Keeping a License

Becoming a licensed architect has never been easy. Some wouldbe architects take several years before they pass their architectural exams. Most assume that once they pass the exams, they need not worry about their license anymore, and for most people that is true. However, there are a number of frequently encountered situations that can put a license in jeopardy. They are worth knowing about.

While passing the exam is a major factor in getting licensed, scrutiny of the applicant's moral character also takes place. For some applicants, who may have consciously or unconsciously transgressed the law and practiced architecture without a license, this can be a problem after the exam has been taken and passed. Often the licensing department becomes aware of this through anonymous calls alleging that the applicant has held himself out to be an architect and has provided architectural services. In my practice, I have received many frantic calls from individuals who have been contacted by the Office of Professional Discipline for a variety of allegations ranging from the unlicensed practice of architecture to conviction for a crime.

An investigator from the department will look into the allegations to determine whether they are groundless or are so minor that only a warning may be issued. If the investigator determines that they are substantial, a hearing may be called. While a hearing must be held for a licensed individual, an unlicensed individual who has passed his exam usually must request a hearing. The panel members who hear the case are usually licensed architects. Depending on the backlog of cases, a hearing may take many months to schedule. If an unlicensed individual who has passed his exam is found to be morally unfit, his license will not be issued. Reversing this decision requires another hearing.



Your License and Private Life

Few people consider the connection between their private and business lives. For example, a criminal conviction for drug dealing could result in the suspension or revocation of an architect's license. This would require a hearing on the issue and would be in addition to any other punishment the individual may have received from the criminal courts. Thus, even if an individual received a suspended sentence and probation from the criminal court, he could find at the end of that probation that he is facing a civil hearing for his architect's license and moew penalties.

As with other areas of the law, there is often an opportunity for settlement. The settlement discussions are more in the nature of plea bargaining, as in criminal cases. An individual may agree to have a one year license suspension, for instance, rather than face a hearing. However, for unlicensed individuals, there can be no such settlement without a hearing.

For licensed architects, there are several practices they may encounter in their daily lives that can be construed as unprofessional conduct and should be immediately stopped. In most states, architects may only stamp drawings they have themselves prepared or which were prepared under their direct supervision. The practice of "rubber stamping" drawings prepared by an unlicensed individual is considered unprofessional conduct.

In New York State, the Board of Regents has recently adopted an amendment that requires licensees who stamp documents prepared by people not under their direct supervisor to prepare a written evaluation of their review and to keep this review and the plans, computations, and records for at least six years. This makes it easier to find violators, but does not make the architect, engineer, landscape architect, or land surveyor immune from prosecution for this practice.

If an architect has a substantial financial interest in the contracting firm or product supplier used in a project and the client does not know and approve, it may constitute unprofessional practice. The same would be true if an employee in an architectural firm had such an interest. Employers would be well-advised to make sure that employees know this and that the firm monitors their relationships with others on the project.

If the design professional's contract calls for any observation or supervision of the work, then it is not only a breach of contract, but can be considered unprofessional conduct, to fail to advise the owner of any "improperly authorized substantial disregard" of the plans or specifications for construction by the contractor. The architect cannot leave it to others to bring this to the client's attention.

It is always a frightening experience to go through a licensing hearing. Knowing what is impermissible is the best way to ensure that it never happens to you. C. Jaye Berger

The author is the founder of Law Offices C. Jaye Berger in New York City, a firm specializing in building construction, real estate, and liability. Ms. Berger is also the author of a recently published book by PSMJ entitled Cut Professional Liability Now.

Practice	
Law	57
Specifications	59
Computers	61
Reader Poll	63
Computer Products	144

Practice Points

More architects will be crossing the border between the U.S. and Canada as the AIA and the Royal Architecture Institute of Canada move forward with the Fair Trade Agreement for Architecture. The NCARB *Reporter* notes that increasingly similar educational and registration standards will allow registered architects to work in either country.

Two-thirds of architecture firms now consider marketing essential to the development of new business. The 1989 AIA Firm Survey reports that on average firms spend 5.2 percent of operating revenues on promotion.

According to *PSMJ*, architects tend to overemphasize the pursuit of new clients during slow periods, while overlooking the value of remembering existing clients by staying in contact with them, providing free consulting that could lead to further business, socializing over lunch, and always returning calls promptly.

Sixty-six percent of clients feel strong loyalty to one architectural firm for all of their work, according to a survey of businessmen conducted by the Design Partnership, Ltd., an architectural firm with offices in Minneapolis and Rochester, Minnesota.

The National Association of Attorneys General has suspended publication of its model contract forms. According to the AIA, the forms do not conform to AIA contract guidelines. There has been concern among architects because these model contracts change the traditional relationships among the participants in a building project.

THE METROCOLLECTION Strong Luxurious Sophisticated Out Class A rated fabrics work

Strong, Luxurious Sophisticated, Our Class A rated fabrics work beaufifully together or alone. Five city-smart designs in 36 colorways.



Circle No. 321 on Reader Service Card

Specifications: Getting Physical

Caught up in the technical aspects of producing specifications, usually under considerable deadline pressure, specification writers don't always have time to make decisions about the physical product itself, the project manual. That is unfortunate because they have much to contribute in the way of practical experience and knowledge of the manual's probable future career.

Functional considerations need to be at the forefront when the appearance and the physical character of the project manual are being determined. Here are a few criteria that most specifiers would agree should be given weight.

The Cover

No matter what its graphics may be, the cover must be of substantial cardboard (preferably water-resistant) or plastic, suitable to stand up to use and abuse in the field over a period of two years or more. Heavy paper just won't do, though it may be easier to print on. Choose whatever color you like, but include a binding fold or flap that will shield the binding device and protect the user's hands.

If the cover is printed to order, the minimum information on it should be the project name and the architect's name. Also helpful are the architect's and the clients' job numbers, the name of the client, and the project location. If there is still room, consultants' names can be added. It is not generally a good idea to include the intended publication date, since that may change after the cover is printed. Dates can go on the title page inside.

If the print run is small, or printed covers are not appropriate, standard heavy cardboard report covers will do well. They usually come with fabric-reinforced binding flaps and in a variety of colors. A cover label is easily produced on the computer for self-sticking attachment. Heavy board report covers are much better than designed covers of flimsy paper that will not stay the course, even though the report covers are less attractive.

Binding

It is a fact of construction life that the project manual often needs to be taken apart to add

addenda, to distribute sections to subcontractors and suppliers, to reproduce pages for separate use, and to detach bid forms, insurance requirements, and other items. This makes the popular plastic or metal spiral binding devices far less satisfactory because they are less flexible. A special binding machine is required to handle them, and most contractor and field offices do not have one.

A second option uses doubleheaded post screws (commonly called "Chicago" screws) that work with two- or three-hole punched paper and covers. Though they do take equipment (a screw-driver) and time to disassemble, they work well, and when the manual gets to be two inches thick, they also provide support. Chicago screws don't permit opening the book flat for copying, but do allow dismantling for that and other purposes. They are also easy on the hands and on neighboring volumes on the shelf.

Two-piece bent metal fasteners (made by Acco and others) are in most ways satisfactory since they come apart easily without tools. Unfortunately, with thicker books they can come apart too easily. They should never be used on a cover without flaps that conceal and protect them. The damage to users' hands and adjacent books is too great. For most moderate-sized jobs, this fastener, properly used, is the best choice available.

Colors

Colored paper is frequently used to help locate certain sections of the manual. Traditional colors (they should be light colors so as not to lessen the visibility of the print) are blue for plumbing, pink for HVAC, and green for electrical work. Occasionally other sections are also color-coded. Be consistent from job to job and with common practice in your part of the country. Color choice should not be a design issue for each printing. And it is important not to overdo it. Save colors for addenda (where it is helpful to have each addendum in a different hue so that when pasted in the manual, its origin and date are immediately apparent) and for tinting later versions of bid forms should they have to be reissued with corrections. At the bid opening it should be quite clear who did not use the proper form.

Compactness

Clearly, large specifications need to be printed on both sides of the page, not usually a problem with the reproduction equipment available nowadays. But the paper needs to be heavy enough and opaque enough so that the reverse side doesn't print through either on the original issue or when xeroxing later on. Trying to avoid having more than one volume of project manual for a job is a worthy goal but not always achievable. Certainly two volumes, each printed on only one side, would be an inconvenience to users as well as a waste of paper. Sets of two (or more) volumes need to be distinguished so that it is clear which volume is in hand without reading it. Color or graphics can be used. And some basic information should be inside each volume: title page, table of contents, and the like. It is usually best to stick to standard page sizes (81/2" x 11" in the U.S.) to minimize printing and reprinting problems.

Devices

While it is sometimes hard to remember to punch the addenda for inclusion in the manual, this should always be done before they are distributed. One architect used to provide a heavy cardboard divider page to separate addenda (always placed at the front of the book in reverse date order) from the title page and contents, making it much easier to find the original index after subsequent material has been added. If color coding of some sections is to be done, indicating the colors selected in the table of contents is helpful to the reader as well as the printer.

Controlling the format and technical characteristics of the project manual's sections has a clear purpose: to give the document the appearance and consistency it should have if each part had been written by one all-knowing specifier and produced on the same printer or typewriter. While such uniformity is often difficult to achieve in practice, since so many parts of the manual come from different outside sources, control of the physical product itself can be more easily accomplished because its character is almost wholly determined within the architect's own office.

It is worthwhile to give some thought to these aspects of project manual production and to have

them functionally right as well as aesthetically satisfactory, rather than to turn out a product created partly by chance or default. A good architect doesn't let the contractor design the building or even the project sign. Is it a good idea to leave the physical characteristics of the project manual to the printer? Walter Rosenfeld

The author is a consulting architect and specifier in Newton, Massachusetts.

Practice

Project manual production checklist

- □ Is the CSI numbering system used for each section?
- □ Is there a consistent page format? □ Is a three-part section format used
- throughout?
- □ Is the same typeface used for each section?
- Is the manual printed on one or two sides?
- Is it punched with two holes or three?
- Is it collated and bound into sets?
- Are sections indicated with colored paper?
- Does it use Chicago or Acco binding?
- Does it have pre-printed covers or report covers with self-sticking labels?
- □ If a pre-printed cover, have the design, information, cardboard weight, flaps, number of holes, color, and back been addressed?
- Is there a punched addendum divider?
- Have the AIA documents and other printed forms been inserted?
 - Have the sets for bidders been

Progressive Architecture 2.90

59

- □ Have extra bid forms been printed? Has an extra table of contents been
 - marked up for the printer?
- □ Has the print order been written?

numbered?

- □ Has the number of copies been
 - determined, including owner's set architect's office and field sets, record copies, signed copies, building permit copies, agencyrequired copies, consultant copies, and specifier copy?
- Has a weekday printing time been established prior to the date bidders will pick up sets?

Accugraph. Networking People And Solutions, Not Just Computers

Networks. X Windows. UNIX in DOS. DOS in UNIX. How do you put them all together? You need real integration in a one-source solution – and Accugraph has it now.

Accugraph's networking system lets you use your favorite software packages, plus gives you the ability to share data, printers, plotters and storage devices. And that's not all. We provide a powerful design and information management system for applications in:

- Architecture
- Facility Management
- Civil Engineering

You can access all this power through your existing PC systems.

Call us today for a free networking-analysis kit that will help you profile your needs in networking, design and information management. Gircle No. 312 on Reader Service Card

> 1-800-678-1061 Accugraph Corporation 5822 Cromo Drive El Paso, TX 79912

X Windows, UNIX, DOS, AutoCAD, WordPerfect, Lotus 1-2-3. ORACLE, PC-NFS, and the Sun logo are either trademarks or registered trademarks of their respective corporations.

Accugraph

WordPerfect

四

AutoCAD

Computers: Animation and Rendering

A review of CADD usage by architectural firms over the last decade reveals an interesting evolution. The first professional uses of CADD were within a very rigid management framework that saw CADD as strictly a production tool to be used by "operators" or specialists, whose areas of expertise tended to be in computer science rather than design.

Emphasis on CADD production work has continued in most firms, with improvement in user interfaces and accessibility of symbol libraries offering shorter learning curves and increased cost effectiveness. However, as the technology has become more robust, firms have grown more comfortable with the capabilities of CADD, and there has been an increased interest in investigating its potential for activities other than production.

With the continuing decline of computer costs, coupled with increasing power and sophistication, CADD technology has begun to captivate the imagination of architects, who are beginning to look at it as a visually and intellectually exciting medium for exploring, developing, and presenting design concepts. There is a growing recognition of the usefulness of animation in particular, not only as a medium for general marketing and client presentations, but also as a design analysis and development tool. The hardware and software technologies for animation, which until recently have been used almost exclusively in the television and motion picture industries, are now available for a much more diverse professional market.

Rendering and Animation Technology

The quality of rendering and animation output varies widely depending on a number of factors. There are technical criteria to be considered in evaluating the hardware: image resolution, pixel depth, shading algorithms, and anti-aliasing methods to name a few. Features offered by rendering software may include ray-tracing, shadow casting, texture mapping, reflection mapping, shading algorithms, and specification of specular reflectances for surfaces. The computational processes required for these features involve

arithmetic-intensive operations that are still rather poorly supported on PC-class machines, particularly for larger three-dimensional models. Even on larger animation systems, the computational time alone needed for producing a one-minute animation from a complex model may be up to a week or longer. For this reason, the tendency is to minimize the number of objects in the model to be animated, and to reduce the resolution used to produce the individual frames well below what would normally be used for a single rendering. Optimizing the resolution for animation is an art rather than a science, since the visual effects of adjusting resolution vary according to the detail of the subject matter, and the lighting and distance of the virtual camera from the target.



Each frame of an animation is rendered from the computer directly to videotape, film, or digital storage media. Videotape is currently the most popular distribution medium for computer-generated animations since, apart from being a convenient format, it takes advantage of the widespread acceptance of video cassette recorders as a marketing and presentation technology.

For the same reasons the performance gap between microbased and mainframe-based CADD stations has been closing over the past decade, the quality of PC-based rendering is now beginning to rival that produced by large animation houses. For example, AutoDesk's Animator product and AT&T's TOPAZ product, to name two, offer sophisticated interactive graphics tools previously unavailable on personal computers. These software packages offer the ability not only to create renderings and animations at high resolution, but also to use previously developed CADD drawings as a basis for editing. Nevertheless, there is still a marked difference in the quality of the final products

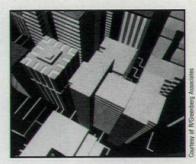
produced by the DOS-based PCs and the higher-end machines. Architects may find the quality of renderings and animation produced on most PC-based platforms unacceptable for presentations.

One important point for architecture firms to recognize is that they need not, and probably should not, acquire the costly hardware and software technologies for rendering or animation inhouse, unless high volumes of such work are anticipated. When provided with graphic data files in the proper format, even large animation houses can produce renderings and animations of very high quality within a reasonable time. The cost of working with an animation shop in this way is a small fraction of the cost of having the shop generate the 3D model from paper-based drawings. When the conversion process is properly managed, and the design architects are brought into the process of creating the rendering or animation, the cost should be comparable to commissioning commercial renderers or model shops, and the results more controllable.

Conversion to 3D Format

Over 60 percent of architectural firms use CADD as a matter of practice for developing 2D production drawings. What is not generally understood is that 2D design development and production drawings may be used (often via extrusion) as a readily available basis for generating 3D wireframe models, and that the wireframes may then be used for creating solid-modeled renderings and animations. When properly developed, these highly realistic representations offer an unparalleled medium for the analysis of designed spaces. In fact, the wireframes produced on personal computers can be exported to the same high-end animation systems that are used in the motion picture industry.

When the drawing has been successfully read into the animation system, it first appears as a transparent wireframe drawing, since no characteristics have been assigned to its surfaces yet. There are several standard methods for accomplishing the latter. The renderer may assign a specific color to each surface or choose a texture that has been sampled digitally by a scanner. For example, a photograph of granite or an actual sample of granite may be scanned to create what is called a texture map. This texture may be mapped at any specified scale onto any surface of the wireframe. Replacing, modifying, and otherwise manipulating texture maps is very simple on the more powerful systems.



ractice

A shading algorithm may be selected if the system supports more than one. Shading models, more appropriately called reflection models, deal primarily with two kinds of matte surfaces that scatter light equally in all directions and have the same overall brightness from any viewpoint. Specular reflection is a property of shiny surfaces that creates highlights.

When color and reflective properties have been specified, internal and external lighting sources may be defined. On the more powerful systems, an arbitrary number of internal and external light sources may be defined in terms of position, color, intensity, and diffusion. Even foggy conditions can be simulated by adjusting the lighting sources.

When the model is completed, individual views can be rendered in a variety of media, including film (by attaching a film recorder to the computer's video card). Film does not involve an external camera photographing an image displayed on the monitor. Rather, the video buffer, which ordinarily would be displayed on the monitor, is sent directly to film at a resolution much higher than even high-end monitors can display. The available resolution depends on the manufacturer and model.

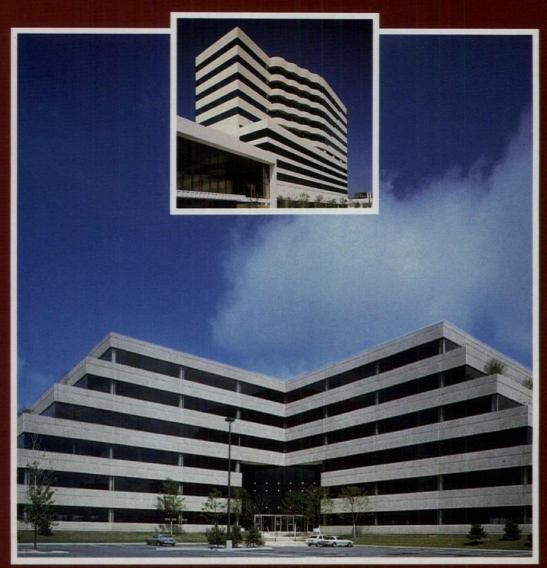
These new animation and rendering systems raise interesting new technical and management issues for architects. It remains to be seen in what ways architects will incorporate them into their repertoire of CADD applications. **Eric Teicholz**

The author is president of Graphics Systems Inc. in Cambridge, Massachusetts.

Progressive Architecture 2.90

61

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.



Precast/Prestressed Concrete Institute, 175 W. Jackson Blvd., Chicago, IL 60604 Phone: (312) 786-0300 Fax: (312) 786-0353 See us in Sweets 0300/PRE BuyLine 3822

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

Reader Poll: Architect-Client Relations

Examining the sociology of practice, the poll yields a profile of U.S. firms, and some surprising facets of the exchange between architects and clients.

A by-product of the poll is a breakdown of architectural practice by types of clients and chief areas of practice. The most distinctive trait in this profile of the architectural market: Most firms, small to large, deal with a variety of clients - corporate, private, and public - and most firms have commissions in diverse areas of practice - new construction, renovation/ preservation, residential, interiors, and commercial. It would appear that diversification - not specialization is the prevalent practice trend at this time. In maintaining successful client relations, most readers concurred that understanding the client well was as important as good performance.

The Respondents (Figs. 1-3)

P/A's poll on architect-client relations drew 408 responses, a much smaller sample than usual (most polls draw over 1000 responses). Nevertheless, P/A's research consultants, Morrison & Morrison, considered the sample statistically reliable. "It may be that the topic of this poll was of limited interest to P/A readers," they said. "However, it is our opinion that the business community has been distracted this [fall 1989] quarter and has not demonstrated its usual interest in replying to surveys." Morrison & Morrison has noted a similar reduction in response to other business-to-business mail surveys conducted during this time, and attributed the "distraction" to the vagaries of the stock market, among other things, and to large lay-offs which affected management.

Another possible reason for the reduced sample size may be in that only management-level readers felt qualified to respond to many of the poll questions, an assumption borne out in the "role in firm" statistics: A majority (64 percent) of respondents are owners or principals of a firm. Twenty percent are project managers, and under 10 percent are staff architects. As is customary, most responses (85 percent) were received from architectural or A/E firms. The bulk of the responses (61 percent) came from small firms, with less than 10 employees. One quarter of the responses came from mid-sized firms of 10-50 employees, while 59 respondents (14 percent of the total) came from larger firms.

Types of Clients, Areas of Practice (Figs. 4, 5)

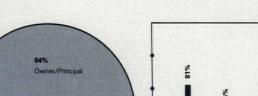
The bulk of respondents (85 percent) reported business in new construction. Over three quarters (77 percent) had renovation/preservation projects, and slightly more than half (56 percent) had interiors commissions. It is useful to remember that these figures do not reflect the proportion of total firm business or revenues. Over 80 percent of the readers have commercial clients, slightly less than

two thirds (62 percent) work with residential clients. The proportion of public clients is lower, at 57 percent. It is possible to conclude from this data that on average public and interiors commissions constitute the smallest areas of practice, due in part to the shrinking of the public realm and to the limited penetration of architects into the interiors field.

For greater reliability of detailed comparisons, the statistics for medium and large firms were combined. The results, in terms of type of client and chief areas of practice, are telling. Significant differences are revealed in two areas: Small firms are more than twice as likely to have residential projects as medium or large firms (80 percent versus 34 percent). Medium and large firms are likelier to have public clients (78 percent as opposed to 44 percent). Smaller, but still significant differences: Medium and large firms are more likely than small firms to have corporate clients (77 percent vs. 58 percent), and they seem to have broken more successfully into the interiors market (66 percent vs. 49 percent).

Location of Clients (Fig. 6)

Firms represented by this poll report that on average, 90 percent of their business is conducted with local clients. On average, 10 percent of a firm's business is with

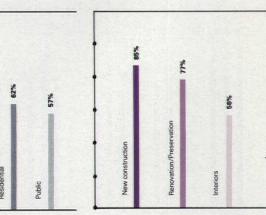


3 Role in firm

Othe Designer/Draftsman Staff Architect







63

Reader Poll



al or A/F

1 Size of firm

Over 50 employ

2 Type of firm

61%

1.9

10 -50 employee

6 Firms with local clients. Median = 90%

45% 16% 13% 2% 2% 4% 4% 0% Percent local clients 50% 100%

clients who are more than 200 miles away from their offices. Few firms (19 percent) have work with foreign clients. Large firms (at 43 percent) are more likely to.

Reader Poll

Progressive Architecture 2.90

64

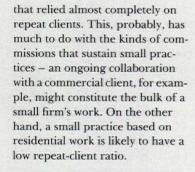
It is interesting to analyze the responses regarding client location by firm size. (Here, too, the data for medium and large firms was combined.) The pattern that emerges is consistent: Medium and large firms are more likely to conduct business farther afield. This shows itself in various ways. For example, medium and large firms are less likely to rely completely on local clients than small firms, only 23.5 percent report 91-100 percent of their business is conducted with local clients. Among small firms, more than twice as many (59 percent) report working virtually exclusively with local clients.

This holds true of business conducted with clients who are more than 200 miles away from the firm location. On average, small firms report 5 percent of their business is conducted "long distance," while firms of over 50 employees reported on average 28 percent of business conducted with such clients. All firms reporting over half of their business as being done with foreign clients are large. One possible reason for this split is that larger firms have, besides branch offices and more developed marketing techniques, greater resources at their disposal (whether communications, equipment, or manpower), which enable them to pursue and be competitive on long-distance projects.

Repeat Clients (Fig. 7)

Among the firms polled, on average half of all customers are repeat clients. A quarter of the firms polled reported that less than a third of their clients were repeat customers. Thirty percent reported a repeat-client ratio between 40–60 percent. The bulk of the respondents (45 percent) reported that repeat clients constitute between two thirds and 100 percent of their business.

The extreme ends of this spectrum are interesting when examined in light of correlated information on the size of firm and its chief areas of practice: Among those who reported no repeat clients, all were small firms. Similarly, small firms made up the bulk of firms who reported only limited (1–10 percent) business with repeat clients. At the other end of the spectrum, small firms also made up the majority of those



7 Percent of firm's business with

1/3 and 2/3

2/3

Aore.

repeat clients.

25%

3

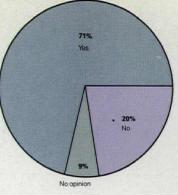
less than

Client Characteristics (Figs. 8, 9)

A large majority (71 percent) of the poll respondents agreed that clients have become more demanding over the past five years. This may be attributed to a generally heightened awareness of architecture among laymen. Respondents were almost evenly split over whether client influence on design has increased over the past five years. Half of the respondents perceived that client influence had grown. Less than half (46 percent) thought clients' influence hadn't changed. A small minority felt it had lessened.

P/A readers were asked to rate each type of client their firm deals with on a number of characteristics. Responses were given on a scale of one to three (respectively equivalent to "rarely," "moderately," and "definitely"). The re-

8 Have clients become more demanding over the past five years?

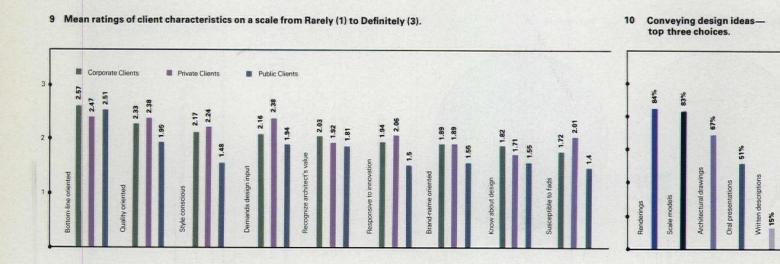


sults reflect the mean ratings. Of the firms polled, 82 percent have corporate clients, 90 percent have private clients, and two thirds have public clients. For uniformity of responses, corporate clients were defined as those who belonged to a decision-making hierarchy, and private clients as those who made final decisions themselves. While corporate, public, and private clients are profiled somewhat differently, they are all perceived by a majority of P/A readers to be bottom-line oriented, although private clients were considered somewhat less so.

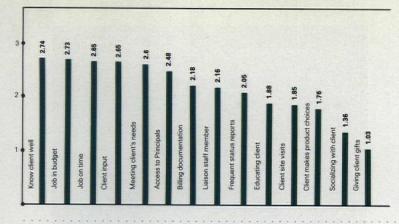
P/A readers believe that corporate and private clients are commonly quality-oriented, demanding of considerable design input, and style conscious. Corporate and public clients were deemed least susceptible to fads. Most clients, public in particular, are considered only "moderately" cognizant of an architect's value, knowledgeable about design, or responsive to innovation.

Methods of Communication (Fig. 10)

A majority of P/A readers (over 80 percent) believe that art renderings and scale models are the best means of conveying design ideas



11 Mean ratings of factors in maintaining good architect-client relations. Not important 1 2 3 Very important



to their clients. Two thirds of the sample also rely on architectural drawings, and one half make oral presentations. Only a few respondents (15 percent) mentioned written descriptions as the best way to convey design ideas to clients. The architects' preference for graphics is not surprising, since it is part of the design process. It is likely that clients, too, prefer visual, rather than verbal representation.

Maintaining Good Relations (Fig. 11)

P/A readers were asked to rate the importance of several factors in maintaining good architectclient relations. It's interesting that getting to know the client well was deemed even more important than on time/on budget performance, and more important than meeting all programmatic requirements - which suggests that architecture is still very much a peopleoriented service profession.

While understanding the client was of highest importance to most P/A readers, the reverse, educating the client to the architect's design philosophy was considered of only marginal importance. Likewise, encouraging the client to visit the construction site and allowing the client to make product choices

14

VIDU

were rated low in importance to fostering good relations. Architects believe that socializing with the client and wooing the client with gifts are usually not important to maintaining good relations. This seems to suggest that "goodol'-boy" networking, if not gone, is not acknowledged.

While architects are in general agreement as to the importance of these factors to successful client relations, some differences can be noted: Large firms and firms who work with public clients are significantly more likely to believe that concluding a job within budget is very important to a good relationship. The smaller the firm, the more likely that it will allow clients easy access to the firm principals, because they believe this is important to good relations. The larger the firm, the more likely architects are to believe that it is important to assign a staff member to manage the client's concerns. It is possible that this data merely shows that clients are attracted to firms that comply with their own preferences in these regards.

On average, according to P/A readers, 20 percent of corporate

readers reported that their corporate and public clients employed no in-house architects.

Conducting Business (Figs. 12, 13, 14, 15, 16, 17)

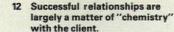
P/A readers voiced their degree of agreement with a set of statements, using a scale of 1 to 4, from agree strongly (4) to disagree strongly (1). A majority (81 percent) of P/A readers believe that successful client relationships are a matter of "chemistry," or having rapport with the client, although over half (52 percent) only agree somewhat. It would appear that some level of client input in the design is desirable by most architects. When asked whether "given a detailed program architects should be able to design with minimal interference from the client," 71 percent neither agreed nor disagreed strongly.

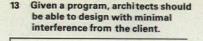
Close to 80 percent of P/A readers agree strongly that fees should be established prior to initiation of any project. However, readers are divided on the importance of customized project contracts. While 58 percent agree that custom contracts are the best way to reduce

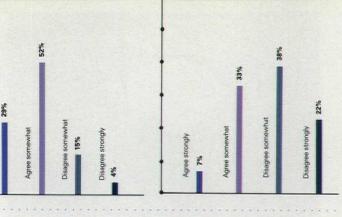
repondents agreed, occur more frequently about budget and schedule than about design.

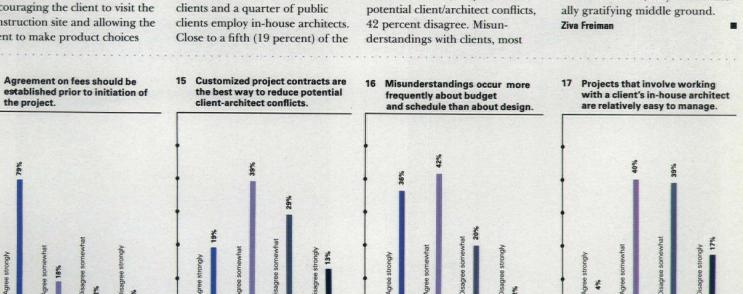
Readers seem to have mixed feelings about working with a client's in-house architect, P/A research consultants report. While 44 percent agree that "projects that involve working with a client's in-house architect are relatively easy to manage," over half (56 percent) disagree. It is notable that 79 percent of the sample registered their opinions in the "somewhat" range of the scale. "This would seem to indicate that working with a client's in-house architects does not usually expedite project management," the Morrisons note.

