

The background of the cover is a photograph of a building's exterior. On the left, there is a light-colored stone or concrete wall with a decorative circular medallion and a recessed rectangular opening. On the right, there is a red brick wall. The central part of the image is a dark, shadowed area, possibly a doorway or a recessed part of the building.

ARCHITECTURAL RECORD

Business Design Engineering
A McGraw-Hill Publication, Seven Dollars
March 1988





Now there's a new vinyl floor
worth celebrating.

Suffield features random specks of color that contrast with a classic background. The result is a look never before seen in a 6' vinyl sheet.

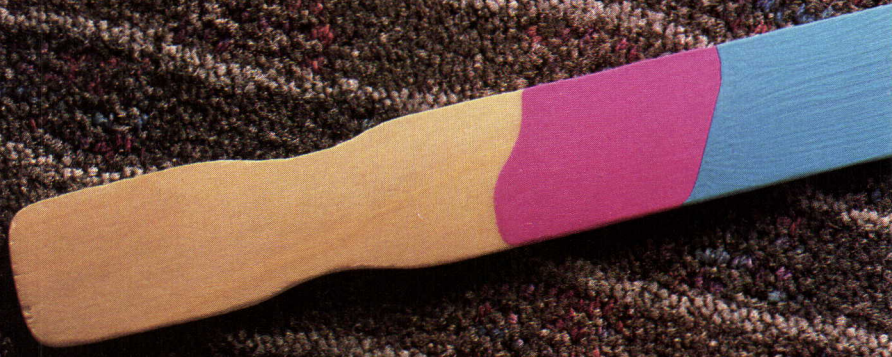
The floor's pattern extends through the rugged 50-mil wear layer, so its good looks endure tough traffic. Vivid accent colors and subtle surface texture help hide indentations. And the seams are chemically bonded to prevent accumulation of dirt and moisture.

For more information about the freshest look in contract vinyl sheet flooring, call 1 800 233-3823 and ask for Suffield.

Armstrong

Circle 1 on inquiry card

ASID DESIGN AWARD WINNER



The Artline Collection.

DUPONT
ANTRON XL
NYLON



Custom design options in carpet.

Artline commercial carpets offer sophisticated design options in 38, 40, and 45 oz. face weights.

Many patterns allow you to specify any color for distinctive, totally personalized designs which you can change dramatically by rearranging the colors.

All Artline patterns coordinate with each of our 30 solid-color cut piles or friezes for border treatments and accessorizing. And with our selection of 71 precoordinated colorways, your options are virtually endless.

For more information on personalizing a pattern, call 1 800 233-3823 and ask for Artline.

Armstrong

Circle 2 on inquiry card

Charles Hoyt's thoughtful overview [ARCHITECTURAL RECORD, January 1988, page 27] of "Build Boston," the New England design profession's annual convention and tradeshow, was a comprehensive summary of a complex event.

"Build Boston" is an industry event analogous to any building project—numerous professions make up the project team. The multidisciplinary team works on a building and Charles Hoyt incisively identified how it works every year for "Build Boston."

The Boston Society of Architects hopes to share its "Build Boston" model with other states and welcomes inquiries on the convention, the tradeshow component, and the industry-wide collaboration.

Richard Fitzgerald
Executive Director
Boston Society of Architects

While I very much enjoyed Steven Holt's review of *Carlo Scarpa: The Complete Works and Carlo Scarpa: Theory, Design, Projects* [RECORD, October 1987, page 87], and the depth of the understanding of Scarpa's work and influence, I find it curious that someone as involved with the history of design and architectural ideas as Mr. Holt should use a term of recent and specific coinage without defining its context or providing attribution.

Mr. Holt and I were present last October at the Form I program at the IDC/NY when Ralph Caplan, during his keynote talk, related a conversation in which I had observed that in the repudiation of Modernist functionalism, generations of designers and architects who had never acknowledged the emotional content of design were going to have to learn to deal with it remedially and learn what I called "emotional ergonomics." Ralph replied that it was "such an attractive concept that no one should talk about it because

pretty soon it will become a 'thing.' There will be courses in emotional ergonomics, and there are going to be emotional ergonomists . . . and after all, ergonomics is supposed to include all the emotions. It is like our tendency to take the nourishment out of bread, and then enrich it by putting some of the vitamins back. It's too late to see it as part of what every designer ought to think about as a matter of course."

Therefore, while Scarpa's synthesis of form and emotive content is certainly a meaningful and highly developed expression, it seems to me denigrating to Scarpa for Mr. Holt to call him a "pioneer of emotional ergonomics" when, in fact, Scarpa had the depth and understanding to work in a far older and richer tradition from which the "emotional enrichment" was never removed.

Richard Penney
The Richard Penney Group
New York City

I was intrigued by your presentation of Frank Gehry's Fishdance Restaurant [RECORD, January 1988, pages 80-87] and think it would be of great interest to us mere practitioners who face our run-of-the-mill clients to know more of the architect-client relation in such unusual projects as this.

How do these jobs originate? What is the dialogue between architect and owner? What happened at first presentation? What are the fees (the greatest mystery of all)? I'm curious about all human-interest aspects of the building process.
Fred L. Liebmann, AIA
New York City

Correction

Pages 38 and 40 in our February issue were inadvertently switched by our printer. The article is reprinted on pages 36, 37, and 38 of this issue.

March 15 through April 15
Italian Tile Environment, an exhibit of new uses for ceramic tile, designed by John Saladino; at the Italian Tile Center, 499 Park Ave., New York, N. Y. 10022.

March 17
NRCA Roofing Systems Conference, for architects, engineers, specifiers, and other construction professionals, sponsored by the National Roofing Contractors Association; in Miami. For information: NRCA, One O'Hare Centre, 6250 River Rd., Rosemont, Ill. 60018 (312/318-6722).

March 22-25
CAE India '88, international conference and exhibition on computer-aided architecture and engineering, as well as other computer activities; in New Delhi. For information: Tara S. Ganguli, Director, Technology and Research Associates, 5, Lindsay St., Calcutta 700087, India (033/29-9420).

March 24-27
Preserving Wright's Heritage, a symposium and festival sponsored by Domino's Pizza, Inc., in cooperation with the University of Michigan; at Domino's Farms and the University of Michigan campus, Ann Arbor. For information: University of Michigan Extension Service, Conference & Institutes (313/764-5305).

March 24 through August 31
A retrospective exhibit of the building projects of James W. Rouse, including his plans for "festival marketplaces" and urban redevelopment in Baltimore and Boston; at the National Building Museum, Washington, D. C.

March 29
The Site as a Determinant of Form, a lecture given by Werner Seligmann, sponsored by Yale University; at the Yale Art Gallery Lecture hall, New Haven, Conn. For information: Yale University School of Architecture (203/432-2289).

ARCHITECTURAL RECORD (Combined with AMERICAN ARCHITECT, and WESTERN ARCHITECT AND ENGINEER) (ISSN0003-858X) March 1988, Vol. 176, No. 3. Title © reg. in U.S. Patent Office, copyright © 1988 by McGraw-Hill, Inc. All rights reserved. Indexed in Reader's Guide to Periodical Literature, Art Index, Applied Science and Technology Index, Engineering Index, The Architectural Index and the Architectural Periodicals Index.

Every possible effort will be made to return material submitted for possible publication (if accompanied by stamped, addressed envelope), but the editors and the corporation will not be responsible for loss or damage.

Executive, Editorial, Circulation and Advertising Offices: 1221 Avenue of the Americas, New York, NY 10020.

Officers of McGraw-Hill Information Systems Company: President: Richard B. Miller. Executive Vice Presidents: Rick Jannott, Construction Information Group; Russell C. White, Computers and Communications Information Group; J. Thomas Ryan, Marketing and International Group. Vice Presidents: Frank A. Shinal, F. W. Dodge Group; Peter B. McCuen, Sweet's Group. Vice President-Group Publisher: Ted R. Meredith, Construction Magazines. Senior Vice Presidents-Publisher: David J. McGrath, ENR. Vice President: Robert D. Daleo, Controller; Fred O. Jensen, Planning and Development; Michael J. Koeller, Human Resources; Julia Lenard, Systems Planning and Technology; Colin B. Ungaro, Editorial.

Officers of McGraw-Hill, Inc.: Harold W. McGraw, Jr., Chairman; Joseph L. Dionne, President and Chief Executive Officer; Robert N. Landes, Executive Vice President, General Counsel and Secretary; Walter D. Serwatka, Executive Vice President, Chief Financial Officer; Shel F. Asen, Senior Vice President, Manufacturing; Robert J. Bahash, Senior Vice President, Finance and Manufacturing; Frank D. Penglase, Senior Vice President, Treasury Operations; Ralph R. Schulz, Senior Vice President, Editorial; George R. Elsinger, Vice President, Circulation.

Associated Services/McGraw-Hill Information Systems Co.: Sweet's Catalog Files (General Building, Engineering, Industrial Construction and Renovation, Light Residential Construction, Interiors), Dodge Building Cost Services, Dodge Reports and Bulletins, Dodge/SCAN Microfilm Systems, Dodge Management Control Service, Dodge Construction Statistics, Dodge regional construction newspapers (Chicago, Denver, Los Angeles, San Francisco).

Subscription rates for personnel of Architectural, Engineering, Interior Design, Design and other directly related firms and students thereof, are as follows: U.S. and U.S. Possessions \$39.00; Canada \$39.00; all other countries \$125.00. Single copy price for Domestic and Canadian: \$7.00; for Foreign: \$12.00.

Change of Address: Forward changes of address or service letters to Fulfillment Manager, ARCHITECTURAL RECORD, P.O. Box 2025, Mahopac, NY 10541. Provide both old and new address; include zip code; if possible attach issue address label.

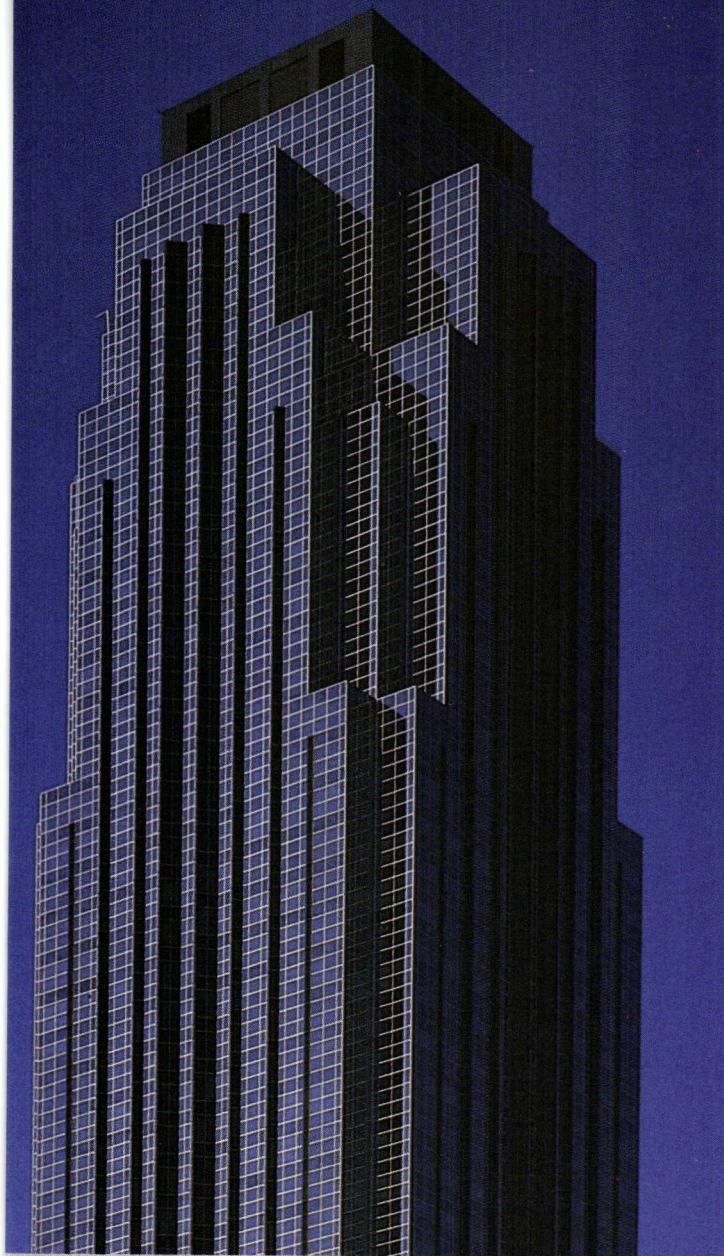
Guarantee: Publisher agrees to refund that part of subscription price applying to unfiled part of subscription if service is unsatisfactory.

Copyright and Reprinting: Title © reg. in U.S. Patent Office. Copyright © 1988 by McGraw-Hill, Inc. All rights reserved. Where necessary, permission is granted by the copyright owner for libraries and others registered with the Copyright Clearance Center (CCC) to photocopy any article herein for the base fee of \$1.50 per copy of the article plus 10 cents per page. Payment should be sent directly to the CCC, 21 Congress Street, Salem, MA 01970. Include code with request: ISSN0003-858X (\$1.50 + .10). Written permission must be secured for any other copying. Write Reprint Manager for such permission at address below, or to obtain quotations on bulk orders.

Subscription List Usage: Advertisers may use our list to mail information to readers. To be excluded from such mailings, subscribers should send a request to: ARCHITECTURAL RECORD, Mailing List Mgr., P.O. Box 555, Hightstown, NJ 08520.

Publication Office: 1221 Avenue of the Americas, New York, NY, 10020. ARCHITECTURAL RECORD (ISSN0003-858X) published monthly with additional issues in April and September by McGraw-Hill, Inc. Second-class postage paid at New York, NY and additional mailing offices. Postage paid at Windsor, Ontario, Canada. Registration Number 9617.

Postmaster: Please send address changes to: Fulfillment Manager, ARCHITECTURAL RECORD, P.O. Box 2025, Mahopac, NY 10541. THIS ISSUE is published in national and separate editions. Additional pages or separate editions numbered or allowed for as follows: Eastern Section 32Ea through 32Eb. Central Section 32Ca through 32Cb. Western Section 32Wa through 32Wd. Sunbelt Section 32Sa through 32Sb.



The Technical Spectrum

Thermopane® insulating glass has provided clear solutions widely differing technical problems for decades.

Now it's more versatile than ever. Consider, for example, Thermopane with an outboard light of Vari-Tran® solar control glass. It offers the dual benefits of reduced air-to-air heat transfer and solar radiation control. Which means enhanced visual and thermal comfort for the people within.

Or consider Thermopane with a neutral Janusite® low-emissivity coating, which admits high levels of visible light, yet blocks longwave infrared radiation. It provides unparalleled reduction in air-to-air heat transfer, along with an uncoated appearance.

For more information on today's Thermopane insulating glass, contact Spectrum Glass Products, P.O. Box 408, Clinton, NC 28328. (919) 592-7101. Telex: 910 380 9098.

**SPECTRUM**
GLASS PRODUCTS
Circle 3 on inquiry card



The Architectural Spectrum

Spectrum's wide array of high performance glass products could be instrumental to resolving your fenestration problems.

Select Thermopane® insulating glass with neutral Janusite® coating to enhance thermal performance, but retain the aesthetics of uncoated glass. Or choose from 34 varieties of Vari-Tran® solar control glass, ranging from bright and shiny to dark and subdued. Coatings include Antique Silver, Sterling Silver, Sapphire Blue and Burnished Bronze.

Design spandrels with glasses which closely match the appearance of vision areas. Or band the building subtly or in a bold expression of color.

For further details on the complete array, call or write Spectrum Glass Products, P.O. Box 408, Clinton, NC 28328. (919) 592-7101. Telex: 910 380 9098.

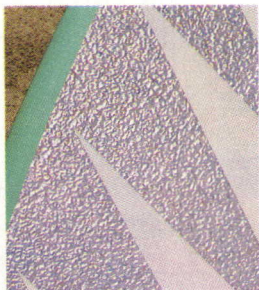
**SPECTRUM**
GLASS PRODUCTS
Circle 4 on inquiry card



COORDINATION ACROSS THE BOARD

You're riding the next wave of color and design with an unerring sense of balance, an instinct for changing conditions — and one hot design board.

This kind of total coordination is the essence of the WILSONART Surfacing Safari. It's the glistening look and texture of coarse grained sand. The primitive beat of weathered abstracts — both washed in three cool, muted colorwaves. Then, just to make things even more intriguing, we splashed the entire



beach-cool palette onto another abstract and a radical new linear.

It's a tasty set of eight new patterns — with enough coordination possibilities to get your brainwaves pumping like the thirty footers at Pipeline. So if the laminates you've seen lately leave you without even a ripple of excitement, embark on the WILSONART Surfacing Safari.

There's no better way to exercise your imagination.

Join us on our Surfacing Safari

For "full on" delivery of product samples and literature, call toll-free (in the continental U.S.):

1-800-433-3222 In Texas: 1-800-792-6000



SURFACING SAFARI™
WILSONART®

Bringing new solutions to the surface™



Editor
Mildred F. Schmertz, FAIA

Managing editor
Carolyn De Witt Koenig

Executive editor
Douglas Brenner

Senior editors
Herbert L. Smith, Jr., FAIA
Grace M. Anderson
Margaret F. Gaskie
Paul M. Sachner
Charles K. Hoyt, AIA
Darl Rastorfer
Deborah K. Dietsch

Associate editors
Karen D. Stein
James S. Russell, AIA

Assistant editor
Joan F. Blatterman, new products

Design director
Alberto Bucchianeri
Anna Egger-Schlesinger, senior associate
Muriel Cuttrel, illustration
J. Dyck Fledderus, illustration

Design consultant
Massimo Vignelli

Editorial production manager
Annette K. Netburn
Adrienne FitzGerald, assistant

Editorial consultants
George A. Christie, Jr.
Jonathan Barnett, FAIA, AICP

McGraw-Hill World News
Peter Gall, director

Group circulation director
Richard H. Di Vecchio

Circulation manager
Phyllis Josselson

Director of business
and production
Joseph R. Wunk

Director of marketing
Camille H. Padula

Assistant to publisher
Elizabeth Hayman

Publisher
Ted R. Meredith

Inquiries and submissions of work for publication may be addressed to any editor, though the editors listed below have a special responsibility for the subject areas named:

Deborah K. Dietsch, interior design, houses
James S. Russell, design news and competitions
Charles K. Hoyt, business
Herbert L. Smith, architectural education
Darl Rastorfer, engineering
Joan F. Blatterman, new products and product literature

Letters/calendar, 4
Editorial: In the public interest: Housing, 9

Business

News, 33
Practice: The new AIA General Conditions—a flawed document that architects will use at their peril, by Carl M. Sapers, 36
Practice: The AIA defends A201/1987, 40
Management: "Better Codes = Better Buildings." An AIA conference in Boston, 45
Finance: Industrial production will keep the economy growing, 47

Design

News, 59
Design awards/competitions, 70
Observations/books, 75

In this issue, 85

Rowes Wharf, Boston, Massachusetts, 86
Skidmore, Owings & Merrill, Architects

Eight projects by the Office for Metropolitan Architecture, 94

Clark Bandstand, Oberlin, Ohio, 108
Julian S. Smith, Architect

Building Types Study 650: Firehouses, 110
Firehouse for Engine Co. 233 and Ladder Co. 176, Brooklyn, 112
Eisenman Robertson, Architects
Canton Fire Station No. 3, Canton, Mississippi, 116
Mockbee-Coker-Howarth-Architects
Wellesley Fire Station Headquarters, Wellesley, Massachusetts, 118
Schwartz/Silver, Architects
Fire Station Five, Columbus, Indiana, 122
Susana Torre in association with Wank Adams Slavin Associates, Architects and Engineers

Engineering

Light-powered architecture, 126
By Christopher C. Swan

Computers: Technology, 135
Software reviews for architects, by Steven S. Ross
Computers: Are they right for the small architectural firm?, 141
By Keith Kondrot

New products, 130
Product literature, 145
Manufacturer sources, 165
Classified advertising, 173
Advertising index, 188
Reader service card, 191

Cover:
Rowes Wharf, Boston, Massachusetts,
Skidmore, Owings & Merrill, Architects
Photographer: ©Steve Rosenthal

Lighting the way to tomorrow.