That may be. More likely, the lukewarm response reflects inherent difficulties: While working opposite an in-house architect might make communication of design precepts easier, it's harder for architects to claim the prerogative of exclusive expertise. More than anything, the cagey acceptance of in-house architects proves one point: Architects and clients have different agendas, disparate interests. At best, they find a mutu-









Reader Poll

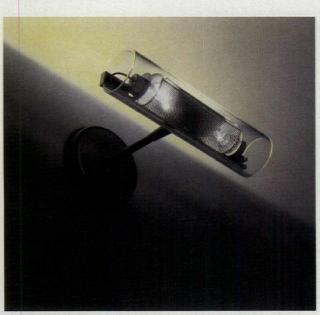
65



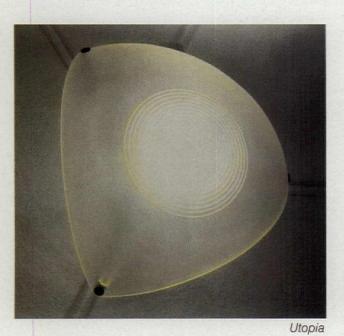
Filicudara



Pergamo



Acheo





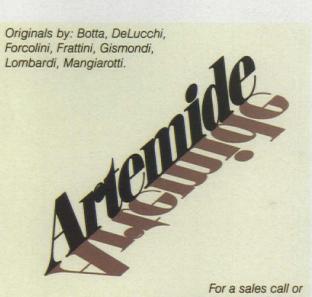
<image><image>



Giasole



Icaro



catalog material a 1 800-359-7040







Shogun



Nature offers an endless variety of lustres.

So does Du Pont.

Imagine.

The velvety lustre of a rose. The delicate matte beauty of a quail's egg. The luminous sheen of a perfect pearl.

Now, nature's most precious lustres are captured in fabrics from Du Pont, your total lustre source.

Dull to bright, no one creates as many lustrous possibilities. Our multi-fiber capabilities let us develop virtually any look you want. From seating systems of Antron[®] nylon. To wall coverings and panel systems made of Dacron[®] polyester.

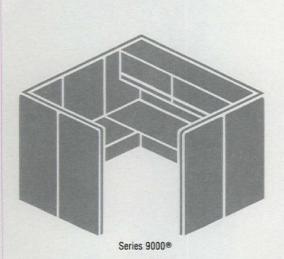
So call us. And just bring your imagination. We'll furnish the rest.

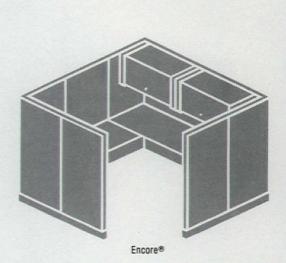
For more information, contact Kaye Crippen at DuPont, 302-999-3110.



Circle No. 328 on Reader Service Card

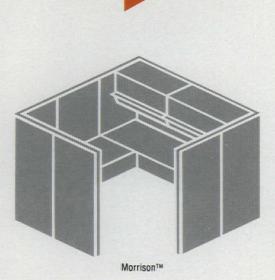
AFTER YOU WEIGH THE





Tempo is a trademark of The Shaw-Walker Company. Series 9000 is a registered trademark of Steelcase, Inc. Encore is a registered trademark of Herman Miller, Inc. Morrison is a trademark of Knoll International.

USUAL CHOICES,



GO ONE MORE.



Any number of office systems can provide standard solutions. The trouble is, there aren't too many standard problems.

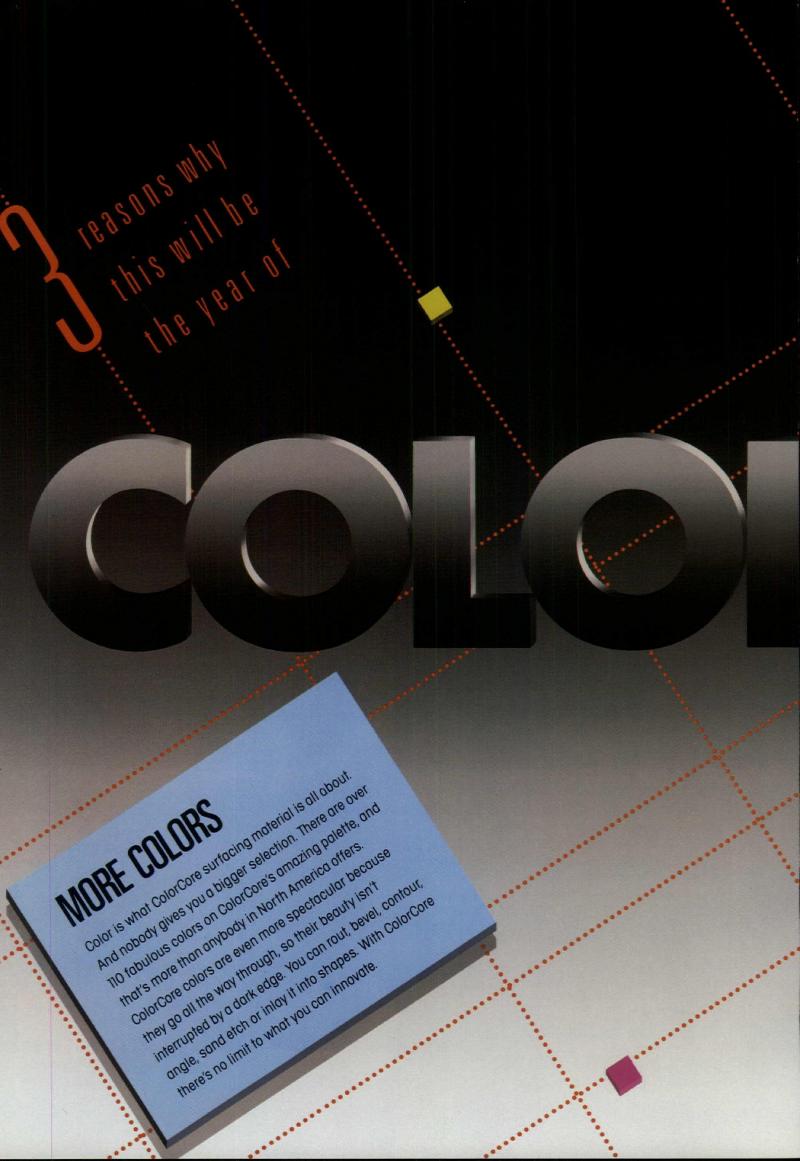
Every person, every department, every organization has unique image and task support requirements.

That's why, for example, Shaw-Walker gave the new 300 series panel more power and cable capacity than ever. Why adding or redirecting cables is now a minor procedure, instead of a major investment. And why we made it easier to tap into all that versatility with desk-height ports.

Exceptional features such as these, together with further acoustical refinements, elevate the Tempo[™] system into a category all its own.

If your needs are anything but standard, summon appropriate solutions at 1-800-345-9404.

SHAW WALKER



surfacing material

MORE FABRICATORS

Of COURSE YOU WONT YOU' Drilliont design ideas from the and th DTCOUISE YOU WOM YOU DMMOM DESIGN DEESIGN DEEDS MOM BESSIV executed That's why we've put together a nage we trained more executed That's why we've put together in tage we trained more tom of familiant contract and instrumers in tage we trained that Steer of topricators and installers. In 1989 We trained more or and the second contraction of th en of 100 fc01 icotors in our recent when a construction of the formation copoole of moking your installations preasely what you had in mind. And they're easy to get a hold of. Just call had in mind. And they're easy to get a hold of the month of the second 1200 In mind. And their te easy to get a noid of Just can have a service and their te easy commended footicator nearest

You. Here's to a great ColorCore Vear!



The Name Brand in Surfacina Circle No. 336 on Reader Service Card

products

-Estimated Average

MORE WALLE

ColorCore surfacing material's Rew price reduction will mother it even more of a pleasure to work with. And your clients will oppreciote its wear on the transformer you the 100K 0rd f88 of 0 \$010 of 1855 COSt

and with fat more color availability.

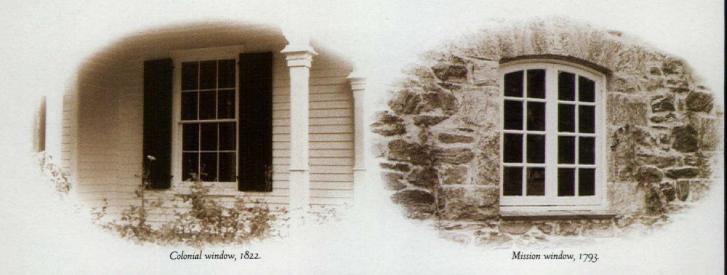
And because of formico

Corporation's global distribution

network you can get it any time

and anywhere you want it.

ColorCore vs. othe Suffacing cost per sq. (1)



INTRODUCING THE ARCHITECT SERIES". TO COME ALONG SINCE THE DRAFTY,



All the truly great classic windows, it seems, were designed before the age of insulating glass.

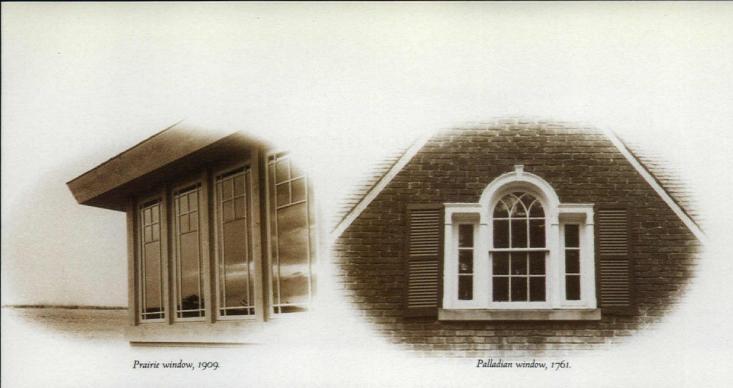
Back then, no one worried about R Values or heating bills or energy conservation. What



people cared about were aesthetics. Elegant and graceful lines. Beauty for beauty's sake.

Over the years, in our seminars and discussions with architects across the country, one theme kept recurring. Would it somehow be possible to recapture those times? How do you balance the requirements of an energy-conscious society with the demands of aesthetic integrity?

INTRODUCING THE ARCHITECT SERIES FROM PELLA.



THE MOST BEAUTIFUL LINE OF WINDOWS INEFFICIENT ORIGINALS.



From these discussions, an idea began to emerge. An idea that inspired a radical new manufacturing technology. Which, in turn, has made



it possible to create windows of extraordinary beauty and elegance without sacrificing energy efficiency.

These windows are called, appropriately enough, The Architect Series.[™] We believe they embody an aesthetic purity and a free-flowing approach to window design that hasn't existed for twenty-five years.

As you will see on the following pages, this could very well be where the classics of tomorrow begin.



BUILT TO IMPOSSIBLY HIGH STANDARDS. OUR OWN."

Their 13/8" muntin.

The first time you lay an Architect Series™ window next to a true divided

light with insulating glass, you're in for two major surprises.

The first one comes when you realize you can't detect which is which.

The second surprise is when you discover that the

THERE ARE HUGE DIFFERENCES OTHERS. THE BIGGEST IS 1/2".

Architect Series window actually looks better.

This is the result of a new process called Integral Light Technology[™] It means our standard muntin bar is only 7/8" wide,

as compared to 1-3/8" for true divided light. This is only one half inch. But it makes a monumental difference.

INTRODUCING THE ARCHITECT SERIES FROM PELLA.

It makes the difference between classic and clunky. Elegant and horsey.

Stainless steel spacers inside the glazing

form a solid re-enforcing grid. The muntin bars are then bonded to both sides of the glass with an adhesive so strong it's used to attach scuff plates to the wings of fighter aircraft.

The result is a window superior to IG true divided

BETWEEN OUR WINDOWS AND

light in every conceivable way. It's stronger and more durable. More resistant to air and water infiltration. Free of nail holes. More cost efficient. And, aesthetically, just plain beautiful.

Some architects who have seen The Architect Series predict it will mean the end of true divided light.

We won't go that far. But we do know it's going to give you a lot to think about.



BUILT TO IMPOSSIBLY HIGH STANDARDS. OUR OWN

AS CUSTOM DESIGNS GO, THIS TECH TO THE WIND. EVEN IF IT'S BLOWING

In the past-even with our most skilled craftsmen at work-there were limits to what could be achieved in the area of custom window design.

However, with the advent of the

Series,™

all such limitations go right out the window. So to speak.

Architect

It is now safe to say that whatever the mind of the architect can conceive, we can build. (The window you see here is a small example.) And what we build will be stronger and more durable than anything that could be produced with previously existing technology.

We know this, because custom windows from INTRODUCING THE ARCHITECT SERIES FROM PELLA.

NOLOGY LETS YOU THROW CAUTION At 110 Miles Per Hour.

our Architect Series have had to pass through the same chamber of horrors every Pella window must survive.

In wind chambers, they have been battered with hurricane force winds. They've been subjected to arctic cold and desert heat and tropical humidity. They've been shaken, rattled and rolled... dated to test for

water infiltration. What has come

from all this testing is a custom window that's prepared for some-

thing no other window in the world is prepared for.

It's prepared to wear a Pella® sticker. BUILT TO IMPOSSIBLY HIGH STANDARDS. OUR OWN."





As you may have gathered by now, The Architect Series™ Window from

Pella is like no

So, if you disadvantage.



window you've ever seen before.

haven't seen it, you're obviously at a great Nothing we can tell you or show you on a



printed page can compare to examining and touching and feeling this product in person.

distributor is prepared to let you do just that . . . in the privacy of your

own office, if product, he'll Package



you like. He'll not only show you the introduce you to our new Designer software that lets you see, on the spot, how



these new windows might fit into applications you currently have on the boards. This remarkable new program allows you to specify and price in a fraction of

the time it took before.

We feel The you design with windows.



Architect Series will not only change the way windows, but the way you actually *think* about So, with something as important as

that in the offing, why waste time? Call your Pella distributor today at



I-800-524-3700. © 1990 Rolscreen Company.

BUILT TO IMPOSSIBLY HIGH STANDARDS. OUR OWN."

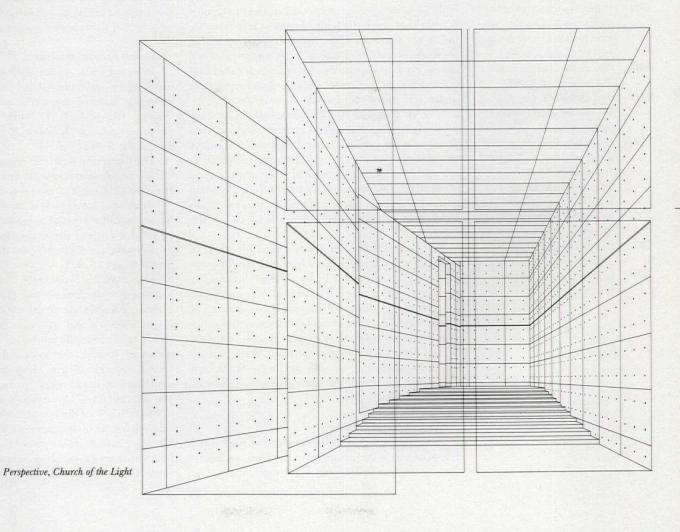
Circle No. 359 on Reader Service Card

Design	
Case Study: Tadao Ando	83
Design Feature: Herman Miller	98
Interior Design: Kevin Walz	106
Portfolio: Chicago Buildings	112
Selected Detail	116
Books	117
Perspectives	118
Projects	120

.

While Tadao Ando bases his designs on the abstractions of Modernism,

the resulting buildings embrace the realities of context and culture.



Ballette

Progressive Architecture 2.90

February 1990

Tadao Ando: **Abstraction Serving Reality**

Case Study: Tadao Ando

	A REAL PROPERTY AND A REAL PROPERTY AND
0000	Tadao Ando
1941	Born in Osaka
1962-	Self-educated in architecture
1969	Travels in the U.S., Europe, and Africa
1969	Opens office in Osaka
1978	"A New Wave in Japanese
	Architecture," exhibition s sored by Institute for Archite and Urban Studies, toured U.
1982	Participant in Charlottesville "P3" conference in the U.S.
1985	Alvar Aalto Medal
	One-man exhibition, Graham
	Foundation, Chicago.
1986	Annual Award of Japanese
1300	and the second se
	Ministry of Education "Tokyo:
	Form and Spirit" exhibition,
	Walker Art Center, toured

spon-

tecture

U.S.

- U.S. 1987 Davenport Professor, Yale University
- 1988 Visiting Professor, Columbia University
- Gold Medal, French Academy 1989 of Architecture

Tadao Ando's work is reductivist in the sense that he works with a limited number of geometrical figures and a few unadorned materials, but the effect is not to deprive us of sensory richness. Far from it. All of his restraint seems aimed at focusing our attention on the relationships of his ample volumes, the play of light on his walls, and the processional sequences he develops.

"I believe," writes Ando, "that contemporary architects will return to the problems that the Modern Movement left unsolved 20 years ago." He acknowledges that Modernism must be counted at least as an accomplice to the "environmental crime" of recent decades that has made the world's cities "unbearably monotonous environments." But the real culprit, according to Ando, is "economic rationalism," the view that recognizes no values except economic ones.

Ando does not talk much about the spiritual role of architecture, but that is what he is addressing when he admits shafts of light into a shadowy church or even when he frames a bed of ivy as a view from a restaurant table. He does talk about adapting every building to the specifics of its context, and this he does in ways that reach deep into Japanese tradition: On the most urban sites, he seals his building within anonymous walls and opens them only to internal courts; on more open sites, he exploits selected outward views, but still keeps his spatially rich interiors under very understated wraps.

The geometry of Ando's interior plans, typically involving rectangular systems cut through by curved or angled walls, can look at first glance rather arbitrary and abstract. What one finds in the actual buildings are spaces carefully adjusted to human occupancy. (Consider the spaces on either side of the curved wall in the I House, p. 89, or the division into entry and main space by an angled plane in the Church of the Light, p. 91.)

One device that Ando uses to excellent effect in some of the buildings covered here, the vaultlike ceiling/roof, does not quite fit into the predominantly reductivist or geometric character of his work. Abstract as it is, this canopy form is read as a sign of shelter - coming closer to symbolic allusion than other elements of his buildings. Similarly, Ando's culturally neutral materials - concrete, steel, and glass - are occasionally joined by materials with more traditional associations, such as rubble stone walls or rough-hewn wood furnishings.

The Self-Taught Architect

Among the select group of architects who are asked to lecture, teach, and compete for prestigious commissions all over the world, only Ando is self-taught. The

young Ando scorned formal education, learning about construction in a carpenter's shop, and observing buildings by traveling and sketching on four continents. At no time did he work for another architect.

Somewhere along the way, the wiry, still youthfullooking Ando did some professional boxing. And he is noted for speaking with an urban accent that seems to be the Osaka equivalent of Brooklynese. (Osakans in general are considered very spontaneous and candid by other Japanese.)

Today, 20 years after he brashly began building, Ando has a staff of 20, working in two residentialscaled buildings of his own design in one of the byways of downtown Osaka. In the work spaces, draftsmen often have to move to let others pass. On hand there is Yumiko Ando, his wife, translator, and office manager. Also at home in the office is their mixed-breed dog, LeCorbusier.

Ando and members of his staff now fly off to many sites in Japan, the U.S., and Europe; a current destination is Seville, where they are designing the Japanese pavilion for the 1992 fair. Ando has recently been visiting professor at Yale and Columbia, and this year he will do a shorter stint at Harvard.

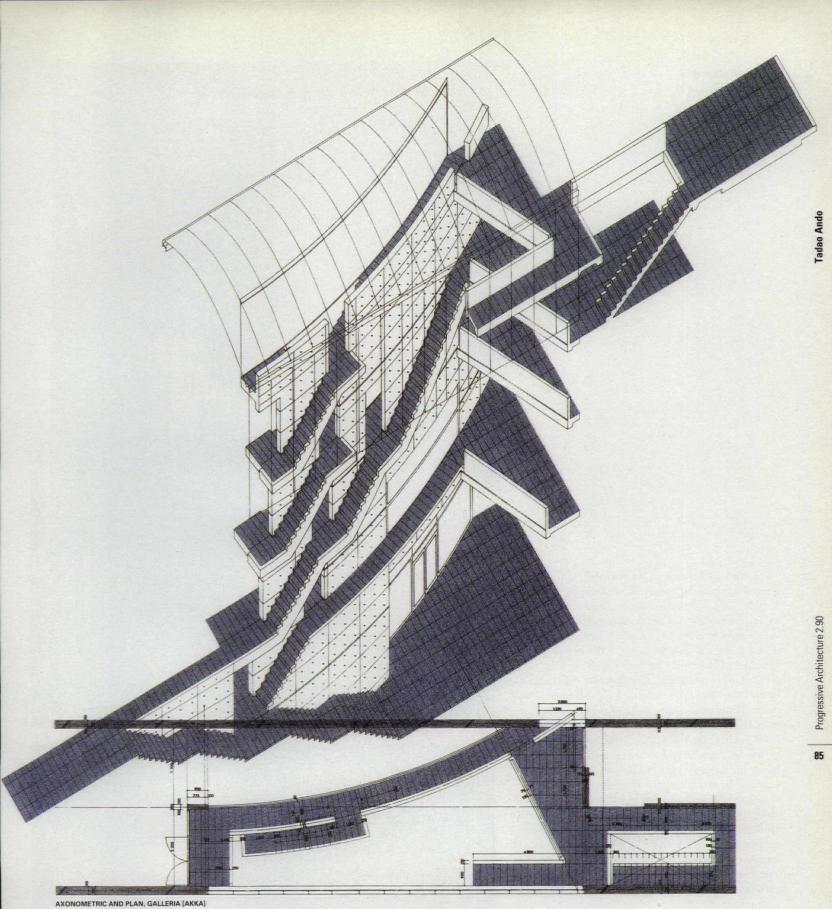
Current Accomplishments

In recent years, Ando's office has been completing six or more new buildings per year - all so far at the moderate scale of the works shown in this article. Among the few of his works featured in U.S. magazines was the Kidosaki House in Tokyo (P/A, Oct. 1987, p. 96).

The five recent buildings featured here have been chosen to demonstrate both Ando's consistency and the way his designs draw on specific circumstances. While most of his work is strongly tied to its context, he occasionally develops imaginary projects just to explore ideas; one of these, displayed in an exhibition of his work, was realized by the client for the Church on the Water (p. 92).

The buildings discussed in this article are examined on the next six pages in terms of dominant themes in Ando's use of space (Outside/Inside), light (Light/Shadow), and materials (Concrete/Glass). In the descriptions of the individual projects on the final six pages, several other common aspects can be observed: interior courts, views from level to level, switchback routes to major spaces. On the final page, you will find a few chosen Ando quotes.

This will not be the last of Tadao Ando's architecture you will see on the pages of Progressive Architecture. His office is remarkably productive, and we will soon be sharing more of his accomplishments with our readers. John Morris Dixon



Hidden opulence is an old Japanese tradition: Lacquered bowls and boxes are often quite severe on the outside, rich with gilded design on the inside. And urban neighborhoods are traditionally lined with severe fences or walls, above which treetops and rooftops are the only visible signs of the complex, individualized houses and gardens within.

In Ando's work this tradition of concealment is interwoven with the international Minimalist aesthetic. His exteriors have none of the eaves or projections that enliven traditional street walls; sharply incised portals take the place of ornamental gateways.

Inside Ando's austere envelopes, on the other hand, the geometrical restraints of traditional Japanese buildings are cast off: Curved and angular walls violate the basic rectangles of his plans. (There is always, however, one underlying rectangular grid.) Modernist open plan and transparency are employed; we often see up or down to other floor levels and sometimes get sectional views of several levels at once. The distinction between indoor space and internal gardens - a rigorously maintained one in traditional Japanese architecture - is dissolved in the Modernist manner. Stairs are handled dramatically and inventively. Light comes from unexpected sources.

Consistent use of the same unadorned material maintains the identification of each Ando interior with its more severe exterior. The potential harshness of concrete as an interior material is offset by its refined surfaces, the rich play of light on geometric forms, and views into other spaces or gardens.





- Human

PARTIAL AXONOMETRIC, GALLERIA [AKKA]

At the entrance to Galleria [akka], a mere slit in the plain concrete front wall 1 leads into an interior of great spatial complexity (drawing above). Similarly, at the Old/New complex, the simple openings in the severe front 2 afford views into a sensuous composition that includes a curved glazed bridge and a planted courtyard – not to mention cases full of pastries.

AXONOMETRIC, OLD/NEW BUILDING



Tadao Ando

On Ando's exteriors, the play of light is simple; the Minimal wall surfaces are evenly illuminated and the openings are seen as dark crevices. What happens behind these openings, however, is a conscious and characteristic manipulation of light and shadow.

Ando uses narrow openings to admit dramatic shafts of light, as he does all around the perimeter of the aptly named Church of the Light. Slivers of light coming through cuts in the wall, both by day and in the evening, delineate the symbolic cross above the altar. Slotlike openings where one wall plane passes through another admit strong shafts of light that point up surface textures.

Where Ando uses curved walls, it is usually an occasion to admit light at one end, which is delicately modulated as the wall turns. Where he uses vaulted ceilings, daylight is typically admitted through glazed end-walls, seeming to flow far into the interior along the curved surfaces.

Much of the light in Ando interiors comes from internal courts and gardens that are so often found in his buildings. So the light inside is often much more generous than the exterior envelope would lead one to expect. Often, too, light from an internal court reaches down to below-grade spaces, which are often crucial to meeting space demands on Ando's typically confined urban sites.

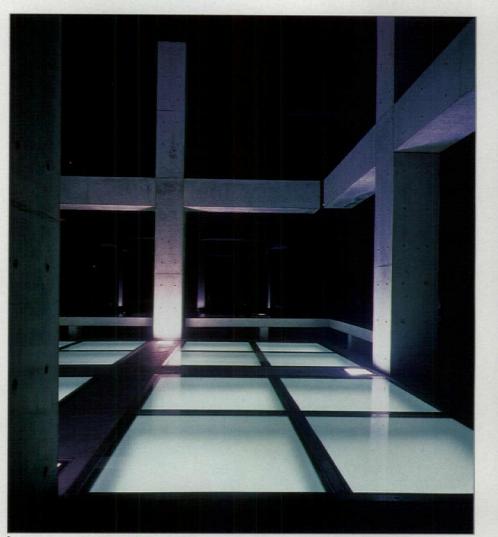






In the Church of the Light, the passage of an angled wall plane through the rectangular envelope is marked by a narrow gap that admits dramatic light (facing page); where the plane cuts another wall obliquely, a glazed area reveals its shaded side 1. The cross cut into the altar wall of this church 2 is illuminated in the evening by exterior spotlights. The living room of the I house 3 illustrates Ando's characteristic lighting of curved walls and ceilings from large glazed areas at their ends, using their smooth surfaces for effective daylight diffusion.

Ando's virtuoso use of concrete is illustrated in the top-floor entrance volume of the Church on the Water 1, where cast-in-place crosses surround a skylight that reverses at night to provide up-lighting. In the Church of the Light 2, linear gaps in the concrete envelope form a lighted cross behind the altar. The top floor of the Galleria [akka] 3 shows characteristic uses of concrete and clear glass, but introduces frosted glass in a steel-framed retractable roof. A typical use of large glass panes set into concrete is seen in the I house 4, where the only hardware is a barely visible strip of stainless steel at the sill (detail drawing, facing page).



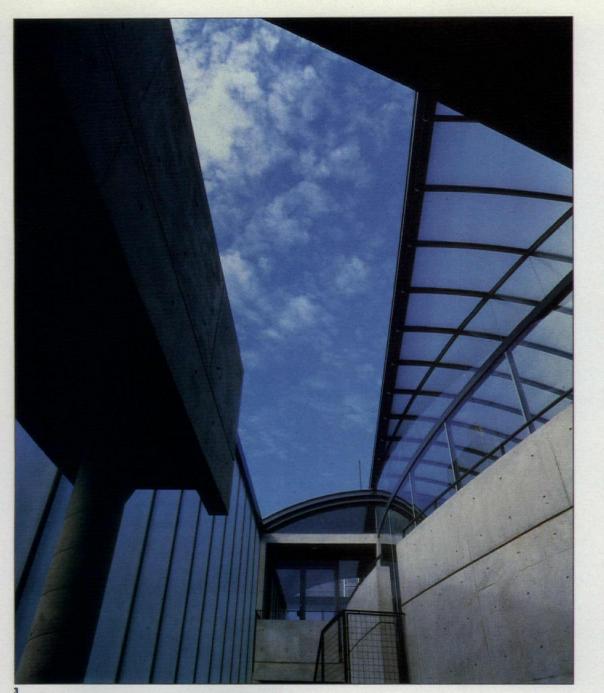
Although Ando's buildings may have wood or stone floors, steel roofing, even some concrete block walls, the primary materials of his work are cast-in-place concrete and glass. His concrete surfaces are resolutely neutral, with only subtle surface indications of reinforcing and formwork modules; their geometry is what counts, rather than any expression of mass or craft. Where his typically large-scale sheets of glass meet the concrete, it is with the least visible joint detailing to be found anywhere.

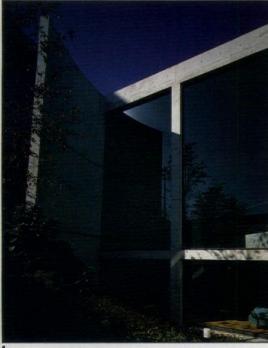
Ando has provided details of a typical insertion of glass into a concrete frame (facing page), using no metal except for a barely noticeable strip of stainless steel at the sill. Dimensioning the concrete to the close tolerances such details require obviously takes extreme care. And easing the glass into narrow grooves on three edges before securing it with steel on the fourth is a painstaking procedure. But such details are executed as a matter of course in Ando's works, some of which have constricted budgets.

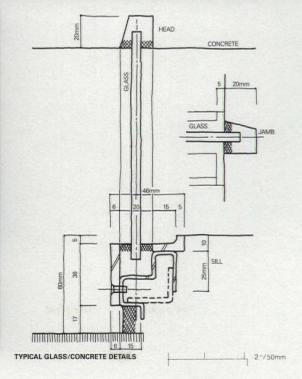
The concrete in Ando's buildings hardly ever suffers from surface damage or clumsy patching, but it is not totally free of irregularities. There is often the rather visible boundary between pours, with wavy bands of color variation. But, typically placed at floor levels or other datum lines of architectural significance, these seem appropriate and even an improvement over unrelieved uniformity. The visible evidence of the concrete's casting can be said to be truly minimal, within the limits of current technology, but the process is not in any way hidden or denied.



Fadao Ando







The fine cast-in-place concrete of Ando's buildings arouses questions about construction techniques involved. There have been rumors about special cadres of workmen and about unusual maintenance procedures after completion, which Ando refutes.

The typical concrete ingredients are portland cement, water, fine aggregate (sand), coarse aggregate (gravel or crushed stone), and an air-entraining agent. Strength is a minimum of 210Kg/cc; slump is no greater than 15cm; water/cement ratio is under 55 percent; air content is 4 percent; cement weight is a minimum of 270 kg/cubic m.

In a specific example, here are the statistics: strength of concrete: 270 kg/cc; cement: 333 kg/cubic m; water: 173 kg/cubic m; fine aggregate: 835 kg/cubic m; coarse aggregate: 960 kg/cubic m; additives: 0.8 kg/cubic m. Water/cement ratio is 52 percent, fine/total aggregate ratio, 47 percent.

Forms are typically of plywood coated with polyurethane resin, typically 900mm x 1800mm x 12mm (about 35" x 70" x ½"). Depending on the situation, the same form materials may be used two or three times, where dimensions and other conditions are the same.

No special placement techniques are used. "Traditional" methods employed include: tamping with various tools and vibrating with internal vibrators. No special craftsmen are employed, but the architects give guidance to the contractor and briefings to the workers themselves for each job. "Continuous education efforts" are directed toward construction workers, says Ando.

After casting, proper curing is considered important. Forms are removed carefully to avoid surface damage. Silicon resin is then sprayed or rolled onto the exposed surfaces to protect from water and dirt. Every two or three years thereafter, a cleaning and a new silicon coating are recommended. 91

Old/New Building, Rokko

Progressive Architecture 2.90

92

As one climbs toward the mountains in the Rokko district of Kobe, the Old/New complex is first identified by its rubble stone walls. Then the characteristic Ando volumes of concrete, steel, and glass can be seen extending discreetly above them 4.

Ando has taken pains to acknowledge the old and affluent residential area that surrounds this site. The granite boulder walls are of a kind traditionally used for retaining walls in such a hillside residential area, and the whole building has been laid out to preserve two 200-year-old camphor trees on the site.

Old/New displays Ando's characteristic contrast between an austere exterior and a volumetric complexity within it (pp. 86–87). Entering through a tall portal in the concrete west wall, one is immediately presented with a variety of largely transparent volumes around a courtyard that is itself surprisingly luxuriant 3. Near at hand, complex reflections and transparencies are generated by the curved, glass-walled passage that joins the upper-level bar to the rest of the complex.

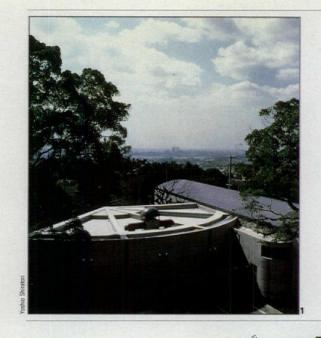
Inside, the building has been neatly divided into four restaurant spaces on two levels. North of the entry, an Italian-style restaurant extends in a fan-shaped plan, making the most of its view of the walled gardened court; above that, a Japanese-style restaurant looks into the trees and has a great curved window that breaches the wall. On the south side of the entry are a ground-floor coffee shop (featuring fine pastry) and a second-floor bar 2 with a view that extends out to the sea, miles away at the foot of the slope 1.

The interiors, by other designers, are quite compatible with Ando's intentions. In the top-floor bar, tables, bar top, and cabinets of massive, rough-hewn wood relate very effectively to Ando's minimal geometry and taut surfaces.

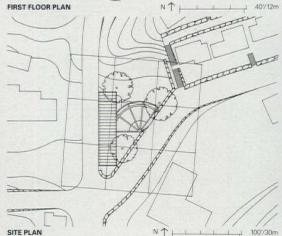
Consultants: Ascoral Engineering Associates, structural; Iijima Design Studio and Super Potatoes, interiors; Takashi Sugimoto, art director.

General contractor: Takenaka Komuten. Site: about 1300 sq m (14,000 sq ft) in an affluent residential district.

Program: two restaurants, a bar, and a coffee shop; 806 sq m (8670 sq ft).



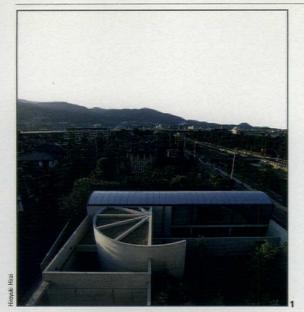
SECOND FLOOR PLAN

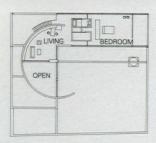




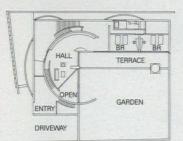








SECOND FLOOR PLAN

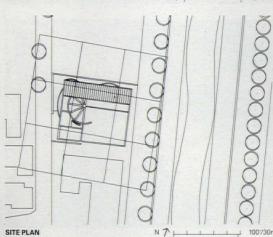


FIRST FLOOR PLAN



NT

BASEMENT PLAN







l House, Ashiya

Located near the sea on the lower course of the Ashiya River, this house takes its place among a variety of expensive residences 1.

.

Designed in part for businessconnected entertaining, the house has a cylindrical core of living/dining space that rises three stories from the level of the sunken court that it overlooks 3 (also page 91). Inside the cylinder, floor slabs diminish in area as they rise, so that each level overlooks parts of the one below.

A linear wing extending from this pivotal core houses bedroom suites on three levels, while kitchen, garage, and other service spaces fill out the rectangular parcel. Throughout the house, large-scale Italian furniture pieces (by various designers, produced by Saportini Italia, with some from Cassina) are placed like sculptures – effective ones – in the Minimalist spaces; storage units are built in by the architects.

As in other Ando projects, the courtyard here yields remarkable spatial rewards for such a small space; at the bottom level, smallscaled rooms (one an exquisitely Minimal tatami room) look out on an intimate space. As the terraced courtyard rises it gets larger, as the rooms facing it also increase in scale. Second floor bedrooms have their own walled terrace, with one big opening toward the larger court. At the top of the bedroom wing, a handsome master bedroom with a vaulted ceiling and a porch at its east end is like a lofty pavilion 2 surveying the garden, the riverbed, and the distant hills.

A particularly successful feature of the house is the way light is distributed throughout the interior from a few large glazed areas, following curved walls and vaulted ceilings (p. 89). It is almost as if these curved surfaces are in themselves luminous.

Consultants: Ascoral Engineering Associates, structural.

General Contractor: Daiku Kensetsu. Site: About 1000 sq m (10,760 sq ft) in high-income residential district. Program: House for elderly couple, their son and his family, and guests; 908 sq m (9770 sq ft). 93

Galleria [akka], Osaka

In one of the dense lowrise areas in the core of Osaka, a blank concrete street wall marks the entrance to this powerful little retail/ gallery structure (p. 86). On a lot 8m x 40m (about 26' x 130'), using one level below the street and four above, Ando has created complex spaces of remarkably generous scale (pp. 85 and 87).

By introducing a long, gentle curve in plan, within the constricting rectangle, the architect has been able to carve out a central atrium that extends the full width of the site (with an implied extention slightly beyond on one side). As one enters from the street, a widening stair straight ahead provides a grand entry to the basement level, while a series of stairs climbing the curved wall invite the visitor toward upper levels. All three dimensions of this central space height, width, and depth - exceed any expectation one might get from the exterior.

At the top of this atrium, which accounts for just half of the building's volume, a curved roof of frosted glass framed in steel 1 (also page 91) admits light that penetrates down to the basement level 2. In good weather, the portion of roof over the atrium rolls back to open the complex to the sky 3. In recent years, the Japanese

have been building many ingenious little retail developments that offer appealing retail locations on several levels around open or sheltered courts. In this case, the type has been given a strong architectural identity by the strong forms and homogeneous surface of the concrete and by the unifying roof,

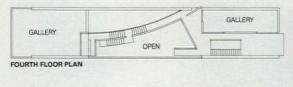
recalling those of traditional shopping arcades in the West. The shops have interesting but

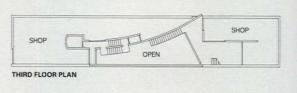
practical plans, with extensive frontage on the walkways around the atrium. Varied ceiling heights add spatial interest. On the top floor, a handsome gallery benefits from the billowing roof form.

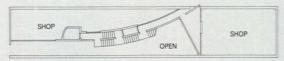
Consultants: Ascoral Engineering Associates, structural.

General contractor: Fujiki Komuten. Site: Lot 8 m x 40 m (26' x 130') in dense commercial district. Program: Shops and top-floor gallery; 1027 sq m (11,050 sq ft).

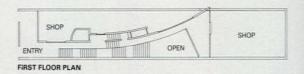


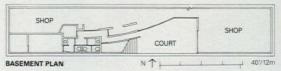


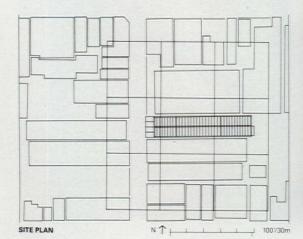




SECOND FLOOR PLAN

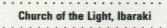












Modesty was demanded of this church, by both the limited means of its congregation and by its crowded location in a middle-class suburb of Osaka 1. Fitted tightly between the street and an existing auxiliary building, the new church is a linear volume, focused on a cross cut out of the concrete wall behind the altar 2 (also p. 90).

.

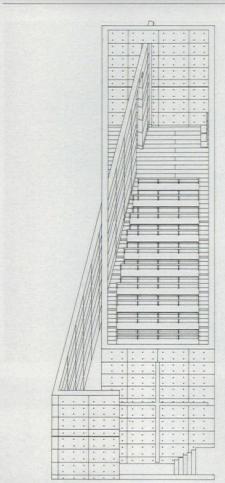
The walls of this sanctuary define a volume equal to three 5.9-meter (19-foot) cubes, end to end 3. Slicing through this at an angle that relates to the site plan, a freestanding wall defines a narthex at the entrance, linked to the gardened site by extensive glazing. A tall, narrow opening (p. 88) leads from here into the main room, lighted mainly by slits of glass; its only large glass area is heavily shaded by the angled wall (p. 89). In the morning, sunlight pours in through the cut-out cross; in the evening, lights outside the church illuminate the focal cross and cast strong patterns on the walls (p. 89).

Floors, pews, and platform furnishings are all made of rough scaffolding planks, stained a dark, neutral color. Ando advocates natural materials for "parts of the building that come into contact with the human hand or foot."

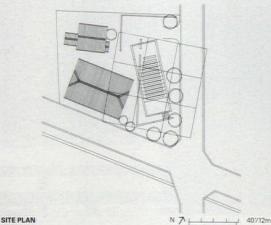
Completed last year at a cost of only 25 million yen (about \$200,000), the church is seen by Ando as a challenge to the prevailing economic rationalism, in which "everything is determined by cost, and there is no room for human considerations." Even as this church was going up, it was expected to take years to complete, serving in the interim as a roofless chapel. But enough money was raised to carry it right through to completion, "thanks to the enthusiasm of the congregation and the construction company." It was apparently a case of inspiration winning out over calculation.

Consultants: Ascoral Engineering Associates, structural.

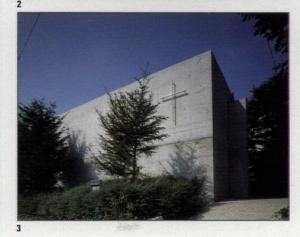
General contractor: Tatsumi Kensetsu. Site: Corner lot, 837 sq m (9000 sq ft) in quiet residential suburb of Osaka. Program: Church for United Church of Christ congregation; 113 sq m (1215 sq ft), one story.



OBLIQUE PROJECTION







Progressive Architecture 2.90

95

Chapel on the Water

A rural tract on the island of Hokkaido is the setting for this chapel, which is one component of a developing culture-oriented resort. Within a kind of natural bowl, an artificial pond has been created and the chapel has been erected on its shore 1, 4.

One enters along a freestanding wall forming an L in plan. A gentle slope leads up to the chapel entry, a glazed volume about 10 meters square (about 32 feet square), surrounding a smaller cube formed by four-cast-in-place crosses (p. 90). A dark, curved stair leads down from here to the chapel itself 2, where the pond reappears through a wall of sliding glass doors, with a steel cross rising from the water 3.

In Hokkaido's rigorous climate, resembling that of Northern New England, the setting presents strong seasonal variations, with vivid fall foliage and heavy snow cover in season. It is in this framed, everchanging landscape, says Ando, that "one senses the presence of what is natural and sacred."

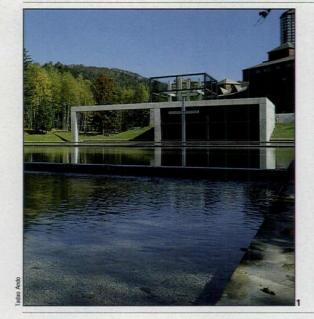
The Chapel on the Water and the Church of the Light, completed in 1988 and 1989 respectively, reflect ideas worked out for the Chapel on Mt. Rokko of 1986. In that chapel, too, an entry process involving a 180-degree turn leads into the sanctuary itself, which is cubic. At Mt. Rokko, a glazed side wall lights the solid altar wall, in the manner of some earlier Modern churches, while in the two later religious buildings, the light comes principally from behind the altar.

The developer who built the Chapel on the Water has also commissioned the Ando office to design a Theater on the Water, to be built about 400 meters away, with curved, banked seating for 6000 facing a 200-meter-long platform extending out over the water; it would be used for concerts, fashion shows, and – in the winter – as a setting for iceskating.

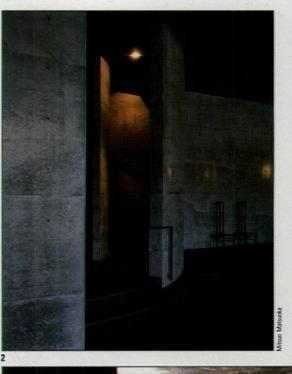
Consultants: Ascoral Engineering Associates, structural; LD Yamagiwa Laboratory, lighting.

General contractor: Obayashi Corp. Site: Area of 6730 sq m (72,400 sq ft) in rural landscape.

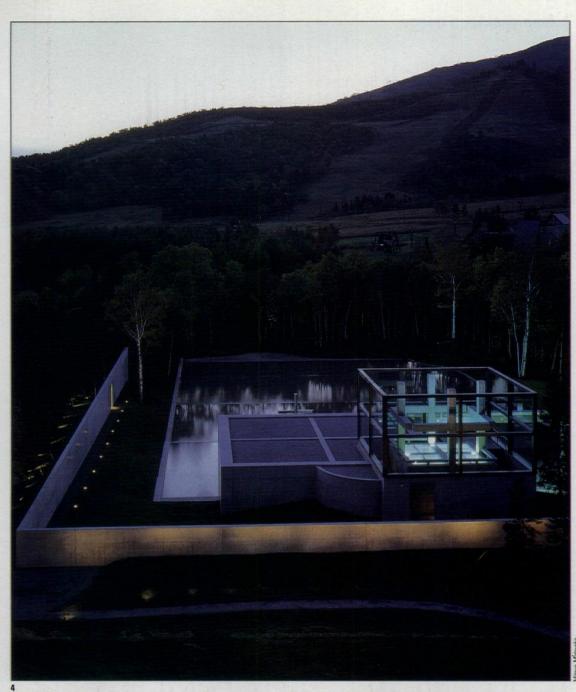
Program: Church with area of 520 sq m (5600 sq ft), facing artificial pond.



CUTAWAY AXONOMETRIC









"Like a single flower in a vase in the tokonoma (a raised platform) of a teahouse, it is not the quantity of visual stimuli that bears richness; rather, it is the inner quality of the message."

"To regain the fullness of life, I want to continue to pursue the reductive aesthetic I have developed through my practice as an architect. My buildings are being refined towards geometric simplicity, but I also seek to generate complexity through the introduction of various elements. This mixture is the true state of nature and man's existence."

"By employing geometry as a methodology, I seek to synthesize past and present, East and West."

Except from a lecture by Ando, Yale University, fall 1987, as quoted in Tadao Ando: The Yale Studio and Current Works, Rizzoli, 1989. Tadao Ando

A Non-precious Image

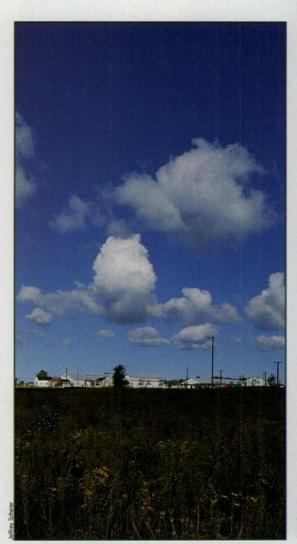
Taking a cue from the surrounding countryside, Meyer, Scherer & Rockcastle have created a facility for design, engineering, and testing new furniture ideas.

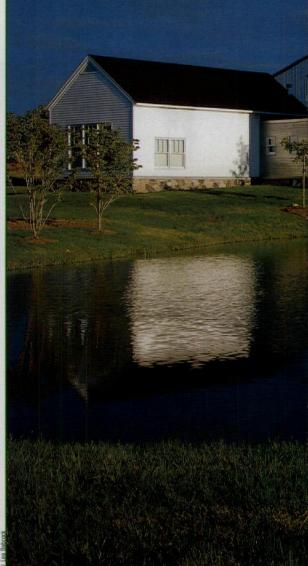


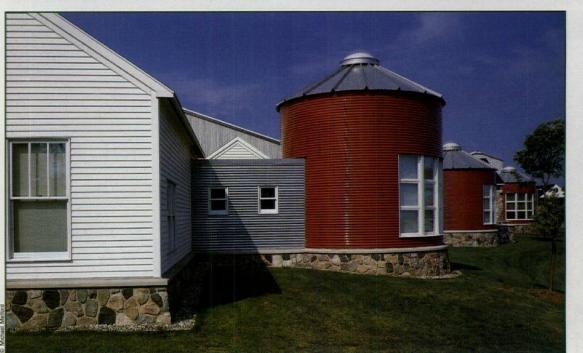
Progressive Architecture 2.90

98

From the road and across the fields (above, left) the complex looks like a well-tended farm. Seen across one of the ponds on the site (above, right), the southwest part of the complex exactly duplicates one of the renderings submitted to the P/A Awards. A stone base was chosen to help both the industrialized and the frame buildings meet the ground more gracefully, and to relate to the many stone foundation walls in the area. A datum of 18 inches above the highest grade point was set, forming a "horizon line" on which the buildings rest. Among the pieces the architect calls "idiosyncratic elements," the red grain bins (right) serve as conference rooms and design studios.









While many winning schemes in the P/A Awards program get built just as the jury saw them, few bear the striking resemblance between the picturesque presentation drawings and finished photos that is evident in the Herman Miller Design Yard (P/A, Jan. 1989, p. 86). It is farm imagery, plain and simple. Jurors were split about the appropriateness of the solution, and the same kind of rift is likely for observers of the finished complex – love and/or sympathy versus disbelief and/or disdain – with little in between. It is important, then, to understand what led to the farmyard imagery, beyond the fact that much (but not all) of the countryside in the Holland, Michigan, area is rural in character.

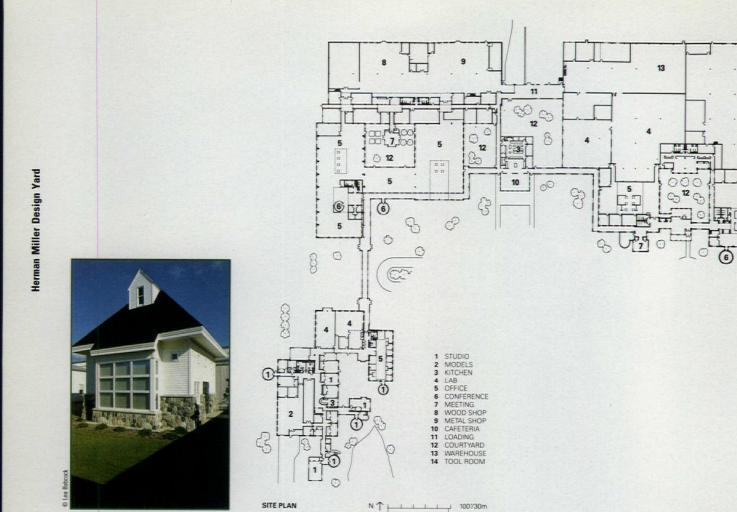
According to architect Jeffrey Scherer of Meyer, Scherer & Rockcastle, their first act was to work up a program for consolidating the functions of design, development, product safety, manufacturing engineering, and facilities into one complex. At the outset, the architects were told of a Herman Miller rule of thumb that no building will exceed 60,000 square feet, a function of keeping each person near a window. Because of the nature of the work carried on in this facility, security was another important requirement.

On the aesthetic side of the early discussions, the architects were advised that Herman Miller was distinctly not after an award-winner (ironic in view of the P/A recognition), a piece of late 1980s architecture, or anything trendy or stylish. Says Scherer, "It was not to be monumental or precious, that was a big issue, but they were insistent on high-quality design. That pairing of requests caused the design team the most anguish over how to approach the problem."

In apparent concert with these requests, Herman Miller had imposed a strict budget for the project, and were not inclined to vary from it. Given the monetary and style directives, Scherer began to think about how to enclose space for as little money as possible, and how to translate the farm vernacular of Western Michigan. Metal farm buildings were of interest to him for both their cost and their character. His thinking, he says, went beyond farm imagery to the notion of where work is done, combined with creativity. In his mind, there were "yards" of various other kinds, as well – shipyards, lumber yards – but (continued on page 102) Interviews: Clients/Users

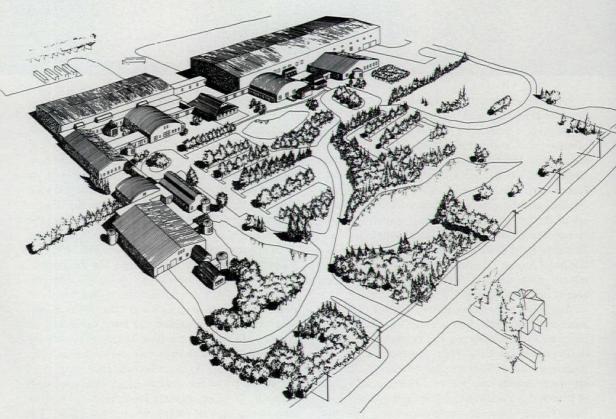
The following are interviews with some representatives of Herman Miller, both corporate and consultants: Marty Dugan, V.P., Facilities Management; Greg Hankamp, Director, Facilities Design; Rob Harvey, Sr. V.P., Research and Design; Gary Miller, Sr. V.P., Development engineering/ Facilities; Tom Newhouse and Don Shepherd, outside designers working with Herman Miller.

Harvey: This is a very accepting facility, in that it's risk-embracing, and it is not precious or monumental. But the important thing is that, from a very practical viewpoint, we've been able to find a way of meeting the demands of a very large and highly structured R&D process, and rendered the facility



100

. A linear flow of a project idea can be traced on the plan, where the design area (plan, top left) connects with the engineering and development sections (top right), which ultimately connect with testing and shipping. One special and voluminous meeting room (above), near engineering development, was located in a courtyard to place it on "neutral turf" for meetings. The "horizon line" is held, even on the few occasions (facing page, top) when the stone is carried above it. Bowed roof forms (facing page, bottom left) were determined by how far the metal panels would droop in a hanging position; they are supported by conventionally-built steel trusses. Columns on the several porches are mounted on nicely-detailed steel bases (facing page, bottom right).



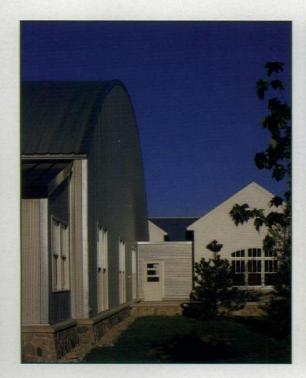
5

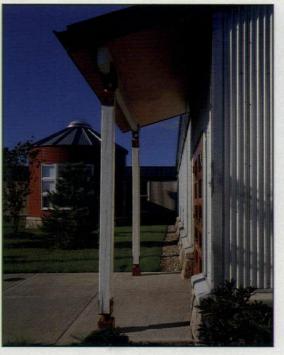
3

AERIAL PERSPECTIVE



This complex is the result of a clear mandate to build a non-monument in semirural Western Michigan, and on a budget.





much more intimately and experimentally than you might expect. The architecture is successful in that regard. It's also very cost effective, which speaks well for what we do and how we do it.

.

Some of the material uses and some of the farmyard metaphors are perhaps a little strident, and not very convincing, but by and large the facility itself works well. It's not just the consolidation of all these functions, which is obviously wonderful, but I think the major result has been that we got a much broader understanding of what the whole process of managing change is about. This is reflected in the architecture by the breakdown into smaller elements, and the simplicity and uses of common materials; in terms of some very important aspects like materials handling, layered access, and security, it is very, very successful.

101





. Herman Miller humor appears in numerous places inside the facility. A frog in the casual lounge/coffee bar (above) is created from an abandoned set of seat molds. A spontaneous game of basketball breaks out in the engineering development section (facing page, bottom left). Perhaps the only place the architect questions the industrialized farm imagery is in the inside silo/conference room (facing page, top), where he feels he might have overdone it just a bit. In the private offices of the design section (facing page, bottom right), operable glass doors can be closed at right angles when acoustical privacy is required. They are used infrequently, report the design department heads.

(continued from page 99)

the visual aspect had to come from the farm. The details and the variations he wanted from the metal building manufacturers, while not extensive, took much of his time in the beginning. Structural assumptions and modifications, base conditions, shaped roof forms, and details like the ventilators were all carefully worked out.

Security measures, originally thought to be almost overwhelming to achieve, were cleanly and simply handled by a roughly front-to-back layering of the spaces within each building. Circulation permits a visitor simply to pass by areas for which entry is restricted. A version of that same layering is applied to the building massing, as a "veil" of smaller buildings is arrayed in front of the larger ones for the full length of the complex. Aside from reducing the apparent scale, this also gives each department its own "front door" and "porch," something the department heads wanted very much.

The functional flow of the whole complex is clear from the plan, and therefore readable from the front of the building. As an idea comes to the company from its outside designers, it enters the design section on the west end of the complex. As it matures, it passes through engineering and the other phases, in order, from west to east. At the east end, it leaves on a truck, a mature product.

This complex is the result of a clear mandate to build a non-monument in semirural Western Michigan, and on a budget. The project has layers of fine detailing and careful craftsmanship, which require close inspection to be obvious. It is the result of much dedicated thought and work on the part of Herman Miller people and the architects; functionally and intellectually it works well, in varying degrees, for those who work there. It seems to have nurtured an admirable environment and spirit at Herman Miller. Notwithstanding disagreements, both in the profession and outside it, over the aesthetic employed, the architects have taken a set of paradoxical requirements and turned them into considerably more than a sow's ear. Jim Murphy







Miller: I agree, the security aspect is one of the things that is most successful. It does what has to be done but in a very relaxed way. And it's done without the need for apology to anyone. I was concerned originally about the overtness of the metaphor, but I'm more taken now with the informal use of materials, the non-precious use. I think it really induces an informality around here. Most of the people in my area have reacted extremely well. We needed these kinds of neutral territorial spaces where members of the whole company could gather and where the idea was king.

Newhouse: The building is nonprecious, it is all kinds of things I enjoy and appreciate. I won't refer specifically to any other facilities around the state that do similar things for furniture manufacturers, but they are the absolute antithesis of this place.

Shepherd: As an interior designer, I have some aesthetic reservations about the building. Its character, its human traits, I'd rate higher. I think the idea is a wonderful idea, as a concept, and it does work on a number of levels. It is a very appropriate aesthetic for the region, because it is a very agricultural area.

Hankamp: Herman Miller Research had been working on some things where they had interspersed project groups throughout a space, and small clusters of engineers who worked on specific projects. That broke the mold, and seemed to be a very effective test of what we might do here. So the first plan Jeff Scherer proposed was based on having project groups interspersed throughout the space. However, as time went on, that turned out not to be economical, so we had to begin to centralize the projects by function, and to isolate them, then discuss the square footage, and what that would cost Herman Miller. And that was the beginning of the process.

Dugan: The placement of plan elements in the complex describes the actual flow of the process here, the path, literally, of an idea that comes in one door, and ultimately goes out another door, as a product on the truck. In terms of the day-today maintenance, the ongoing operation of the building, it has worked out quite well. It appears to be a building that, over time, will be an economical one to maintain.

Hankamp: My feeling is that it is working very well, particularly the design building. The personality that it has taken on is very influential in the design process. The types of spaces in it are leaving a very strong impression on the designers about using unusual materials and taking unusual risks. Progressive Architecture 2.90

Dugan: It's a facility that you hear people in the Holland/Zeeland area talking about, and wishing they could work there. Just within the company, there is a whole range of folks who wish they could come over here. People are always asking what role facilities play in the organization, and if you're looking for a facilities statement, this is Herman Miller. This really reflects, by and large, not only what people inside do, but what Herman Miller people stand for and who they are.

Hankamp: To me, the building has a very strong sense of permanence, the same sort of permanence as the old farms in the area, and I enjoy that. It just feels as if it's going to be around for years.

Project: Herman Miller Design Yard, Holland, Michigan.

Architects: Meyer, Scherer & Rockcastle, Minneapolis (Jeffrey A. Scherer, partner in charge, design; Lynn Barnhouse, Tameron Francis, Victoria Gibbs, Jeff Kelley, Richard Laffin, James Larson, Gord Metcalf, Thomas Meyer, James Phelps, Barry Petit, Richard Pugsley, Garth Rockcastle, Nick Tollefson, Steve Wong, project team). Client: Herman Miller, Inc. Site: rural 40-acre tract.

Program: new facility to house formerly disparate functions of design, development, product standards and testing, and manufacturing engineering. Structural system: pre-engineered steel frame, concrete foundations, wood frame "outbuildings," metal grain bins. Mechanical system: gas-fired variable air volume air system.

Consultants: Bakke, Kopp, Ballou & McFarlin, structural and mechanical; Moore & Bruggink, civil; Damon Farber & Associates, landscape. Construction manager: E & V, Inc. Costs: \$11.4 million.

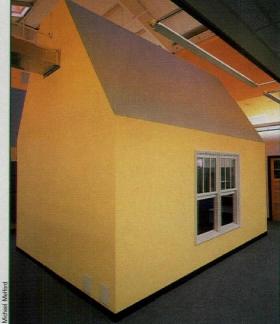
.

Progressive Architecture 2.90

A spacious gallery in the design studio area (top right) is used for many different activities, such as gatherings, exhibits, or three-dimensional displays. It also serves as access to the kitchen which opens off it, and to the individual and autonomous studios. Since all product design at Herman Miller is done by outside consultant designers, the studios temporarily "belong" to the designer working in them. If one entrance is more public than another, it would be the one where touring groups enter (left below), by way of a small porch adorned with two wooden rocking chairs. In some of the high spaces, individual buildings-within-buildings (right below and facing page) define specialized areas.



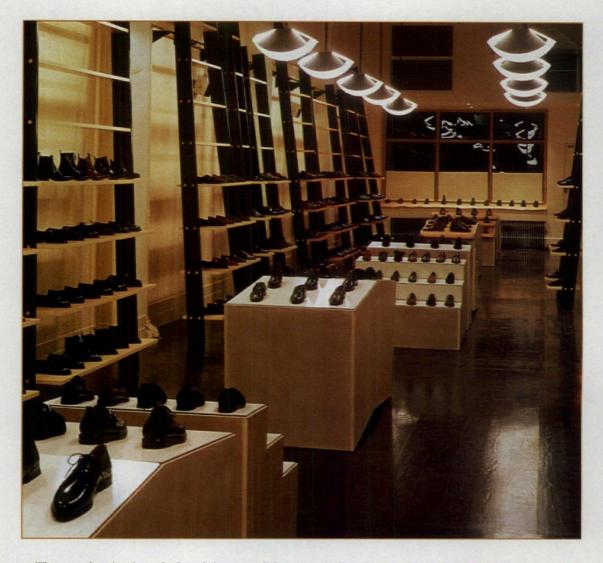






Mind Over Matter

A Manhattan shoe store by designer Kevin Walz reveals a maverick's singular hand and visceral way with materials.