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

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

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

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

 **Kawneer**
The Designer's Element

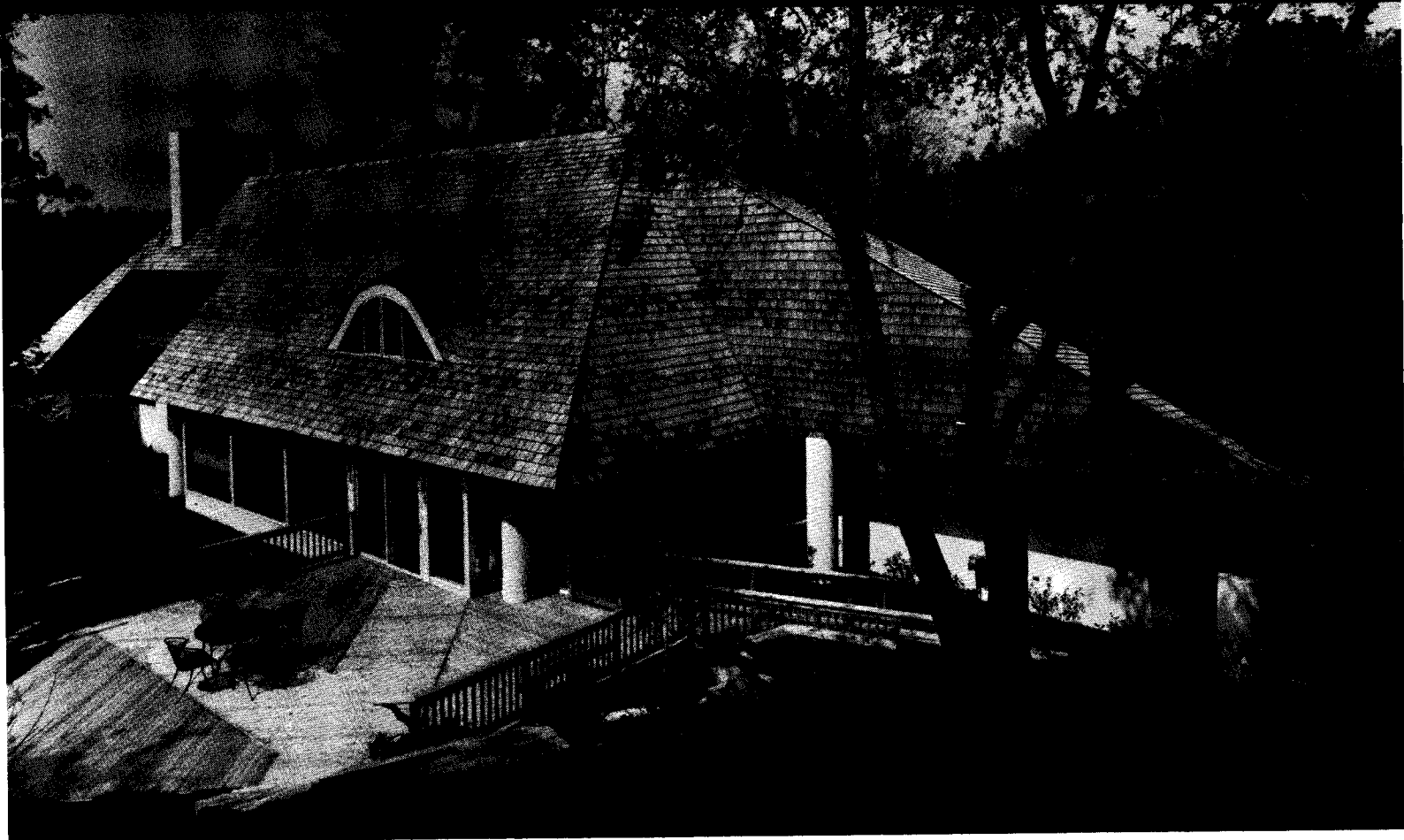
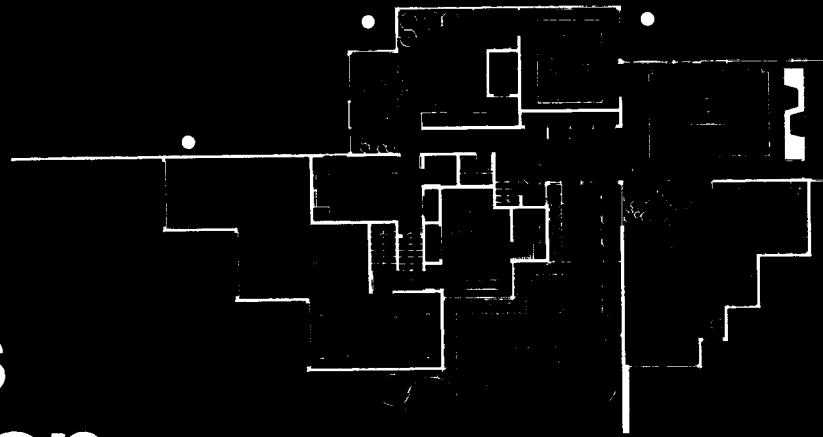




*For full technical description, tracing details and specifications,
contact your Kawneer representative or write to: Kawneer Company, Inc.,
Department C, Technology Park-Atlanta, 555 Guthridge Court, Norcross, GA 30092.*

Circle 9 on inquiry card

Sometimes compromise is the best solution.



He wanted clean and contemporary. She was inclined toward the more traditional. With the help of beautiful, enduring red cedar shingles, the architect pleased them both.

But there's more to red cedar shingles and shakes than first meets the discriminating eye. Here is a roof that endures for decades. Plus energy efficiency that's hard to surpass.

To fully understand why red cedar shingles and shakes are such a superior solution, write for your free copy of the Architect's Cedar Library. It tells you everything you need to know regarding insulation, ventilation, product selection and more.

Simply address your request to:

Cedar Library, Suite 275, 515-116th Ave. NE, Bellevue, WA 98004.



These labels on the bundles of Red Cedar shingles and shakes are your guarantee of Bureau-graded quality. Insist on them.

Bloomfield Hills, Michigan home
Architects: Kenneth Neumann/Robert Greer
& Associates

Circle 11 on inquiry card

Multiply the Possibilities



VELUX® prefabricated gang flashings let you group VELUX roof windows and skylights in almost any combination quickly and easily.

The precision engineering of VELUX gang flashings allows weather tight installation without the need for caulk or mastic. This means no weather delays, mess, and less chance of callbacks. In addition, VELUX gang flashings are readily available nationwide in a wide range of standard sizes to meet your timing requirements and your deadline.

Sales, Warehousing and Service Nationwide



The world leader in roof windows and skylights.

Circle 12 on inquiry card

©1988 VELUX-AMERICA INC.



For more information about VELUX Gang Flashings, send for a free copy of our VELUX Gang Flashing brochure, plus "The Complete Guide to Roof Windows and Skylights", and a price list. Your inquiry will be answered within 24 hours.

Name _____

Firm _____

Address _____

City/State/Zip _____

VELUX-AMERICA INC.
P.O. Box 3268
Greenwood, SC 28648

VELUX-CANADA INC. AR3
16817 Hymus Blvd.
Kirkland, P.O. Canada H0H3

An inspired definition

Newhouse Group furniture — mid-priced, freestanding furniture that makes it easy to create a space to fit the work habits of anyone on the organization chart.

Sixteen sizes of Table Desks (in laminate, re-cut, or full-cut veneers) coordinate with matching storage alter-

natives — Pedestal Drawers, Lateral Files, Side Cars, Credenzas, Bow Front Cabinets.

An economical option to paneled cubicles...

A way to introduce more space and openness to the office...

An innovative approach to

the problems caused by frequent reorganization...

Compatible with all Herman Miller open-plan products — the Action Office and Action Office Encore systems and Ethospace interiors...

Seating, systems, and now freestanding furniture — the beginning of yet another

trend in the art of furniture design. From the company that understands how people work in an office...

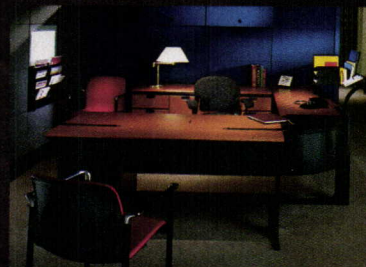
For more information call 1-800-851-1196 from anywhere in the U.S. or Canada.

1987 IBD Gold Award, desk and credenza category

The Newhouse Group

FREESTANDING WORK SPACES

of versatility!



herman miller

919/227-6211. *Sunbrella Firesist is a registered trademark of Glen Raven Mills, Inc. *SEF-PLUS is a registered trademark of Monsanto Chemical Company.

Sunbrella Firesist®

Circle 14 on inquiry card

Stanley plays leading role in Theatre Building comeback.

1928. Louisville, Kentucky. It's Sunday. Just about everyone is out strolling Fourth Avenue. A few people are headed to the Brown Hotel for lunch. Some are window-shopping. Others are going to the new United Artists' Theatre for an afternoon matinee.

As people file into the movie house, hardly anyone notices the new building next door. Many architects believe it's the state's finest example of beaux arts and art deco design. But the crowd is talking more about the star of this new film. Some fellow named Chaplin.



Stanley salesman Bill Baines. (He's also the pilot in the ad at right.)

It's now 1987. And the building no one noticed in 1928 is getting an awful lot of attention.

It was placed on the National Register of Historic Places in 1982, and a renovation project

was begun in 1984.

A few months ago, the large bronze-plated front doors were taken down to be cleaned. Paul Lichtefeld, owner of the building, and Pat Fry, his Project Manager, noticed the old hinges were damaged and corroded.

"We tried stripping and cleaning

them, but that didn't help," said Fry. "Then I went through catalog after catalog, but couldn't find anything that resembled them," he added.

Finally, Fry took the hinges to a local hardware distributor.

After recognizing the old Stanley logo on the leaf, the distributor asked Stanley sales rep Bill Baines if the company could manufacture six new hinges.

"What caught my eye about these hinges," said Baines, "was that they utilized two distinct features you don't normally find together."

The first was a "slip-in" frame leaf, which allows

the hinge to act as a reinforcement.

The second was a "half surface" door leaf, which attaches to the pull face and adds additional hanging strength.

"The handwork involved in manufacturing these hinges was extensive. We're just fortunate to have production people who can still handle that kind of detail," commented Baines.

"This was one project where something else simply wouldn't do," explained Fry.

Indeed. Originally built in 1928 by world-renowned architect John Eberson, the Theatre Building is a mine of architectural delights.

The entry way is finished in red marble with bronze lettering. The front doors are deeply recessed and topped by a multipaned transom. And above that is some rather intricate metal grillwork.

The four-story structure is faced with smooth beige tile and enriched with an array of terra-cotta ornamentation.

The interior is just as lavish.

The corridor to the elevator has a terrazzo floor and marble wainscoting, plus art deco chandeliers hanging from a coffered ceiling adorned with roses.

Fry admitted it wasn't easy restoring the 30,000 square feet of office space to its original splendor. But he agreed that having Baines as part of his supporting cast helped the project receive rave reviews.

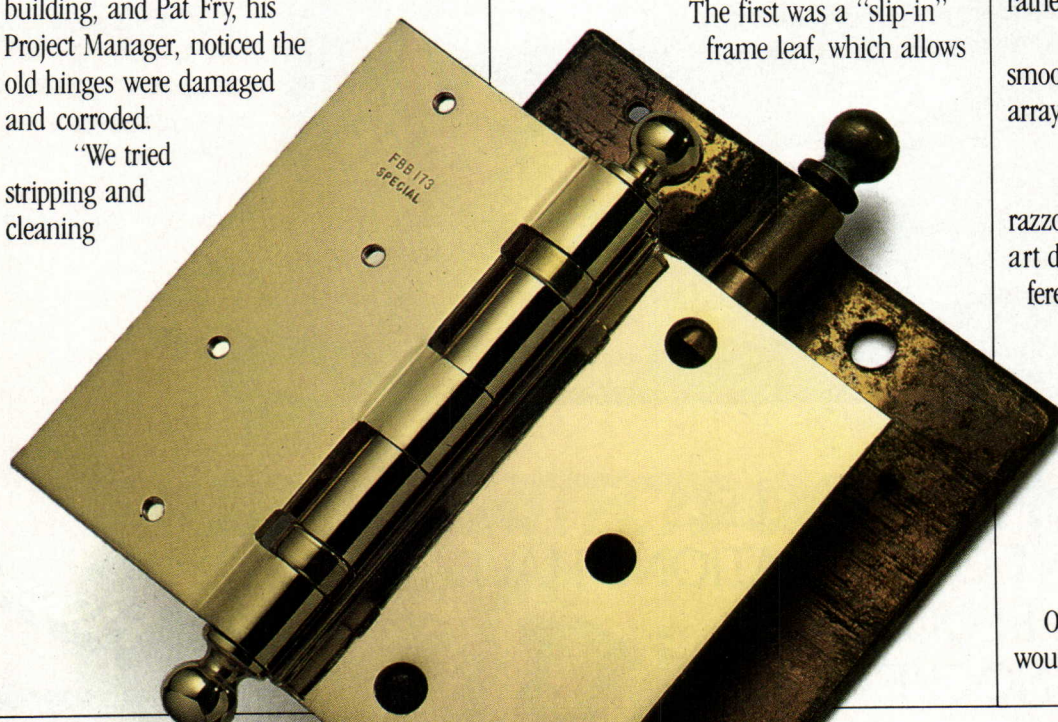
It's just too bad they don't give Oscars for building renovations. Stanley would be a shoo-in.



WE GO OUT OF OUR WAY TO DELIVER.

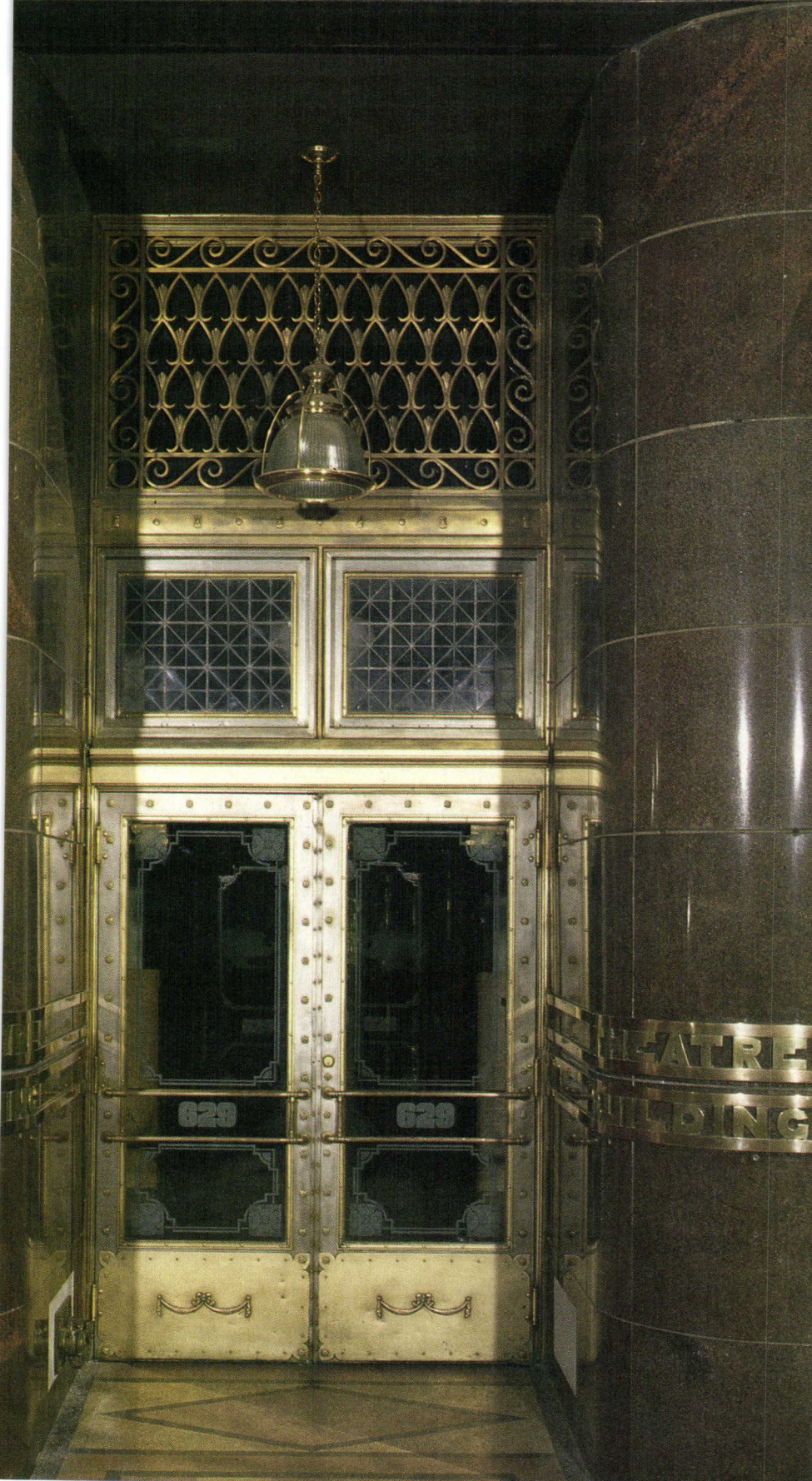
At Stanley Hardware, do a promise we deliver on, request is too small. No so great that it will keep our appointed rounds. Our factory-trained crew is made up of dedicated men and women, every mountain and Ford team. To get you what When you need it. What need it. They realize that service, and a "can-do" what helps their customer to the top.

Talk about truth in advertising.



A star is born. The new hinge next to its predecessor.

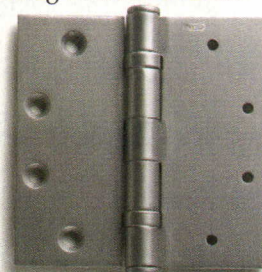
THEATRE BUILDING



DID YOU KNOW?

Slip-in hinges.

There are two types of slip-in hinges widely used for aluminum tubular frames where mortising would be difficult.



“Application A” is a hinge with only the frame leaf drilled and tapped (12–24). The door leaf is countersunk for #12 screws and

fits into a standard mortise in the door edge.

“Application B” has both leaves drilled and tapped, so that the entire hinge clamps onto the inside of the tubular frame *and* onto the inside of the tubular door stile.

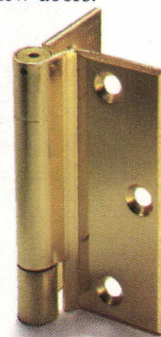
Half surface hinges.

Half surface spring hinges are an excellent way to hang and automatically close fire doors. Especially for retrofit work where existing frames are to be reused along with new doors.

Given a proper size match, the existing mortise will accept the frame leaf, allowing the surface applied door leaf to fall where it may on the face.

Transfer drilling for through bolts and back plate completes the installation without any need for coordinating the location of the existing hinge mortises in the reused frame. Simply adjust the spring tension, and you're done.