They say there's a kernel of truth in every cliché. If that adage were applied to current design, Kevin Walz's work would certainly qualify as the veritable core – even as the ideas that fuel it have become, in less-talented (or more cynical) hands, the hackneyed stuff of trend.

Reeling off the themes that characterize Walz designs may sound, at first, like a litany of worn phrases: his use of "unexpected materials," their "dramatic juxtapositions," and the "search for meaning" that governs the designer's choices; the "illusion of age" Walz imparts to objects, and the sense that his forms are "shaped by a human hand." But a visit to any of Walz's projects makes it clear that it is only the words that fail.

Many of the designer's recurrent themes, much refined over 11 years of practice, are in evidence at Otto Tootsi Plohound, a shoe store he recently completed on lower Fifth Avenue.

Retaining the industrial character of the 16-foottall elongated space, Walz distinguished between hightraffic display space – furnished, appropriately, with ladders, ramps and stairlike showcase elements – and a comfortable seating area for sampling the wares.

Walz welcomes the notion that his projects begin a gradual process of change from the moment they are inhabited and designs accordingly. Certain elements are designated as "constants," and constructed of easy-maintenance materials that are relatively impervious to wear. Others, however, are made of what Walz calls "emotional materials," which respond to continued use and reflect its effects. At Tootsi Plohound, for example, the long wall, against which most of the display ladders are arrayed, is a constant. It is clad with Senideco, a synthetic surface whose compressed woolly texture Walz likens to "spitballs," and which can be easily cleaned or patched. By contrast, the sales counter (fig. 7, p. 109), as well as the storefront window ramp (figs. 1, 2) and other display surfaces, are covered with unfinished belting leather a material that will scuff and stain, gradually acquiring a patina of use.

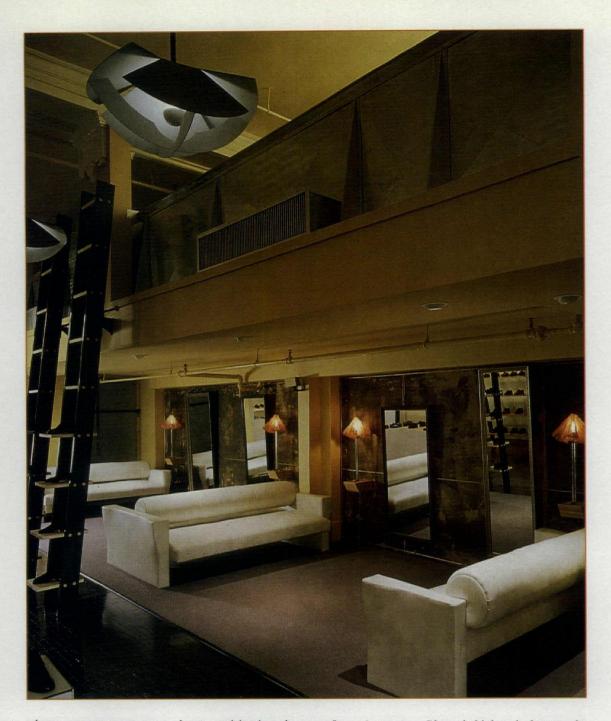
In some instances Walz goes further, to "build in" the passage of time. Since aging is inevitable, he says, he prefers to design objects that will "look worn in – rather than worn out." The stairlike display boxes, for example, are made of ¼-inch composition board,

Otto Tootsi Plohound, New York

as sellouts, an impression he and the shoe store owners were eager to avoid. Rather than partition off the back, Walz retained an unobstructed sightline from simple, glazed storefront to the brickwalled alley behind the building (above). Shades on the lower portion of the rear windows screen off the alley's garbage piles. The seating area, too, reflects Walz's down-at-the-heels realism. Its tar-and-burlap wall (facing page), hung with thrift shop mirrors, has the appeal of a shabby parlor. The white leather sofas and copper mesh-shaded lamps are recent additions to the collection Walz designed for Arc International.

Too glitzy or polished a design would

have branded Walz's Soho-based clients



whose corners were worn down, anticipating the punishment they're prone to. (See close-up, fig. 6.)

Canted on rear wheels to make them look weightier (and alleviate the "corniness" of too-literal stairs) these display boxes sport three different kinds of stepped surfaces: porcelain-coated steel in the women's department, belting leather in the men's, and milky plexiglass, lit from within by "cheesy fluorescent" lighting, for the more prominent elements that flank the sales desk and seating area. In each case the material is detailed differently: The porcelain steel is laid on top of its masonite frame (see also fig. 4); the leather is inlaid; the plexiglass treads and risers are cropped in. "Each is a different relationship, with a fine articulation you'd see in a sculptor's work," Walz says. "[The detailing] has hidden meanings, you have to think about it."

It's important to Walz (himself a painter turned designer) that elements reflect the order and method of their construction. Thus, joints, pegs, and seams are visible, even accentuated. His motives for this are more than pedagogical. Walz believes objects acquire an aura of heightened value when they reflect the craftsman's presence. Blatantly high-tech elements, in particular, are enriched by the contradiction of visible handiwork. "People use the words 'cold' and 'hot' a lot. I don't believe in that business," he says. "We don't have the same opportunities to express quality that were available 100 years ago. We try to express quality in different ways. Seeing the human hand is very important."

While Walz's use of cast rubber, diverse metals, masonite, and synthetic materials points to his fascination with industrial products, other moves the designer makes are downright primitive. The wall along the carpeted seating area, for instance, was coated with tar, to which vertical strips of burlap were applied. Wide seams between the burlap's frayed edges allow the tar to bulge through. The effect is evocative, bizarrely sumptuous. And, like so much of Walz's work – it capers on a fine line between subtlety and shock. **Ziva Freiman** Project: Otto Tootsi Plohound shoe store, Manhattan.

Designer: Walz Design Inc. (Kevin Walz, principal; Christopher Smith, Francisco de Leon, Suzanne Couture, design team).

Client: Lawrence and Annette Everston. **Program:** 2700-sq-ft shoe store including loft offices.

Major materials: Senideco, tar and burlap wall surfaces, masonite, porcelain-coated steel, translucent plexiglass, metal stud and drywall, oak and African slate floors, Cor-ten steel, rubber playground matting, belting leather, copper, wood.

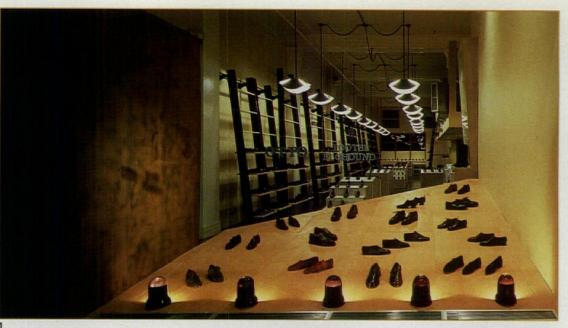
Consultants: Integrated Media Design Inc. (Paul Krauth, president), Stereo Sound System.

Contractor: Silver Rail Construction Corporation.

Photos: Andrew Garn, except as noted.

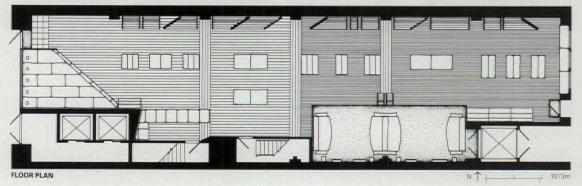
Otto Tootsi Plohound

Walz's storefront sign of translucent vinyl letters was applied directly to the window, and "shadowed" on the interior side with three-dimensional black metal characters (1). The window display is ranged on a leather-clad asymmetrical ramp that sets up an exaggerated perspective, reinforced by steel pendant lamps linked with conduit "swags." In contrast to the tall space, Walz created an intimate gateway: One jamb is of Cor-ten steel (2); the other is clad with rubber playground matting, applied face-down to reveal its ribbed underside (3); African slate defines the threshold. To reflect the passage of time, the lamps' copper-mesh shades (8), and the copper side panel of the sales desk (7), were left unlacquered to gradually oxidize and blacken. The corners of porcelain-coated steel display steps are abraded, allowing the metal to show through (4). The designer's preoccupation with baring the building process is revealed in the hollow pegs joining the sides of masonite display boxes, whose wood filler responded differently to the stain finish, and so display how the piece was assembled (6). Disc-grinding adds "hand-applied" texture to a ventilation duct (5).

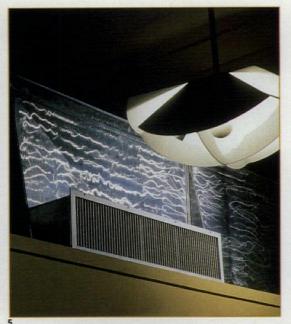


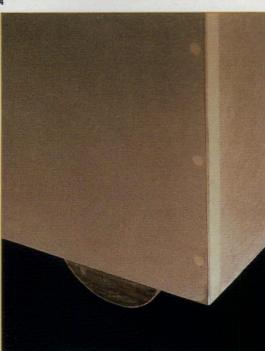


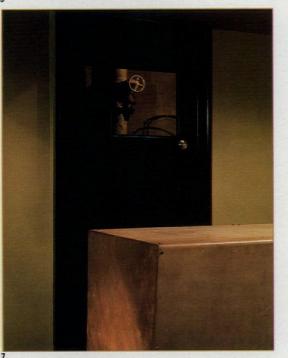














A selection of details from various Walz projects charts the evolution of his design credo.

Truth or Decor?

On the coattails of Frank Gehry's celebrity, the use of lowly industrial materials in incongruous settings has become rife, joining a long line of avant-garde expressions engulfed by the mainstream - and so neutralized. The unusual has become usual.

Walz dismisses the products of such trends as "decor." Underlying his derision is a deep distrust of "movements." They "tend to take away the importance of meaning. They become decor really quickly," he says, and cites the trajectory of Cubism: "[Picasso and Braque's] struggle of the first year is what's exciting. The next two years are dreary, and then they were struggling again. The birth and the death were interesting, the life was just dreadful."

How to circumvent the doldrums of widespread acceptance? Walz, 40, believes the answer lies in charting a personal, sometimes not quite rational course. "We try to find meaning in relationships of materials, materials and process, materials and form." That meaning, while central to Walz's design, is virtually never explicit. He assumes that what is evocative to him will be so to others.

Refining the Grain

Paradoxically, though relentlessly creative - Walz eschews originality for its own sake. The designer arrives at his most startling results "out of frustration" with rote solutions. ("To use gypboard arbitrarily means you're not thinking.") At the showroom he designed for Arc International, for example, Walz sought to magnify the presence of the walls as a backdrop to enhance the furnishings on display. He decided on two kinds of sandpaper, and convinced the manufacturer, 3M Corporation, to supply him with 150-foot-long strips, each 12 inches wide, which he banded horizontally with an effect akin to masonry (13). Refusing to docilely slap paint on the dining room wall of a private residence in Brooklyn, Walz resorted to beveled masonite panels and a steel chair rail, topped by crinkled and painted rice paper (14).

Another example of Walz's

Details, Otto Tootsi Plohound

109

unorthodox - at times surreal problem solving can be seen in a farmhouse remodeled for photographer Chris Callis. Walz provided prodigious kitchen storage - without sacrificing daylight - using cabinets that double as windows (15). He remains mildly apologetic about the move. "There's something ha-ha about it," he says. Eager to uphold the spirit of the 80-yearold original structure even as he updated it, Walz designed a shower stall that seems almost Victorian (12). A half-round pan, contained by tube rails, and curtains slung from hospital tracks are more appropriate "low-tech" substitutes for standard gliding door stalls. Walz is recognized for his furni-

wall is recognized for his furmiture, much of it custom built for specific projects, the rest manufactured, since 1986, by Arc International. In the company's showroom Walz built cantilevered counters, as well as an entire workstation out of wax-finished laminated leather (10), which afforded durable surfaces, appealing texture, and extraordinary freedom of form. Balking at the "horrible idea" of

a space-truncating, built-in closet

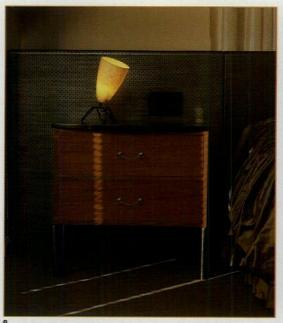
110

in the master suite of the Brooklyn house, Walz designed angled mahogany and brass closet doors, which end short of the ceiling (11). The mahogany panels were rubbed with bronze dust for added luminosity. Brass grates dematerialize the bases. The result approximates a lightweight screen. The bedside tables have stained wood tops and pigmented cherry sides (9). The drawer pulls were made of thin steel cable. "They are about human presence, you can tell where the person was when he opened the drawer," Walz explains. "Details like this allow you to be a

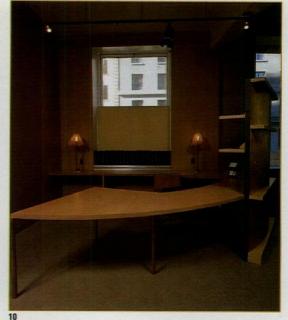
A casual observer might miss such fine points. But then Walz is "interested in intimacy," the features only proximity brings to light. The more and longer you look, the more you see.

bit of a detective."

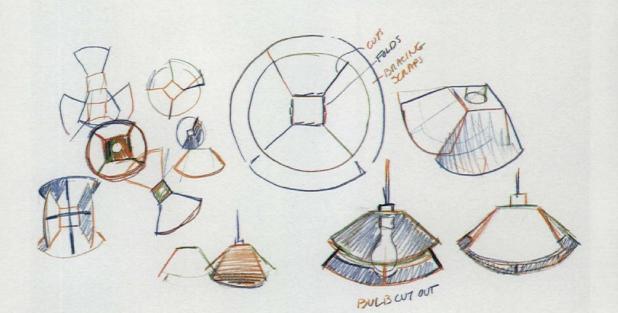
A showroom designed in 1986 for AF Supply Corporation, a luxury bathroom fixture manufacturer (16), heralds many motifs that recur in later work. These include swags of electrical conduit (which enabled Walz to avoid dropped ceilings). Masonite paneling was first applied









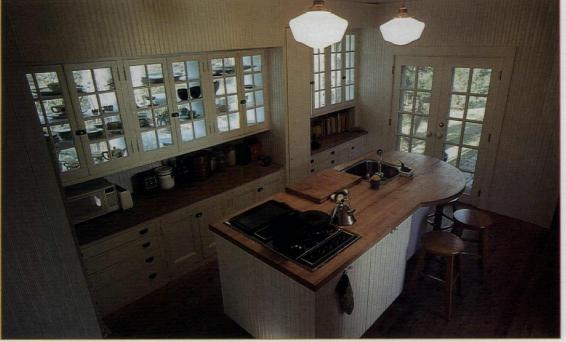


SKETCHES FOR SHOE STORE'S CUT-AND-FOLD STEEL PENDANT LAMP











here, to the wall behind a steel reception desk. A security gate, made of different kinds of steel mesh, afforded varying degrees of transparency. The circle club chairs and metal end tables form the foundation of Walz's furniture collection. The designer's ideas evolve from one project to the next, though he aims to take a different path each time – guided and inspired by each job's constraints. "The more specific, the more difficult, the more interesting."

Portrait of the Young Man

Walz's interest in relationships can be traced to his salad days as a painter and graphic designer. In the late 1960s, after three years in Pratt's fine arts department, Walz transferred to the New York Studio School, where he was exposed to more rigorous, process-oriented training. In watercolor class, for example, entire sessions were devoted to making two marks of color alongside each other, always working from life. Being constrained to paint a portion of the subject and express also the area adjacent to it gradually yielded an understanding of how color and line could convey depth, texture, mass, and light.

Walz continued to paint for five years. In 1977, he participated in a group show at Artists Space, which included young artists such as David Salle, Robert Longo, and Cindy Sherman. Offers to mount one-man shows ensued. Preparing for these required moving to a larger loft. Walz and his wife, Barbra, found a derelict 4000square-foot space, and, armed with books on plumbing and electricity, Walz set out to make it habitable. Three interior design commissions followed in rapid succession, he recalls. "I never painted again." ZF

P/A Portfolio The Chicago School: Today's Curriculum

Local traditions resurface in a pair of service structures.

112

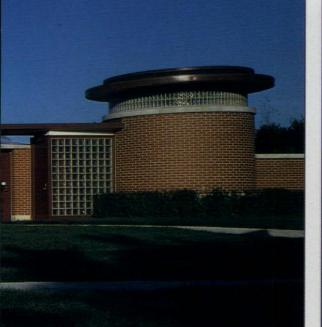
The refueling station is covered by a large steel roof, which spans paired steel columns (above; facing page, bottom). A smaller roof, cantilevered from the brick wall, leads to the storage and toilet space in the cylindrical building (facing page, top). Service trucks park in the one-acre maintenance yard which extends beyond, enclosed by the brick wall.

Gas stations, one of America's most prevalent and undistinguished building types, are generally considered architectural lightweights. One noteworthy exception to the norm appears in Glenview, Illinois, one of Chicago's suburbs. Here, the local municipality built this pumping station for the police and public works departments; it is a service structure with civic presence.

The facility is primarily an outdoor structure, an endpiece for a three-phase public works center designed by Andrew Metter. The first phase, comprising offices and a garage for truck repairs, was built in 1984; a midsection is planned to join these to segments. Metter collaborated on two other public works stations; one for Evanston won a P/A citation in 1980 (see P/A, Jan. 1980, p. 122; Oct. 1983, pp. 92–95). He considers these hybrid buildings – utilitarian workshops that deserve more recognition as civic symbols. They house the public services that make day-today life possible; what could be a more fitting program for a building that represents today's suburb?

The service station's possibilities are rich: It entails a ritual of cars, people, and machines, and calls for free-standing structures and a small enclosed space. At Glenview, the masonry walls link these program elements: At the gas pumps, the lower wall is flanked by three paired columns that meet the ground; on the opposite side, the columns are set into the wall itself, in indentations that imply the compressive load on the masonry. Three exposed girders span the roof and are crossed by beams, which run longitudinally. These account for the depth of the fascia; they also render the four exposed joists extraneous.

This ponderous ceiling, somewhat ominous in its bulky proportions and scale, floats above a smaller, rectilinear counterpart, which leads to the circular toilet/storage building. Here, too, Metter keeps surfaces distinct; the small roof is balanced on three steel armatures and a wall of glass brick, and the adjacent circular roof is raised on a band of glass. At night, the transparent surfaces are a street-corner beacon, a symbol of suburban efficiency.



Project: Municipal Fueling Facility, Glenview Public Works service center. Architects: Lubotsky Metter Worthington & Law, Chicago (Andrew Metter, principal designer; Robert Lubotsky, project principal; Meredith Smith, staff).

Client: Village of Glenview, Illinois. Site: one-acre corner site.

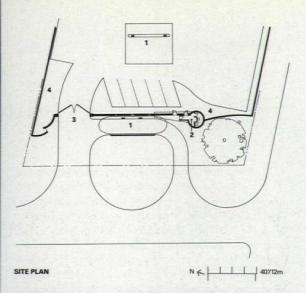
Program: One-acre yard built for trucks and materials storage; fuel pumps, tanks, and 24-hour-accessible toilet set in front; site enclosed by 8-foot brick wall.

Major materials: See Building Materials, p. 149.

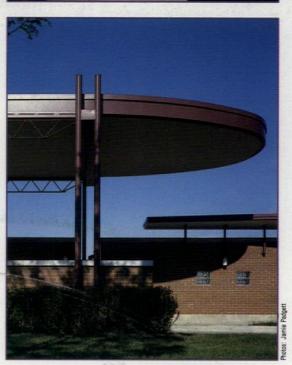
Consultants: Village of Glenview and Urban Management, Inc., landscape; Don Belford Associates, structural; Sherwin Stenn Associates, mechanical and electrical; Charles Greencard Associates, civil.

Contractor: Certified Midwest Construction.

Cost: \$1,001,000; \$66 per sq ft.



1. FUEL PUMPS 3. GATE TO EMPLOYEE PARKING AND STORAGE YARD 2. STORAGE AND TOILET 4. 8-FT. HIGH MASONRY WALL



The Chicago School: Is it Alive or is it History?

In our survey courses on Modern Architecture, we learned that in the late 19th Century Chicago produced some of the world's best skyscrapers. It was a city developed by businessmen who valued pragmatics over cultural pretension; on their understated buildings, façades were governed by the logic of the steel frame. The Prairie Style, one of America's truly original architectural movements, emerged here in the work of Frank Lloyd Wright and his contemporaries. They likewise modified historical conventions and designed buildings that harmonized with the flat landscape and democratic ethos of the Midwest. As our syllabuses advanced to the Mid-20th Century, we focused once again on Chicago to study how Mies van der Rohe arrived from Germany to advance the local skyscraper tradition, and build the most understated, and perhaps most poetic, modern office towers.

While Mies considered his steel and glass buildings models to be refined by the generation of architects he educated, barely a decade elapsed after his death before a countermovement spread among Chicago's architectural circles. In the late 1970s and 1980s, architects and critics concurred that Minimalist buildings, despite their structural clarity, could be urbanistically simplistic and ultimately self-referential.

It may be short-sighted to describe the pluralistic work of recent years as the eclipse of the Chicago School. Instead, it may have helped us recognize its heterogeneity. Reevaluations in architectural design have been accompanied by revisionist histories that reveal the diverse inspirations of Louis SulliProgressive Architecture 2.90

Progressive Architecture 2.90

114

Freestanding brick walls fold across the eastern façade (facing page, top), as seen from the driveway. The building appears to be more accessible than it really is: On the street elevation (facing page, bottom), redwood louvers substitute for glass, and no doors interrupt the one-story masonry wall. Service technicians enter the facility from the rear.

van and his contemporaries and the intuitive leaps in Mies's design

aware of the dense layering implicit

options for its further development.

It is difficult to assess the cur-

in Modernism, we recognize new

rent condition of the Chicago

School if one concentrates on the

city's newest generation of skyscrap-

ers - many are built by out-of-town-

ers – and some employ figurative motifs that seem to obscure the

structural clarity we associate with

However, the two small structures

in this portfolio imply that local

architects may find new relevance

in the work of Frank Llovd Wright

where each architect had to respond

and Mies van der Rohe. Here,

to community preferences, they

showed that modern architecture can be inflected to accommodate

local idiosyncracies. Both buildings

Modernism. At the same time, their

overcome the charges of self-ref-

erentiality that have maligned

architectonic qualities are not

obscured by applied forms. Like

their Modern predecessors, these

architects continue to explore the

frame and the wall.

relationship between the structural

Chicago's skyscraper tradition.

methods. Now that we are more

In the town of Lincolnshire, Illinois Bell commissioned Holabird & Root to design a telephone switching station – a secure, window-free enclosure for electric circuitry. Soon, a group of concerned neighbors told the architects they feared the building's impact and asked that it appear "residential." It might have seemed paradoxical for the architects to respond with a building designed in the manner of Mies van der Rohe; his buildings are not famous for blending into their context.

The quality of the completed building justifies their decision; it also shows how durable and flexible Miesian design can be. Elegant and simple, this building is replete with abstract correspondences to its context; through subtle manipulations in its walls and structure, the building implies more than its utility.

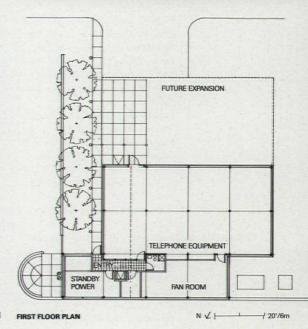
The one-story brick wall has references that are both structural and spatial. From the road, it seems to be a base for the five columns that rise to the fascia. On the east side, it extends into a freestanding curve; together with the adjacent straight wall, it reduces the building's scale and delineates an intermediary outdoor zone.

Holabird & Root compounded these spatial gestures with references to the barn and brick silo that once stood on the site: The hemicycle recalls the silo's circular plan, and the paired steel smokestacks seem to be a condensation of its volume. Because the barn was built of wood, steel, and brick, the architects used them on the front of the building – not to fabricate any historical imagery, but to highlight the structure with materials common to the region.

Redwood louver panels are set behind the plane of the brick and a lattice of tension braces; they screen air ducts and imply that the wall is not load-bearing. The façade is classically composed: The fascia resembles a cornice, and the exposed ends of the columns seem to be vestigial capitals. The southeastern corner sustains these classical allusions with admirable finesse (see the Selected Detail on the following page): a plate is welded into the webbing of the beam, so that it terminates with a reference to the Orders and a form that indicates the plane of the transverse wall.

Holabird & Root's design method was more inclusive than that of Mies. Unrelenting in his search for universal solutions, he distilled the logic of steel construction so thoroughly that the building itself became a virtual abstraction. Here, the architects show that Miesian rigor does not inevitably lead to a dematerialized architecture; they employ tactile materials that give the building a sensuous quality and offer correspondences to the history of the site. Instead of seeking an architecture of least common denominators, they compound the architectonic references of a building. Here, redwood, steel, and vestigial silos and capitals have not weakened the architectural logic of Mies; they simply made it richer. **Philip Arcidi**









Project: Illinois Bell Telephone Remote Switching Unit.

Architects: Holabird & Root, Architects Engineers Planners, Chicago (Gerald Horn, partner-in-charge; James Baird, project architect; William Rumsey, project manager; Carlos Martinez and Richard Hayes, project team). Engineers: David Ekstrom, structural; Paul Prchal, mechanical; Theodore Cichon, electrical; Reginald Dorosz, plumbing; Mark Chertow, civil. Client: Illinois Bell Telephone. Site: a 2.5-acre open suburban parcel. Program: A 4500-sq-ft structure for telephone switching, mechanical equipment, and emergency power. Major materials: See Building Materials, p. 149. Consultants: Joe Karr & Associates, landscape. Contractor: Joseph J. Henderson & Son, Inc. Cost: \$1,017,000; \$200 per sq ft. Photos: David Clifton.

Selected Detail

Selected Detail

Progressive Architecture 2.90

116

Wall Sections

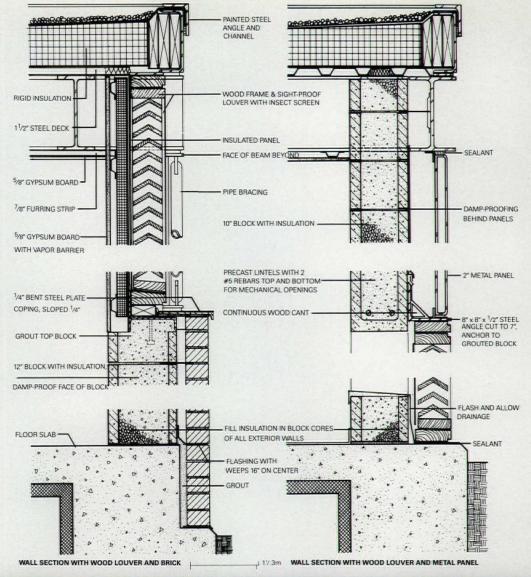
Illinois Bell Telephone

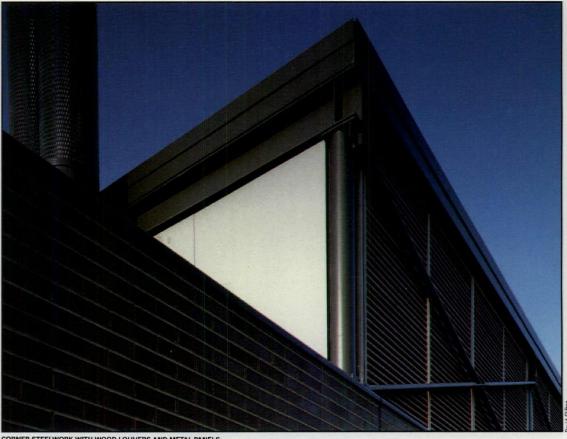
Remote Switching Unit

Lincolnshire, Illinois

. The real strength of the Miesian tradition lies in its handling of materials and details, a strength apparent in these wall sections by Holabird & Root. The architects developed a cladding system of brick veneer, Redwood louvers, and metal panels, each of which serves a different function. The wood louvers, for example, disguise mechanical openings. The brick veneer serves, among other things, to conceal differences between the height of the concrete floor slab and the grade level. And the metal panels function, in part, as a noncombustible wall adjacent to the exterior vent stacks.

But steel, in fine Miesian fashion, remains the real infrastructure in this building. Steel angles form the coping, steel channels the fascia, steel H-beams the entablature, steel tubes the columns, and steel pipes the cross bracing. Steel also plays a more mundane role in these walls. Steel plates, for example, cover the brick veneer, steel channels cap the block walls, and various steel angles back up the metal panels. The range of materials here is broader than what Mies would have used, but his influence is evident in the careful articulation of elements and the creative use of standard steel shapes.





CORNER STEELWORK WITH WOOD LOUVERS AND METAL PANELS

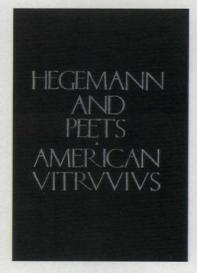
Books

Two books on the art of urban design, though 66 years apart, emulate a classical ideal. Alex Krieger asks whether we can return to traditional urban models.

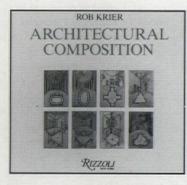
Civic Art: A Model Restored?

Those who have abandoned the quest for beauty have thrown away the most important tool for arousing interest in city planning and . . . they are themselves helpless without the aid and power of art. Christopher Tunnard, The City of Man, 1953.

It is easy to imagine Tunnard's warning on the frontispiece of Rob Krier's Architectural Composition or of Hegemann and Peets' American Vitruvius: An Architects' Handbook of Civic Art. Neither volume abandons the quest for beauty. On the contrary, these two books, kindred in spirit, seek out the aid and power of art to guide architecture.



The American Vitruvius: An Architects' Handbook of Civic Art by Werner Hegemann and Elbert Peets, Princeton Architectural Press, New York, 1989, 298 pp., illus., \$60.00.



Architectural Composition by Rob Krier, Rizzoli, New York, 1988, 320 pp., illus., \$65.00

In the manner of ancient treatises, the two books set out to

compile, and thus remind us of. time-honored principles of architecture and urban design. Both are about the form of things; the physical expression of institutions and lifestyles, the public character of buildings and places, the concept of the city as a complex artifact. Both address the future conservatively, by positing traditional, and similar, solutions to new problems. Both are at times polemical, ideological, even moral in tone, yet given the ambitious sweep of each, they are also wonderfully eclectic. Each is finally more anthology than manifesto, full of specific exemplars through which general points are made.