Just remember that half surface spring hinges are used only where you would normally use traditional spring hinges. For more information on Stanley Hardware, including a free sample of a slip-in or half surface spring hinge, write Dave Loughran, AHC/CDC, Stanley Hardware, 195 Lake Street, New Britain, CT 06050.



STANLEY

HARDWARE
helps you do things right.®

Circle 18 on inquiry card

LET YOUR IMAGINATION SOAR...



VENTURE PLAZA
Detroit, MI
Architect: Neumann Greager
& Associates
DECORA® Pattern

PITTSBURGH CORNING

PC GLASSBLOCK® PRODUCTS

Capture the dazzle and dynamics of light. Define space with a frozen wave of glass. Your imagination rules when you design with PC GlassBlock® products.

No other building component offers such versatility for both interior and exterior design. And no other transmits such a high percentage of available light while simultaneously providing desirable privacy.

And PC GlassBlock® products, with their variety of shapes, patterns and sizes, *further* expand your innovation horizons.

But the beauty of PC GlassBlock® products doesn't stop with aesthetics and design. There's an important functional side, too. An insulation value equal to double-pane glazing—for reduced HVAC requirements. Light transmission that lowers interior lighting needs. Sound insulation that minimizes noise penetration. No dirt, dust or drafts. And, greatly reduced maintenance. It's encouraging to know that something so beautiful can also be so practical.

Pittsburgh Corning, the sole American manufacturer of glass block, has been fueling imaginations since 1938. We offer thorough, accurate technical information and personal assistance through your Pittsburgh Corning representative. Call today. We're ready to help you soar!

For information, call our PC GlassBlock® Products Hotline: 800-992-5769. (In Pennsylvania, 800-992-5762). Or write Pittsburgh Corning Corporation, Marketing Department AGB-8, 800 Presque Isle Drive, Pittsburgh, PA 15239. In Canada, 106-6 Lansing Square, Willowdale, Ontario M2J 1T5; Tel.: (416) 222-8084.



AUSTIN III BUILDING
Youngstown, OH
Architect: Buchanan, Ricciuti
& Associates
HEDRON® I and
STANDARD SERIES Squares
DECORA® Pattern,
Black Edge-coated

NORWOOD PARK SOUTH
Norwood, MA
Architect: Project Planners Inc.
SOLAR REFLECTIVE Glass Block



PITTSBURGH
pc®
CORNING

Circle 20 on inquiry card

Esco Reveals The Hole Truth About Hydraulic Elevators.



If you believe that you can't have the reliability of a hydraulic elevator without the time and cost required to drill a hole, you haven't been told the hole story. ESCO's 886 is a completely self-contained "holeless" hydraulic elevator. Its unique design requires no hole or building modifications, making it the ideal choice for two or three landings.

Innovations such as the 886 are why architects and building owners have specified ESCO elevators for more than 50 years. Write today for a free brochure or call ESCO at 817-478-4251. We'll reveal the hole truth about hydraulic elevators – and a whole lot more.

 **ESCO**
ELEVATORS, INC.

P.O. BOX 445 ■ FORT WORTH, TEXAS 76101 ■ 817-478-4251

Circle 21 on inquiry card

TISCHLER WINDOWS AND DOORS. UNCOMMON. UNCOMPROMISING.



TISCHLER UND SOHN

Made in Germany since 1888.

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

Circle 22 on inquiry card

Circle 28 on inquiry card

ONCE AGAIN, DRAMATIC OUTDOOR LIGHTING IS IN THE SPOTLIGHT.

Announcing The Second Annual Night Beautiful Contest.

Beautifully lit buildings attract more attention. Especially when Florida Power & Light and the Illuminating Engineering Society stage their annual salute. Any building with exceptional lighting design in the FPL service area can be entered.

For information and entry forms that could put your building in the spotlight, call Dolores Puls, (305) 227-4323. Deadline: April 1, 1988. Sponsored by IES in cooperation with FPL.

FPL 

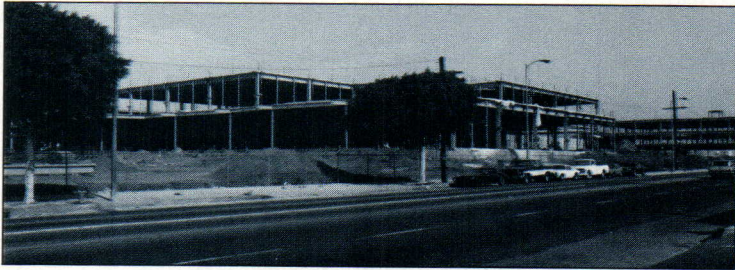
IES

Circle 29 on inquiry card



The postman will deliver a lot less than expected

NCARB offers certification to Californians



Congress giveth and Congress taketh away and, for the Postal Service, it's now mostly the latter. Drastic budget cuts in the 1988 budget will force the service to eliminate most of its once-ambitious construction and renovation program (RECORD, September 1987, page 35) this year and next.

The \$1.25-billion cuts are less deep than first feared; original plans called for slicing \$1.7 billion. Nevertheless, Postmaster General Preston R. Tisch, who has announced he will resign in the near future, says: "Our plan to build or modernize badly needed postal facilities

throughout the country will be virtually wiped out."

Tisch says the service will cancel 50 percent of the projects scheduled for fiscal years 1988 and 1989, overall, and 75 percent of those which would have gone forward in 1988. "The net effect of this will be that new-facility construction projects not already under contract will be eliminated," Tisch adds.

An agency spokeswoman says the basic rule is that the current stage of projects for which contracts have been awarded will be completed. Suspensions of construction not currently under contract can be expected to affect large and small projects alike. Major projects that will continue include two in California—Los Angeles (photo of Albert C. Martin Associates' \$150-million project shown above) and San Bernardino—and one in Austin, Texas.

Peter Hoffmann, World News, Washington, D. C.

Now that California is holding its own architectural-registration examination (RECORD, June 1987, page 39), the National Council of Architectural Registration Boards, in cooperation with the Nevada state board, will offer the national exam used by other states in various California locations. The national exam is required by NCARB to certify architects for practice nationwide. The first such exam will occur in June for which applications must be in by March 15. For information: contact the NCARB at 1735 New York Avenue, N. W., Washington, D. C. 20006 (202/783-6500).

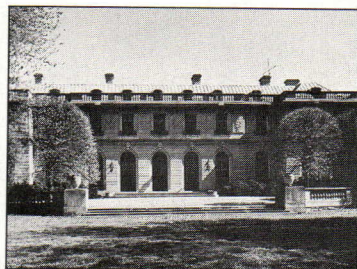
Public agencies to demand proprietary systems?

A seminal thrust by corporations and public agencies to demand that their consultants work on computer systems compatible with their own has recently picked up momentum. Some consultants have seen the only holdup as the clients' decisions on which system to use. Now, while the Post Office Department may prefer AutoCAD, the Army Corps of Engineers is going with Intergraph, says consultant Eric Teicholz, whose company, Graphic Systems, Inc., served as consultants to the Corps. "The systems don't talk to each other particularly well," he adds. Nonetheless, the two agencies may be demanding that architects and engineers produce their work on compatible systems or even the same systems as their own as early as this year. If all this turns out to be the case, "the implications for the design professionals could be broad and very far-reaching," says Teicholz. *C. K. H.*

Even for renovation, it's location, location, location

Purchasing an existing building for renovation remains a smart investment. That was the message of a recent seminar in Chicago sponsored by the National Association of Realtors and the National Trust for Historic Preservation. Of particular interest was the subject of matching the renovation to the location. Architect William MacRostie, president of Heritage Consulting in Washington, D. C., speaking on transition in resurgent neighborhoods, noted that during the initial pioneer stage, risk is high and finding financing difficult, but property can be

very cheap and the profit potential thus strong. Making sure that a structure's architecture has worthwhile characteristics is essential to help convince tenants to live or work in a building in a neighborhood that is not itself an enticement. During the second stage, other rehabilitation projects are under way and property prices have risen, reducing profit potential. But this period usually appeals to the most investors because financing is available and neighborhood stability has reduced the risks. *Jeff Trewitt, World News Chicago*



An ultimate in established locations, Grosse Pointe Farms, Mich., was the scene of the conversion to 13 condominiums by architects Rossetti/Associates of the Horace Dodge house.

MOST OF YOU WOULDN'T REPLACEMENT WINDOWS I

It was a rather typical situation. An old building. Historically significant. With the original windows that were horribly inefficient. And energy maintenance costs rising.

Up to now, you probably thought you were limited to replacement with special-sized windows to preserve the architectural integrity. Unfortunately, this has often meant sacrificing product quality.

ANDERSEN® WINDOWS: THE PERFECT SOLUTION.

All of the replacement windows in this building, over 650 of 'em, are stan-

dard sized, readily available Andersen Narroline® double-hung windows with double-pane insulating glass.

They met all terms, codes and conditions.

With the product backup Andersen is famous for.

The snug fit means our windows are far more weathertight than industry standards require.

The Andersen double-pane insulating glass reduces



THINK OF USING ANDERSEN® THIS BUILDING. UNTIL NOW.

conducted heat loss through the glass area by 50% compared to single-pane windows.

Our windows offer tremendous dimensional stability through a solid wood core thickly encased in rigid Perma-Shield® vinyl. Also, they have a far better insulating value than metal windows.

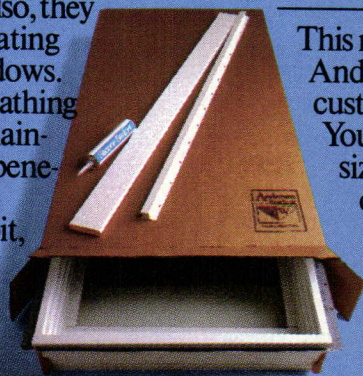
And the vinyl sheathing is known for its low-maintenance, no-painting benefits. Plus these Perma-Shield windows won't pit, rust, warp or corrode.

There's an aesthetic benefit for the

building owner, too. Because of the windows' traditional lines, the historic appearance is preserved.

NEW PERMA-SHIELD CASING IS THE KEY.

This new casing turns every Andersen window into a custom replacement window. You can choose any stock-sized Perma-Shield unit: double-hung, casement, gliding, or awning. With the Perma-Shield family of products, Andersen has the sizes and styles

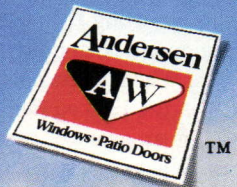


to fit more than 6,000 openings.

The window, new Perma-Shield casing and "h" channel, plus silicone sealant are all that's needed.

For more information: Call your Andersen distributor. See Sweet's File 8.22/An. Or write Andersen Corp., Box 12, Bayport, Minnesota 55003.

Come
home to
quality.



Andersen

Circle 30 on inquiry card



86132 © 1986 Andersen Corp.

Circle 31 on inquiry card

The provisions added for the benefit of the subcontractors and suppliers have been measured and limited by other provisions considering the interests of the architect.

most rules, there are practical exceptions: the 1987 edition of A201 recognizes that for good reasons (possibly to protect the public safety or the owner's interest in the project) the architect may give specific instructions concerning these matters in the contract documents (under Subparagraph 3.3.1) or in response to shop drawings (under Subparagraph 4.2.7). If, for instance, winter conditions are anticipated, the architect may instruct the contractor, through the specifications, that brick walls shall not be constructed without weather protection when the temperature falls below 40 degrees Fahrenheit.

Defense counsel for an architect might say, "Why change this? We can defend against contractor's claims better without that exception." The first thing to understand is that there is no liability if the architect does not act on construction means, methods, or techniques by giving specific instructions or other actions. Second, if the architect does get involved in these matters pursuant to Subparagraph 3.3.1 or 4.2.7, then the architect can rely upon the exceptions stated in those provisions to legitimize any exercise of power over construction means, methods, and techniques. In the real world this happens more frequently than defense attorneys realize. If, by action, the architect gets involved in these matters, the disclaimer in Subparagraph 4.2.3 offers no protection, with or without the exceptions provided. The new language in Subparagraphs 3.3.1 and 4.2.7 honestly handles this issue, and will assist the architect in defusing any contractor's objections to specific instructions on how to correct or perform the work.

The definition of the capitalized term "Work" was of particular concern when the

Documents Committee began revising A201. In the previous edition, the lowercase "work" was used to refer to a number of items not a part of the capitalized "Work," including temporary facilities, shoring, and the work of separate contractors. The distinction was not generally recognized by the public, however, nor did any appellate court cases take note of it, even in passing. A few theorists pointed out the connection between the definition of capitalized "Work" and Subparagraph 4.2.2, which says the architect will observe the "Work" to determine if it conforms with the contract documents. They feared that the new definition would make the architect responsible for inspecting the contractor's temporary facilities, shoring, etc. This concern was not persuasive, however, and the definition of "Work" was modified after extensive debate over a considerable period of time among the members of the Documents Committee. The committee clarified the distinction by broadening the definition of capitalized "Work," by substituting the undefined term "construction" for lowercase "work," and by adding the phrase "when completed" to the architect's responsibility for observing the "Work." The new A201 language simply tries to clarify the reality of the marketplace, not change it. The net effect of the new definition is a more straightforward document.

Why was the term "construction change directive" added to the document? The A201 document represents an attempt to match actual industry practices with a legal description allocating responsibilities for those practices. The term "change order" was first used in A201 in 1966 when some consistency of usage began emerging from the industry. The

definition of that term was further refined in the latest edition of A201, and a new term, "construction change directive" was introduced. The latter is intended for use in situations where the parties do not fully agree about adjustments in time or cost, but agree to go ahead with the change. The intent is to distinguish clearly between changes that have been agreed to in detail and those for which the cost or time must still be decided.

Who gets to terminate contracts and when?

As noted at the outset, the 1976 edition of A201 has held up well under court interpretation. A new federal bankruptcy law, however, caused a minor adjustment even before the revision process began in 1981. Section 365 of the Bankruptcy Code gives substantial power to the court-appointed administrator (known as the "Trustee"), who may choose to continue with a private contract even if that contract allows for termination by the owner in the event the contractor is declared bankrupt.

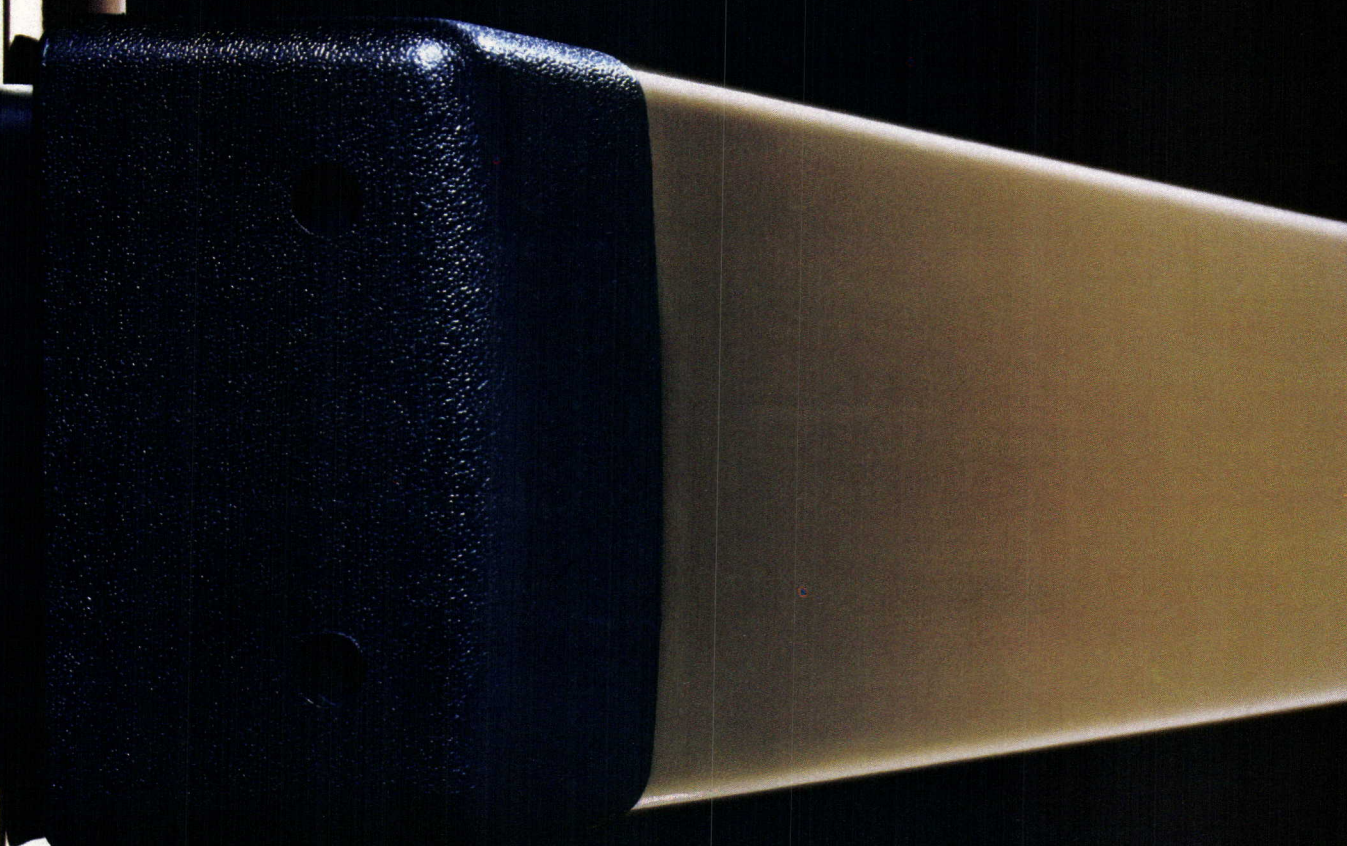
In 1981, the Institute published AIA Document A512, Additions to Guide for Supplementary Conditions, which recommended deletion by supplement of the portion of the 1976 edition of A201 relating to bankruptcy and insolvency. This change was incorporated into the 1987 edition of A210 because of the strong possibility of an owner (or architect) assuming that the "automatic" clause under the 1976 provision was conclusive and foolproof. Language was retained in Subparagraph 14.2.1 allowing termination in the event of the contractor's persistent and repeated refusal or failure to supply enough workers or materials or failure to make payment. As a practical matter, the latter provision provides the owner with sufficient protection

in the event of the contractor's bankruptcy.

The net effect of these evolutionary changes in the new edition of A201 is to make the document more elastic, so that it mirrors the numerous possibilities encountered in today's dynamic construction environment. Elements of the document have been redefined or reorganized to make it easier to use. The essential features of the document, proven over time, have been retained.

Is the new edition perfect? Of course not—it is a general document and, as such, will always require modification by supplement in each particular situation. It is also a consensus document, reflecting numerous necessary compromises in which none of the parties got all of what they wanted. It is, however, a carefully thought-out and balanced document that is reasonably fair to all parties. Like the 1976 and previous editions, A201/1987 is a benchmark against which the parties can measure their respective risks on a particular project. Can it be improved? Of course—that is why we make criticism part of the process. We believe in the long run such criticism will lead to a better document for us all.

Exit devices from the originators of the M.S.[®] Maximum Security Deadlock



US3	BRIGHT BRASS
US9	BRIGHT BRONZE
US10B	OIL-RUBBED BRONZE
US 32	BRIGHT STAINLESS



Adams Rite set the standard when they originated deadlock security hardware for narrow stile doors 30 years ago. Today they are raising the standard of exit devices. Now any building can have the complete exit device package from Adams Rite.

The new fire-rated Series 3000 complements the Adams Rite Series 8000 life safety exit hardware for wood, metal and glass doors.

All devices feature beautiful, full-width push bars with no-load actuation of only 8 lbs. anywhere along the bar. Each bar is either anodized or metal-clad in a wide choice of hardware finishes; brass, stainless and bronze. Whether you choose Rim, Mortise, Surface Vertical Rod, Concealed Vertical Rod or all four, you'll be choosing the brand name you can count on for legendary maximum security, and fast delivery, at a cost that won't alarm you.

Write or call for complete information and specifications.

ADAMS RITE
MANUFACTURING CO.



4040 SOUTH CAPITOL AVENUE, POST OFFICE BOX 1301, CITY OF INDUSTRY, CALIFORNIA 91749
213/699-0511 TELEX: 3710777 CABLE: MS LOCK FAX: 213/699-5094

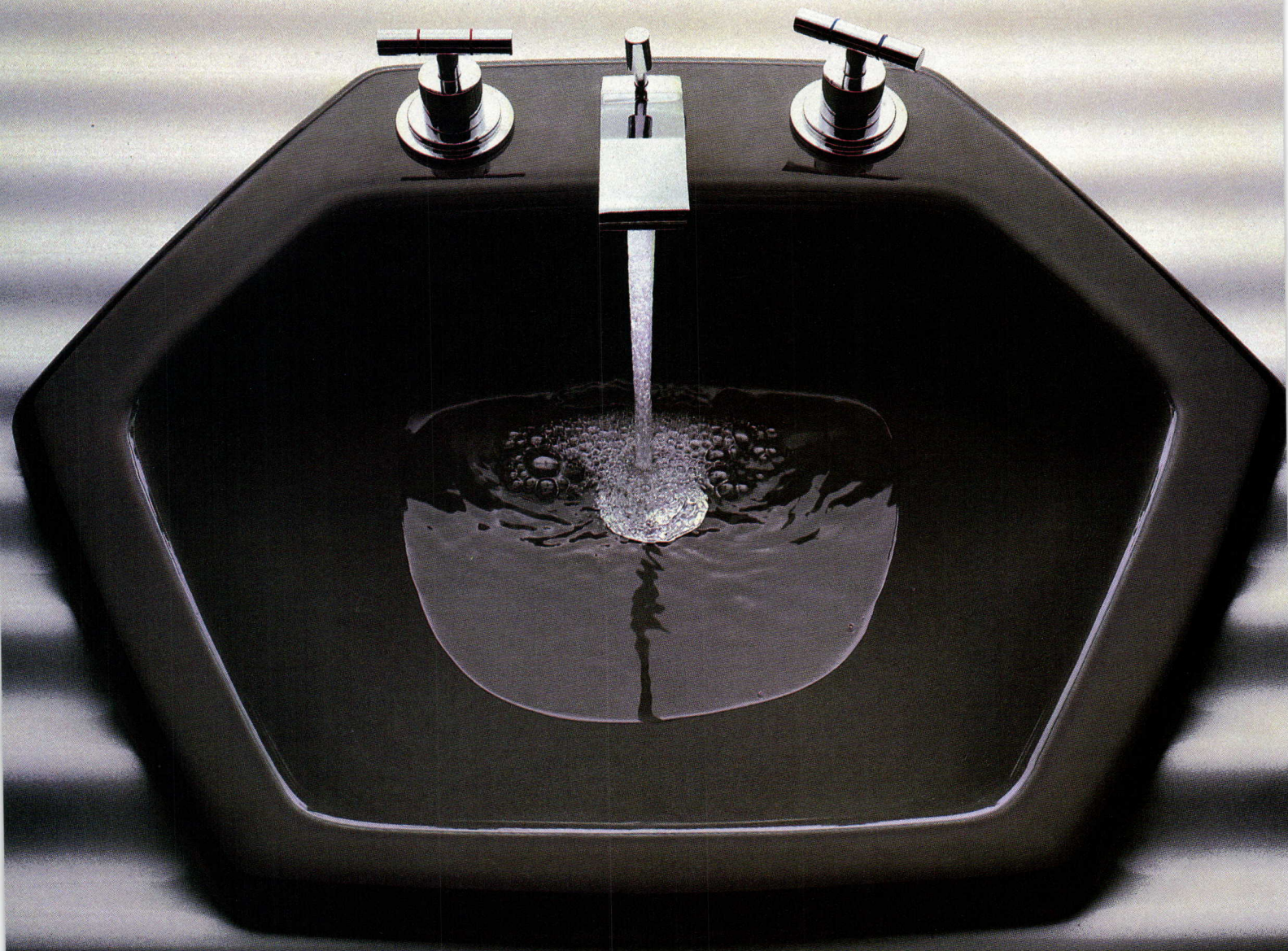
Circle 32 on inquiry card

Choosing Sides

Hexsign™ Lavatory and Taboret® Faucet. Side with better design and color on your next project. Kohler's distinctive shapes and exciting color range are not just for residential use. Enameled cast iron fixtures and cast brass faucets stand up to heavy usage in commercial applications. The cost stays within budget. And everyone knows Kohler's reputation for quality.

When you can have so many designs in so many colors, why go white? Make your project look as good as it functions, by simply choosing Kohler.

THE BOLD LOOK
OF **KOHLER**®



For assistance with your specifications, call your Kohler distributor or write: Kohler Co., Dept. TB3, Kohler, Wisconsin 53044.

Circle 33 on inquiry card

Management: "Better Codes = Better Buildings:" An AIA conference in Boston

How can creative approaches to codes make types of projects feasible that were not even envisioned when most codes were written? That was the topic explored by participants in a recent conference in Boston sponsored by the AIA Building Performance and Regulations Committee with cooperation from the Building Officials and Code Administrators International and the National Fire Protection Association.

Among the broader issues discussed were how to represent architects' views in the making of codes and the extent to which codes and safety issues should be taught in schools. Keynote speaker Bernard Spring said: "We must be eternally vigilant to keep the bridge open between the two groups [of architects and code administrators] considering their fundamental differences in thinking." He acknowledged that architects do have a problem in that, while thinking in humanistic terms, "problem-solving tends to get shunted aside." The question of what constitutes over-regulation came up often, along with a discussion of the effects of under-regulation. The former can come from seeing what happens with the latter, said one official.

A large-scale mixed-use project over a highway and railroad required pioneering solutions

Copley Place in Boston [RECORD, August, 1986, pages 114-123] by The Architects Collaborative, The Stubbins Associates and others, was the largest mixed-use project in the country at the time of its completion in 1984. Combining apartments, a hotel, offices, theaters, a shopping mall, and department stores (as well as separate ownerships and high- and low-rise construction), it was also a building type not covered by the local codes. And BOCA's fire code was still under development back in 1978, when the Copley design was started.

A free flow of space between the mall, department stores, and hotel lobby was a marketing necessity, but required vast spaces without visible fire separations. A central atrium was to bring light and views to offices and shops on its perimeter, although the only regulations for such vertical spaces applied to monumental stairs. Each of the many uses was regarded as a separate building type by the code with its own individual requirements for construction, exiting, and fire safety. And there were exacting regulations for rights-of-way over the highway and railroad.

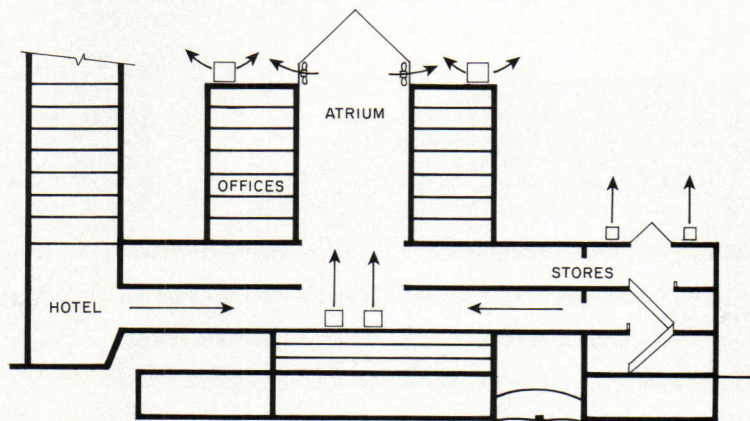
The architects opted to build the entire project to meet those code requirements that were most stringent. By isolating the office building with sprinkler-protected glass walls around the atrium, the architects were able to treat the latter as a separate structure with simple exit requirements. Exits from other spaces were not so easy. "There were discussions with officials over the distance from the main entrance when there were many," said code consultant Herbert Eisenberg. Because some lower-floor areas were isolated by rights-of-way, exit corridors had to go up before they went down to bridge them. Indeed the battles fought on this project may well have created the new willingness by Boston officials to try to accommodate innovation and search for safety equivalencies where no precedents exist. The design of the smoke-control system (diagram above) for which no regulations were applicable, required intensive cooperation and flexibility by designers and code administrators.

An adaptive reuse project, infeasible 10 years ago, successfully completed

Constitution Office Park is a huge office/research-laboratory building and separate parking

In Copley Place, the atrium meets fire-safety requirements by acting as a giant funnel through which roof fans can draw out smoke. Smoke

control for the entire building is by mechanical confinement: Areas immediately affected are exhausted while adjacent ones are pressurized.



garage recently remodeled by architects Huygens DiMella Schaffer & Associates from two sturdy loft structures located in Boston's former Charlestown Navy Yard. The two original buildings, constructed in 1917 and 1944, respectively, are designated landmarks and qualified for preservation tax abatements, although project architect Amir Man noted that, as architecture, "they weren't very nice." And the buildings were in poor shape. Much of the exposed-concrete frames were badly spalled, for example, and had to be repaired and preserved.

Here Article 22 of the Massachusetts code (which governs construction in Boston) was brought into play. Instructive to the many locales that do not have such provisions, it allows adaptive reuse without total compliance to new-construction standards. Instead it recognizes not waivers or variances but safety equivalencies—a concept made all the more feasible here because the old use was a higher hazard than the new. Because Article 22 allows the selective use of new systems without the scrapping of all old ones, the architects could reuse existing sprinkler pipes and pressurize fire stairs without a pressurization-exhaust system for full floors such as that developed for Copley Place.

The most striking creative results of working with Article 22 are two atriums, cut through the old structures, that not only bring light and spaciousness to

the interior but, like those at Copley Place, become smoke exhausts. Without such practical purpose, the architects would have had difficulty justifying the creation of unrentable space.

Small-paned industrial-sash windows like the originals, a goal of the architects and the landmark preservationists, were facilitated by the codes. Economy would have called for the replacement windows to be big sheets of glass with artificial grid dividers. The fire department determined the latter to be dangerous, and individual panes of glass were used instead (RECORD, January 1988, pages 118-119).

Keeping the the appearance of the existing loft windows in the structure designated to be the garage posed the question of what to do about exhaust fumes and the possibility of smoke. The architects created the necessary openings while maintaining the look of the former windows by substituting, in the place of the old glass, wire mesh in a similar pattern.

Innovation, with all its risks, is here to stay

Architect William Anderson cautioned, "Roller coasters are unsafe. Buildings are unsafe to a lesser degree. The trick is to walk the fine line between innovation and irresponsibility." And Paul Heilstedt of BOCA added, "You can't be an architect today unless you can risk going to court." Clearly the thrust was toward accommodation of new concepts and attitudes.

Charles K. Hoyt

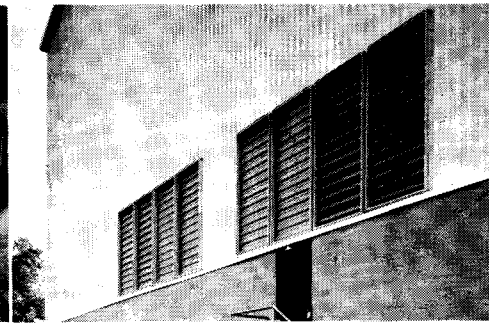
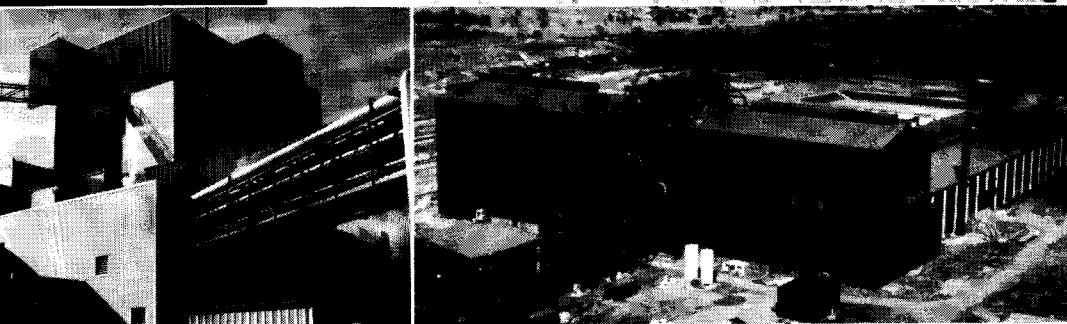
Steelite capabilities are simply attention to every detail.

A building panel should not be a commodity. The difference is in the details—and the added values of Steelite's attention to details.

Steelite quality and service add value to a comprehensive range of building panel profiles and accessories, plus a complete line of fixed and adjustable louvers, continuous ridge and clamshell ventilators. They are all available in a variety of metals, protected by a wide choice of coatings. For every product, Steelite takes total responsibility for quality.

Steelite products are backed by skilled support that reaches from project concept through completion. Steelite will assist with design, engineering, specifications, estimating, load calculations, and pricing. Steelite is a fully qualified single source for on-time, on-budget delivery of complete building enclosure systems.

Apply the values of Steelite quality and service to your next architectural, industrial, or commercial project. For more details, send for our new capabilities brochure.



STEELITE, INC

1010 Ohio River Boulevard
Pittsburgh, PA 15202

TOLL-FREE: 800-824-1371;
in PA, 800-824-1370

Finance: Industrial production will keep the economy growing

By Phillip E. Kidd

A significant transition is under way in the economy. The impetus for maintaining real growth is shifting away from consumer spending toward higher manufacturing and agricultural production and rising exports. A major concern about this transformation is the ability of those sectors to expand sufficiently to sustain an economic advance despite a slowdown in consumer buying.

Industrial production climbed

at a healthy 5-percent clip in the past year. Manufacturers responded to this improvement in output and sales with larger capital expenditures. As the demand for their goods spreads, their investment outlays are projected to rise even faster than in 1987. It is those anticipated expenditures—with their promise of more jobs, output, and sales—on which the prospects for further economic growth rests.

Currently, industrial firms are

confronted with some difficult decisions. Initially, they could draw on surpluses of semiskilled and skilled labor, raw materials, and plant capacity to meet increased demand. As the recovery took hold, they directed most of their rising capital budgets to purchases of equipment, which, when integrated into their existing plants, upgraded efficiency, restrained costs, and boosted output. Now they are starting to stretch the capacity of their present structures.

Usually, when utilization rates move solidly into the 82- to 85-percent range, manufacturers begin spending more in building additional space. So far in this expansion, that is not happening.

Clearly, manufacturers are delaying larger outlays for buildings until they are satisfied that the dollar will remain cheap and not rebound to hurt their competitiveness, that funds for investment will be available at reasonable costs, and that domestic consumers will not retrench so much that their purchases are curtailed.

Consumers are slowing the growth of their purchases. However, they are expected to buy relatively more American products than in the past several years because the lower dollar has made imported items more expensive. Similarly, U. S. exports are climbing because our goods have become very competitive in foreign markets. These shifts do show up in recent retail and export reports, but both trends will gain even more momentum this year, providing U. S. producers with acceptable year-long demand. Instead of accelerating spending, consumers will concentrate on repaying debt and rebuilding savings. Each of these actions will make more money available for domestic investment, lessening our dependence on foreigners.

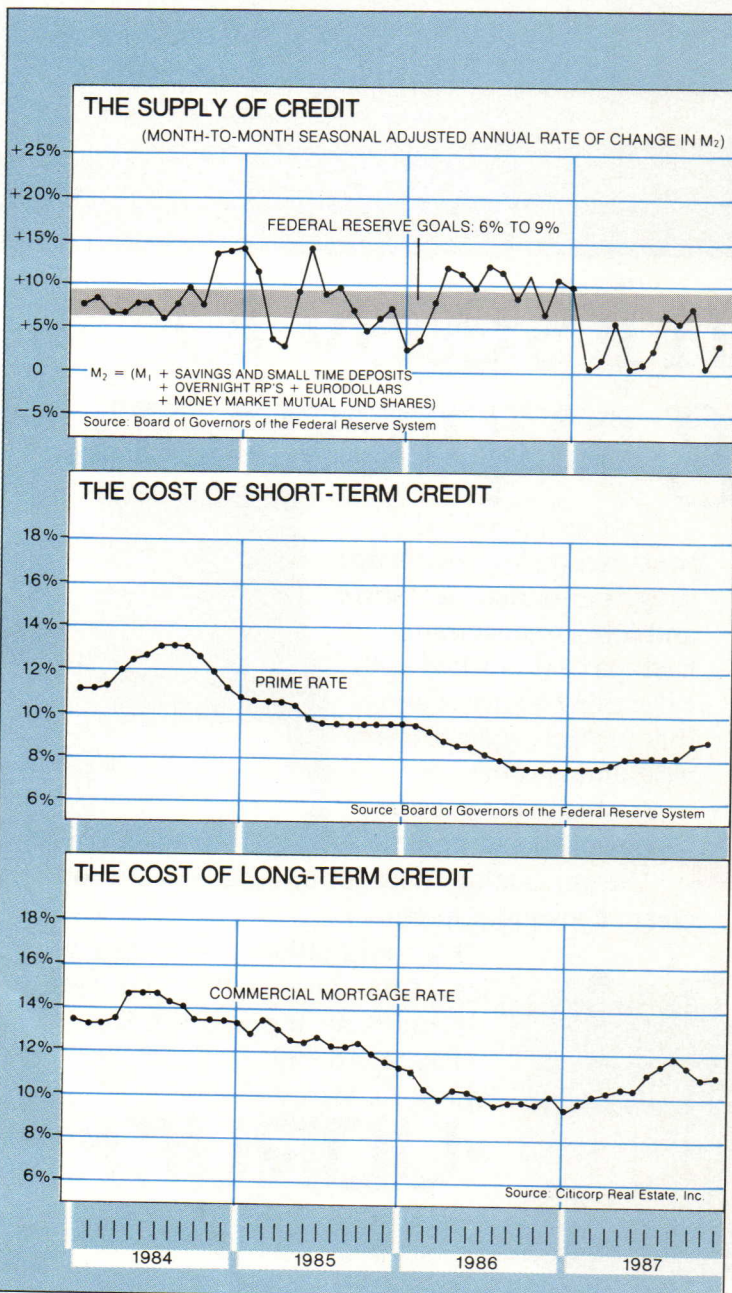
Increasing domestic flows of

funds and a slowly improving trade deficit will permit more flexibility in monetary policy. The Federal Reserve will allow supply and demand in the financial markets to shape the movement of interest rates in the second quarter, intervening only as needed to restore confidence in the dollar. As further deterioration in the value of the dollar slows, foreign private investors will gradually return to the U. S. debt markets as purchasers.

The combination of better domestic availability of funds, adequate lending from abroad, and a less constrained monetary policy will limit increases along the yield curve to between 50 and 100 basis points (a basis point is one hundredth of a percent) this spring. Interest rates on high-quality assets will range from 6.25 to 7.25 percent for short-term instruments; from 8.75 to 9.50 percent for seven- to ten-year governments; and from 11.00 to 12.50 percent for mortgages.

In this environment, industrial building will gain moderately. However, construction of housing for sale (because of higher mortgage rates) and retail building (because of mortgage rates and moderating retail sales) will struggle to hold their 1987 pace. Multifamily construction will begin bottoming out. And office building will slide downward under the weight of too many vacant units.