These similarities may be surprising, considering that twothirds of the 20th Century separates the writing of the two books. Actually, the similarities reveal much about the century. American Vitruvius' republication in the year of the appearance of Architectural Composition suggests that (with respect to the design of cities) the beginning and ending decades of our century may prove to have more in common than either end will have had with the middle.

The appearance of American Vitruvius in 1922 must have immediately struck some as enigmatic. After all, that same year Le Corbusier was exhibiting his "Contemporary City for Three Million" in Paris, and one of his inspirations, Tony Garnier's "Cité Industrielle," had seen wide circulation during the prior decade. The Columbian Exposition had taken place almost 3 decades earlier, and 13 years had passed since the adoption by Chicago's city council of Daniel Burnham's monumental urban plan. In the 1920s, operational considerations, not visual order, preoccupied American city planners. The new slogan (and goal) was a "City Scientific" reflecting, at once, disappointments encountered in the implementation of City Beautiful plans and great expectations for a more systemic,

and yes, scientific approach to city planning.

As a heroic reiteration of civic design, American Vitruvius appeared just as the ascendance of Modernism threatened to render its examples irrelevant. Even though the authors outlined a rational case for incorporating spatial and aesthetic tenets in a more "scientific" approach, these efforts were not fully appreciated. Not surprisingly, American Vitruvius did not enjoy (in today's marketing jargon) a long shelf life. It mostly sat on musty and ignored library shelves, encountered occasionally by traditionalists or adventuresome students.

Why then reprint a volume that seemed dated when first published 68 years ago? Perhaps because its insights are more useful now, as we look back on a half-century of the practical art of city planning. with results that have confirmed Tunnard's warning. American Vitruvius remains the best outline of an era in which planning as civic art flourished, an era which has yet to be properly accounted for historically. It is also, as Allan Plattus notes in his introduction to the reprint, a compelling synthesis of the formal characteristics of an American urbanism. This book was the first serious attempt to recognize an American civic design tradition. It identified and anticipated the principal American contributions to the art of city design. By illustrating these side-by-side with paradigmatic European examples (it remains a great sourcebook for these), the book argues for a continuity of Western town planning traditions. This was a "how-to" book on how America should adapt the traditions of city building to meet its own circumstances.

But it is our continuing reassessment of Modernism that most compels the new edition. Among those swayed by the city as "logic" and as "inevitable consequence," both planners and architects, the principal design casualty was the (continued on page 152)

Architects' People edited by Russell Ellis and Dana Cuff. Oxford, New York, 1989, 291 pp., \$29.95

Who comes to mind when architects design? Themselves. among others, according to the contributors. Thirteen essays analyze the people, both real and conjectural, who participate in the design process.

Sir Christopher Wren: the Design of St. Paul's Cathedral, introduction and catalog by Kerry Downes, AIA Press, 1988. 191 pp., illus., \$39.95. The architect's designs for this cathedral extended over 45 years; this collection of 221 drawings illustrates the five different designs Wren produced, with complementary sketches for interior details.

Henri van de Velde by Klaus-Jürgen Sembach, Rizzoli, New York, 1989. 227 pp., illus., \$50.00. This is the first monograph in **English on the Belgian architect** whose designs exemplified the total-work-of-art of the Art Nouveau. The author critically assesses van de Velde's 50-year career, both as a teacher and a designer.

Reweaving the Urban Fabric: Approaches to Infill Housing, edited by Deborah Norden. New York State Council on the Arts and Princeton Architectural Press, 1989. 160 pp., paper, illus., \$24.95

A 1985 competition and a subsequent exhibition and symposium generated this study. Proposals for Harlem are complemented by a critical survey of comparable infill housing in **Europe and America.**

See Tech Notes (p. 43) for listings of other publications of interest to practicing architects.

117

Book

Perspectives

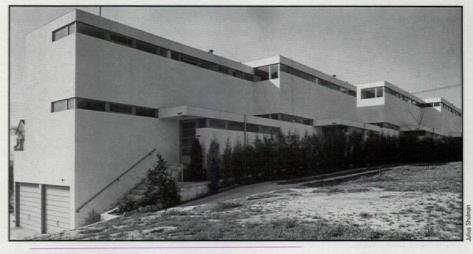
Robert Venturi and Denise Scott Brown appraise the work of Esther McCoy and of Southern California's second generation of Modernist architects. This essay was written prior to Esther McCoy's death.

Re-evaluation: Esther McCoy and The Second Generation

In *Five California Architects* in 1961 and in *The Second Generation* in 1984, Esther McCoy established what might be considered a new genre, relating social history and architectural criticism and linking them to a novelist's observations about character; she produced architectural criticism with a human face.

These observations derive from a re-reading of *The Second Generation*, which describes the lives and work of four Southern California architects – J.R. Davidson, Harwell Hamilton Harris, Gregory Ain, and Raphael Soriano – who all practiced in the second and third quarters of this century. This work contains McCoy's most prescient architectural writing – yet it has still to be adequately appraised. This may be because its subject is both too near and too far.

Where taste is involved, it is hard to like the recent past. In art as in life we see the struggles and accomplishments of the previous generation as ordinary, banal, or obnoxious; they exemplify the trite axioms of today or the stale outrages of yesterday. In order to achieve independence we deny (or resent)



The Dunsmuir Flats, 1937, (above) and the Avenel Cooperative, 1947, (below) by Gregory Ain.



erspectives

118

dependence; the taste of our fathers may promote nostalgia, but it seldom commands respect. We prefer the art of our grandfathers. One could call disdain for the recent past the "I know th-at" phenomenon.

Resistance to the last generation in art derives as well from cycles of taste. For example, in the 1930s, 1940s, and 1950s, architects preferred to work in a scale that, to our eyes, looks piddling – in the way that last year's hemline looks too short (or too long) or that John Soane's Neoclassicism might have seemed thin to the eyes of an architect in the 1840s at the culmination of the Empire Style. Le Corbusier put an end to the small scale of the mid-1950s when he reinstated a heroic stance in the architecture of *beton brut;* but we are in for another swing of the pendulum today and *The Second Generation* may prove prophetic. "Human scale," as it was called then, may soon be back again.

"Human" was a *leitmotif* of the second generation of Modern architects, not only in California. Immediately after World War II, architects adapted the Modern style, which had been based on universal abstractions and industrial technology, to the softer ambiance of post-war life. Modernism was domestiThe Wyle house, 1949, (right) by Harwell Hamilton Harris.

cated, scaled down, accommodated to outdoor living, integrated with particular qualities of landscape, and mellowed by the use of natural materials. This direction, which flourished in the U.S. primarily in California, had its European counterpart in Scandinavia.

The four architects described in *The Second Generation* are different from each other, yet have much in common. If their most significant shared accomplishment was the humanizing of the Modern style, their response to the world of Southern California represented another common thread within their work. Though their architecture was neither explicitly and ideologically regional like that of the Bay Region architects, nor contextual as the term describes directions in urbanistic architecture today, it was nonetheless related to Southern California in particular and significant ways.

In that mild climate, the Modern theme of enhancing the flow of space between inside and outside was explored in several ways – intimate urban courts were designed to expand living room space and decks to exploit views of land and sea; and architectural form was integrated with tropical flora. This much is known about this architecture world-wide. However, in the Southern California of *The Second Generation*, the landscape is, in fact, a cityscape. It is the cityscape of the 1950s Western city of the United States – not of the Eastern city nor, indeed, of the Western city of today, but of the close-to-suburban, mid-century Los Angeles whose houses are frequently smaller and more densely packed than those of Eastern suburbia, and whose bungalow and courtyard imagery differs



"The journalistic cattiness, one-upmanship, and pretentious obscurity that pervade architectural writing today are not present in her book."

from the Colonial imagery of the East.

Although the work of these architects was mainly residential, not all of it was single-family houses. Much of Gregory Ain's architecture consisted of group housing. Ain's houses, in their size and scale, are essays in suburban urbanity. For this reason they are relevant to the higher-density suburbia that is developing in metropolitan areas today; developers of "townhouses" in today's suburbs could learn from Gregory Ain.

Another theme of this book is the adaptation of architecture to modern living, especially that of Southern California. In her analysis of these houses McCoy devotes considerable attention to plans. They are studied for their suitability to a client's way of life. The evaluation is sometimes on a philosophical plane, showing clients' preferences as part of their culture and of the higher things in their lives, but often at the down-to-earth level. McCoy describes plans suited to daily life without servants, where a person in the kitchen can view children in the yard and activities in the living spaces, and where kitchens are explicitly planned for the work and storage needs of their users. She praises Harris's cabinets designed to accommodate the depth of two standard cans or one large one.

Her delicate analyses expose the philosophy behind aesthetic decisions. She quotes, for example, Harris's rules on the use of materials and the design of windows, because these encapsulate significant aspects of 1950s aesthetics: "Don't butcher a material; don't fragment it. Make whole forms of it that accommodate the openings... When I wanted an opening, I made a whole wall of glass."

Through these architects' words and their works, McCoy traces phases within the evolution of building technology in Southern California. Cesar Pelli, in his introduction, defines the Southern California view of technology as "creative pragmatism" that combines "optimism, a relaxed understanding of technology, and a readiness to use it in inventive ways for artistic purposes." McCoy takes up the story of technological development after Irving Gill, evolving from his concrete walls toward the light frame structures of traditional American wood stud systems. She evaluates the architecture of columns, lintels, and panels that resulted. "Ain predated the merchant builders in reducing the number of elements in a structure. In the framing he carried four-by-four posts to the height of the building to form an uninterrupted girdle; he limited the sizes of wall openings to the four-foot intervals between the studs. This reduction brings a rhythm and an order that rules the building.'

McCoy documents the development of Soriano's steel and plastic construction for housing over a period of years, giving careful attention to its rationale, structural and economic. She quotes Peter Blake on Soriano's buildings, which "may seem on paper as hard as nails; but in reality they are as romantic as the ancient buildings of Soriano's native island of Rhodes . . . he is a poet as much as a technocrat."



The courtyard of the Colby Apartments, 1952, (above) by Raphael Soriano.

The Dann house, 1952, (below) by J.R. Davidson. Analyzing architectural detailing for its quality, precedence, influence, and relationships within the whole, she quotes a poignant observation of Davidson, "I never had a plan I wanted to change – only details."

McCoy demonstrates that out of these California visions of life and structure emerged an architecture of modesty and delicacy and, on occasion, of a kind of bold sparseness. These buildings were never strident; they didn't prove points, fit a theory, or promote an ideology. They went from the particular to the general; theory may have emerged but it was not imposed. Although they were well known in their time, these buildings were never icons and their architects did not become superstars. In spite of this – perhaps because of it – McCoy's analyses render much that is important, and her reasoned exposition produces offerings that are deeply meaningful to us.

McCoy's genius lies in pointing out the significant in the familiar. Her analysis of the programs, forms, techniques, economics, culture, and ethos of the architecture is brilliant and easy - in the overall and the details. Her description of the personalities and backgrounds of the individuals makes gripping reading. Herein lies the essence of the genre established by McCoy. The journalistic cattiness, one-upmanship and pretentious obscurity that pervade architectural writing today are not present in her book. Gratuitous polemics, sensational substitutes for serious analysis that promote the writer's cleverness over the subject's talents, play no role in McCoy's critical approach. Her architect-subjects have found a recorder and analyst who, despite her presence as a participant in their history, does not intrude on their story. By trusting the intentions of her subjects and becoming the servant of her art, she shows herself to be a profound critic and an exquisite artist. But perhaps the most significant contribution of her work here is its timeliness and thereby, in the end, its timelessness.

Above all, thank you, Esther, for opening our eyes to a part of our recent heritage we take for granted or tend to forget, but which may play a profoundly meaningful role in architectural thought, post-Post-Modernism. **Robert Venturi, Denise Scott Brown**

The authors, themselves critics of note, are principals in the Philadelphia firm of Venturi, Scott Brown & Associates.



Jerzy Soltan, formerly an associate of Le Corbusier, considers Modern architecture a quarry of history and poetry. Perhaps we have defined Modernism too narrowly?

Interview: Jerzy Soltan

It is often said that our generation of architects has retrieved history. Jerzy Soltan disagrees; he believes

Perspectives

that many Modern architects never let it go. During his four years of work with Le Corbusier and his own practice in Poland, he considered Modernism a consolidation of the past. Recently Soltan, professor emeritus at Harvard's Graduate School of Design, shared his views with P/A.

P/A: In the 1920s you were studying at the Warsaw Polytechnic. What was the architectural climate in Eastern Europe then?

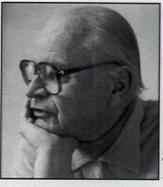
Soltan: Modernism emerged in Eastern and Western Europe along different lines. Poland, within the Eastern sphere, was influenced by both Germany and Russia. Hannes Meyer, Mies van der Rohe, even Walter Gropius and the Bauhaus were far closer to the Russian way of thinking, with Malevich and Lissitzky, with all the Constructivists and Suprematists, than they were to the Western side, with Cezanne, the Cubists, Le Corbusier, Terragni, and Lubetkin.

Le Corbusier and the Western Europeans always sought to keep their roots in tradition. They sought contact with the early phases of previous cultures: archaic Greece, the early Roman, the early Romanesque. These were intuitive counterparts for their own sense of re-beginning. Le Corbusier's chapel at Ronchamp draws inspiration from the Christian catacombs of Rome, the early Romanesque. It has none of the aridity one finds in the Modernism of the Eastern Europeans who started design with a tabula rasa. Curiously, Le Corbusier considered the leading Modernist, in his sympathy to tradition, to be a Russian, Ivan Leonidov - the only architect whom Le Corbusier mentioned with complete awe. Leonidov's thinking both paralleled and preceded that of Le Corbusier. To him, Leonidov was a peer. P/A: How did your path turn from the Easternoriented Modern Movement to Le Corbusier's studio? Soltan: When I was studying architecture I thumbed through design journals and detected some appealing buildings that broke away from the standard, stark "matchbox" Modernism that surrounded me. These were the work of Pierre Jeanneret and of Le Corbusier, whose poetic writings enamored me. P/A: So Le Corbusier was someone whose work you

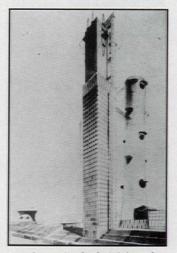
had to seek out on your own? Soltan: Yes. During World War II, when I was impris-

oned for six years, I corresponded with Le Corbusier from a German POW camp. After Germany's surrender, I ventured to France; I visited Le Corbusier, who was working then on the Modulor, his proportional system (based at that time on a 5'10" person); my height is 6'2", apparently a disappointment to him. His first words were, "Well, this must be Soltan. But you are too tall!"

P/A: We've talked about the ways tradition has inspired



Jerzy Soltan



Leonidov, project for the Ministry of Heavy Industry, Moscow, 1934.

architects. How might historical precedent surface in contemporary architecture?

Soltan: Houghton Library (1941), a Colonial Revival building, is, to me, one of the most appealing on the Harvard campus. To me, the son-of-a-bitch Corbusian, it is infinitely more appealing than, for instance, the Modernistic Harkness Commons (1950). I can't accept matchbox Modernism. If Modern architecture has to be a string of unmodulated cubes, I'd prefer Houghton Library. But, on the other hand, I still believe that a matchbox architecture based on a real concern with humanity's lack of shelter is more defendable than the work of someone who dabbles in. for example, non-axial axialism, non-symmetrical symmetry - the work of some of our colleagues who are trying to make something out of nothing. I deplore this hermetic work more because its premises are shaky; the distance to fall down and hurt your naked ass is higher. And I find it less dangerous to be found short of talent in the matchbox mode (given a commitment to the social good) than when you are indulging in "clipper Classicism," to borrow a phrase from William Curtis.

P/A: What would you say about the avant-garde in the pioneering years of the Modern Movement and the avant-garde today?

Soltan: All of the Modernists were definitely concerned with mankind's need for shelter. There was a saying: "Think not about roses when the forests are burning." It's wrong. Man has to think about roses always (a belief that John Hejduk and I hold in common). This is a condition of the human species that

Whatever we may say about the blights of our modern society, we are at our cultural beginning, its first century.



Walter Gropius and TAC, Harkness Commons, Harvard University, 1950.



Perry, Shaw, Hepburn & Dean, Houghton Library, Harvard, 1941.

the Modern Movement slighted. They forgot to "chercher la rose."

Whatever we may say about the blights of our society, we are at our cultural beginning, its first century. Come on - with a revolution of the magnitude of modern culture, do you expect society to have already produced a coherent expression in the most difficult and the most revealing type of art, namely architecture? You know, ours is by far the last art form to manifest a culture (Giedion speaks wisely about this) because it is always connected with other concerns. In previous cultures, architectural styles had the privilege of a long time for their formation. So it is naïve to expect Modern architecture to be ready now. But it is sad and tragic for society to be faced on one side by the oversimplifications of Modernism, and on the other by the naïveté of Post-Modernism. This predicament is the result of the false assumption that architects can start from a tabula rasa and of today's haphazard eclecticism.

These excerpts are from an interview conducted by Philip Arcidi in Cambridge, Massachusetts, on December 22, 1989. On its riverfront, Chicago tries design controls, but goes only halfway.

Urban Critique: Cityfront Center

Chicago is a transparent city. The logic of its placement on Lake Michigan at the Chicago River reveals itself immediately. On this spot – where the shipping docks, rail lines, and warehouses once pumped Chicago's industrial lifeblood – a new city of office buildings, hotels, and housing is rising on the north bank of the river from Michigan Avenue east to the lake.

The outline of Cityfront Center, this 52-acre private development, was drawn by Alexander Cooper, who did the master plan in 1984 (P/A, July 1986, p. 104–105). Over the next 15 years his scheme will gradually be filled in with an estimated 13.5 million square feet of office space and 5900 residential



Guidelines governing public spaces have regulatory teeth; those describing design have only gums.

units. The scale of the project and the site's historic and visual prominence makes the work that goes up in Cityfront more important than construction elsewhere in Chicago.

Conscious of this, the city used its zoning clout to persuade the property's two owners – Chicago Dock and Canal Trust and Equitable Real Estate – to employ design guidelines. Cityfront's guidelines invent a relationship with nearby eclectic towers such as the Chicago Tribune Tower and the Wrigley Building. Cityfront is also supposed to be an answer to the alienating excesses of Modernist planning and building: Curtain walls are forbidden, as is reflective glass; all buildings must exhibit a tripartite division. Together the master plan and design guidelines are intended to create architectural harmony and a human-scale environment inviting to pedestrians.

In Chicago, where developers are generally able to do whatever they want, Cityfront's design guidelines are a first. As such they set an admirable example. Two sets of guidelines were written. One governing public spaces and infrastructure has regulatory teeth and is supervised by the City of Chicago; the second describes design standards and is overseen by the owners. To judge from work now under construction in Cityfront, the second has only gums.





Cooper's master plan (top left) extends the city's grid. Projects complete or underway include SOM's NBC Tower (top), North Pier and adjacent apartment tower (upper right), and Gelick Foran apartment tower (above).

Now with a few projects completed and others underway, the intentions behind Cityfront are in jeopardy. Elsewhere, guidelines have worked: In New York, they helped create Battery Park City (P/A, Jan. 1984, p. 136; March 1988, p. 86), a project praised for its design unity and urbanity, exactly the qualities Cityfront's planners say they hope to achieve. The trouble in Chicago is that these guidelines recommend when they should require. The guidelines for belowgrade parking are being translated into parking at buildings' bases, and recommendations for setbacks are becoming patterned skins. Another difficulty may



be the confused role played by the owner. At Battery Park City, the guidelines were administered by a public agency, not the owners.

Things looked promising at the start. As he did at Battery Park City, Cooper pulled the city's grid out over the site in his master plan, extending and incorporating existing streets into the new development and drawing the city up to the waterfront. The plan broke the resulting parcels into zones dedicated to different uses. It left a view corridor from the lake to the historic Chicago Tribune Tower. It also made good on promises for public spaces, leaving 14 acres for 7 parks, squares, and a riverfront esplanade. The plan coped with daunting problems, including two elevated arterial roads that slice through the east and west ends of the site, and a 30-foot change in grade where concealed service and utility roads end behind Columbus Drive.

On the part owned by Equitable, things continue to proceed well. Equitable's master architect, Skidmore, Owings & Merrill, with Adrian Smith as design architect, has recently completed the NBC tower, the first new building in Cityfront Center. Smith designed it to do everything the guidelines asked. A 38-story, limestone-clad building, it takes to heart lessons from skyscrapers of the 1930s, particularly those from the RCA building at Rockefeller Center. The building's height is exaggerated by setbacks and buttress-like elements on the north and south elevations. The (continued on page 122)

The following excerpts from a 1969

interview with Charles Eames (1907–1978) are as understated as his designs, as clear as they are brief.

Cityfront (continued from page 121)

urban elements that knit the tower into the city – designed by Cooper, who has been retained by Equitable – are finished or nearly so. These include a landscaped plaza and car turnaround in front of NBC, and the extension of Illinois Street that connects the plaza to Michigan Avenue.

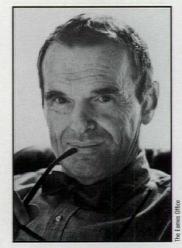
The completed project on Dock and Canal property has also turned out handsomely. Booth/Hansen renovated North Pier, the only remaining structure from the days when this was a shipping center. A former warehouse, it faces a slip and backs up to rail lines: Goods went in one side and came out the other. The seven-story building was converted to office and retail uses by a simple design that exposes the heavy timber construction.

Elsewhere, however, the quality of design deteriorates. A new 61-story apartment tower is being added to the east end of North Pier. The developer hired Florian-Wierzbowski to create the skin after the tower had already been designed by Dubin, Dubin & Moutoussamy. Florian-Wierzbowski came up with a precast panel design of varying thicknesses to give the tower a degree of articulation. The panels are colored to connect the tower with the adjacent North Pier at the base and to create interest at the top. The solution brought the project into conformity with the guidelines in a half-hearted way. The skin cannot conceal the awkwardness of the building, whose dull massing is explained by a desire for uniform floors.

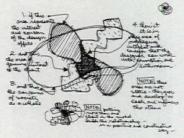
Two residential projects under construction conform to the letter of the guidelines, but violate the spirit. A 39-story apartment tower designed by the Chicago firm Gelick Foran Associates does not seem promising. Eight levels of parking will form the tower's base, which will not help create the pedestrian environment the guidelines say they are aiming for. The shaft will be rotated to provide better views, the architects say, but it will also throw the grid of the master plan off and create a gratuitously attentiongrabbing profile on the skyline. Two 12-story apartment buildings on adjacent sites designed by the same architects will be no better. They read as separate structures, and all the cues suggest entries at the buildings' matching drum-like corners. But the cues are misleading; the two buildings are actually joined and have a common - if baffling - entry beneath an elevated plaza that sits between. The plaza is a device opening the required view corridor and masking parking, which will form the street-deadening base of these structures as well.

A hotel going up on the riverbank, designed by Solomon Cordwell Buenz & Associates, has taken advantage of the site and guidelines to create a convention hotel with good interiors for a building of its type. Still, the design isn't strong enough for its site.

Cityfront's guidelines go only halfway and, so far, roughly half the work is turning out well. For this site, that ratio is simply not good enough. **Cheryl Kent**



Charles Eames.



Courtesy Lucia Earnes Demetrios, representing the Earnes Office

Notes and diagram of the design process, by Charles Eames.



Hotel on the riverbank by Solomon Cordwell Buenz & Associates.

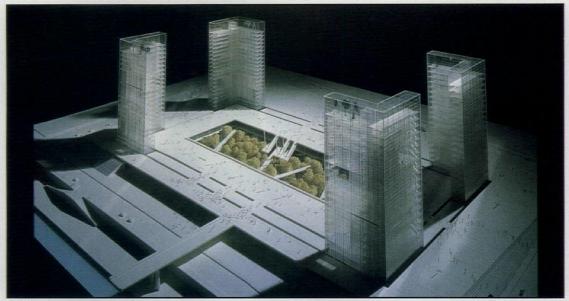
Excerpt: What Is Design?

- Q: What is your definition of "design"?
- **A**: A plan for arranging elements in such a way as to best accomplish a particular purpose.
- Q: Is design an expression of art (an art form)?
- A: The design is an expression of the purpose. It may (if it is good enough) later be judged as art.
- **Q**: What are the boundaries of design?
- A: What are the boundaries of problems?
- **Q**: Is [design] a method of general expression?
- A: No it is a method of action.
- Q: Is design a creation of an individual?
- A: No because to be realistic one must always admit the influence of those who have gone before.
- Q: Is there a design ethic?
- A: There are always design constraints, and these usually include an ethic.
- **Q**: Does design imply the idea of products that are necessarily useful?
- A: Yes even though the use might be very subtle.
- **Q**: Is it able to cooperate in the creation of works reserved solely for pleasure?
- A: Who would say that pleasure is not useful?
- **Q**: Ought form to derive from the analysis of function?
- A: The great risk here is that the analysis may not be complete.
- **Q**: Does the creation of design admit constraint?
- A: Design depends largely on constraints.
- Q: What constraints?
- A: The sum of all constraints. Here is one of the few effective keys to the design problem the ability of the designer to recognize as many of the constraints as possible his willingness and enthusiasm for working within these constraints the constraints of price, of size, of strength, of balance, of surface, of time, etc.; each problem has its own peculiar list.
- Q: Does design obey laws?
- A: Aren't constraints enough?
- Q: Are there tendencies and schools in design?
- A: Yes, but this is more a human frailty than an ideal.
- **Q**: Ought [design] to tend towards the ephemeral or towards permanence?
- A: Those needs and designs that have a more universal quality will tend toward permanence.
- **Q**: To whom does design address itself: to the greatest number (the masses)? to the specialists or the enlightened amateur? to a privileged social class?
- A: To the need.
- **Q**: What do you feel is the primary condition for the practice of design and its propagation?
- A: Recognition of need.
- **Q**: What is the future of design?
- A: (No answer)

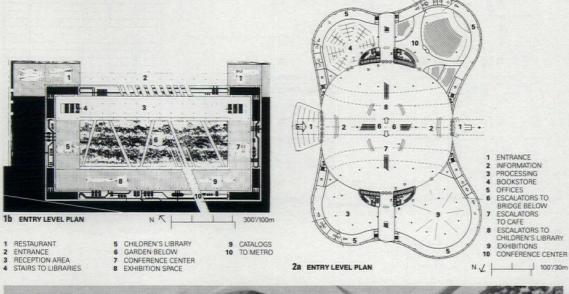
P/A thanks Lucia Eames Demetrios for these excerpts from the film $Design Q \ \ A (1972)$. The text appears in *Eames Design* (Abrams, 1989).

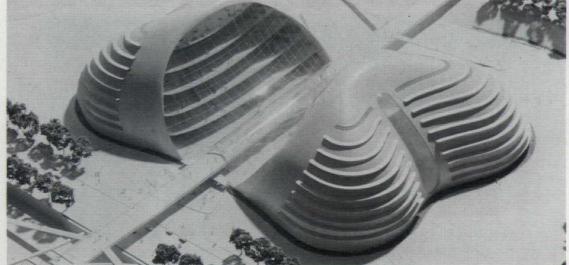
Projects

France's "Très Grande Bibliothèque" competition – and its six premiated entries – finds architects dealing with the functional and symbolic needs of an Information Age library.



1a Winning scheme by Perrault.





2b Future Systems scheme

Just when the Bicentennial spotlight had begun to dim on Paris, President François Mitterrand unveiled his latest grand projet, the Library of France. Like the other grands projets, this tres grande bibliotheque proves France's commitment to resurrecting her image as a cultural leader. Certainly, the City of Lights is enjoying a new brilliance. Unlike other grands projets, however, such as I.M. Pei's pyramid at the Louvre and Spreckelsen's arch at La Défense, whose exceptional sites forced a response to context, the library problem was very much about making a building. President Mitterrand called for "an entirely new (building) type," and the competition for the Library of France provided the opportunity to explore both an architecture of addition - to Paris, to the history of library design - and a point of departure that envelops new technologies and techniques.

Twenty semi-finalists for the library were selected from 244 entrants. A jury led by I.M. Pei further narrowed the field to four (Dominique Perrault, Philippe Chaix and Jean-Paul Morel, Future Systems, and James Stirling; Rem Koolhaas and Jean Nouvel received special citations), from which President Mitterrand selected French architect Dominique Perrault as the winner (P/A, Oct. 1989, p. 25). The final 20 projects were the subject of the exhibition, "The Library of France - First Volumes," held at the French Institute of Architecture from October 3-28, 1989. There, the projects were presented in white models of the same scale along with drawings and biographies of the architects. The overwhelming theme of the projects in the exhibition was not, as Perrault termed his project, "A Place for Paris, A Library for France," but a universality of architectural ideas that defied the specific site. A new breed of literate Modernism rendered the buildings as complex and layered as the books they proposed to hold. Nationalism, an ideal much extolled in the exhibition, is only supported in the fortuitous choice of a French architect.

The 20 proposals demonstrate the divergence that exists today among Modern architects. "Modern" seems a small umbrella to cover proposals as precise as

Richard Meier's and as exuberant as Bernard Tschumi's. Historicism barely appeared, except in formal relationships in the proposal of Alvaro Siza Vieira.

The competing architects had the advantage of an underdeveloped site towards the edge of the city. With the Seine itself as the nearest symbol of Paris, the urban solutions each seem to follow a unique set of rules determined by the design and thus the architect, rather than patterns established by the existing city. One clear divergence at the conceptual level is between designs based on a big, graphic idea, such as Perrault's four open books as the image for his towers (1), and designs based on a varying of scale and form to avoid what Stirling termed "a Kafkaesque experience." Stirling's proposal (5) resembles an urban village with individual buildings arranged around a public garden. The garden terraces, which step down to the banks of the Seine, offer one of the few integrated garden solutions. Other proposals completely cover the site with their enormous building mass - or, in Perrault's case, create a large, flat, elevated plaza. The proposal of Philippe Chaix

Progressive Architecture 2.90

124

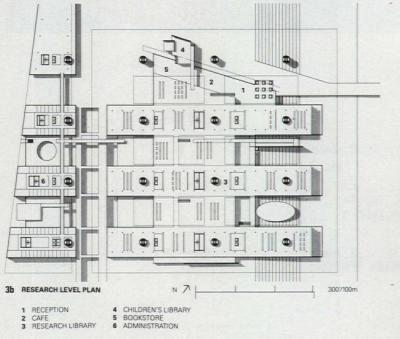
book. In their design, the roof plane/book is inscribed with words of great authors, like torn pages cast in stone. The public reaches the roof by any of nine elevators that pass from the open base through the transparent levels of the building. Transparency and a lightness of structure are themes shared by many of the proposals. The modern library has been interpreted as less a protective enclosure and more a highly computerized transmitter of information. Therefore, the analogies to the book become almost nostalgic.