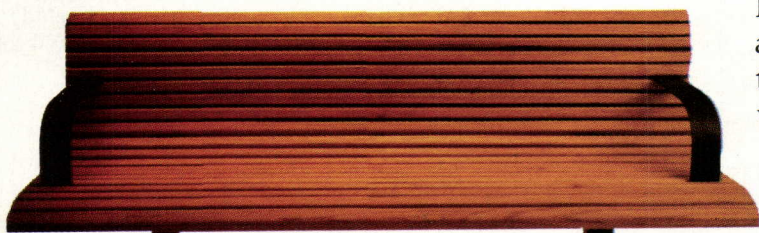
Mr. Kidd is a prominent economic consultant and former director of research for the McGraw-Hill Information Systems Company.





With Ultrum it's easy to create a lasting impression.

From beautiful hand-rubbed wood finishes to the contemporary lines of our new perforated metal series, Ultrum offers today's most exciting and versatile site amenities collection.



Stylish seating, planters, trash receptacles, ash urns, Ultrum

has everything to create a lasting impression.

In wood, Ultrum continues to blend distinctive styling with meticulous craftsmanship. Every piece is selected with exacting care and hand-finished for use indoors or out.

Ultrum's perforated metal series offers exciting shapes and colors.



Our all-welded construction features heavy gauge perforated steel sheet and tubular steel frame. Each piece is finished with a durable powder coating that protects against heavy wear and weather.

Write for your free copy of the all new Ultrum catalog. Without it, it will be hard to create a lasting impression.

For information, contact your GameTime representative. Or write GameTime, Inc., Box 121, Fort Payne, AL 35967. Or call 205/845-5610, telex 782-534.

•ULTRUM•

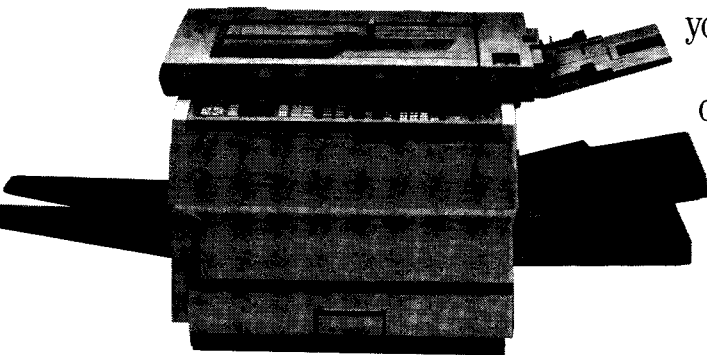
© 1987 GameTime, Inc.



Harris/3M copiers come with a unique paper supply.



It's something no other copier company in the world can offer. We call it the Harris/3M promise. And it guarantees, in writing, that your copier will be up and running when you need it. But that's only part of what we offer you.



Trade in now for up to \$1000!

Give us a call or send in this coupon and we'll tell you how, for a limited time, you can save up to \$1000 on a new Harris/3M copier. We'll also send you two free booklets to help you evaluate your copier needs.

Get all the facts on the Harris/3M promise and our valuable trade-in offer soon. You'll be convinced

that your next copier should be a Harris/3M. We guarantee it.

Call 1-800-TLC-COPY

Or send in this coupon to receive information on our trade-in offer plus two FREE booklets to help you evaluate your copier needs.

I'd also like information on your full line of fax machines.

Name _____

Company Name _____

Address _____

City _____ State _____

Zip _____ Telephone _____

Mail to Harris/3M Document Products, Inc.,
P.O. Box 785, Dayton, OH 45401. MH388FP

HARRIS/3M

Get more than a copier. Get a commitment.

Offer is valid at participating U.S. dealers for a limited time and other restrictions and limitations apply; see your Harris/3M sales representative for details. Free loaner offer is valid if copier is installed within 50 miles of an authorized Harris/3M service facility. ©1988 Harris/3M Document Products, Inc. Harris is a trademark of the Harris Corporation. 3M is a trademark of the 3M Company.



At the pinnacle of the Opryland Hotel Conservatory's lush indoor Victorian garden are angle bay windows, custom built for the hotel.

When Opryland Hotel asked Norco to design some special windows, the results were grand



Some would call it a tall order...building windows for Opryland Hotel that are in perfect harmony with their Conservatory suites.

But Norco measured up and built custom windows, fine tuned on both the exterior and interior to capture the Conservatory's lush mood. The Conservatory is over two acres of architectural wonder – Victorian gardens with winding trails, bubbling brooks and tumbling waterfalls.

Crowning the Conservatory's elegance are Norco's custom Angle Bay Windows,

Norco's sweeping angle bays complement the southern elegance at Opryland Hotel Conservatory suites and give guests a breathtaking view of the Conservatory.

designed with authentic True Divided Lites, evoking the rustic charm of the Old South.

A high note for each suite.

Each upper level suite is graced with one or more Norco Angle Bay Window, blending with the romantic appointments, giving each guest the impression he is staying in a stately Southern mansion. And each Norco Angle Bay Window was designed to create a floor-to-ceiling wall of windows, set precisely at the right angle to give a glorious view of the Conservatory.

Grand results brought Norco back for an encore.

Opryland Hotel's newest expansion, the Cascades, is set for completion in 1988. It is another major, skylighted interior space even larger than the Conservatory. Its 839 additional rooms will enlarge the hotel to 1,896 rooms.

Norco's Custom Angle Bay Casement Windows will again be center-stage in the addition.

Norco's performance on the original construction phase was so impressive that Opryland Hotel brought Norco back for an encore.

Uncompromising quality, on-time delivery and Norco's capability to build windows to Opryland Hotel's exacting standards (at a surprisingly affordable price) are some of the reasons Norco windows are again at the top.

Norco can make your imaginative window designs a reality. Call or write today.



Besides meeting all the practical maintenance requirements of a modern hotel, the windows had to fit perfectly into the Conservatory's lush setting.



Architects:
Earl Swensson Associates
Nashville, TN

Windows:
Norco Windows, Inc.
Hawkins, WI

Masterpieces in wood windows and doors.



NORCO
WINDOWS, INC.

P.O. BOX 309 · HAWKINS, WI 54530
PHONE: 715/585-6311



© 1987 Norco Windows, Inc.



Water table.

Table your notions of compromise when it comes to a roof. It either works, or it doesn't. You find out soon enough either way.

For a roof system that performs the way it's supposed to right from the start, come to the company with over 130 years' experience, Manville.

We supply the most complete systems package: membranes, insulations and accessories.

We train and support the Manville Approved Roofing Contractors who will install these roof systems.

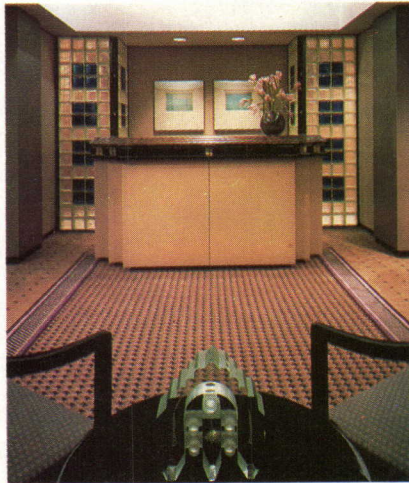
And we give you the option of the industry's most comprehensive guarantee program to back up your investment.

When it comes to shutting out the elements, nobody does it better. For more information, contact Manville, P.O. Box 5108, Denver, Colorado 80217-5108.

Keeping the water out.
That's what this business is all about.

Manville

WHETHER WORKING,



SHOPPING,



OR GLOBE HOPPING,



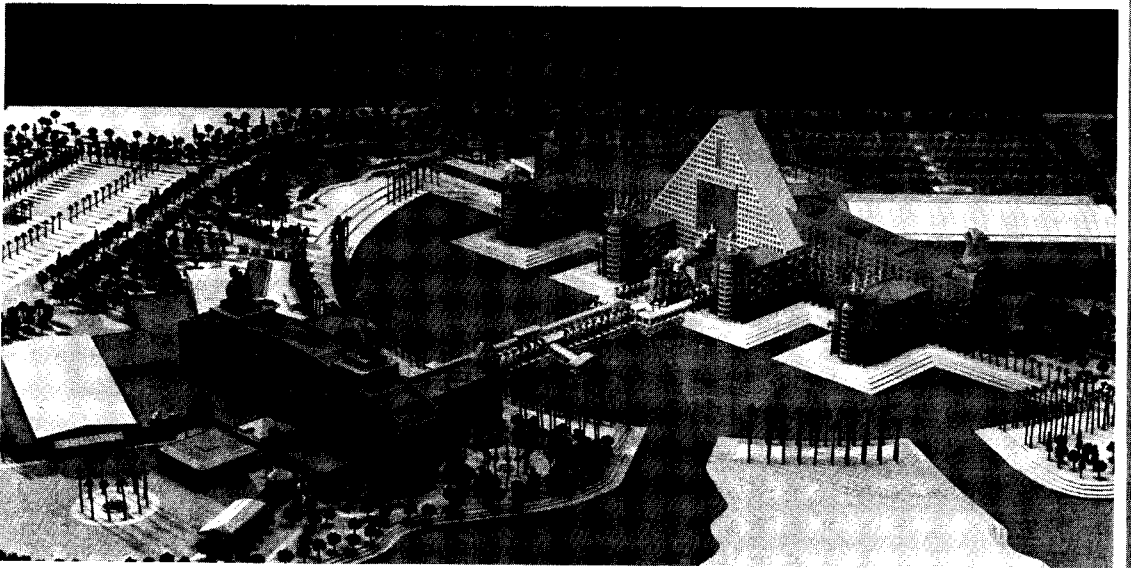
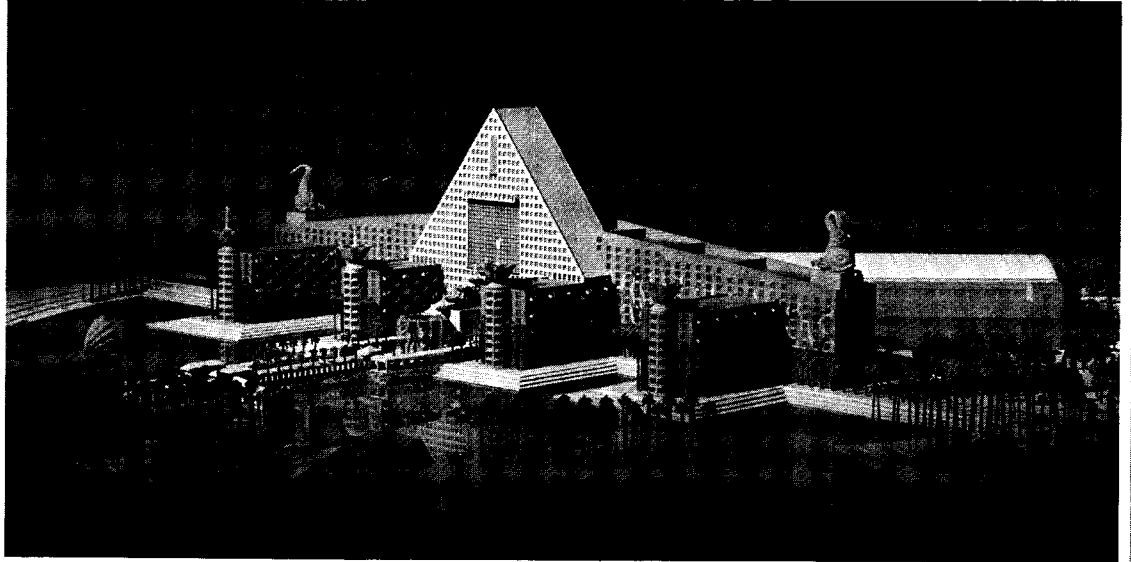
WE COVER ALL POSSIBILITIES.



For additional information, call 1-800-524-0159; in NJ call 1-800-624-1914; in Canada call 1-800-363-1405

Circle 41 on inquiry card

Graves's Swan and Dolphin Join Mickey, Minnie, and Donald



© Walt Disney Co. photos

"Classic, but also fun" is how Princeton, N. J., architect Michael Graves describes the recently unveiled designs for the Dolphin and Swan convention hotels in Orlando, Fla., adjacent to Walt Disney World and Epcot Center. In his first foray into what the Disney Company calls "entertainment architecture," Graves chose the swan and dolphin as traditional symbols for water (conventional Disney characters were considered, but seen as not sufficiently appealing to adults). The \$375-million complex is nevertheless serious about its fun: 47-foot-high dolphin/swan statues at the

corners of their respective resorts are but part of the aquatic theme, which includes a three-tiered clamshell fountain that cascades down the front of the Dolphin, and exterior cladding patterned in blue-green waves (Swan) and banana leaves (Dolphin). Graves's office worked with Alan Lapidus, Architects, of New York City, which provided design-development and contract documents for the project. The Lapidus firm (Alan Lapidus is the son of famed Miami Beach hotel architect Morris Lapidus) honed the Graves scheme to move 3,000 employees and thousands of guests with

Disney's vaunted efficiency. The 760-room Swan boasts four restaurants, meeting facilities, and a 25,000-square-foot grand ballroom. Across a tree-shaded bridge, the 26-story, 1,500-room Dolphin will contain seven restaurants, and will be connected to a 165,000-square-foot convention and meeting facility by a three-story rotunda.

Sitework has already begun on 50 acres of lagoons, with construction of the Swan to be complete in 1989. The Dolphin is expected to open in 1990. Other Disney projects involving innovative architects are said to be in the works.

Russwin products are the talk of the industry.

"Russwin is my first choice when I want both the security and beauty today's market demands."

Arvil Thompson
Director of Physical Plant
Berry College
Mt. Berry, GA

"When I need a problem solved, I turn to Russwin's distributor network. They really come through."

Gary Bertish
Lowe Development Corp.
Los Angeles, CA

"Only Russwin offers product attributes that have the customer in mind. Easy installation, little or no maintenance."

Ralph Murphy
Kilroy Industries
Los Angeles, CA

"Only Russwin offers me a specifying guide. It makes my job a lot easier."

William F. Kiel, CSI, CCS
Chicago, IL

And for good reason. In fact, for many good reasons. More and more architects, contractors and builders across the country are turning to Russwin for beautiful, well engineered door hardware.

Whether it's the time-tested Uniloc, the state-of-the-art Security Bolt, or the rugged, new 3400 Series Cylindrical Lock, we supply you with the products and the tools—our one-of-a-kind Specifying Manual—

After all, the only way to be the talk of the industry is to listen to your needs. We'd like to hear yours. Call us at 1-203-225-7411 or write

to the Russwin Division,
Emhart Hardware Group,
225 Episcopal Road, Berlin,
Connecticut 06037-0503.

And let's talk. 

RUSSWIN
®

HARDWARE GROUP

EMHART

News briefs

Library is new campus center at University of Hartford

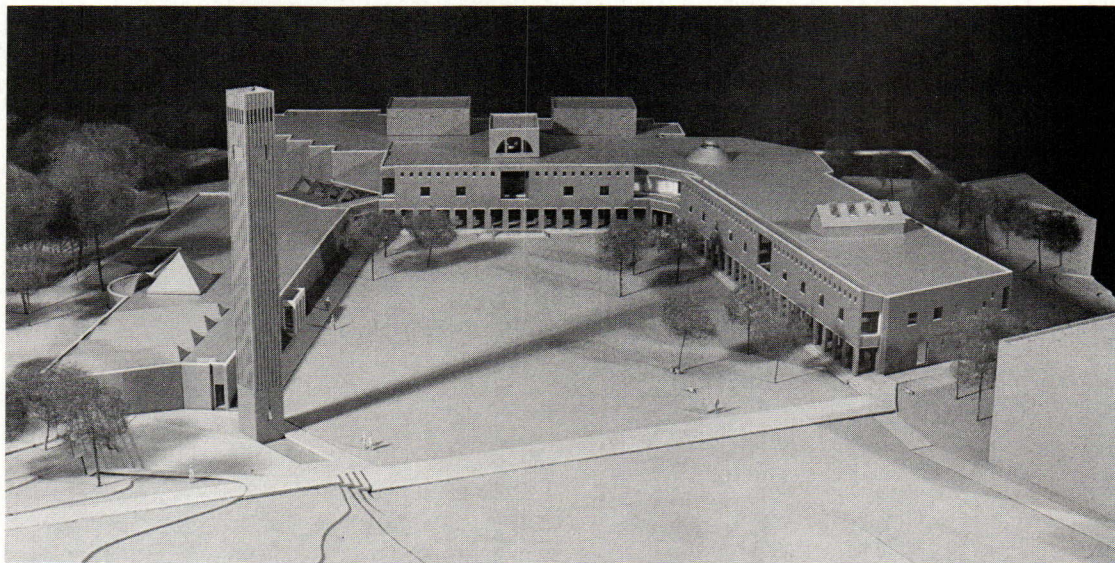
Whittier, Calif., devastated by an earthquake last October, was the subject of a study conducted by a team of architects and students led by Paul Neel, a professor at California State Polytechnic University. Developed for 26 sites, the team's concepts will be the basis for a 10-year rebuilding plan to be refined by a consultant not yet named.

Architects/Designers/Planners for Social Responsibility will benefit from the auction of drawings by such internationally known architects as Franco Purini (Italy), Thom Mayne (U. S.), Arata Isozaki (Japan), Bernard Tschumi (U. S.), and Mario Bellini (Italy). The sale will be held April 14 at the Max Protetch Gallery in New York.

Architectural Art: Affirming the Design Relationship will open at New York's American Crafts Museum May 12 to coincide with the AIA National Convention. The show focuses on works executed specifically for new architecture since 1980.

Microecture Corp. and the American Institute of Architecture Students have announced a software grant program to allow schools of architecture to enhance their technological course offerings by increasing opportunities to learn computer-aided design. Further information is available from AIAS: (202/626-7472).

Ove Arup, one of the world's most respected structural designers, died in February. His work made possible many of the innovations of the Modern movement, including Jorn Utzon's Sidney Opera House. Arup's firm, Ove Arup and Partners (RECORD, September 1987, pages 122-133), has worked with James Stirling (Staatsgalerie, Stuttgart), Foster Associates (Hong Kong Bank), and is currently at work with Venturi, Rauch and Scott Brown on the extension to the National Gallery in London. Arup was 92.

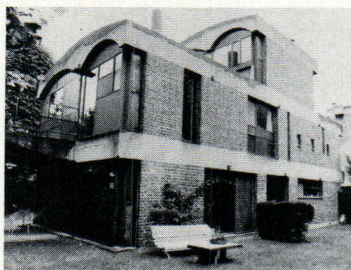


A desire on the part of the client to centralize library facilities in one building provided the opportunity for Tai Soo Kim Associates to create a true campus center at the somewhat amorphous University of Hartford. Additional space is to be added to the front of the

existing library (rear of photo), and colonnaded wings spread from this frontispiece to enclose a new quadrangle. The 100,000-square-foot University Center includes a new Museum of American Political Life (to contain the university's widely respected collection of

presidential memorabilia), an art gallery, bookstore, conference center, classroom space, and a home for the campus radio station (antennas are intended to be installed in the tower at left). The brick-clad facility is expected to be completed in the fall of this year.

Sotheby's offers houses, artwork of Le Corbusier



The Maisons Jaoul, designed by Le Corbusier and still occupied by the original clients, have been offered for sale. While André Jaoul, a longtime friend of Le Corbusier, died before construction was completed in 1956, his wife—now 90 years old—and his son, Michel, have meticulously maintained the houses in their original state, including the color scheme, the fixed furnishings designed by the architect, and the floor tiles (some hand-painted by Le Corbusier). Built in the chic Paris suburb of Neuilly, the property comprises two living pavilions, set at right angles to each other.

Each house is organized into primary and secondary spaces by linear, brick-faced, vaulted modules.

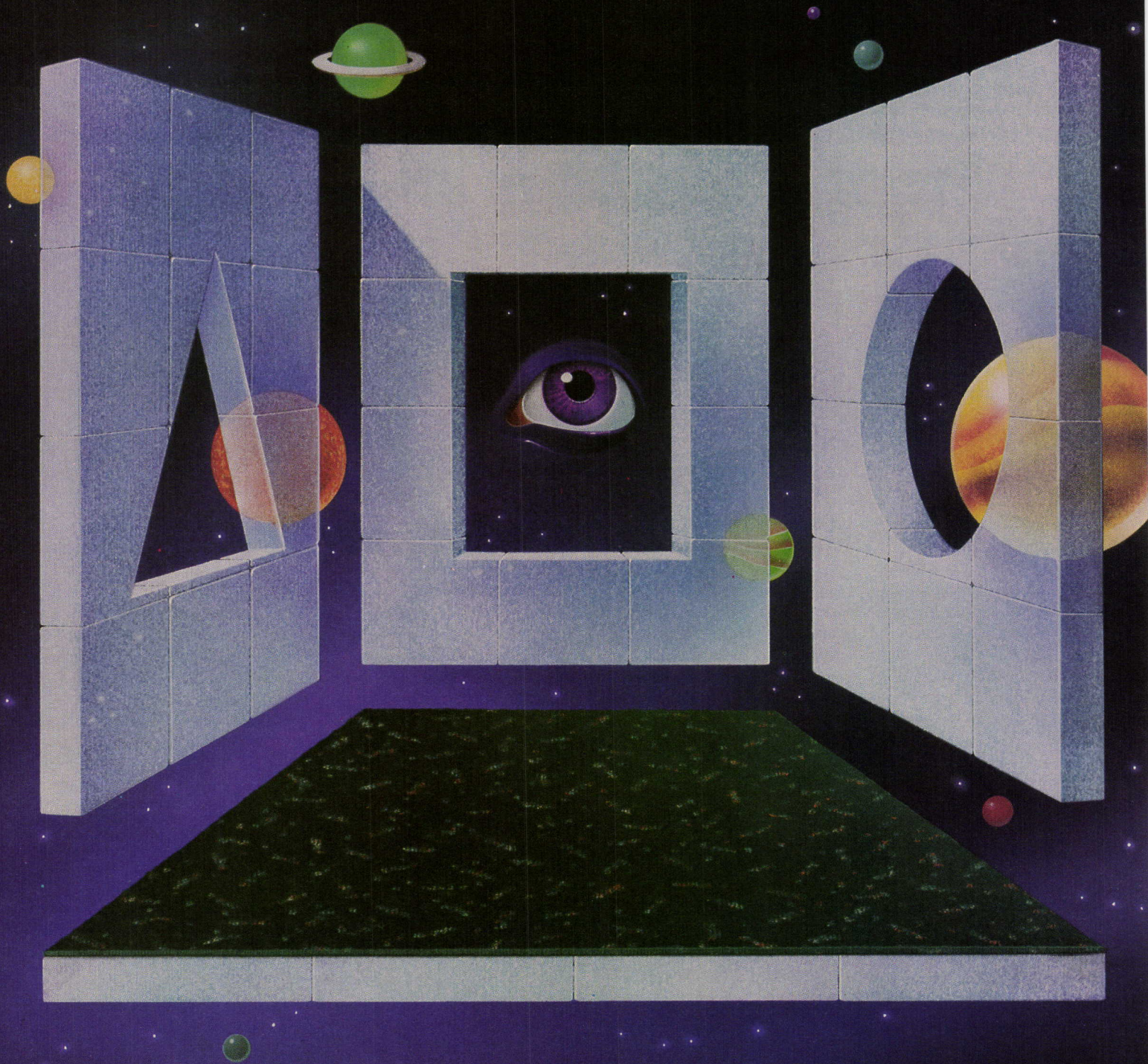
Michel Jaoul, a retired industrialist, recalls that it was difficult to obtain a permit for Le Corbusier's primitivist design, and the houses—sculpted board-formed concrete (the celebrated *béton brut*) and exposed structural brick—still have the power to shock. "We are selling the houses only because they are too big for us, now that the children have moved out," says Jaoul, "but we want a buyer who will respect them for the architectural monuments they

are." Jaoul hopes a buyer can be found who will establish an architectural academy in the houses.

The property is being offered by Sotheby's International Realty and went on the market last December concurrently with an auction of 35 art works. Interest in Le Corbusier's art appears to be keen: the total sales were 50 percent higher than Sotheby's estimate; one work, the 1927 "La Guitare et le Mannequin" sold for more than \$720,000. The Maisons Jaoul are being offered for approximately \$3.5 million.

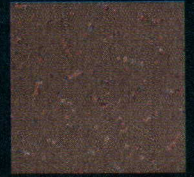
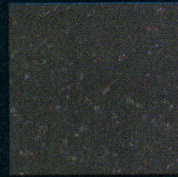
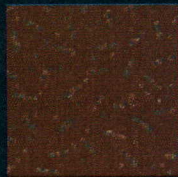
Tracy Metz, Amsterdam

A NEW VISION FOR INNER SPACE.



Cosmos is a new vision for the universe within. A design that lifts the space it covers onto a new level of style. With Cosmos, Wellco has crossed a threshold of fresh colors. Bringing into view a palette that arrests the eye. And a design backed by the uncompromising quality and unequalled service for which Wellco is known. Cosmos is destined to create styling trends that will demand your attention. Remember the name. Cosmos. A new vision for inner space.

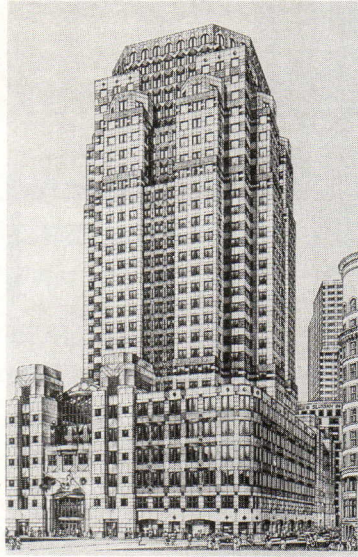
wellco
Business Carpet
a mannington mills company



Circle 43 on inquiry card

News briefs

"Renaissance" in Reading



Middlebury College (Vt.) is planning \$28 million of construction in what is described as the largest capital program in the college's history. Architect for the projects, which include major new construction for the arts and renovations to six buildings, is Hardy Holzman Pfeiffer Associates.

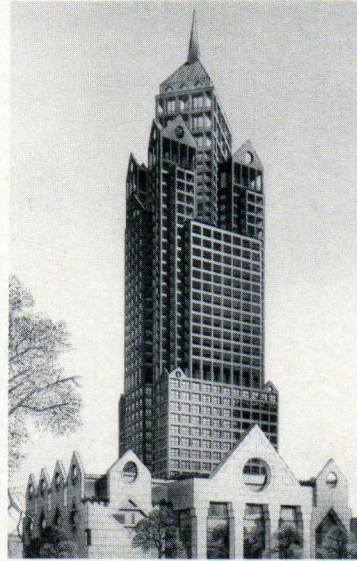
The Institute of Business Designers will sponsor an "Auction of Collectibles," to be held April 28 in New York City. All items have been donated by major furnishings manufacturers, and proceeds will benefit education and scholarship programs and the Design and Interior Furnishings Foundation for AIDS. Information: (212/477-2155.)

75 State Street (1) will boast 3,600 square feet of gold leaf on its neo-jazz-modern facade. The 745,000-square-foot tower (designed by Graham Gund Architects and Skidmore, Owings & Merrill) is under construction in Boston.

Stuyvesant High School, whose graduates are said to have earned more Ph.D.'s than those of any other U. S. secondary school, will be relocated to a new \$80-million facility (2) in Manhattan's Battery Park City. Architects for the 10-story structure are Alexander Cooper + Partners and Gruzen Samton Steinglass, Architects.

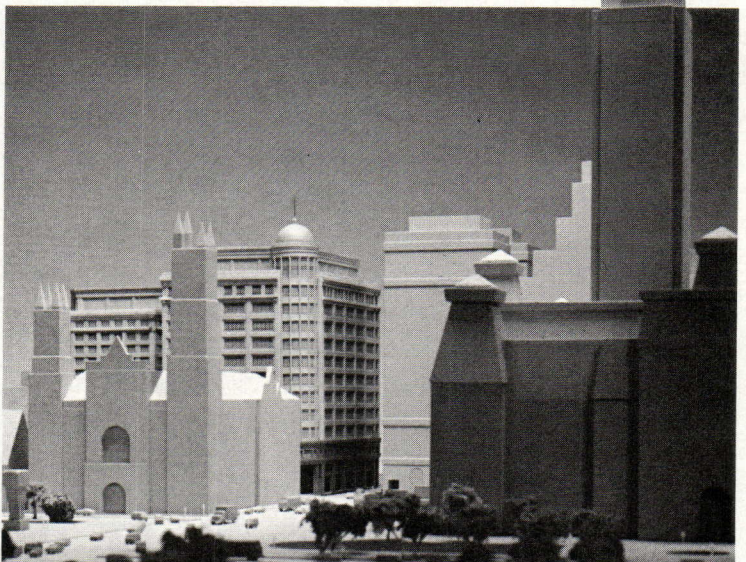
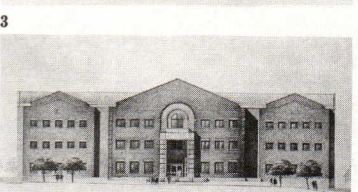
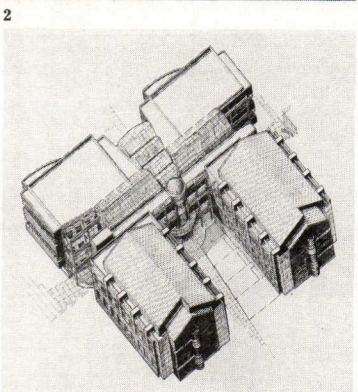
The Mind/Brain Institute at Johns Hopkins University in Baltimore (3) will provide laboratory and research space for experts in the fields of neuroscience and cognitive and computer science. Design of the 115,000-square-foot facility is by RKTL Associates.

The West Library, a new 350,000 volume brick-and-limestone building at Texas Wesleyan College (4) will allow replacement of an existing structure and anchor a new quadrangle. Architects are Cannady, Jackson & Ryan of Houston.



Each apartment will sport a "traditional American porch" at Reading (Pa.) Renaissance, according to architect Der Scutt. This mixed-use project combines a 180-room hotel and a 167-unit condominium with a retail atrium featuring (as at Trump Tower) the architect's signature "water wall." The massing and materials of the retail base have been scaled to match the cornice line of surrounding buildings, while the apartment portion culminates in four temple-like structures intended to be visible for miles. A bronze spire rises from the copper roof of the tower.

Justice in Philadelphia



Ground has been broken for Philadelphia's controversial \$165-million Justice Center. Citizens successfully resisted an earlier scheme that blocked important views to the Second Empire-style City Hall (at the very center of William Penn's town plan) and exceeded zoning bulk

regulations. The current design resembles the Evening Bulletin Building, a 1908 terra cotta-clad landmark demolished to make way for the center. Architects are a joint venture of Hellmuth Obata & Kassabaum, Livingston/Rosenwinkel, and Saxon-Capers.

Tom Bernard

CARADCO

We give you
imagination
room to work

Think of Caradco windows as frames for architectural emphasis to your design. For enhancing the shape of a room. For turning your houses into showcases.

With our product and our support program and our capability, there is no limit to what you can do.

Custom or in-stock Caradco wood windows and doors give your imagination room to work, and your business room to grow.

Compare the quality.

Compare
Caradco

A Kusan, Inc. Company, Rantoul, Illinois 61866



A complete line of quality wood windows and patio doors: casements, sliders, awnings, double hungs, round tops and custom. In both primed and clad. **Circle 44 on inquiry**

Exhibit: Wright's "ideas" in Dallas

Following last year's spate of sensational Wrightiana (biography, auction records, museum addition), the simple premise of the exhibit "Frank Lloyd Wright: In the Realm of Ideas" is welcome indeed. It is intended as a manifestation of the four fundamental principles that for Wright constituted "organic" architecture. The first section of the exhibit, which recently opened at The Dallas Museum of Art, traces "The Destruction of the Box" in projects ranging from Unity Temple to the consummate plasticity of the Guggenheim.

Furniture and decorative objects, original drawings, and blown-up backlit enlargements elucidate Wright's ideas. Captions, however, are confined to Wright's own mystical, often elliptical words, which, in the second section of the exhibition, "The Nature of the Site," only sketchily describe sites or solutions. The third section comprises familiar "Methods and Materials" in unfamiliar work: brick in the relentlessly circular Jester House project (1938); glass—its light "the blessing of the occupants"—in the Beth Sholom Synagogue. Wright's notion of "Building for Democracy" is but minimally presented in the exhibition's

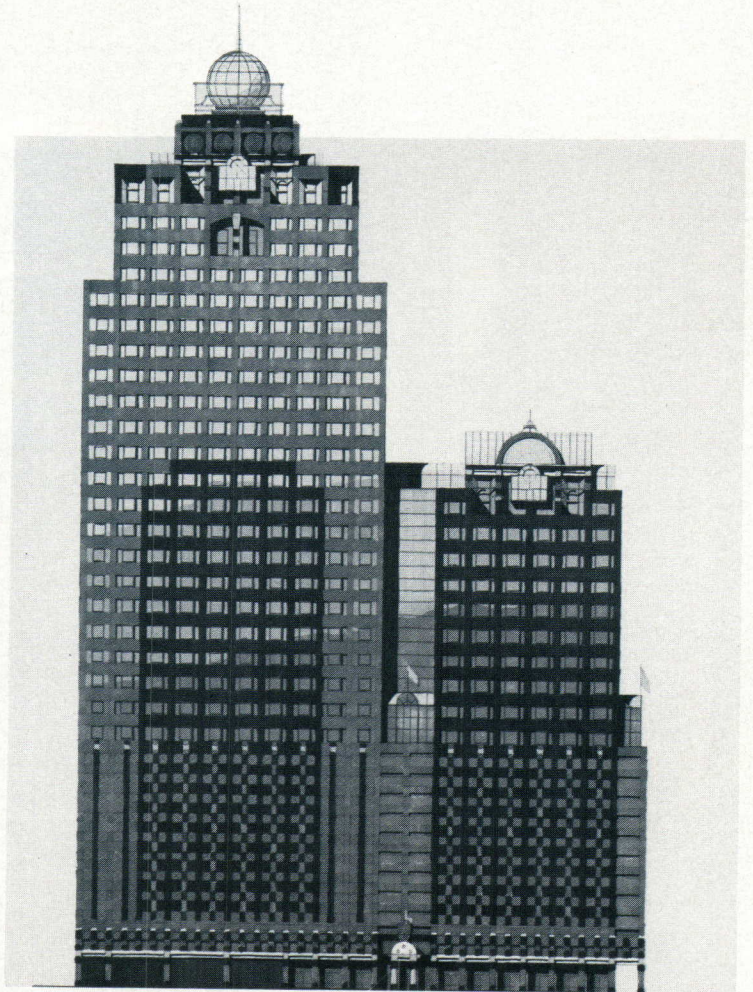
fourth section. In the accompanying catalog, Narciso G. Menochal gives a more complete explanation of the literary roots of Wright's conviction that democracy could be conveyed by organicism. The exhibition concludes with a recreated 1,800-square-foot

P. R. Singleton



Usonian Automatic House from a Wright design of 1955. Seen on an open lot in downtown Dallas, a freestanding dwelling begs the question of the supposed site-specific nature of usonian housing, but the question of whether "organic" architecture can delight is answered affirmatively by this unassuming little structure in its expansiveness, in the complex section of its living/dining area, and in the serviceable linearity of its bed/bath "polliwog." The exhibit will travel to Washington, D. C.; Miami; Chicago; Scottsdale, Ariz.; and San Diego. *Sandy Heck*

Global Trade in Connecticut

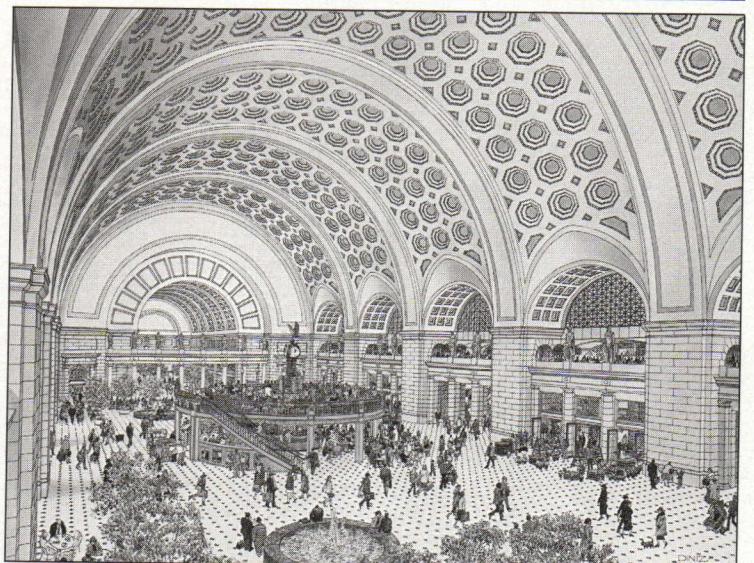


An illuminated globe 33 floors above grade will signify the higher of the Hartford World Trade Center's twin towers. The 22-story second tower will be capped by a glazed barrel vault. Designed by Hartford architects Russell, Gibson, Von Dohlen, the center will command views of

historic Bushnell Park and the Connecticut state capitol. A glass curtain-wall link serves to differentiate sections that are otherwise sheathed in tan and red granite. The 500,000-square-foot development includes parking for 1,000 cars and street-level retail space.

New life (again) for Washington's Union Station

Construction underway on a mixed-use project in Washington's vast Union Station replaces the heavily criticized visitor center installed in the barrel-vaulted Beaux Arts waiting room (right) for the 1976 bicentennial. Completed in 1908 to the designs of Daniel Burnham, the terminal is to be restored by Harry Weese & Associates; Benjamin Thompson & Associates is the architect for the 215,000-square-foot redevelopment (left). A garage, new train platforms, and a connection to the D. C. subway are part of the project, which is expected to open in September.





***New improved
Pedimat
stops dirt
quietly
and colorfully—
with added safety!***

THE BEST IS NOW EVEN BETTER

For more than a decade, Pedimat's *all aluminum*, hinged tread rail has withstood the most punishing abuse. Even in buildings where 100,000 people enter and exit daily. So why did we change? Simple. We made Pedimat even better!

Today's Pedimat *is better* because the tolerance between rails and rotating hinges has been tightened to *reduce noise* and to cope with today's slender high heels. That means an extra margin of *safety*. Dirt removal from tread surfaces has been uniquely enhanced by Pedimat's *quiet*, vibrating action. And to clean, simply roll back the mat periodically to remove dirt and debris which have collected beneath it.

COLORFUL CARPETS

Our co-extruded 100% Antron® nylon carpet treads are also unique. They're *splice free* and precision cut to stay in place.

And since each fiber is independently secured to a rigid two-ply backing, fraying and shrinking is virtually eliminated. Pedimat's standard carpet color range has been expanded too. So there's something for almost any decor. Or, we can create a custom color just for you.

A SUPERIOR RECESSED ENTRANCE GRID

Pedigrid offers features similar to Pedimat but is designed exclusively for recessed installations. Both *Pedigrid* and Pedimat can be custom fabricated to fit any size or shape and are available in a variety of tread surfaces.