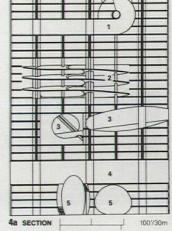
and Jean-Paul Morel (3) is also based on the image of the open

Future Systems cites the precedent of Henri Labrouste in their use of the most advanced technology, elaborate materials, and forceful forms of their time. The form they have chosen, a curved shell pierced by a taut bridge (2), contrasts in its compactness to the form of the tree that Jean Nouvel uses to radiate into the city (6). Nouvel's use of the tree of knowledge as a motivating force for the redevelopment of the site and the surround-



3a Chaix & Morel scheme.

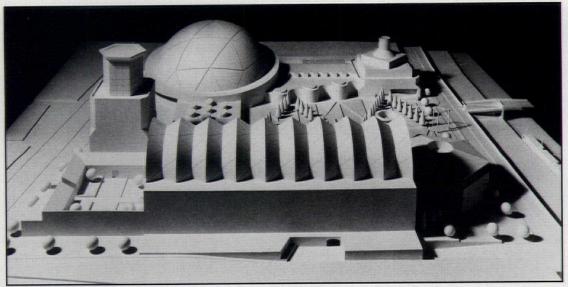




1 RESEARCH LIBRARY



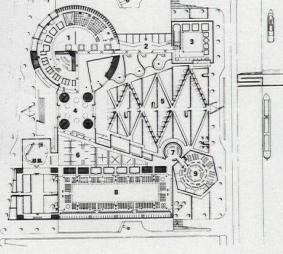
4b Koolhaas scheme.



5a Stirling Wilford scheme.



RECENT ACQUISITIONS 4 ENTRANCE 7 CATALOG ROOM CAFE EUROPE 5 PARK 8 REFERENCE LIBRARY SOUND AND MOVING 6 EXHIBITION SPACE 9 RESEARCH LIBRARY IMAGE LIBRARY 55 ENTRY LEVEL PLAN



N 7 100//30m

6b SITE DIAGRAM

123

ing neighborhoods is the sketchiest of the proposals. Its lack of articulation is based on Nouvel's desire for the design to be a collaborative effort among many architects and artists, ending in a "museum of different library types." The main branches, or streets, become the connecting structure and life of the project.

Certainly, the most engrossing project is by Rem Koolhaas (4), who created a "solid block of information," placing the future of architecture alongside the future of technology. The surface of the block varies in transparency with a pattern of floating clouds etched into the glass. Inside of the block the public spaces are suspended like embryos within the mass of library stacks. Nine transparent elevator shafts, inscribed with words, songs, etc., provide access to the independent, floating shapes. One moves through the building as if through ideas and information, almost like tracing the plan of a computer chip, yet far more serene.

This is an age when the television has quickened the pace of information reception; word and image are joined. The library, as demonstrated in these designs, can become as much of an information transmitter as any video screen, turning the building itself into a readable surface and collector of images. Just as knowledge has become more accessible, so have these proposals created libraries as passageways and gathering points. The Library of France competition provided a forum in which to address an important architectural and cultural intersection, and supplying new models for library design. Claire Downey

The author is a freelance writer living in Atlanta.

125

Projects

AND YOU THOUGHT ANDERSEN WAS JUST A HOUSEHOLD NAME.

Presenting Flexiframe[®] windows. The custom-made commercial window from the company you may have thought didn't even make one: Andersen. Flexiframe windows offer a

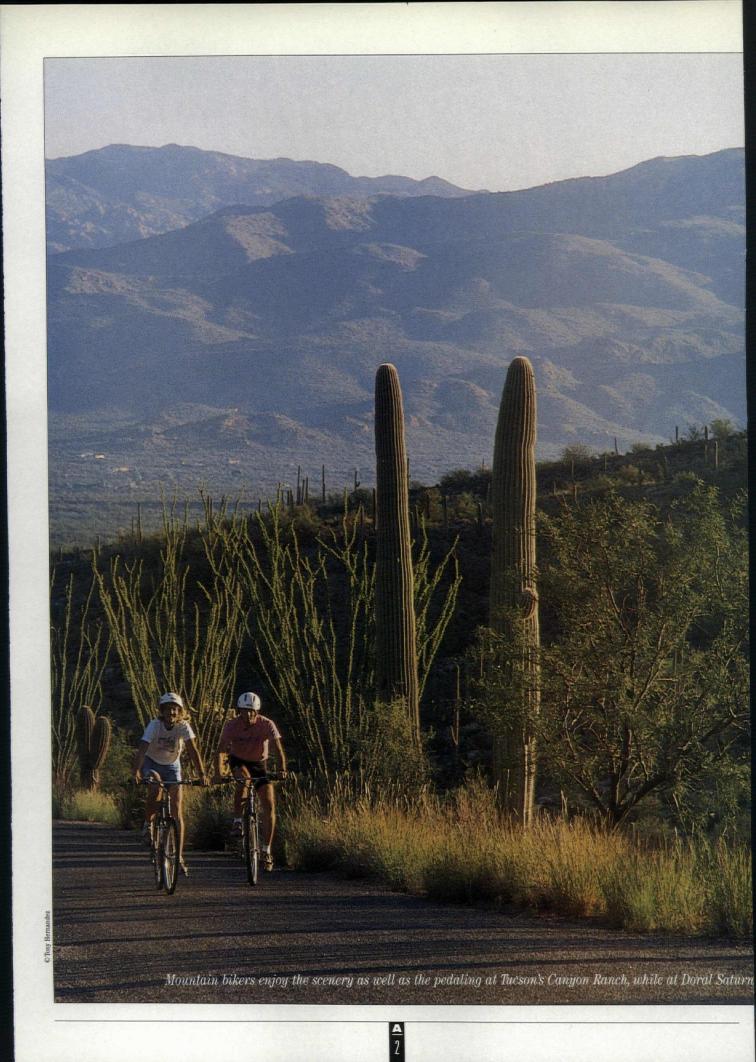
nice change from common aluminum. They're made with a glass-fiber-enhanced polymer, a version of our Perma-Shield[®] window. This enhanced polymer material is so strong and corrosion-resistant, it's actually used along the seacoasts as a substitute for structural steel.

On the inside, Flexiframe windows offer yet another revolutionary material you don't usually find in commercial windows: wood. Our warm Ponderosa pine gives

SUPER

Fitness resorts recharge executives and shape lifestyle changes

A Lifestyle Supplement to Penton Publications / Travel / Lodging / Resorts / Recreation / Leisure





Canyon Ranch and other fitness resorts recharge executives and shape lifestyle changes.

3

mud bath helps to relieve stress and remove torins.

It's 9 a.m. and Canyon Ranch—cradled at the base of the Santa Catalina Mountains, under blue sky and blazing sun, surrounded by the lush green and rocky soil of the Arizona desert with its saguaro cacti standing tall, as if in silent tribute to the wonders of nature—is *alive*. The 6:30 morning walkers have long finished, and soon the hikers will return from their backpack into Ventana Canyon. In the spa building, focal point of activity at this 60-acre Tucson vacation/fitness

resort, the guests are beating their feet, and other areas of anatomy, to rock music. In the "Total Fitness for Men" class, two dozen executives, professionals, and others are pedaling, jogging, walking, climbing, stretching, lifting. In other rooms in the 60,000-square-foot building, aerobic/toning and "stretch and flex" classes, and educational sessions on back care, even breathing, are being conducted. In the indoor pool—one of four pools on the property—"Aqua Trim" helps tone the body, through water resistance.

The more than 40 fitness classes daily cover a variety of aerobic, toning, strength, and educational activities at beginning, intermediate, and advanced levels: cross training, jumping rope, men's stretch, women's stretch, studio aerobics, pool aerobics, "positive power" (105 minutes of practically non-stop aerobics), body contour, circuit weights, free weights, flugels (another water exercise), lap swimming, yoga, meditation, even Tai Chi martial-art exercise.

While all this is going on in the spa building, others among the 250 guests are in the clubhouse, attending one of the 40 lectures presented every two weeks. (In all, 195 activities are offered.) Other visitors are at the health and healing center, being evaluated for cholesterol, hypertension, and general fitness; or perhaps consulting about stress management, stopping smoking, or other personal/family/ job issues; or planning a nutrition program.

BRAHAM

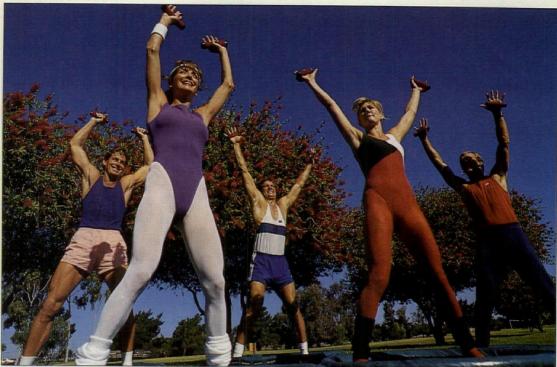
JIM

he ways to better health, fitness, stress management, and nutrition are offered in a convenient, enjoyable, group environment, and that's the attraction for the busy executive.





Aerobics helps set the tone at La Costa, as does water volleyball (cover photo). Hiking is a prime attraction at Canyon Ranch. Healthy eating is part of any spa experience but the meals, as presented here at the Oaks and Palms, may startle the executive accustomed to rich dining.



Some guests are playing racquetball, squash, or hardball; some are on the eight tennis courts; others are swimming. A great many more are enjoying the pampering of a spa—receiving one of the six types of massage, an herbal wrap, or one of the other rejuvenating amenities from one of the 65 masseurs and masseuses on the 400employee staff. Or they're simply sweating away in sauna, whirlpool, or steam.

Still other guests are doing what Art, a venture capitalist from Los Angeles, does when he visits Canyon Ranch twice a year. He works out on the treadmills and stationary bikes, plays tennis, even tries to keep up with the ladies in aerobics but also, he says, "I relax. I like to read the paper for an hour in the morning and goof off. Hey, I'm here to have a good time, not kill myself." Among the 60% of repeat visitors, he has learned to select the activities he prefers.

Folks visit for a *vacation*, after all. But it is a different sort of vacation — and it's not for everyone. For at Canyon Ranch, and other serious fitness resorts, one can examine his or her lifestyle and learn how to, if not live longer, at least live more fully. He can incorporate what is learned here in his home life. At these spas, the vacation doesn't end when you leave; it's really just beginning.

The philosophy of Mel Zuckerman, who founded Canyon Ranch in 1979, is based on five tenets: that fitness is a state of mind as well as body; that a fitness program must include food-habit management, an exercise plan, and relaxation techniques; that everyone must take responsibility for his own health and well-being; that bad habits can be broken and replaced with good ones; and that everyone needs a little pampering once in a while. The idea of a vacation that's "good for you" is spreading, and Canyon Ranch in the Berkshires recently opened in Lenox, Mass.

Dan Baker, Ph. D., Canyon Ranch's executive director of program development, likens it to a "supermarket where you shop for the things you can take home." The ways to better health, fitness, stress management, and nutrition are offered in a convenient, *enjogable*, group environment, and that's the attraction for the busy executive who tends not to put a high premium on a better, more healthy life.

"People see exercise as something you do in your spare time. After 40, they haven't got spare time for their health. We say that you've got to regard exercise time just like you do time for a board meeting," says Phil Eichling, M.D., medical director.

t coed Canyon Ranch, 25% to 35% of the guests are men. That's more than the typical spa, and it's increasing. Most are executives or professionals, although even Canyon Ranch attracts the "spa junkies" (mainly women) who seem to steam from sauna to sauna. This is not a "fat farm." Most guests appear to be in at least fair shape.

It is the "hard-driving executive" whom Canyon Ranch particularly targets. "We want to improve executives' lifestyles and show them a higher quality of life," Baker says.

The typical visit is a week, and a fourday executive-health program is being developed. The typical executive's day goes something like this: An early morning walk, hike or bike ride, one or two exercise classes later in the morning and one in the afternoon, a couple of educational classes, perhaps a one-hour professional consultation, and maybe a massage. A couple of hours, Baker says, are spent simply "taking it easy and strolling around the desert."

The walks, hikes, and bicycle rides-geared



Other serious fitness resorts with special executive appeal include:

Cal-a-Vie, Vista, CA. At \$3,500 a week, it vies with nearby Golden Door as most expensive spa. It's even more exclusive—20 guests maximum (619/945-2055).

Canyon Ranch in the Berkshires, Lenox, MA. Mel Zuckerman's philosophy spreads east (800/326-7100).

Doral Saturnia, Miami, FL. Ultramodern fitness techniques blend with ancient Italian hydrotherapy treatments; 48 luxury suites adjoin resort/country club (800/331-7768).

▶ **Hilton Head Health Institute**, Hilton Head Island, SC. Health, weight control, and habit-change programs with long-term emphasis (800/292-2440).

King Ranch, King, Ont., Canada. Opening in May, this Canyon Ranch copy will accommodate 180 guests (800/263-3272).

▶ La Costa, Carlsbad, CA. Luxurious, 478-room hotel/spa offers everything even golf—amid plenty of pampering (800/426-5483).

Marriott's Desert Springs, Palm Desert, CA. New spa adjoins spectacular resort hotel offering golf and tennis (800/228-0848).

Rancho La Puerta, Tecate, Mexico (40 mi. southeast of San Diego). Spa opened in 1940 by Edmond and Deborah Szekely is like Canyon Ranch minus some amenities (800/443-7565).

Sheraton Bonaventure, Ft. Lauderdale, FL. Another luxury spa at a resort featuring tennis and golf (800/327-8090).

▶ The Ashram, Calabasas, CA. Small, intense "boot camp" for 10-12 hardy souls who don't mind spartan food and surroundings and 5 hours of hiking daily (818/888-0232).

▶ **The Golden Door,** Escondido, CA. Also run by Szekely family, the ultimate in luxury/service (120 employees to 39 guests) originally was for ladies only. Now eight weeks are for men only and five weeks are for couples (619/744-5777).

The Oaks, Ojai, CA. Here's where Canyon Ranch's Zuckerman saw the spa light. Guru Sheila Cluff owns this and the Palms, each accommodating 84 guests maximum (805/646-5573).

The Palms, Palm Springs, CA (619/325-1111).

Topnotch at Stowe, VT. John and Ginny Lopis, former managers at Doral Saturnia and Canyon Ranch, recently opened spa complementing ski/tennis resort (800/451-8686). "When I checked into Best Western they asked if I wanted a room with a king or a queen."



"What a country! But I'd really prefer my own room."

Some hotel chains promise you the royal treatment. At Best Western, we give you so many different choices, in so many different places, you always get and pay for just what you want. Not frills you don't need.

For reservations, call 1-800-528-1234.

Each Best Western is independently owned and operated.

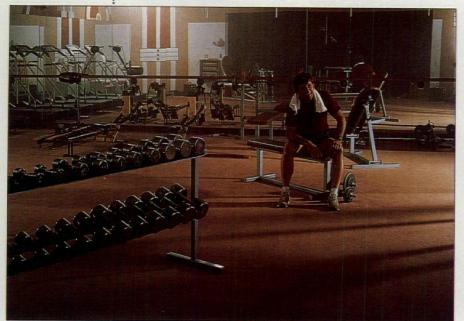
*H*xercise is the cornerstone for building a more healthy, energetic lifestyle, and that means <u>aerobic</u> exercise.



for folks at all levels of fitness—seem to be everybody's favorite activities, perhaps because the terrain is so beautiful and challenging. There are four different walks daily, from one mile to four miles, plus an eightmiler on Saturday for the "very fit." Hikes stretch from beginner three-milers to advanced 12-milers. The bike ride into Sabino Canyon is interesting not only for the scenery but because the 15-speed, fat-tired mountain bikes are a kick to ride.

Exercise is the cornerstone for building a more healthy, energetic lifestyle, and that means *aerobic* exercise, which elevates the heart rate sufficiently. For the typical executive, assistant fitness director Eric Chesky recommends finding an activity one *enjogs* jogging, biking, brisk walking, swimming, e.g.—and doing this at least 30 minutes, followed by 5 to 10 minutes of stretching, 3 to 4 times a week.

Stress management is another major attraction. "Many managers, if they ever did know how to relax, have forgotten. They have a sense of guilt," Baker says. "A lot of people have only two gears—stop and fast



La Costa's jumping, while at Canyon Ranch every exerciser needs a break sometime.

l

forward. It's nice to have a few in between. That's stress management."

There are three ways to deal with stress, he says: "One, modify or leave your current environment. Two, manage your reactivity through things like biofeedback, progressive muscle relaxation, yoga, and meditation. Three, perceptual training, which is the most important. Most of us think inaccurately. If

At Tucson's Canyon Ranch (800/742-9000), a standard room, single occupancy for seven nights, runs \$2,330 and a double \$1,910 in season (Dec. 25-June 15). Rates are slightly lower offseason (Sept. 23-Dec. 24). Prices include three meals a day, all fitness classes and lectures, plus some personal or sports services and health consultations.

.....

you manage your perceptions, you prevent stress in many situations."

Healthy eating is part of any spa experience. At Canyon Ranch the meals may startle the executive accustomed to hefty portions of meat, cream sauces, and foods laden with butter, salt, shortening, and the like. Not only are the portions smaller and lower in calories, they are — most important significantly lower in fat. Only 20% of the calories come from fat, 20% from protein, and 60% from carbohydrates, the leading source of energy. Presenting attractive dishes high in taste while low in fats is a culinary challenge, but Canyon Ranch succeeds.

The menu is high in complex carbohydrates or starches (fruits, vegetables, pasta, rice, grains, beans, legumes) and fiber. It is low in salt, saturated fats, refined flour and sugar, additives, and preservatives. It is devoid of caffeine, though packets of instant caffeinated coffee are available upon request. Decaffeinated coffee is served, along with a selection of mostly caffeine-free herbal teas.

Caffeine, salt, sugar, and soft drinks are missing from the dining room. (There's no smoking or alcohol, either, in any of the ranch's public areas.) Water is the drink of choice; guests are encouraged to drink eight 8-ounce glasses daily.

Although portions are small—three ounces of steak (250 calories), for example one can order as much as wanted. Most guests, in fact, are surprised to feel so filled. One reason, Dr. Eichling explains, is that "you tend to eat bulkier foods."

or safe weight *loss*, Canyon Ranch recommends that men eat 1,200 to 1,400 calories daily, and women 1,000 calories. For weight *maintenance*, the average man aged 23 to 50 engaging in normal physical activity needs 2,300 to 3,100 calories daily, the average woman 1,600 to 2,400 calories. Those over 50 require 200 to 300 fewer calories. It's not realistic to expect much weight loss at a spa. Results come at home *after* the spa experience provided that one continues dieting and exercising.

Pampering relaxation is a major appeal at most spas, and more and more men are discovering what women have known, that massages, herbal treatments, and the like do relieve stress and tension and add to an overall sense of well-being.

Often, men visit a health spa reluctantly, to appease wives for whom spas have become an annual event. Generally, they wind up raving over them, too, and become regular visitors. Some value their spa experience so highly they extend it to their children. Stan, a Toronto dentist visiting for the third time with his wife, notes that their 14-yearold son "would never eat spa food" but that their 18-year-old is "into health." They plan to present him a Canyon Ranch vacation for his high school graduation present. Says Stan, "What better way to start your adult life than doing something good for yourself?"



Sarah Charlesworth's "Bull" is among more than 100 works in Whitney Museum's "Image World."



Palm Beach's Winter Equestrian Festival will be jumping, with over 300 of the world's best riders.





The largest Hispanic festival in the U.S., Carnaval Miami attracts more than a million visitors.

	hat's Happening
Thru F18	"IMAGE WORLD: ART AND MEDIA CULTURE," Whitney Museum of American Art, NYC; exhibit highlights mass media influence on contemporary art.
J24-M4	WINTER EQUESTRIAN FESTIVAL, Palm Beach Polo & Country Club, W. Palm Beach, FL; America's finest riders and horses in four major jumping shows.
J27-M25	"IMPRESSIONISM: SELECTIONS FROM FIVE AMERICAN MUSEUMS," <i>Minneapolis Institute of Arts, MN; 85 paintings, sculptures, etc., by 21 masters including</i> <i>Degas, Cezanne, van Gogh, Monet, and Renoir.</i>
1-A 29	"ODYSSEY: THE ART OF PHOTOGRAPHY AT NATIONAL GEOGRAPHIC," Royal Ontario Museum, Toronto, Canada; century of great magazine pictures.
1-11	QUEBEC CARNIVAL, <i>Quebec City, Canada; biggest and most famous winter celebration, numerous indoor and outdoor activities.</i>
3-18	DAYTONA SPEED WEEKS, Daytona Beach, FL; auto races capped by final day's 200-lap Daytona 500 stock car chase.
10-18	CHICAGO AUTO SHOW, McCormick Place; America's largest annual exhibition of new cars attracts nearly 1,000 vehicles, includes entertainment.
11	NBA ALL-STAR GAME, Miami Arena, FL; pro basketball's finest on display.
12-13	WESTMINSTER KENNEL CLUB DOG SHOW, Madison Square Garden, NYC; over 2,900 dogs from 142 breeds and varieties in most prestigious show.
17-19	COCONUT GROVE ARTS FESTIVAL, Miami, FL; over 300 artists, sculptors, and craftsmen, plus national entertainers in outdoor concerts.
17-21	MIAMI INTERNATIONAL BOAT SHOW, <i>FL</i> ; huge boat show features most popular runabouts to 100-foot yachts priced in millions. Free sailing clinics.
23	INDOOR GRAND PRIX TRACK CHAMPIONSHIPS, Madison Square Garden, NYC; climax of ninth annual season.
24-27	BRAZIL CARNIVAL, Rio de Janeiro; final fling before Lent go-goes through Shrove Tuesday, with parades and dancing in streets and along beachfront.
27	MARDI GRAS, New Orleans; ten parades, parties, and street celebrations draw more than 600,000 revelers.
3-11	CARNAVAL MIAMI, FL; week-long Hispanic, Mardi Gras-style bash serves up world's biggest block party—23 streets of foods, conga dancing, and entertainment.
4	LOS ANGELES MARATHON, CA; 26.2-mile run finishes in Memorial Coliseum
11	USA GRAND PRIX AUTO RACE, Phoenix, AZ; downtown race opens 16-event season for 1990 Formula One world championship.
17	SEBRING 12-HOURS GRAND PRIX OF ENDURANCE, Sebring, FL; auto race climaxes three-day gala of qualifying and other events.
17	ST. PATRICK'S DAY PARADE, Fifth Ave., NYC; struts off at noon and lasts 6 hours with 125,000 marchers and over I million spectators along 2-mile route.
22-25	NCAA BASKETBALL TOURNAMENT REGIONALS; 16 colleges play ThurSat at Meadowlands Arena, E. Rutherford, NJ, and Reunion Arena, Dallas; and FriSun at Superdome, New Orleans, and Oakland Coliseum.
30-A 1	WORLD CHAMPIONSHIP SNOWMOBILE HILLCLIMB, Snow King Resort Jackson Hole, WY.
31-A 2	NCAA BASKETBALL TOURNAMENT FINALS, McNichols Sports Arena, Denver CO; final four college teams.

Going for the green in Hong Kong.

To get to where the deals are swung in Hong Kong, take the airline that goes there more often than any other. United. United gives you the best possible shot, with more nonstops from the U.S. than anyone. Each one comes with lots of extras, like generous Mileage Plus credits in generous Mileage Plus credits in First and Business Class. And our exclusive Concierge Service for First Class passengers. Come fly the friendly skies.





Young Architects Issue July 1990

Progressive Architecture invites

recent graduates and designers to

submit portfolios and resumes to

be judged for possible publication

in an issue on young architects sched-

uled for July 1990. The editors are

interested not only in exemplary

architectural design but also in un-

built projects and alternative careers.

 Submissions will be considered in any of three categories:

 Built work, constituting commissions undertaken for a verifiable client. Projects submitted must be completed by April 1, 1990.

 Unbuilt work, constituting designs undertaken for a verifiable client.

 Alternative careers for architecture graduates in other fields of design or in education, government, business, non-profit organizations, or other endeavors.

 Eligibility is limited to those with a bachelor's or master's degree in architecture or a bachelor of art in architecture, received not more than 10 years prior to July 1990, or who have been practicing as designers for no longer than 10 years, as of July 1990.

 Work done for academic credit is not eligible.
 Work done while employed at an established firm must be accompanied by a letter from a principal of that firm stating that the entrant had primary responsibility for the project.
 Collaborative efforts among qualified entrants are welcome.

 Selections will be made by the editors of P/A. Their decision is final.

- Submissions must include a one-page firm profile, and one-page resume for each entrant, in English, describing education and experience.
- Graphic material, slides, and photographs included must be submitted in binders which shall not exceed 17 inches in either direction.
 Enclose a brief description of each project and the ideas underlying its development.
- Anonymity is not required. All submitted material must be labeled with applicant's name, address, and phone number.

There is no fee for entry.

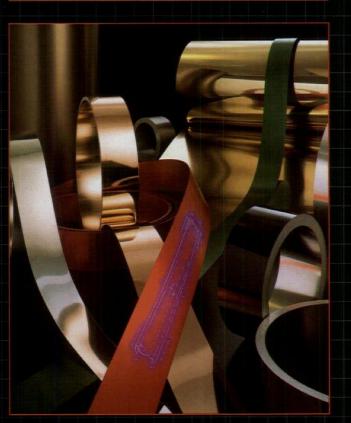
- Submissions will be returned only if they are accompanied by an adequately sized and stamped self-addressed envelope. P/A will take every precaution to return submissions intact but accepts no liability for loss or damage. Please do not submit original material.
- Selected entrants will be notified confidentially by April 30, 1990.
- If the entry is selected for publication, the entrant agrees to make available further material as needed, but at no undue expense.

Deadline: March 30, 1990

Address all questions and submissions to Young Architects Issue, Progressive Architecture, 600 Summer St., P.O. Box 1361, Stamford, CT 06904. 129

'oung Architects

Coil Anodized Architectural Aluminum for Premier Interiors



Premier Performance:

- Metallic beauty
- Color uniformity
- Unsurpassed durability
- Broad finish and color selection
- Extensive inventory
- Available in slit coil and flat sheet

Premier Benefits:

- Low maintenance
- Extended wear life
- Formability without flaking or delaminating
- "J.I.T" delivery
- Ideal for wall panels, decorative trims, ceilings and reflector sheet

For our free "Engineer's Guide" and our "Preanodized Lighting Sheet brochure" phone 1-800-654-1159, or write to...



COIL ANODIZERS INC.

1960 S. Roberts Muskegon, MI 49443 In Mich. 616-722-1631

A Division of Lorin Industries. Inc.

Specify anodized finishes for beautiful interior systems that will last.

Circle No. 325 on Reader Service Card

It's all in your mind.

Employee cafeteria, Computer Associates International, Inc., Las Colinas, TX. Design by Scott Strasser, CRS/Sirrine, Inc. Dallas.

© 1989 Pioneer Plastics Corporation and Computer Associates International, Inc.

Pionite and the Pioneer logo are registered trademarks of Pioneer Plastics Corporation. Pony Skin and SpecFX are trademarks of Pioneer Plastics Corporation. The Pony Skin design is copyright © 1988 by Pioneer Plastics Corporation and Scott Strasser. All rights reserved. Computer Associates is a registered trademark of Computer Associates International. Inc.

DESIGNER SCOTT STRASSER CREATES HIS OWN PIONITE.

It was all in his mind. Pony Skin.[™] So Scott Strasser took his idea to Pioneer, the *one* company where he could specify his own design.

Pony Skin is the marriage of a brilliant idea and Pioneer's ability to recreate it in laminate form. Something we call SpecFX.™

It's the same capability we used to create Strata II[®] -decorative laminates like no other anywhere in the world.

For a Strata II sample chain, or more information about SpecFX, our custom laminate capability, call **1 800 777-9112** (in Maine, call 207-784-9111) and ask for Designer Services.



The most for your imagination™

Circle No. 362 on Reader Service Card

When It Stays Warm, All Your Problems Meltaway®

REAR

Come winter, Nature turns a cold shoulder. And life gets much more exciting. There's the prospect of snow, wind and freezing rain. The

tension of watching frost and cold turn normally smooth, dry surfaces rock-hard and slippery. But winter doesn't have to be that exciting. Not when the ground underfoot is equipped with a Meltaway radiant hydronic heating system by Wirsbo. Meltaway systems are customdesigned to eliminate snow, ice and frost on natural and man-made surfaces — from athletic fields and parking ramps to streets, sidewalks and commercial areas.

The benefits reach far beyond convenience. In streets and sidewalks, Meltaway eliminates not only snow, but the costs and hassles of snow removal: plowing, sanding, spreading corrosive chemicals, repairing surfaces, maintaining equipment. It also helps reduce litigation from accidents caused by unsafe conditions.



Installs quickly and easily under concrete and asphalt, or in existing turf.

optimum competitive conditions year-'round. In airplane hangars and taxiways, Meltaway provides sure footing for both people and planes.

Meltaway systems use Wirsbo's unique crosslinked polyethylene tubing, a thermoplastic that provides decades of reliable, trouble-free operation. A Meltaway installation can be powered at a fraction of the cost of conventional electric groundheating systems — and without the need for cable replacement or expensive maintenance. Operators who have switched from electric systems are documenting savings of 40 to 60 percent.

At Wirsbo, we have more than twenty-five years of experience in designing hydronic underground heating systems. Call us. We'll be happy to take a little of the excitement out of your life.

In parking facilities, Meltaway keeps driving surfaces free of snow and ice all winter long. In sports fields and racetracks, Meltaway assures



5925 148th STREET WEST • APPLE VALLEY, MN 55124 • (612)469-4800 • FAX (612)469-1657 Circle No. 384 on Reader Service Card



Joscana Series by Villeroy & Boch =

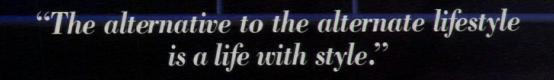
CREATIVE ALTERNATIVES FOR CREATIVE PEOPLE

CERAMIC TILES AND PLUMBING FIXTURES BY VILLEROY & BOCH

FOR MORE INFORMATION CALL OR WRITE, VILLEROY & BOCH INTERSTATE 80 AT NEW MAPLE AVE., P.O. BOX 103 PINE BROOK, NEW JERSEY 07058 PHONE 201-575-0550



Circle No. 378



ligne roset



Innovative and designed for comfort, the Shogun sofa created by Claude Brisson for Ligne Roset, triples as a bed and a chaise. It also • features individually and fully adjustable cushions. Select from over 50 leathers and 250 fabrics in a wide array of colors and patterns. • Residuation of the selection of the Defension of the State of the Defension of the State o

Du Pont's registered trademark for the polyester fiber made only by Du Pont.