Call (800) 233-8493 for complete details.

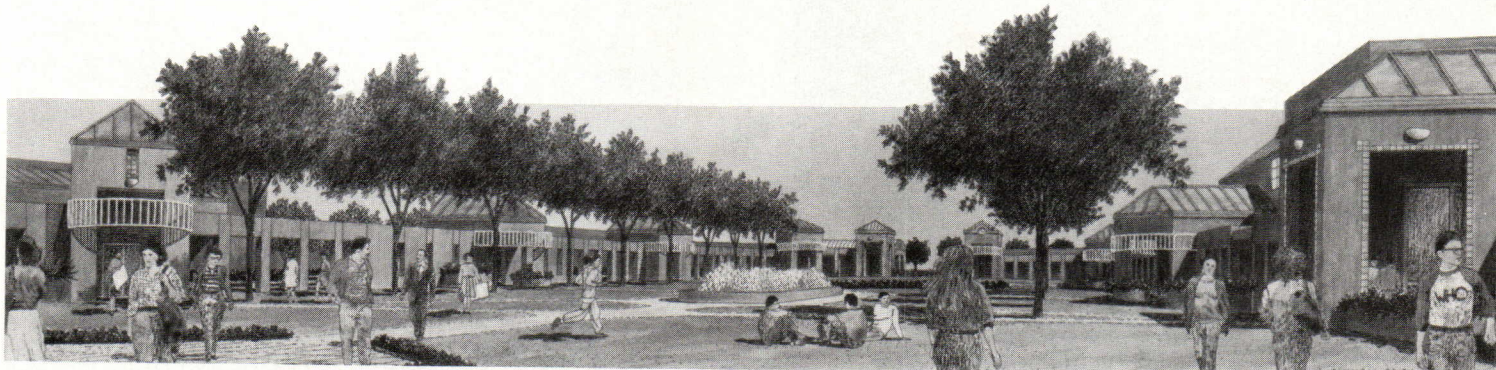
PEDIGRID/PEDIMAT®

THECSGROUP

Muncy, PA • San Marcos, CA
Mississauga, Ont.

Circle 45 on inquiry card

Viva Las Vegas



Architectural elements derived from traditional Southwestern architecture were used to develop designs for the Meadows School, a private K-through-12 facility in Las Vegas, according to architects Carde Killefer Flammang. The architects reviewed possible configurations

in workshops with staff, parents, and children, a process that generated a scheme in which blocks are defined by a hierarchy of lawns and courtyards. A major quadrangle is formed by the administrative wing, gymnasium, the upper school, and arts and music wings (rendering

above). Perpendicular to the main courtyard a smaller quadrangle is surrounded by the middle- and lower-school wings. Broad overhanging porches and covered arcades protect users from the desert sun and visually tie elements of differing scale together. The gymnasium and

auditorium are sprawling, barnlike forms, while single-story classroom wings surround smaller, shady courtyards. The \$20-million project will be built in phases, with the \$2.5-million lower and middle schools to be completed in August of this year.

Preservation easements: Help for endangered churches?

As a source of continued funding for landmarks, the legal device of preservation easements is enjoying rising popularity in the private sector. For the first time, an agreement has been made that will apply this device to a religious structure: Frank Lloyd Wright's famed Unity Temple (1906). The Landmarks Preservation Council of Illinois (LPCI) and the Unitarian Universalist Church of Oak Park have created a preservation easement to "encourage individuals and foundations to contribute to the ongoing restoration efforts with the knowledge that the building will be preserved in perpetuity," according to Carol Wyant, executive director of LPCI. It is hoped that the agreement will provide a model for cooperation on the sensitive issue of preserving religious properties. Cities such as Boston, Buffalo, and Philadelphia have faced protracted battles over landmark

designation or demolition of important religious structures. While private owners can derive tax benefits from investment in historic elements covered by an easement, a religious body cannot receive such benefits; donors, however, can take a charitable deduction for



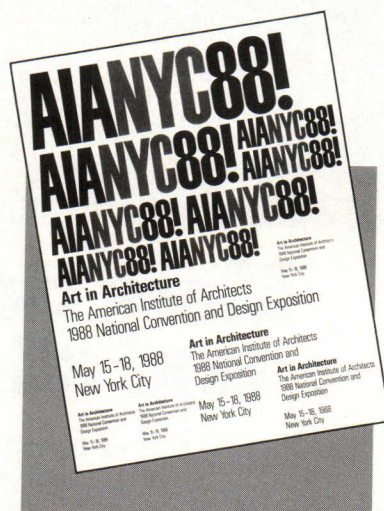
contributions to covered buildings. With alterations being monitored by the sponsoring preservation entity (in this case LPCI), the easement may widen the source of funds by encouraging donations from those who do not have close ties to a building's religious body.

Competition calendar

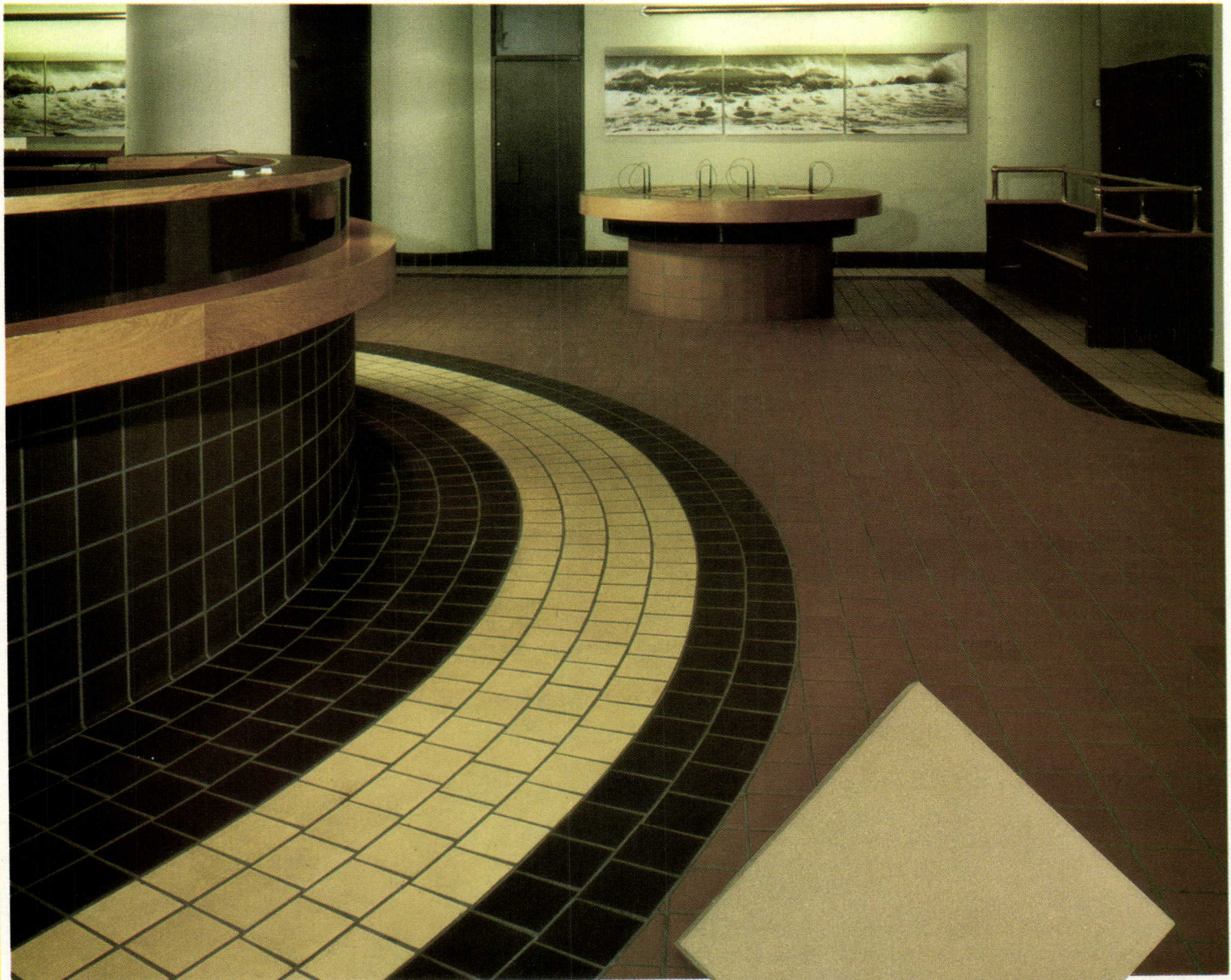
• AGB Exhibitions Ltd. has announced a competition for the Best Worldwide Interior for projects to be completed during 1988. An overall winner will be announced at the spring 1989 Interior Design International Exhibition, to be held in London; trophy awards will also be presented in four categories. Entry forms can be obtained from: Interior Design Secretariat, AGB Exhibitions Limited, Audit House, Field End Road, Eastcote, Middlesex HA4 9LT England.

• "From Table to Tablescape" is a competition sponsored by Formica Corp. Entrants are asked to design objects no larger than 2 by 2 by 2 ft using properties of the company's 2000X line. Winners will be exhibited at NEOCON in June. The deadline is April 27, 1988. Samples of the product and a competition poster are available by calling (800/524-0159).

Pollster and science-fiction author to address AIA



"Art and Architecture" is the theme of the 1988 American Institute of Architects Convention, to be held May 15-18 at the Jacob K. Javits Convention Center in New York City (designed by I. M. Pei & Partners). Public-opinion analyst Louis Harris will address the meeting and reveal results of a survey of 200 experts who influence the development of architecture; science-fiction author Isaac Asimov will envision the future that architects have yet to create.



More design options and all the benefits

Summitville's extensive choice of colors, shapes and styles has a solution for the most demanding architectural requirements.

It's the ceramic tile that can make your projects something extra special.

Summitville has a natural beauty that other floors can't match. A durability carpeting, vinyl or wood won't provide. And quality that's hard to find in other floor products.

Summitville's Quarry Tile, shown above, is extruded to pro-

vide a tough, durable surface that's fireproof, dentproof, fadeproof and highly resistant to stains. It's easy to maintain and keeps its good looks for years. Even in heavy traffic areas like lobbies, restaurants and shopping malls.

See Sweet's File 9.18/Sum for our complete line of ceramic tile, including custom colors, wall murals and decorative insets.

Specify Summitville. The ceramic tile that adds more beauty and value to any installation.

Falcon
6" x 6" Quarry

Moroccan Brown
6" x 6" Quarry

Summitville's Quarry Tile is available in six color ranges, with smooth or abrasive surfaces. Choose from seven shapes plus trim units.

QUALITY ROOFS BY DESIGN
CARLISLE

Unique design considerations make Carlisle's Fully-Adhered Roofing System Max Klein's choice.

"Design A" follows the irregular contours of the roofline—and fits them like a glove.

Call it unique, exciting or striking. When Max Klein, a major plastics housewares products manufacturer decided to build a new corporate headquarters, he resolved it would be unconventional, beautiful and memorable.

Designed by Detroit architect, Harvey Ferrero, the Southfield, Michigan structure is all of these.

The inventive architectural concept is difficult to describe. Its spirals, curves, slopes and angles flow with an irregular but fluid geometry.

And the first-class-plus building required a top-of-the-line roofing system. One flexible enough to follow the intricate geometry of the roofline. A system strong and reliable enough to perform outstandingly under Michigan's rigorous weather conditions. A system that is fully adhered to hold fast for thousands of tomorrow's.

They chose Carlisle's "Design A" Fully-Adhered Roofing System.

Owner, Phil Brodak, Brodak Roofing of Wixom, Michigan observed "The roof has more angles than I've ever seen. It is flat, circular, barrel-shaped and juts in every imaginable direction.



Architect: Harvey Ferrero
Roofing Contractor: Brodak Roofing & Sheet Metal
Carlisle Manufacturer's Representative: Holmes Associates

And because the roof is visible, it had to have a smooth, perfect, solid black surface."

Concluded Brodak, "The Carlisle 'Design A' system is the only roof I know that could perform well under such design considerations. It was the perfect solution. Its fully-adhered roofing system allowed us to go wherever the roof went." Carlisle's roofing membranes include the standard EPDM and a new polyester reinforced EPDM. Both are available in designer colors—basic black Sure-Seal® or the innovative white-on-black Brite-Ply™.

Next time you need a roofing system try a Quality Roof by Design . . . try Carlisle.

Need more information?

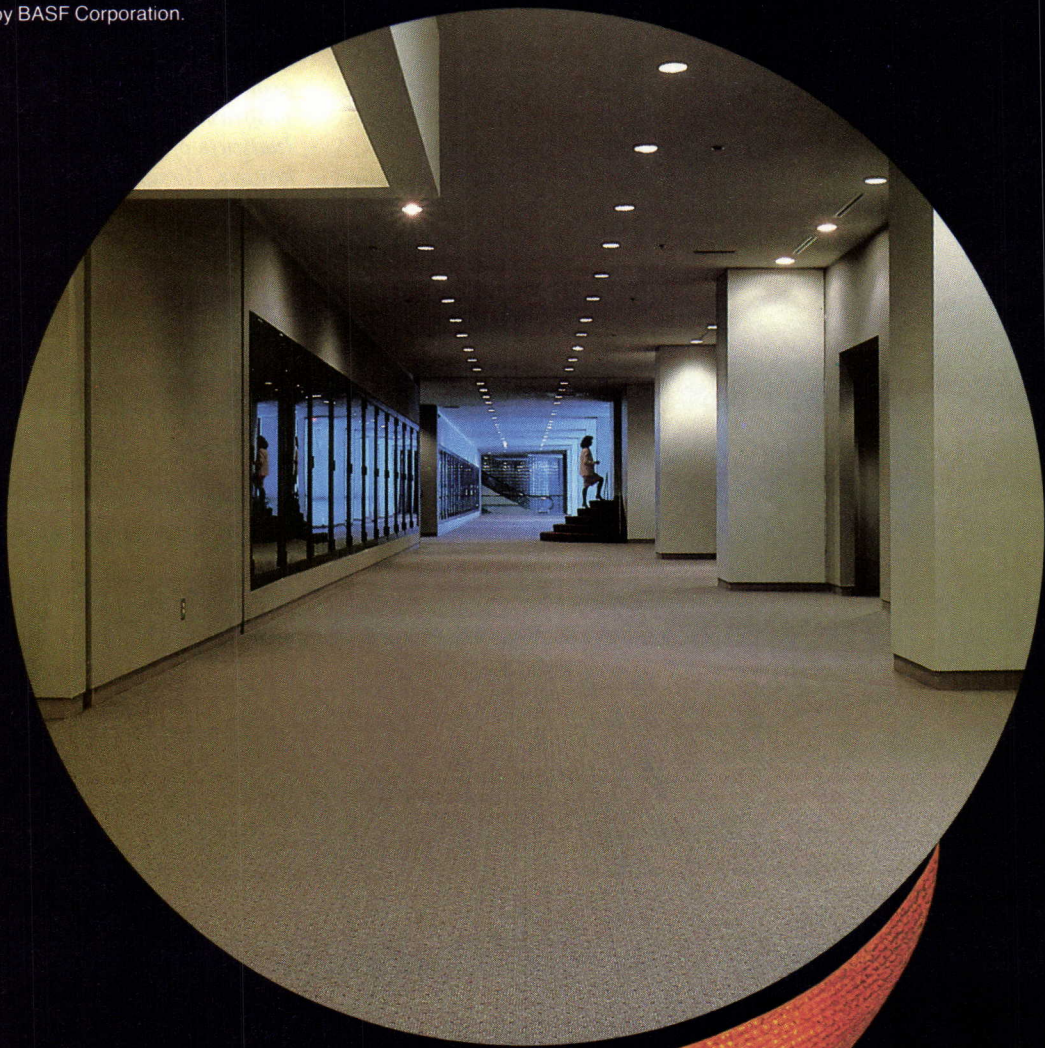
Call a Carlisle representative/distributor. Or call Carlisle SynTec Systems toll free at 1-800-233-0551. In Pennsylvania, 1-800-932-4626. In Canada, 1-416-673-5557. Or write Carlisle SynTec Systems, P. O. Box 7000, Carlisle, PA 17013.

CARLISLE
Carlisle SynTec Systems

Carlisle, Sure-Seal, and Brite-Ply are trademarks of Carlisle Corporation.

© 1988 Carlisle Corporation

Zeftron 500* is a registered trademark owned by BASF Corporation.



Zeftron 500[™] ZX nylon

The fiber of John Portman & Associates.

Zeftron 500[™] ZX nylon stands up to the Atlanta Merchandise Mart.

One million pair of feet walk the Atlanta Market Center every year. The carpet they walk resists everything from tracked-in dirt to spilled drinks. The designers at John Portman & Associates chose carpeting with Zeftron 500 ZX nylon because its special hollow cross-section feature is superior at hiding and releasing soil. Bleach-proof, static-controlled and fade-resistant, Zeftron 500 ZX nylon stays clean-looking longer. And the AMC remains a showplace. Fibers for every way of life.

BASF Corporation
Fibers Division

BASF

Circle 48 on inquiry card

Architecture Transformed: A History of the Photography of Buildings from 1839 to the Present, by Cervin Robinson and Joel Herschman. Cambridge, Mass: MIT Press, 1987, \$50.

*Reviewed by
Douglas Gantenbein*

Architecture and photography are two arts that have shared much in the last 150 years, often paralleling or complementing each other's artistic direction. In a thoughtful, lavishly illustrated study of this relationship, the art historian Joel Herschman and the architectural photographer Cervin Robinson trace the surprisingly significant influence of photography on the development and dissemination of recent architecture.

J. L. M. Daguerre and William Henry Fox Talbot published their techniques for still photography in 1839, and almost at once buildings appeared in the new medium. "Buildings," Herschman explains, "unlike most other subjects, 'sat' patiently for the long exposures required by early emulsions." Early architectural photography was documentary in nature, differing little, stylistically, from contemporary drafting. This changed in the 1880s when new techniques for reproducing photographs in magazines and books allowed photographers inexpensive access to a wider audience.

In the 20th century, photography became more abstract and more self-conscious: F. R. Yerbury, for example, cropped his 1920 image of Erich Mendelsohn's Einstein Tower to focus on the organic curves of its flanks, giving this Expressionist icon the countenance of a giant beached sea creature. By the 1930s architectural photography was a polished and professional

propagandist for the International Style. Particularly in the United States, it was photography that spread the new theology. Witness a photograph by Ken Hedrich in which the streamlined nose of a car juts into the dynamic perspective of Albert Kahn's Dodge Half-Ton Truck Plant: machine architecture for the machine age. Julius Shulman's famous dusk photograph of Richard Neutra's Kaufmann house indicates the high level of craftsmanship demanded by professional journals in the 1950s, by which time they were the primary outlet for architectural photography.

Robinson cites the wider use of color as the essential force in architectural photography since 1970. He argues, however, that the stringent technical demands of color often made the medium more snare than servant and laments that "Photographers' energies applied to this

procedure could at best only result in pictures that looked unremarkable." The photographs in *Architecture Transformed* underscore this point. Even though advertisers and the viewing public expect color, the crisp, detached air of superior black and white reproduction still reveals more of a structure's essential composition, texture, and mass. On the other hand, today's highly coloristic architecture is not always amenable to reproduction in black and white. It is perhaps not entirely accidental that the emergence of a new palette in architecture parallels the emerging dominance of color reproduction, but the authors do not fully grapple with this issue, nor do they do much more than tip their hat to the power of photojournalism to spread an otherwise isolated vision. Pietro Belluschi, for example, was a virtual unknown working the backwater of Portland, Oregon,

when his Northwest-style houses and aluminum-skinned Commonwealth Building became widely known through publication in the late 1940s. Ten years later he was dean of architecture at M. I. T.