Atlanta (404)881-8115*Boston (617)451-2212*Calgary (403)270-8800*Chicago (312)664-9582*Cincinnati (513)891-7444*Cleveland (216)991-2700*Columbus (614)792-7774*Dallas (214)691-1270*Detroit (313)353-9880*Indianapolis (317)251-1100*Laval (514)682-3022*Los Angeles (213)273-5425*Miami (305)573-6493*Minneapolis (612)929-1303*Montreal (514)733-8414*(514)382-1443*New Orleans (504)522-8630*New York (212)685-1099*Ottowa (613)831-2091*Philadelphia (215)923-6085*Pittsburgh (412)361-8853*Quebec (418)847-2724*Rochester (716)325-4880*St. Louis (314)241-5199*San Francisco (415)397-7471*Santa Barbara (805)963-1411*Seattle (206)622-2433*Toronto (416)362-7404*Ventura (805)653-1900*Washington, D.C. (202)488-0955* West Lake Village, CA. (805)494-7133*

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.

Circle No. 349 on Reader Service Card

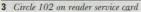
New Products and Literature





2 Circle 101 on reader service card







4 Circle 103 on reader service card



5 Circle 104 on reader service card



6 Circle 105 on reader service card



7 Circle 106 on reader service card

New Products and Literature

West Week Products continued	136
Products and Literature	139
Computer Software	144
Technics-Related Products	147

Westweek 90 Preview

Los Angeles has been billed as the city that will lead the U.S. into the next millennium. Westweek 90, at the Pacific Design Center, March 21–23, looks set to prove this theory with the theme "LA 20/21: Design. Business. The Next Century."

Some of the many events are: "LA 20: The Cultural and Financial Forces Shaping A New International City in the Twentieth Century" and "LA 20/21: A New Generation" with an introduction by Progressive Architecture Editor John Morris Dixon and chaired by David Gebhard, Professor of Architectural History, UC Santa Barbara (March 21, 9:30 a.m.-11:30 a.m., Center Green); "LA 21: A Vision of the Future and Those Who Will Make the Design Difference in the Next Century" with an introduction by Architecture Editor Deborah K. Dietsch and chaired by Michael Rotondi, principal, Morphosis (March 21, 2:00 p.m.-3:15 p.m., Center Green); "The State of the Industry: Change, Competition, Internationalism -Opportunities for the 90's?" with an introduction by Interiors Editor Paula Rice Jackson and chaired by Len Corlin, Associate Publisher, Contract (March 22, 8:30 a.m.-9:30 p.m., Center Blue); and the facilities management conference and roundtable "Environmental Cleanup in the 90's: The Facility Executive's Responsibility to the Bottom Line and Quality of Life" with an introduction by Robert J. Gross, National President IFMA (March 22, 2:00 p.m.-4:00 p.m., Center Green). Among the exhibitions to take in are: "Mondo Materialis," a show presented by the Steelcase Design Partnership (Murray Feldman Gallery, PDC Plaza); and "On the Edge: Industrial Design in Southern California" (Center Green).

Products shown here are some of the introductions scheduled for the show.



Next Seating Series

Nestweek Products

The Next series has been expanded to include two and threeseat settees and backless benches, a low stool, and a bar stool. Interna. *Circle 107 on reader service card*



RizziOffice Additions

Phase Two of RizziOffice includes privacy screens with tackable surfaces and U-unit workstations with U-unit credenzas. Each piece in the collection is an independent wire manager. CorryHiebert. *Circle 108 on reader service card*

New Textiles

Designer and colorist Beverly Thome has added two new textiles to her collection. Bernhardt. *Circle 109 on reader service card*



New Sofa

Jorge Pensi has designed the Baker collection with floating steel arm cushions. The collection includes a lounge chair and sofas in three different widths. Kron U.S.A. *Circle 110 on reader service card*



Ergonomic Seating

Caddy, by Swiss designer Eckhard Hansen, has a front pivot point tilt mechanism, tilt-lock, and a flexible back for support. Allsteel. *Circle 111 on reader service card*



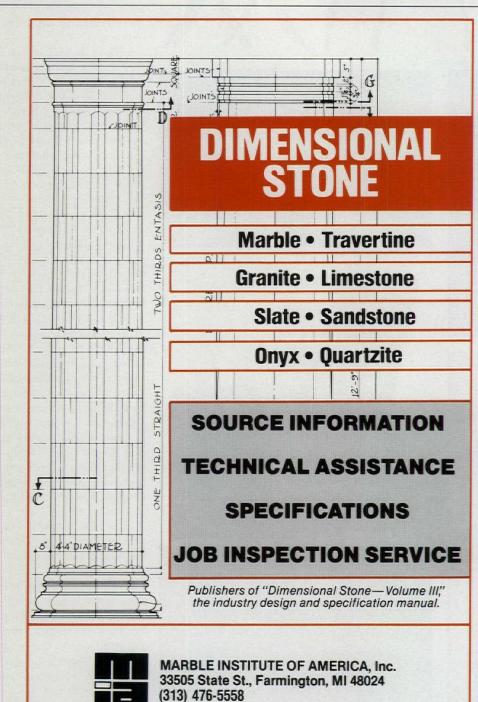
Mission Collection Upholstery

Minares is one of three patterns (each in three colorways) in this collection of 100 percent cotton grospoint weaves. Scalamandré. *Circle 112 on reader service card*



Columns and Mouldings

Paleo Wall Panel System has been expanded to include Paleo Column System with prefinished corner, base and crown mouldings, and accent panels. Components can be applied over drywall and other surfaces. Forms + Surfaces. *Circle 113 on reader service card* (continued on page 139)



Circle No. 352 on Reader Service Card

THE POSSIBILITIES ARE ENDLESS, WITH ASSURANCE PLUS" RUBBER TILE.

Until now, rubber flooring has been treated like a stepchild when it comes to high design. But for those who always believed it could bring something special to the party-you just got your wish. With new Assurance Plus from Flexco.

Featuring eight rich designer colors and a sophisticated, classic design, Assurance Plus is the first rubber tile in years to bring a fresh, new perspective to high traffic areas. Its pebbly surface texture actually complements its non-skid properties.

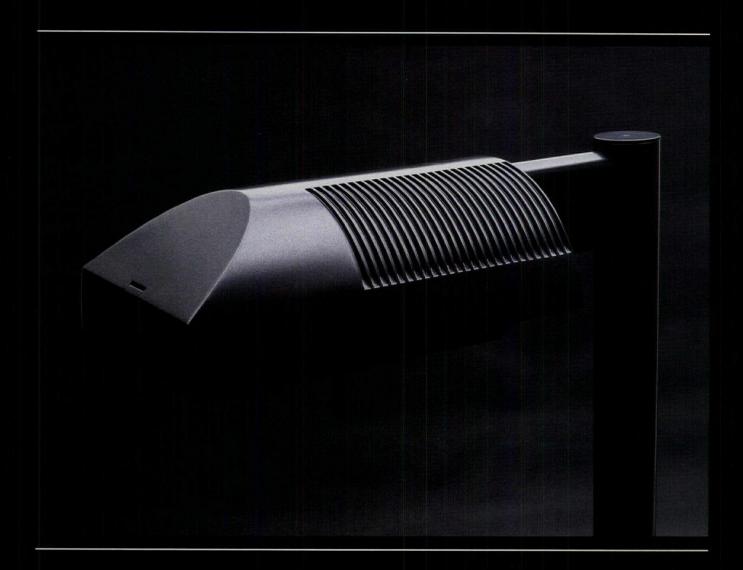
And new Assurance Plus duotone stair treads go even one step further, with an exciting choice of color combinations that can be enhanced by our extraordinary selection of matching Cove Plus wall base. Assurance Plus. It may seem too good to be true. But if the shoe fits...

For samples and information, contact your nearest Flexco distributor, or FLEXCO Company, P.O. Box 81368, Atlanta, GA 30366, (800) 933-3151.



WORKING FLOORS FOR THE WORKING ENVIRONMENT.

Finally! A Bold New Direction in Outdoor Cutoff Lighting.



The Archetype™

Once every decade or two, a luminaire design is created that totally changes the definition of outdoor lighting. The Archetype will become that new definition. Why? Because it reflects the latest thinking in industrial design, architecture, technology, ergonomics and lighting performance. The Archetype is a product of design logic. Its function and purpose are clearly stated by its form, while its compatibility with today's architecture is unsurpassed. The housing and lens frame are rugged one piece



latch that is beautifully detailed into the nose. Four light distributions, six mounting configurations and up to 400 Watt lamp sizes provide total project flexibility for street or area lighting. Simply stated, The Archetype is the new state-of-the-art in cutoff lighting. Everything else is history.

KIM LIGHTING

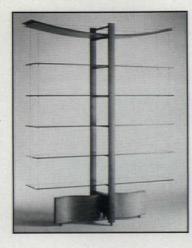
Post Office Box 1275 City of Industry, Calif. 91749 818/968-5666 FAX 818/330-3861

Circle No. 346 on Reader Service Card

(continued from page 136)

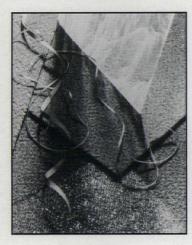
.

New Products and Literature



New Shelf

Every Which Wave, designed by Designwerke, is constructed of sand-blasted steel, concrete, glass, and ash veneer. It is 75" high and 60" wide. Ottoman Empire. Circle 114 on reader service card



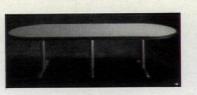
Carpet Tile

A new loop, integrated-pattern carpet collection with a multitextured tip sheared finish is called Moire Plus. Interface. Circle 115 on reader service card

Track and Recessed Lighting ParStar is a unified system of track and recessed fixtures. The 120 volt source operates without transformers. Staff Lighting. Circle 116 on reader service card

Glazing Reference Guides

Three new guides from the National Glass Association include current codes on all glass and glazing provisions in the Standard Building, Uniform Building, and National Building Codes. Guides are \$19.95 for NGA members and \$29.95 for non-members. Contact NGA, Technical Services division, 8200 Greensboro Drive, McLean, Va. 22102 (703) 442-4890.



Fugue Table Brochure

The range of table sizes, shapes, materials, and edging options are described in a new brochure. Howe Furniture Corporation. Circle 200 on reader service card

Roof Retrofit Brochure

Metalshield[®] Elastomeric Roof System is described in a new brochure. Information on deck preparation, rust-inhibitor priming, and application of flashing compound and the Metalshield® elastomeric coating is included. Monsey.

Circle 201 on reader service card (continued on page 140)



If you have avoided CAD because it is too intimidating ...

If you don't like to type ...

If you don't want to spend a lot of time and resources on training...

If you want your drawings to retain a "personal touch" ...

If 80%-90% of your time is spent on drawing production ...

If you have a CAD system which is underutilized and has become your most expensive paper weight ...

...It is time to take a serious look at GEOCAD, the easiest to master, the most "Architectural" Application to AutoCAD.

GEOCAD is complemented by GEOVUE, which uses plans and elevations to create one and twopoint perspectives inside AutoCAD, and **GEOEST**, which extracts esti-mates from AutoCAD drawings without using attributes.

Available for MS-DOS and Macintosh computers.

For more information call or write to: **GEOCAD** Inc. P.O.Box 186, Laurel Road Pound Ridge, NY 10576 Tel. 914 764-4072

GEOCAD is a product of: Rudolph Horowitz Associates, Architects



· GEOCAD drawing and GEOVUE perspective by RHA Architects

mm

m

m

m

0

0

V

0

toCAD GEOCAD IS

ted in the U.S. Patent and Trademark Office by GEOCAD Inc. -GEOVUE and GEOEST are trademarks of GEOCAD Inc. ed in the U.S. Patent and Trademark Office by Autodesk Inc. •MS-DOS is a trademark of Microsoft Inc. mark of Apple Computer Inc.

Circle No. 337 on Reader Service Card

IS FOR ARCHITECTS • IS IN A CLASS BY ITSELF WORKS WITH AutoCAD

ROL

EEFERE

m Ш

CONT

(continued from page 139)



Ganged Seating

Plush is now available in a fully upholstered, ganged version. A variety of lengths with arms between each seat or on ends only can be specified. Kinetics. *Circle 117 on reader service card*

Pre-cast Tabletops

A new non-porous tabletop is made of Fountainhead® solid surfacing material. It can be specified in a 30 inch or 36 inch square or round shape and comes in three colors. Nevamar.

Circle 118 on reader service card

Window Catalog

Custom-made replacement windows are detailed in a new catalog. Performance ratings, glazing type, structural features, and custom design options are described. Season-all. *Circle 202 on reader service card*



End Tables

End tables are part of the Archer Series of tables and chairs by David Wheeler. Glass, solid silkscreened cherry, or bleached ash tops are available; tables are 19" x 20" x 11½". Ambiant.

Circle 119 on reader service card

Bring in the 90's with a NEW American Standard in partitions and lockers

For the first time in the U.S., high pressure laminate (HPL) combines with colorful HEWI thermoplastic nylon for incomparable glamour and guaranteed permanence in the most demanding environments.

Installed anywhere in the U.S.

- Melamine-coated HPL with steel reinforcement is ultra-sanitary, secure, corrosion and rustproof, impact and scratch resistant.
- Exclusive HEWI fittings.
- W&W 5-year no-rust/no-warp/no-rot guarantee.
- A range of styles (including ceilinghung cubicles), sizes, and colors for custom designs.
- All lockers and cubicles can match in form and color for a completely coordinated look. The laminate can even be used as a wall covering.

The KEMMLIT System with over 30 years experience in 40 countries, assures world class quality in partitions and lockers.

Custom Laminates

SpecFX custom laminates allow designers to specify their own designs or graphics; 10 finishes and over 1000 colors are available to execute any silkscreen design. Pioneer.

Circle 120 on reader service card



Composite Panel Cladding

Colorpan[®] Cladding is made from a hardwood resinated mixture that is "sandwiched" in laminate papers and molded under heat and pressure. It can be ordered in a variety of colors, and panels can be cut to fit structures of any size or shape. Werzalit.

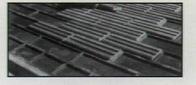
Circle 121 on reader service card



Lighting Control System

A central lighting control system called LiteTouch 2000 has the capacity for nine dimmable points of control, functions that are accessible from any telephone, and a built-in time clock for programming lighting sequences. LiteTouch.

Circle 122 on reader service card



Precast Brick Liner Panels

One half inch thick brick facings can be inserted into this elastomeric form liner. The liner is placed on a precast bed and filled with bricks, concrete is poured, and the panel is stripped 24 hours later. Scott System. *Circle 123 on reader service card*

(continued on page 142)

Circle No. 387 on Reader Service Card

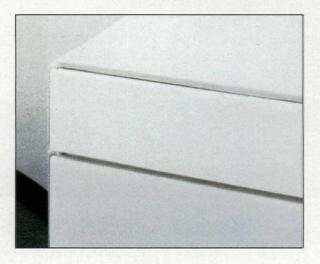
W&W Sales Ltd.

300 Airport Execu

000 Fax: (914) 425-6156

52-7925 (outside NY

ONE OF THE BEAUTIES OF CORIAN® IS WHAT IT LEAVES TO THE IMAGINATION.



我们将

We keep water out. Without difficult instructions.

3 000

The facts don't need much explanation. Over 80% of all constructionrelated litigation involves water leaks. And more than 90% of that leakage occurs at the roof edge.

All because people scrimp on a component that accounts for about .08% of the total cost of a building.

That's right. Eight one-hundredths of one percent of the cost is responsible for almost three fourths of the lawsuits.

But here's another fact you ought to know: Hickman products keep the water out of the edge of the building. Simple as that.

127-A32-17
Nyol: Jefferson
subpoena
TO APPEAR IN PERSON TO PRODUCE DOCUMENT
THE MATTEROF Consolidated Industries
VERSUS General Design & Construction Company
TO: Name of Person Subpoenaed James B. Willians
Address 1825 Fox Rigge Drive
State/20 NE 52241
YOU ARE COMMANDED TO: DO Appear and testify, in the above entitled bookers in court at the place, date,
action, belocie to the low. and time indicated below.
reverse, at the prever, the bekw.
In the General Court of Justice
25 Support
Comparation

The roof edge, membrane, and parapet wall termination systems we manufacture are the best in the industry. Does the quality, long life, and trouble-free performance of a Hickman edge cost more? That's not the right question. The right question is, can you

afford anything less? Look at it this way. You can either call on Hickman. Or get much more difficult instructions from someone else.

W.P. Hickman Company Asheville, NC 1-800-438-3897



Circle No. 339 on Reader Service Card

(continued from page 140)



Chair by Bruno Mathsson

The Eva Armchair, designed in 1978, can be specified in laminated beechwood or natural or stained mahogany. Armrests are optional. Dux Interiors.

Circle 124 on reader service card



"Techno-Deco" Furniture

The Hawksmoor Ceo Series – desk, credenza, and workstation – designed by Po Ku was conceptualized on CAD equipment. Quess. *Circle 125 on reader service card*



Acoustical Wallcoverings

A textured, vertical ribbed line of wallcoverings is called Silence; the line is also Velcro compatible for use on panels. JM Lynne. *Circle 126 on reader service card*

Window Blinds

Optix[®] window blinds made of Lexan[®], a polymer from General Electric, are said to cut 100 percent of the sun's ultra-violet rays. They can be specified in four styles: $3\frac{1}{2}$ " vertical vanes, 1" and 2" horizontal blinds, and Privacy styles. Nanik. *Circle 127 on reader service card* (continued on page 144)

Surprising as it may seem, you're actually looking at a U.S. Post Office in Chicago, Ill. But clearly no ordinary one.

Because its designers found a material that perfectly expressed their imagination. CORIAN[®]

The material with an incredible design versatility matched only by its durability and ease of maintenance.

As a result, what you envision remains intact for years and years. And, as you can see, you can envision just about anything.

For more information, see your CORIAN distributor. Or call 1-800-527-2601. Or write Du Pont CORIAN, Room G-51552, Wilmington, DE 19801.

Then leave it to your imagination.



CORIAN! The premium quality brand of solid surface products from Du Pont.

Planning an ce Rink

Award-Winning ociety of **Project Features** Rinkmaster Ice

Wisconsin

Racine, WI, includes a marina, park, "Festival Hall," and an outdoor Rinkmaster ice rink which provides ice from October to March. Zimmerman Design Group was the architect.

Rinkmasterserves architects with these complete services:

- 1. Typical ice rink plans, specifications, options.
- 2. Preliminary cost estimate.
- 3. Customized plans and specifications for your project.
- 4. Accurate project cost estimate for budget protection.
- 5. Total ice rink responsibility including: refrigeration, installation, concrete rink floor, subfloor heating, waste heat recovery, dasher boards, ice resurfacer, nets, scoreboards, etc.

FREE Full color brochure. ice rink specifying quide & checklist.

CONTACT:



Holmsten Ice Rinks, Inc. 1852 Como Ave., St. Paul, MN 55108 612/646-8625 Fax: 612/646-0806 Telex: 298-415 CALL TOLL FREE IN THE U.S. Continental U.S. 800-328-6808 Minnesota 800-392-0323

(continued from page 142)

Computer Software: Financial Management

User-Friendly Accounting

Designed specifically for the architect's office, Clerk of the Works is a new MacIntosh accounting program that is exceptionally easy to use. It can be progammed to produce more than fifty financial reports. Samsura.

Circle 128 on reader service card

Accredited Bookkeeping Software

For the small firm that relies on an MS-DOS system, Total Trak is a financial management software package based on guidelines established by the AIA, the National Society of Professional Engineers, and the American Institute of American Certified Planners. Wind/2.

Circle 129 on reader service card

Software to Measure Performance

The Professional Services Management Journal has applied its Financial Statistics Survey to the A/E Financial Planner. The software compares the user's financial performance to survey statistics to provide recommendations for improving profits. PSMJ. Circle 130 on reader service card

Financial Billing Software

ArchAccount is an architectural billing program that tracks time and expenses for projects and offers three billing formats: percentage of construction cost, professional fee, or direct personal expense.

The Gardner Partnership. Circle 131 on reader service card

Software For Any Size System

Computer-based Financial Management Systems (CFMS) is architectural and engineering accounting software developed in conjunction with the AIA. It is available on a time-sharing network, VAX, or PC. Harper and Schuman. Circle 132 on reader service card (continued on page 147)



INTERNATIONAL CONTEMPORARY FURNITURE FAIR MAY 20-23, 1990 JACOB K. JAVITS CONVENTION CENTER **NEW YORK CITY**



Cover All The Angles,

At the International Contemporary Furniture Fair® you'll find bold strokes and soft curves. Sweeping arcs and subtle lines. And a focused perspective on contemporary furniture which opens new opportunities for retailers, interior designers, architects, importers and distributors.

The International Contemporary Furniture Fair® is a unique trade fair for the furniture industry. It's a oncea-year market for everyone who needs to know where the future of furniture is going.

Come to the International Contemporary Furniture Fair® and get a new angle on some new angles.

For registration information call (212) 686-6070

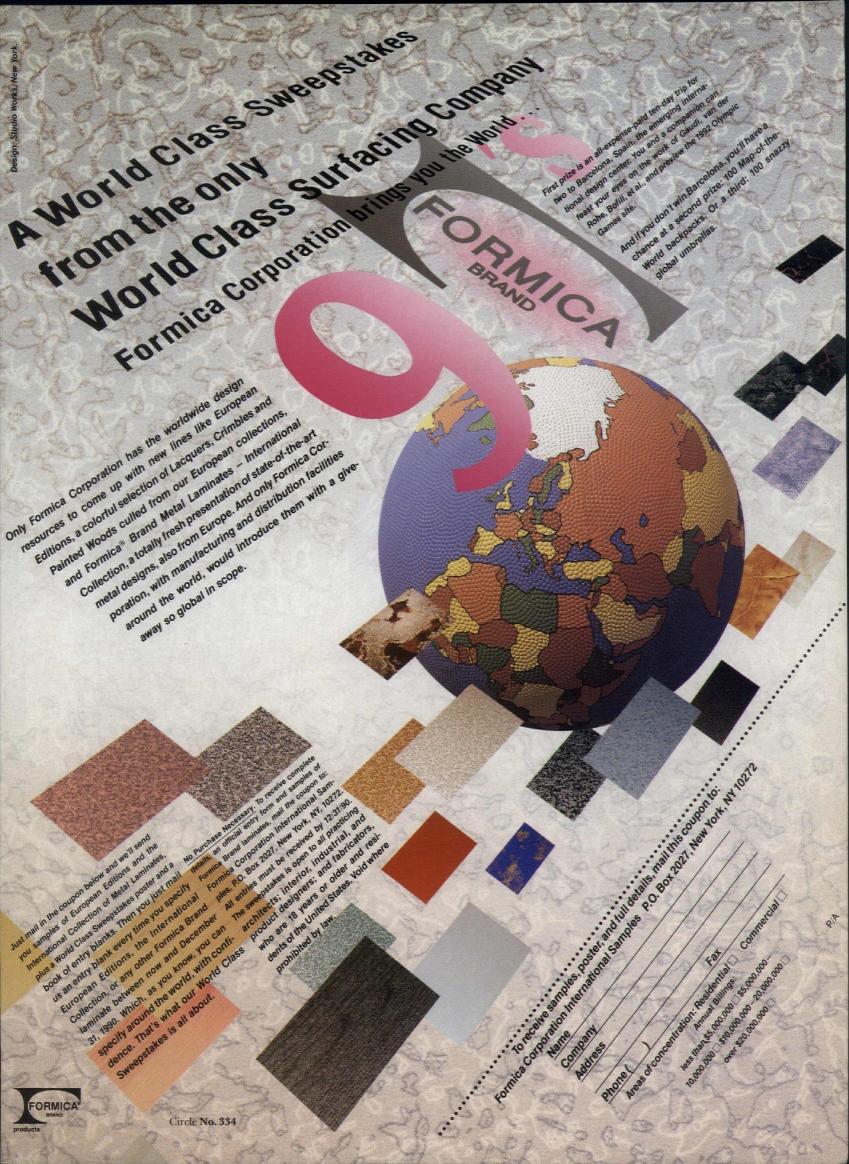




se from top left: Poltrona Frau; The Pace Collection; Godley-Schwan; Zanotta Cappellini. (Zanotta and Cappellini through Classic Age.)

George Little Management, Inc. • 2 Park Avenue, Suite 1100 • New York, NY 10016 (212) 686-6070 • FAX: (212) 685-6598 • Intl. Telex: 422447 LITLSH0,

Circle No. 342 on Reader Service Card



\$135 Million on Building Renovation. *Not a Penny Spent Replacing Roof Tiles*.

A marvelous renovation project that captured America's imagination. The Union Station in St. Louis, truly one of the country's finest historical landmarks, is returned to its stately splendor. Inside and out. From bottom to roof line.

The roof tiles, Ludowici Spanish originals, installed before the turn of the century, remain intact. Not one had to be replaced due to weathering. *Not one*.

Withstanding the elements of time for nearly 100 years — this gorgeous roof is certain to endure well into the 21st century — looking just as magnificent.

Accent your residential, commercial or institutional designs or renovations with Ludowici roof tiles. Available in an array of colors and styles.

Distinctive roof tiles that transcend the ages. Ludowici.

LUDOWICI-CELADON, INC.

4757 Tile Plant Road New Lexington, OH 43764 (614) 342-1995 Fax: (614) 342-5175 Circle **No. 351**

. 11



(continued from page 144)

Technics-Related Products



Louvers

Various types of stationary and adjustable louvers – including drainable and acoustic – are illustrated in a brochure. American Warming and Ventilating. *Circle 203 on reader service card*

Window Washing/Maintenance

Monorail, davit, and roofcar systems are among those illustrated in manufacturer's literature. Powered Platforms. *Circle 204 on reader service card*

Metal Sheet

An aluminum-zinc coating applied to sheet steel results in a highly corrosion-resistant metal building product. A brochure offers description and specifications. Bethlehem Steel.

Circle 205 on reader service card



Roof Accessories

Penthouses and vents are shown in a brochure with several types of louvers and dampers. Airline. *Circle 206 on reader service card*

Window Washing Products

Scaffold restraints and window cleaning anchors to comply with new OSHA safety regulations are described in manufacturer's literature. Weatherguard Service. *Circle 207 on reader service card*

Window Washing/Maintenance

A full range of systems – roof hoist, roof carriage with self-powered stage, davits with self-powered platform – is illustrated in a brochure. Swing Stage. *Circle 208 on reader service card*

Glazing

Five types of glazing are presented with descriptions and examples of use in manufacturer's literature. Cyro.

Circle 209 on reader service card



Louvers

Several blade and frame styles and operators are shown with illustrations and details in manufacturer's literature. Ruskin. *Circle 210 on reader service card*

Translucent Building System

Curved or flat translucent fiberglass panels bonded to structural aluminum beams may be used to construct exterior walls, roofs, and skylights. Kalwall. *Circle 211 on reader service card*

Roof Hatches

A variety of smoke hatches, ventilation domes, and ladder and equipment hatches are shown in a brochure. Dur-Red. *Circle 212 on reader service card*

Skylights

Cluster, ridge, lean-to, and pyramid skylight systems are illustrated with details in manufacturer's literature. API/Auburn Plastics. *Circle 213 on reader service card*

(See Technics, Building Tops, p. 49)

(continued on page 149)



Tired Of WIRE?

Circle No. 373 on Reader Service Card





HARTFORD CT

WORLD FINANCIAL CENTER NYC

SENTRY IS LIGHTING UP AMERICA

From New York, to Beverly Hills CA, to Indianapolis IN to Columbia SC, New Haven CT, Quincy MA and many other sites acros the nation, Sentry Electric luminaires are lighting up parks, plazas, streets, and campuses. Brilliantly. With high energy efficiency. And with powerful aesthetic impact on their environments.

For these Sentry luminaires are unique designs. Each represents the creative output of an architectural team commissioned to create new lighting in consonance with a particular public space.

Sentry also carries a full selection of posts that harmonize beautifully with these luminaires, both visually and functionally. Write, call, or fax for immediate attention. Sentry sales representation is nationwide. **See us in Sweets and LA File.**

Sentry Electric Corporation 185 Buffalo Ave., Freeport, NY 11520 Telephone 516-379-4660 Fax 516-378-0624 CENTRAL PARK NYC



Round it...

Box it ...

Circle it...

Corner it...



Curve it ...

Table it...



Group it ...



Arm it...

Rally round it...





Deck it

WOOd

Nothing warms up a site (and the people who use it) like the natural beauty of wood furnishings. Especially durable, graceful furnishings from Sitecraft.

You can suit virtually any site from our wide selection of standard benches, planters, planter benches, receptacles and other site accents. And should you have special requirements, we can accommodate you with custom site furnishings. For years we've worked closely with architects, landscape architects and designers satisfying their creative concepts.

All Sitecraft furnishings are painstakingly built by craftsmen who have been creating fine wood products for over four generations. Woods range from clear all heart California redwood to super-tough "Ipe", Purple Heart, Philippine Mahogany and other select woods.

To discover all the choices available to you, send for our full color catalog. Write or call Sitecraft, 40-25 Crescent Street,

Long Island City, NY 11101, (718) 729-4900. Outside NY State call toll-free 800-221-1448.





Circle No. 372 on Reader Service Card

Building Materials

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

Herman Miller Design Yard, Holland,

Michigan (p. 98). Architects: Meyer, Scherer & Rockcastle, Minneapolis. Cast-in-place concrete foundation. Pre-engineered steel frame, walls, and roof; concrete-slab-on-grade floors; Pre-formed metal singlemembrane roofing: Varco-Pruden. Pre-formed metal exterior walls. Wood windows: Marvin Windows. Skylights: Plasteco. Hollow metal entrance doors. Wood interior doors: Nord Doors. Overhead doors: Wayne/Dalton. Vinyl and ceramic tile interior floors. Asphalt shingles. Gypsum board and metal stud interior partitions. Paint: Glidden, Sherwin Williams. Washroom/bathroom accessories: Bobrick. Environmental control systems: Honeywell. Lighting and upholstery: Herman Miller.

Fueling Facility, Glenview, Illinois (p.

112). Architects: Lubotsky Metter Worthington & Law, Chicago. Structure: concrete foundation, steel framing, steel and wood frame roofs. Face brick: Belden Brick 505-503 smooth red. Glass block: Pittsburgh-Corning Decora. Roofing: terne coated stainless steel. Butt hinges: Lawrence Brothers. Mortise locksets: Russwin. Slimline door closers: Reading-Dorma and LCN. Fiberglass underground fuel tanks: Owens Corning. Fuel dispensers: Tokheim. Exterior incandescent lighting: Marko. Plumbing fixtures: American Standard. Heating system: electric wall and baseboard heaters.

Remote Telephone Switching Unit, Lincolnshire, Illinois (p. 114). Architects: Holabird 55 Root. Chicago

tects: Holabird & Root, Chicago. Structure: steel columns and beams on poured concrete slab. Brick: Glen-Gery. Roofing: Dynamit Nobel. Cooling: Carrier. Electric duct heater: Indeeco. Emergency power from deisel generator. Locks: P. & F. Korbin. Door frames: Philipp. Floor access door: Bilco. Floor tile: Armstrong.



To The Age Of WIRELESS.

Circle No. 374 on Reader Service Card



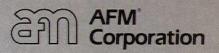
Circle No. 002 on Reader Service Card



A different foam...

No CFC's No Formaldehyde No Thermal Drift UL, FM, Code Listed 20 Year R Value Warranty Non Corrosive, Non Friable Independently QC Certified Proven System Compatibility

AFM, the name brand in Expanded Polystyrene, EPS. We manufacture Contour Taper Tile and Perform roof insulations; WSG for interior and exterior wall systems; R-Control structural insulated building panels; and Fabri-tech EPS architectural shapes and void fillers. 34 manufacturers nationwide. If you specify insulations, call or write AFM for complete information.



6140 Lake Linden Drive P.O. Box 246, Excelsior, MN 55331 Phone 612-474-0809 or 1-800-255-0176 Fax: 612-474-2074

Circle No. 317

TRY OUR CONTINUOUS	The FireLite
HINGE	Advantage:
Are you familiar with continuous hinges from Markar Products, Inc.? If not, Markar would like to send you a free sample! The continuous hinge can solve any door problem. Markar is one of the leading manufacturers of steel, stainless steel and aluminum continuous hinges in the country. Send for your free 10" long sample today.	 FireLite has been tested and certified by Underwriters Laboratories and Warnock Hersey International. FireLite has the current maximum fire ratings of 90 minutes in sizes to 100 sq. inches and 60 minutes in sizes to 1296 sq. inches. FireLite fits standard fire-rated frames. FireLite has a current maximum size of 36"x72." FireLite offers greater impact resistance than wire glass.
Name	
Address City State Zip Phone Send to: MARKAR PRODUCTS, INC.	FIRELITE FIRELITE TECHNICAL GLASS PRODUCTS
Send to: MARKAR PRODUCTS, INC. 12715 Lewis Road Akron, New York 14001 (716) 542-3001 Circle No. 354 on Reader Service Card	FIRELITE: The Clear Choice In Fire-Rated Glass

Advertisement

Small Company's New Golf Ball Flies <u>Too</u> Far; Could Obsolete Many Golf Courses

Pro Hits 400-Yard Tee Shots During Test Round

Want To Shoot An Eagle or Two?

By Mike Henson

MERIDEN, CT – A small golf company in Connecticut has created a new, super ball that flies like a U-2, putts with the steady roll of a cue ball and bites the green on approach shots like a dropped cat. But don't look for it on weekend TV. Long-hitting pros could make a joke out of some of golf's finest courses with it. One pro who tested the ball drove it 400 yards, reaching the green on all but the longest par-fours. Scientific tests by an independent lab using a hitting machine prove the ball out-distances major brands dramatically.

The ball's extraordinary distance comes partly from a revolutionary new dimple design that keeps the ball aloft longer. But there's also a secret change in the core that makes it rise faster off the clubhead. Another change reduces air drag. The result is a ball that gains altitude quickly, then sails like a glider. None of the changes is noticeable in the ball itself.

Despite this extraordinary performance the company has a problem. A spokesman put it this way: "In golf you need endorsements and TV publicity. This is what gets you in the pro shops and stores where 95% of all golf products are sold. Unless the pros use your ball on TV, you're virtually locked out of these outlets. TV advertising is too expensive to buy on your own, at least for us.

"Now, you've seen how far this ball can fly. Can you imagine a pro using it on TV and eagle-ing par-fours? It would turn the course into a par-three, and real men don't play par-three's. This new fly-power forces us to sell it without relying on pros or pro-shops. One way is to sell it direct from our plant. That way we can keep the name printed on the ball a secret that only a buyer would know. There's more to golf than tournaments, you know."

The company guarantees a golfer a prompt refund if the new ball doesn't cut five to ten strokes off his or her average score. Simply return the balls — new or used to the address below. "No one else would dare do that," boasted the company's director.

If you would like an eagle or two, here's your best chance yet. Write your name and address and "Code Name S" (the ball's R&D name) on a piece of paper and send it along with a check (or your credit card number and expiration date) to National Golf Center (Dept. H-1306), 500 S. Broad St., Meriden, CT 06450. Or phone 203-238-2712, 8-8 Eastern time. No P.O. boxes, all shipments are UPS. One dozen "S" balls cost \$24.95 (plus \$2.50 shipping & handling), two to five dozen are only \$22.00 each, six dozen are only \$109.00. You save \$55.70 ordering six. Shipping is free on two or more dozen. Specify white or Hi-Vision yellow.

BAFLUX™





Circle No. 344 on Reader Service Card

Books (continued from page 117)

tool of precedent. The reappearance of Hegemann and Peets' volume confirms our need to recapture this rich resource.

American Vitruvius relies on specific architectural traditions as principal tools; Architectural Composition unveils an architecture derived from a particular sensibility about how cities and urban life ought to be. This perspective was outlined in Krier's earlier book, Urban Space, and in the many conjectural projects drawn by Leon and his brother Rob over the past 20 years. Here the vision is elaborated by focusing on the specifics of building design. The book is alive with conceptual diagrams, interpretive doodles, evocative renderings, and very carefully chosen photographs collected in series, which describe plan and room types, or wall and façade types, or stairways, railings, and even door handles. The selection and presentation of these categories of elements are brilliant, as is the dissertation on architectural proportion, which virtually forms a book within the book.

At the same time, as it may have been for those first encountering *American Vitruvius* in 1922, there is a sense of *deja vu* accompanying Krier's new treatise. What are now common and rather tired attacks on the bankruptcy of Modern architecture, the crudeness of modern construction practices, the crassness of modern clients, and the lack of regard for artistic visions riddle this book and diminish its message.

As we read we are transported to the 1970s when such a critique was bold, necessary, and fresh. Where are the additional insights? Krier intends this book to be a primer for students and those who commission architecture, but the tone is unintentionally pessimistic, as if a schoolmaster is lecturing: "Do it this way, otherwise you are part of the problem . . . These lessons will protect you from society's mediocre standards,"

Krier makes impassioned calls for artistic freedom. At the same time his aim is to persuade us that his is the correct interpretation of architectural composition. While his own illustrated work is elegant, it is not clear how our acceptance of his aesthetic standards would guarantee true artistic freedom. By contrast, a joyful naïvete emanates from the pages of *American* *Vitruvius;* "look at this," the authors-as-students seem to be saying. "Consider the possibilities of this . . . Isn't it terrific!"

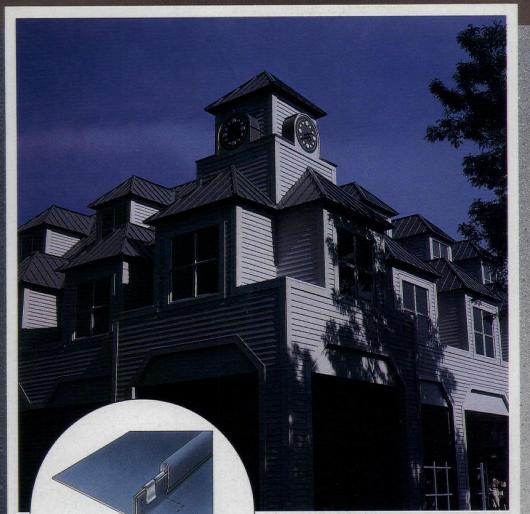
Both books are important sourcebooks for today's practitioners of civic art (how much more appealing this term is than urban design), but a third book is needed even more. The limits of American Vitruvius and Architectural Composition lie in the limited urban agenda that they present to the architect. In practice, we render buildings wonderfully urbane, but frequently our methods (and imagery) seem more analogous to 18th-Century landscape painting than to civic design. One may say that architects of the mid-20th Century, fueled by the possibilities of a Modern urbanity, too readily abandoned the traditions of city building. It is also fair to say that as we rediscover those traditions today, we risk sentimentality and emulate models whose usefulness for much of our cities is nil.

The reissued American Vitruvius calls for a sequel. It should bring us forward in time, showing us how to use those time-honored principles of civic art within the contemporary metropolitan environment. A second volume would have to be as broad as our tasks: we need to re-order our suburban districts, develop paradigms for urbanized regions, integrate the scale of Modern development to existing fabric, urbanize our office parks, malls, and commercial strips. It is up to us to adjust the impacts of our modern transportation infrastructure, to make connections between disaggregated environments and between isolated buildings, and to restructure our zoning codes. In this way, we shall extend the intentions of Hegemann and Peets and the lessons of the Kriers. Alex Krieger

The author is a principal in the firm of Chan Krieger Levi Architects and Adjunct Professor of Architecture and Urban Design at Harvard University.

A modern companion to American Vitruvius, with new counterparts to Hegemann and Peets' examples, is now being planned for publication by Princeton Architectural Press.

PAC-CLAD Metal Roofing Panels



Snap-on Standing Seam .032 aluminum 24 gauge steel 12", 18", 19" or 20" O.C. 1" high

Project: 90 Main Street Owner: 90 Main Street Partners Architect: Ferris Architect, PC. Roofing Contractor: Barrett Non-Pariel Roofing Co. Panel: Snap-on Standing Seam. Color: Slate Gray

See our catalog in Sweet's: file numbers 07610/PET, 07715/PET and 10426/CHC.

AC-CLAD Metal Roofing Panels are a prominent design element on the recently completed 90 Main Street project in Westport, Connecticut.

The architect, Roger Ferris of Southport, Connecticut, has designed a mixed-use facility that is an attractive new addition to the town's commercial center.

PAC-CLAD Snap-On Standing Seam Panels were specified for the extensive metalwork and detailing of the metal roof, dormers and clock tower. The panels are coated with a PAC-CLAD Kynar 500® finish. The color, Slate Gray, is one of eighteen standard PAC-CLAD colors and is provided with a twenty year finish warranty.

For more information regarding the complete Petersen product line, please contact Tom Creigh at Petersen Aluminum Corporation, 1-800-PAC-CLAD.



955 Estes Avenue, Elk Grove Village, IL 60007 1-800-PAC-CLAD or 1-708-228-7150 FAX: 1-800-722-7150

Other Plant Locations: 8735 Bollman Place 4295 Hays Drive Savage, MD 20763

-Tyler, TX 75703

Circle No. 360 on Reader Service Card

The Ville de Montréal and the Real Estate Developers Association of La Cité Internationale de Montréal,

MONTRÉAL 1990-2000

Two International Urban Design Competitions

\$225,000 in prizes

These ideas competitions are provisionally endorsed by the Union Internationale des Architectes (UIA) and the Ordre des Architectes du Québec (OAQ). They aim at developing new visions and workable urban design solutions for significant areas in Montréal:

LA CITÉ INTERNATIONALE DE MONTRÉAL

A two-stage competition, sponsored by the Ville de Montréal and the Real Estate Developers Association of La Cité Internationale de Montréal, seeking Master Plan urban design concepts for a key sector at the gateway to downtown.

PLACE JACQUES-CARTIER

A one-stage competition, sponsored by the Ville de Montréal, seeking urban design concepts for a series of public spaces, buildings, and civic art adjacent to City Hall.

ELIGIBILITY

Any architect, urban designer, city planner, engineer, landscape architect or artist is eligible to compete in either competition as individuals or collaborate in teams where at least one person is professionally licensed or registered to practise in his/her country.

REGISTRATION PERIOD: February 1 to May 15, 1990

Program mailing: March 30, 1990 Anticipated due date for submissions: August 1990 Announcement of winners: September-October 1990

Registration fee: 100SCDN for Canadian residents, 100SUS for foreign nationals, certified cheque, money order, or bank draft MAKE PAYMENT TO: APAAM

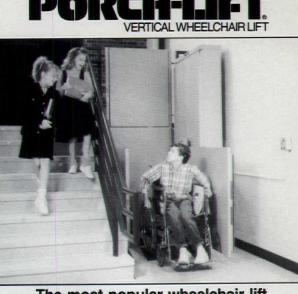
> INFORMATION and REGISTRATION APAAM

55 West, Mont-Royal Avenue, Suite 902, Montréal, Québec, CANADA H2T 256 Tel: (514) 849-2449 • Fax: (514) 849-4781

These competitions are held as part of *Designs on Montréal 3,* an International Urban Design Biennial, organized by the Association de promotion d'art et architecture de Montréal (APAAM).







The most popular wheelchair lift in America

The PORCH-LIFT Vertical Wheelchair Lift provides easy stainway access in churches, schools and office buildings for the handicapped and general public.

Now your accessibility problems are eliminated. The user simply walks or rolls the wheelchair onto the platform, pushes a button and rides up and down. They meet all requirements of the

American National Standards Institute.



For more information call TOLL
The le
FREE 1-800-383-3100 or write
4001 E. 13
AMERICAN STATUS

4001 E. 138" Street - Grandview, MO 64030 (916) 769 3100

AMERICAN STAIR-GLIDE. Dept. PA-0290 FAX (816) 763-3100 FAX (816) 763-3467 - TOLL FREE 1-800-383-3100

Circle No. 314 on Reader Service Card

OLD FASHIONED QUALITY... HIGH - TECH PRODUCTION.

GRAPHIC BLASTED* 1/4 inch plate glass.

Beyond the commonplace signs and graphics! **BEST'S® Graphic Blast®** process offers the buyer new materials such as glass, tile, marble, wood, brass, stainless steel, tough thermoset plastics and fiberglass with carved-in or raised copy and graphics. All we need is your black-and-white artwork. One or one thousand, we can produce your signs or decor economically.

Call, write or fax for free catalog.

A free loan Video is also available



Circle No. 320 on Reader Service Card

Circle No. 327 on Reader Service Card

A FEW REASONS WHY A 350 TUFFLINE ENTRANCE LIVES UP TO ITS NAME.



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

P/A Classified

Situations Open

Full-time tenure-track faculty at the College of Environmental Design, University of Col-orado, Boulder, beginning Fall 1990. Applic. review be-ginning Feb. 15, open until filled. Position One: **DE**filled. Position One: DE-SIGNER-HOUSING SPE-CIALIST, a sr. position in ar-chitectural design requiring: extensive experience and recognized accomplishments in innovative housing design and production; expertise in the social dimensions of housing; and ability to collaborate with social scientists. Responsibilities will include teaching advanced undergraduate studios and seminars as well as GRAPHIC MEDIA SPE-CIALIST, a jr. position, asst. prof. preferred. req. terminal degree in design/media and commitment to both teaching and research. Teaching re-sponsibilities include: advanced graphic representation; computer graphic simulation and geometric modeling; and undergraduate communications and design studios. Applicants please in-clude a sleeve of slides of representative projects and stu-dents' work. The University of Colorado has a strong commitment to a diversity including women, ethnic minorities, and disabled individuals. Submit applications with cur-riculum vitae and names, addresses and phone numbers of three refs. to Chair, Search Committee, College of Envi-ronmental Design, Univ. of Colorado Boulder, CO 80309-0314.

FACULTY POSITION

ROGER WILLIAMS COLLEGE, Architecture Division, seeks applications for the following two full-time teaching position in its 5-year Bachelor of Architecture Program starting August, 1990. The college campus is located on Mount Hope Bay in Bristol, 15 miles from Providence, RI, and 50 miles from Boston. The new Architecture Building (result of a national design competition) was dedicated in October, 1987. The Architecture Program has 280 students (out of a total day student population of 2500), received its initial accreditation by NAAB in 1985 and was subsequently reaccredited in 1987 for five years.

Position #1

Undergraduate professional instruction with primary responsibilities for teaching courses in Environmental Systems (Heating, Ventilation and Air-Condition Systems, Acoustics and Lighting). Degree in Architecture plus an advanced degree, professional registration required (architectural registration desirable), teaching experience in Environmental Systems.

Position #2

Undergraduate professional instruction with responsibilities for teaching courses in Architectural History/ Theory and Design Studio. Professional Degree in Architecture, advanced studies in architectural history (modern period), Ph.D. desirable, record of scholarship and research. Salary negotiable based on qualifications.

Send letter of application including curriculum vitae, selected examples of design work and/or research publications, names, addresses and telephone numbers of three references to Raj Saksena, AIA, Director, Architecture Division, Roger Williams College, Bristol, RI 02809. Closing date is 28 February, 1990. Affirmative Action/ EOE

FERRIS STATE UNIVER-

SITY is seeking an experi-

THE UNIVERSITY OF NORTH CAROLINA AT CHARLOTTE FACULTY POSTIONS IN AR-CHITECTURE: DESIGN, E.C.S., URBAN DESIGN, HISTORY/ THEORY

The College of Architecture seeks to fill five positions at the Associate and Assistant Professor levels. M. Arch. degree or equivalent required, prior teaching and practice experience preferred. Expertise in the areas of Contemporary History/Theory, Urban Design, Materials, Architectural Design-Construction, Site Design and Environmental Control Systems desired. Successful candidates will be committed to working with others to provide holistic, innovative architectural education and providing leadership in developing their area of expertise.

The College of Architecture, composed of 24 diverse and dedicated faculty, and an extensive distinguished visiting architects program offers a 4+1 undergraduate program and a new graduate research program focusing on Theory of Architectural and Technology Design.

Send cover letter describing your approach to teaching and area of expertise, and vita to **Charles C. Hight, Dean, College of Architecture, UNC Charlotte, Charlotte, NC 28223.** Desirable response date is February 15, 1990, but will accept applications through March 31, 1990. Affirmative Action/Equal Opportunity Employer.

Clemson University College of Architecture

The Department of Architectural Studies is seeking candidates for a tenure track position at the assistant professor level to teach in the Master of Architecture program. This position will require teaching a seminar course in architectural theory, technology or practice in addition to conducting a graduate studio.

We are also seeking candidates for a one year *visiting* position at assistant professor level which carries similar responsibilities.

Candidates must hold a Master of Architecture degree. Further academic qualifications, professional and/or teaching experience will be considered. Please send resume and a listing of references to: Professor John Jacques, AIA, Head/Department of Architectural Studies, College of Architectural Studies, College of Architecture, Clemson, SC 29634. Deadline: March 15, 1990. Clemson University is an affirmative action/equal opportunity employer.

DEAN, SCHOOL OF ARCHITECTURE PRATT INSTITUTE, NEW YORK CITY

Pratt Institute, School of Architecture invites applicants and nominations for the position of Dean.

Founded in 1887, Pratt prepares 3600 students for careers in Architecture, Art & Design, Engineering and Library and Information Science.

The School of Architecture has an enrollment of almost 900 students and faculty of 150. Degrees are offered in Undergraduate Architecture, Graduate Architecture, City & Regional Planning, Urban Design and Construction Management.

Applicants must be architects who have appropriate academic and administrative experience and are recognized leaders in the field. Nominations and/or applications with letter of interest, curriculum vitae and three references should be received by March 10, 1990.

Minorities and women are encouraged to apply. Pratt is an AA/EEO employer.

Send all materials to: Professor Stanley Salzman, FAIA, Chair, Search Committee, Pratt Institute, School of Architecture, 200 Willoughby Avenue, Brooklyn, New York 11205.

Architect with five years minimum experience in light commercial design sought for expanding Central PA developer. Competitive salary and benefits plus growth opportunity. Please send resume in confidence to: Personnel Administrator, The Patt Corporation, Box 427, Hollidaysburg, PA 16648. EOE.

TO ANSWER BLIND BOX ADS

Respond to:

Progressive Architecture Job Mart – (Assigned Number) P.O. Box 1361 600 Summer Street Stamford, Connecticut 06904

Progressive Architecture 2.90

156

ARCHITECTS

Fox-Morris specializes in the placement of architectural talent with nationally recognized firms. Current openings include:

- DIRECTOR OF MARKETING (Medical) to \$90k
 CRIMINAL JUSTICE DESIGN
- to \$65k
- HOSPITAL DESIGN to \$60k

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

enced individual for a tenure track position to teach in the established two-year Architectural Technology program, and participate in the development of the new baccalaureate program in Facilities Management. Professional degree in Architecture and architectural experience is essential. Knowledge of CAD is important. Teaching experience and architectural registration is desirable. Applications may be obtained from James B. Shane, AIA, Head, Construction Department, Ferris State University, Big Rapids, MI 49307, (616) 592-2360. Ferris State University is an AA/EOE.





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.

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 postage and handling. (\$2.50 per item outside U.S.A.) PA residents add 6% sales tax. Allow 4-6 weeks delivery

OVERNIGHT SENSATON.

OUTDOOR LIGHTING TAKES A DRAMATIC STEP OUT OF THE SHOEBOX.

INTRODUCING POLYGON FROM STAFF.

For years, innovative architects and landscape designers have been literally stuck in a shoebox when it came to choosing site lighting.

Now, with the striking new Polygon, STAFF dramatically changes the entire landscape of outdoor lighting design.

By day, its aerodynamic shape commands attention and smoothly integrates with the most contemporary design environment.



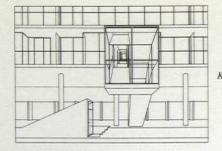
At night, the beauty of Polygon really shines. Narrow slots in its uniquely shaped reflector allow a gentle glow to transform the dark nightscape into an exciting new showcase. Type II or Type III semi-cutoff distribution makes it ideal for courtyards, parking lots, pedestrian malls, parks and building landscapes. And Polygon's dynamic new shape comes in single, double and quadruple pole and wall mounts. Write, phone or fax now for details about Polygon, and give your latest designs our glowing complements.



P.O. Box 1020, Route 9W Highland, NY 12528 Phone 914-691-6262 Fax 914-691-6289

Circle No. 367 on Reader Service Card

Furthermore . . .



Koolhaas Amsterdam housing: piloti city.

By the time you reach this page, we hope you will have noticed some substantial changes in P/A (see Editorial, p. 9), among them the fact that you wouldn't have reached this page before, as it didn't exist. "Furthermore ..." was developed as a way to let you know what's coming up in future issues and to pass along some observations that don't seem to fit elsewhere in the magazine.

The name was chosen through a scientific process under which a prize was offered to the editors. (As it turned out, the editor who was supposed to supply the prize forgot, and came up with the winning title himself in order to avoid embarrassment.) This was just a tiny episode in the laborious process of inventing a "new P/A," while continuing to put one out every month (our Art Director, in particular, experimented with minimum human sleep requirements for a couple of months), but we're proud of the result and eager to hear what you think.

. . .

The pursuit of architectural innovation sends our editors to a lot of strange places, but for a student of architecture and especially urban design, the Walt Disney World complex in Florida is among the strangest. There, on flat wet land treated as a tabula rasa, communities devoted solely to entertainment spring up, seemingly at random, evoking any number of foreign images: Hollywood, the Caribbean, Morocco, Main Street USA. All this is tied together only by common signage and the special "all-threeparks" admission rate. This Post-Modern world of isolated episodes is an appropriate place to consider the iconic, assemblage-oriented work of Michael Graves, whose Walt Disney World Swan Hotel will be featured in March.

But we wouldn't go as far as architect Adrian Smith, who, in awarding the Swan a Citation in the P/A Awards (Jan. 1989, p. 81), said, "This is the one location where [Graves's] architecture is contextual." In fact, we're offering two other Graves projects in very different contexts: the Historical Center for Industry and Labor in Youngstown, Ohio (P/A, Jan. 1988, p. 122) and his renovation and addition to the Newark Museum.

Speaking of the P/A Awards, we've noticed that the dress of jurors during the judging process usually ranges from the corporate to the casual. As a group, though, even "fashionable architects" are generally not given to sartorial fashion. The notable exception is Helmut Jahn. During the judging



this year, he was the one designer with the designer clothes. He began the judging on Sunday in a blousy shirt, which wrapped across the front to a single button, and bright green, striped socks. Subsequent sessions found him in a broad-brimmed hat, boldly striped black-and-white shirts, and neckties made of two different fabrics tied so that both showed. We mention this attire because, as we were putting together a portfolio of Murphy/Jahn projects for the March issue, we were struck by the similarities between what Helmut puts on and what he puts out. There are the wrap-around façade of the Metro West project, the brightly colored stripes of the State of Illinois project, the broad brims of 1111 Brickell, the bold patterns of the Wilshire-Midvale project. If manners make the man, so it seems here that dress drives the designer.



Fashionably lidded Helmut Jahn (left) and the fashionably lidded 1111 Brickell.

. . .

However high they might lift a building, pilotis are at an all time low in the eyes of U.S. architects, especially when used in public housing. But are pilotis so bad? A tour of Rem Koolhaas's recently completed public housing in Amsterdam for the March issue revealed how well used was the space under the main apartment block, among the pilotis. Residents employed it, that day, as a bike park, a dog walk, a playground, a shortcut to the market and, yes, a place for graffiti. Which made us wonder if, in the U.S., pilotis had received a bad rap. Have we blamed pilotis for doing just what they were supposed to do: provide space at ground level for people – people whose behavior is necessarily not socially accepted?

. . .

People are always surprised to find that we are not inundated every month with letters for our "Views" page; in fact, we publish most of them. (So, in answer to the frequent question, "How do I get published in P/A," we should perhaps reply, "Write a letter.") Much of the fun of working here, though, comes from poring through the reams of mail on other subjects that stack up in our "in" boxes. We get press releases for our sports editor (a position currently unfilled), we get weekly dispatches on the volume of Western wood sold and shipped, and we get breathless, excited notices about tract-house development openings in Florida. Among the most entertaining things we've not yet had time to answer:

A release describing a golf clubhouse designed after Monticello: "To make it instantly recognizable as Jeffersonian, we increased the size of the entire design to scale but added Palladian windows to the front and sides for more light. [The architect] thinks Jefferson would see the larger windows as an improvement, given his affinity for Palladio's work."

We were prepared to give that release an award for chutzpah until we ran across another that opened with this puzzler:

> "If God asked you to design a house for him, how exactly would you go about performing this divinely inspired task? Though God hasn't asked you to design, or me to write this letter, I have an editorial idea for you to consider about an especially immense and unusual architectural project...."

No, it wasn't a place in the Hamptons for the Almighty, just a church.

P/A Advertisers' Index

AFM Corp 150
Accugraph Corp
Alumax, Inc C3
American Marazzi Tile, Inc 10
American Seating Co
American Stair Glide Corp 154
Andersen Corp 14, 15, 126, 127
Armstrong World Industries C2, 1
Artemide, Inc 66, 67
Asbestos Abatement Services, Inc 13
noocstos riolicement oct recs, me ro
Bega/FS 12
Best Manufacturing Sign Systems . 154
Brother International Corp 33
Brunschwig & Fils 58
Carlisle SynTec Systems 98 48
Carlisle SynTec Systems 28, 48 Coil Anodizers Inc., Div. of
Lorin Industries
Lorini maustries 150
Dal-Tile Corp 26, 27
Designs on Montreal 3 154
Dover Elevator Systems, Inc 25
DuPont Co.—Antron
DuPont CoContract Textiles . 68, 69
DuPont CoCorian 141, 143
Editor Data Las
Edison Price Inc 152
Flexco Co 137
Forbo Floor Coverings, Inc 30
Formica Corp 72, 73, 145
Geocad 139
Glen Raven Mills, Inc 6, 7
HEWI, Inc 4
W.P. Hickman Co
Holmsten Ice Rinks Inc 144
International Contemporary
Furniture Fair 144
KDI Paragon Inc. 159
KDI Paragon, Inc 152
Kawneer Co., Inc 34, 35, 155
Kim Lighting 138
Kimball Office Furniture 82
Koch + Lowy, Inc 32
Leviton Manufacturing Co., Inc 56
Lighting Services, Inc
Ligne Roset
Ludowici-Celadon, Inc 146
Marble Institute of America 136
Markar Products, Inc 151
Marvin Windows 40, 41

N.C.A.R.B	0W1
National Golf Center	151
National Partitions & Interiors,	
Inc	149

PAF 32
J.W. Peters & Sons Inc 128R1-128R2
Petersen Aluminum Corp 153
Pflow Industries, Inc 29
Pioneer Plastics Corp 131
Poulsen Lighting, Inc 31
Precast/Prestressed Concrete
Institute 62
Rambusch 55
Rolscreen—Pella
Windows
Roppe Rubber Co
Schindler Elevator Corp 32A–32D
Sentry Electric Corp 147
Sharp Electronics Corp. 81 Shaw-Walker 70, 71
Shaw-waker
Sitecraft, Inc 148
Southern California Edison 80W4
Staff Lighting 158
Steelcase, Inc
Stow & Davis
Stow & Davis 2, 5
Technical Glass Products . 147, 149, 151
U.S. Brick, Inc 16
Velux-America, Inc
Villeroy & Boch (U.S.A.), Inc 133
A MARKED AND AN AND AN
W & W Glass Products, Ltd 140
Watson Bowman Acme Corp 46
Wayne-Dalton Corp C4
Weatherend Estate Furniture 42
Wells Fargo Bank 80W2-80W3
Westinghouse Furniture Systems . 17-20
Wirsbo Co

Executives on the Go Supplement Best Western International ... 128A5 United Airlines 128A8

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

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

Atlanta, Georgia 30326:

3400 Peachtree Road, NE-Suite 811 Lennox Tower 404-237-5528 Fax 404 237 1 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. 203-34 203-348-7531 Thomas K. Healy, District Manager Chicago, Illinois 60601: 2 Illinois Center Bldg, Suite 1300 312-861-0880 Fax 312 861 0874 312-861-0880 Fax 312 861 Patrick J. Carroll, Brian Keenan District Managers Gail Lisac, Sales Service Cleveland, Ohio 44114: 1100 Superior Ave. 216-696-7000 Fax 216 696 876 John F. Kelly, Western Sales Manager Fax 216 696 8765 Dallas, Texas; St. Louis, Misouri: 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 Fax 303 692-0219 Albert Ross, District Manager Los Angeles, California 91436: 16255 Ventura Blvd, Suite 300 818-990-9000 Fax 818 905 1206 Michael T. Grennan, 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 Charles B. Selden, District Manager Philadelphia, Pennsylvania: 600 Summer Street, P.O. Box 1361 Stamford, CT 06904 203-348-7531 Charles B. Selden, District Manager San Francisco, California 94010: San Francisco, California 94010: 840 Hinckley Road, Suite 233 Burlingame, CA 94010 415-692-1381 Fax 415 692-7406 Susan M. Werner, District Manager

Italy: Publizeta Via Corticella, 216/6 Via Corticetta, 216/6 40128 Bologna Telephone: 051/320309-325452 Fax: 051-320309 Roberto Zucchini Paris, France:

Paris, France: Continental Europe 12 Avenue Franklin-Roosevelt, 75008 Telephone: 43 59 36 06 Telex: 26 Fax: 43 59 76 70. Yvonne Melcher, Manager Telex: 260717,

Tokyo, Japan 101: Bancho Media Service No. 1 Nisawa Bldg, 5th Fl. 2-3-1 Kanda Tacho Chiyoda-Ku Telephone: 03-252-2721 Fax: 011-81-252-2780 Isao Murkaoshi

United Kingdom: Wood Cottage, Shurlock Row Reading, RG10 OQE, England Telephone: 0734-343302 Telex 848800 Techno G Fax 0-734-343848 Malcolm M. Thiele Managing Director, U.K.