Nevertheless, *Architecture Transformed* is an illuminating account of the viewer and the viewed. Architecture and photography owe their symbiosis not only to mutual needs, but also to the psychic similarities of the two professions. With a simple shift of terms, Robinson could easily be writing of architects when he observes: "The task of an ambitious architectural photographer . . . continues to be to our day: To produce a print of sufficient physical quality that one's work is taken seriously, to get ahead of the pack of one's fellow photographers by some esthetic act, and to remain in the public eye thereafter with a recognizable, individual style."



"Does it come à la carte?"

*Douglas Gantenbein is a
freelance writer based in Seattle.*



Trial by fire.

When the Edmonton Law Courts wanted a fire-retardant panel for their expansion project, the decision was in favor of Duraflake® FR. The Class I fire-rated particleboard that's gone through trial after trial.

It has a UL flame spread rating of 20. And a smoke developed rating of 25. Plus it's stable and won't bleed chemicals. Important requirements when laminating fine veneers such as the teak used in Edmonton's courtrooms.

You can order Duraflake FR cut-to-size, or in four- or five-foot panels up to 18 feet in length. It's even available as a high-pressure laminate panel called DuraDesign® FR, for use in casegoods and furniture.

If you have to meet strict fire codes, call (503) 926-5866 for Duraflake FR. And give it a trial.



Duraflake® FR

Duraflake Division
Willamette Industries, Inc.
Albany, Oregon 97321
(503) 926-5866

Circle 49 on inquiry card

Books



Kohn Pedersen Fox: Buildings and Projects 1976-1986, edited by Sonia R. Chao and Trevor D. Abramson, introduction by Paul Goldberger. New York: Rizzoli, 1987, \$45.

Kevin Roche, edited by Francesco Dal Co. New York: Rizzoli, 1986, \$45.

Helmut Jahn, by Nory Miller. New York: Rizzoli, 1986, \$45.

Robert A. M. Stern: Buildings and Projects 1981-1985, edited by Luis F. Rueda, introduction by Robert A. M. Stern. New York: Rizzoli, 1986, \$45.

Philip Johnson/John Burgee: Architecture 1979-1985, introduction by Carleton Knight III. New York: Rizzoli, 1986, \$45.

Reviewed by Scott Gutterman

Architectural monographs are being published in greater number than ever, thanks in part to the rapidly growing audience for architecture and design. The monographs that are finding their way into better bookstores and onto better coffee tables are not the solemn, weighty tomes of an earlier time; these books are splashier and more colorful, with fewer manifestos and more photographs of finished work.

The architects represented by these five volumes have surely evolved individual, often innovative styles, but the monographs also deal with the high-profile personalities of these architects and their success at capturing large-scale plum commissions.

Paul Goldberger's introduction to the work of Kohn Pedersen Fox places the firm's financial success on equal ground with its artistic ideals. He even credits the firm with having "restored to American architecture a sense

that there is a meaningful and healthy center, a point of intersection between creative and innovative design and major commercial work." KPF has expanded dramatically in the last 10 years and, according to Goldberger, achieved a status that no firm has held since Skidmore, Owings & Merrill in the '50s, that of "maker of forms that historians will use as markers for their time."

Such a claim is double-edged. On the one hand, KPF's brand of commercial Postmodernism has become acceptable among corporate clients in much the same way that SOM's prismatic glass boxes came to represent the quintessential postwar office building. On the other hand, the relative sameness—even anonymity—of many of the buildings produced by both firms would seem to ensure that history may not recall the work of either with absolute clarity.

The image of KPF that emerges from this volume is of a highly responsive firm, one that seeks to accommodate large-scale programs with solutions that reinforce the urban fabric. A spirited discussion between the partners and two interviewers concludes the book, focusing equally on intentions, process, and execution. The well-documented development of KPF's trademark windows, for example, is particularly instructive.

The monograph spanning the comparatively long career of Kevin Roche benefits considerably from the presence of Francesco Dal Co as editor-commentator-interviewer. Dal Co proves a feisty and insightful critic, and his occasional open disagreements with Roche help enliven the book and refine our understanding of the architect's own positions. When Dal Co admits a preference for the sleek, abstract United Nations Tower over the classically inspired column-derived form of

the more recent Morgan Bank, Roche responds sharply, saying, "There is no indigenous form to the high-rise building . . . It literally can be almost anything . . . These are marketplace buildings; they are not demonstrative for any other purpose. What controls their form does not derive from any function." The statement perfectly summarizes Roche's unabashed program-driven approach, a highly individual response to each project that was fostered by his mentor, Eero Saarinen. (Roche and John Dinkeloo took over Saarinen's office upon his sudden death in 1961.) The portrait of Roche that emerges is of a fiercely committed, inventive individual, whose designs temper the sometimes brutal honesty of Modernism with an understanding of human needs.

Nory Miller's introduction to the work of Helmut Jahn characterizes the German-born architect as a wunderkind. Indeed, at the age of 48, he is the youngest member of this group and has certainly pulled in a number of major commissions, particularly in his adopted home, Chicago. The monograph tends to stress the architect's take-charge method, closely charting Jahn's 20-year rise at venerable C. F. Murphy Associates, and the shrewd tactics he used in assuming financial and artistic control of what is now called Murphy/Jahn.

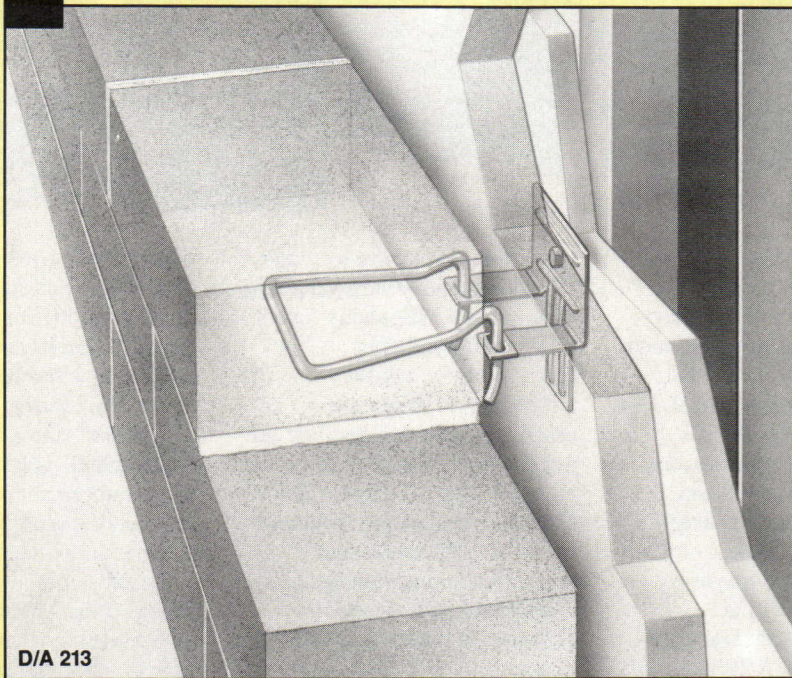
But Miller's excellent essay also puts Jahn's design philosophy into proper perspective, tracing its roots in, and eventual break from, Miesian ideology. She notes Jahn's frequent use of a minimalist catchphrase—"There's a square, a triangle, and a circle, that's all God gave us"—and then describes how he often assembles geometric shapes literally, not as abstractions of form.

The bold use of color that has become a Jahn trademark is

traced to the work of Norman Foster, but it is seen as just as much a product of his particular brand of flamboyant iconoclasm. Design sketches, executed with "a fat Mont Blanc pen filled with brown ink," show that Jahn's wide stylistic palette is tempered by an understanding of the engineering realities of large commercial buildings.

Rizzoli's second monograph on Robert Stern depicts an approach to architecture that contrasts sharply with that of Helmut Jahn. Declaring his frame of reference to be H. H. Richardson's New England and Raymond Hood's New York, Stern, in his introduction, speaks of the desire to create a new/old architecture that transcends a particular moment in time, and calls this approach "Modern Traditionalism." He notes, ". . . I try to create order out of the chaotic present by entering into a dialogue with the past, with tradition. The depth of that dialogue is, I believe, the essence of architecture and, in fact, of all culture." The short, dense introduction is the closest any of the monographs comes to a manifesto, albeit a somewhat defensive one. Stern displays an intense distrust of runaway technology, declaring ". . . innovation that is based not on an improvement of what exists but on the radical imposition of something new for its own sake is a form of totalitarianism." Stern's approach is generously represented by a wide range of projects, mostly residential and many essentially Neoclassical in nature; yet styles as disparate as Italianate and Shingle Style are contained in a single project. His new/old order is based on the artful deployment of architectonic elements—columns, turrets, gables, pergolas, and porticoes—while his forays into carpet and tableware design draw heavily on Art Deco motifs. Perhaps

Scott Gutterman is a freelance writer in New York City.

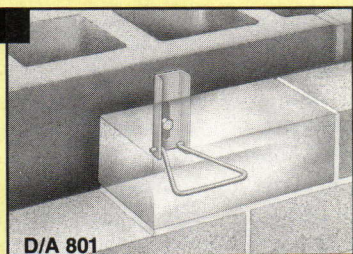


D/A 213

There's more to DUR-O-WAL's veneer anchoring system than meets the eye.

You know DUR-O-WAL has everything you're looking for in a veneer anchor.

The D/A 213 holds masonry to steel studs through heavy insulation. Its unique 2-screw design gives you 100% redundancy, each screw capable of carrying 100% of the load.



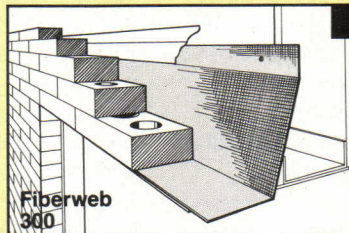
D/A 801

And the D/A 801 Adjustable Speed Set Anchor provides on-site versatility with proven performance into steel or concrete.

But they're not the whole picture. Take, for example, our new SX screws. The self-tapping carbon steel tip combines with a stainless steel shank to simplify installation and prevent deterioration. Dur-O-Wal also provides an alternative to stainless steel in its corrosion resistant Climaseal screws.



SX Screw



Fiberweb 300

Then there's our new Fiberweb 300™ flashing. Its fiberglass/Mylar®/metal foil construction provides moisture proofing performance that's superior to copper . . . and far less expensive.



Weep Hole

And DUR-O-WAL weep holes help eliminate moisture before it becomes a problem.

In short, DUR-O-WAL has a complete veneer anchoring system that lets you specify DUR-O-WAL's proven quality throughout—a single source for the whole order. For the full story, call your distributor or contact DUR-O-WAL.



DUR-O-WAL®, INC.

3115 N. Frontage Road Suite A
Arlington Heights, IL 60004
(312) 577-6400

Continued from page 77

because he has not done very large projects, Stern's occasional urban projects offer a welcome sense of traditional human—even domestic—scale.

Philip Johnson's recent work is exhibited in grand style. The monograph, designed by Massimo Vignelli, offers double-page, full-bleed photographs and renderings appropriate to the gigantic scope of the architect's projects. But square-footage is not the only thing in abundance here. As the late Carleton Knight dutifully noted in his introduction, "Johnson's outgoing personality and Burgee's business sense have brought the firm \$2.5 billion in current work . . . That figure alone makes them significant. . . ." And as Knight wisely pointed out, the firm's influence transcends any particular mode of design. Johnson is a presence in architecture, and has been for over 50 years. His forays into big commercial projects and his interest in reviving certain architectural styles of the past have helped to shape the industry as a whole. Knight's laudatory approach has played into Johnson's natural exuberance: this is clearly a celebratory monograph. Whether or not all of these buildings deserve celebration seems beside the point. The buildings on display here—ranging wildly in style, if not scope—are, like the architect himself, presences to be reckoned with. They are Postmodern in the brashest sense and Johnson delights in the controversy they create.

At this point in his career, Johnson's primary allegiance seems to be to developers. The firm, said Knight, "would be hard-pressed to turn down anything Gerald Hines offers, since he helped bring them the office building prominence they now have." Johnson and Burgee have undertaken no federal government work because, as Burgee explains, "There's no strong person who says, 'Yes, I like that; we'll build it.'" By making large-scale construction with powerful developers its first priority, the firm has left a built legacy for the early 1980s that seems particularly appropriate to its time.

Circle 50 on inquiry card

NOW DXF
COMPATIBLE

WE CALL IT THE PERSONAL ARCHITECT. NOT THE PERSONAL DRAFTSMAN.

We named it on purpose. This is a tool for the entire architectural practice, combining automated design and drafting capabilities on industry-standard IBM* PC ATs and compatibles.

Use the Personal Architect to design buildings. While other systems work with lines and arcs, the Personal Architect lets you work with floors, walls, roofs, and rooms. In 3-D. In perspective. So you can create a true model of your building design.

Use the Personal Architect to present designs.

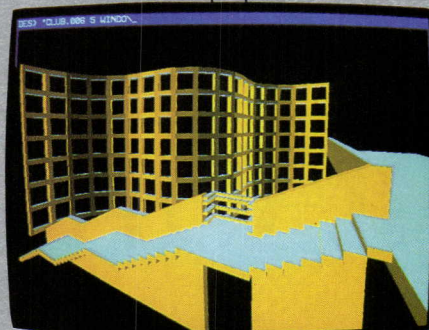
This system gives you the tools you need to make effective presentations. Like perspective views with hidden lines removed. Shaded pictures. And area takeoffs.

Use the Personal Architect to produce drawings. The system

has expert drafting capability to get your production work done. And can edit drawings quickly too.

On-screen icon menus get you up and running fast. And a graphic symbol library of over 1,000 architectural symbols gives you great flexibility.

The Personal Architect. It can help you get more business and do more business. And isn't that the name of the game?



Get more business done. On-screen menus (left screen) facilitate the production of contract documents. Drawing courtesy of Heard & Associates, Chicago, Illinois.

Get more business. Shaded pictures (right screen) like this help clients see your vision clearly from any perspective. An invaluable selling tool. Drawing courtesy of Stephen Douglass, Architect, Cambridge, Massachusetts.

For more information call 1-800-248-PSBU (7728). In Massachusetts & Canada, 617-276-1094. Or write to: Computervision Corporation, PSBU, Building 16-2, 100 Crosby Drive, Bedford, MA 01730. Circle 51 on inquiry card


COMPUTERVISION
Personal Architect

*IBM is a registered trademark of International Business Machines Corp.



FROM THE HOUSE THAT RUTH BUILT TO THE HOUSE THAT JACK BUILT

Incandescent, HID and Fluorescent. Cooper Lighting is the single source that offers a virtually limitless choice of lighting products. The choice for Yankee Stadium, the choice for millions of homes, and the choice for your next project.

Halo, Metalux, Crouse-Hinds, Lumark, McGraw-Edison and Sure-Lites are now all part of Cooper Lighting. We are an unparalleled resource for manufacturing, engineering, marketing, design and research. Seven regional showrooms provide an opportunity to experience first-hand the effects of lighting.

Brilliance from a single light source. Cooper Lighting, 400 Busse Road, Elk Grove Village, IL 60007.

COOPER LIGHTING

THE SINGLE LIGHT SOURCE



Now it's easy to copy bluelines.

Imagine the convenience of making copies of bluelines—even marked-up bluelines—onto bond, vellum, or film right when you need them. Now anyone who needs a copy can have one.

The Xerox 2510 Engineering Copier.

This plain-paper engineering copier gives you sharp, permanent, black-on-white, full-sized copies up to 36" wide, by any manageable length, from any drawing, print, or sepia.

Odor-free, and fits anywhere.

The Xerox 2510 Engineering Copier is easy to use, odor-free, and has no special venting or electrical requirements. And it's small enough to fit on a tabletop. So you can put it anywhere you need it.

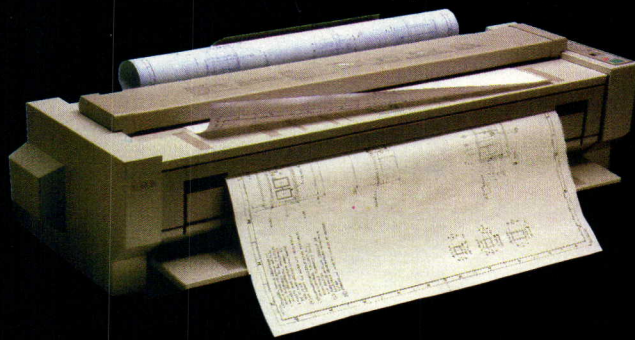
It's yours for just \$4,495.*
(Or lease for about \$125 per month.**)
For all it can do to make your job easier, the Xerox 2510 Engineering Copier is a breakthrough product at a breakthrough price.

For more information call 1-800-448-3400 Ext. 336.

**Prepacked supplies extra.*

***Ask your Authorized Xerox Representative about the availability of lease plans.*

See us in Chicago at the Design Engineering Show, March 7-10, McCormick Place, Booth 964.



Xerox Technigraphic Products
317 Main Street
East Rochester, New York 14445

XEROX® and XEROX 2510® are trademarks of XEROX CORPORATION.

Circle 53 on inquiry card



THIS COMPANY RELIES ON THE WORLD'S BEST QUALITY CONTROL SYSTEM: HUMAN PRIDE.

At Marvin, we make windows to order. We don't build and warehouse an inventory. Not even for the most routine shapes and sizes.

Making windows to order makes every aspect of the job more personal. And more important. You know there's a customer out there who chose Marvin. You give that customer your best work.

It's a matter of pride. Marvin pride. Even after the 68 tests we perform on our windows and their components, every window must meet the exacting standards of the person who made it.

Because we know that someday that window will have to meet the highest set of standards of all — yours.

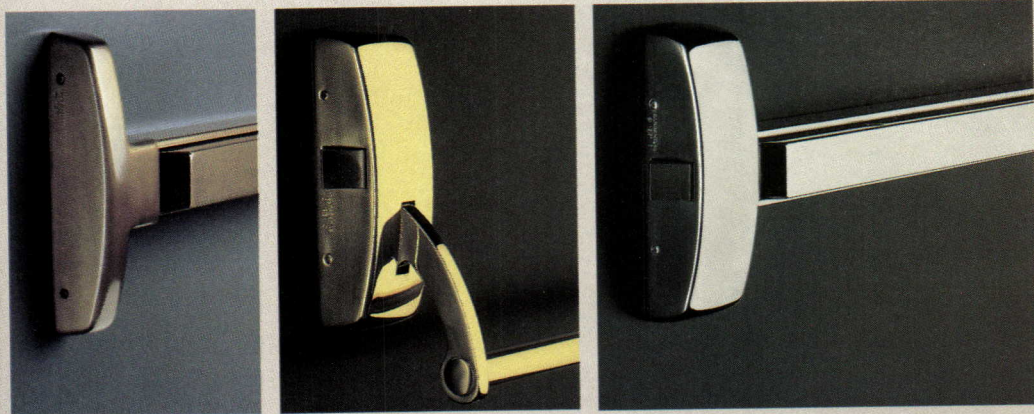
MARVIN WINDOWS ARE MADE TO ORDER.



Design and performance. Hardware classics by Sargent.

This is what you're looking for in exit hardware: timeless design and exacting craftsmanship. Complete security. Reliable, long-lived performance. Backed by responsive service and on-time delivery.

For enduring qualities in exit devices, locks and door closers, choose the complete Sargent line. And get classic architectural hardware.



SARGENT
ESSEX
INDUSTRIES INC.

Sargent, New Haven, Connecticut 06511
Sargent of Canada Ltd.

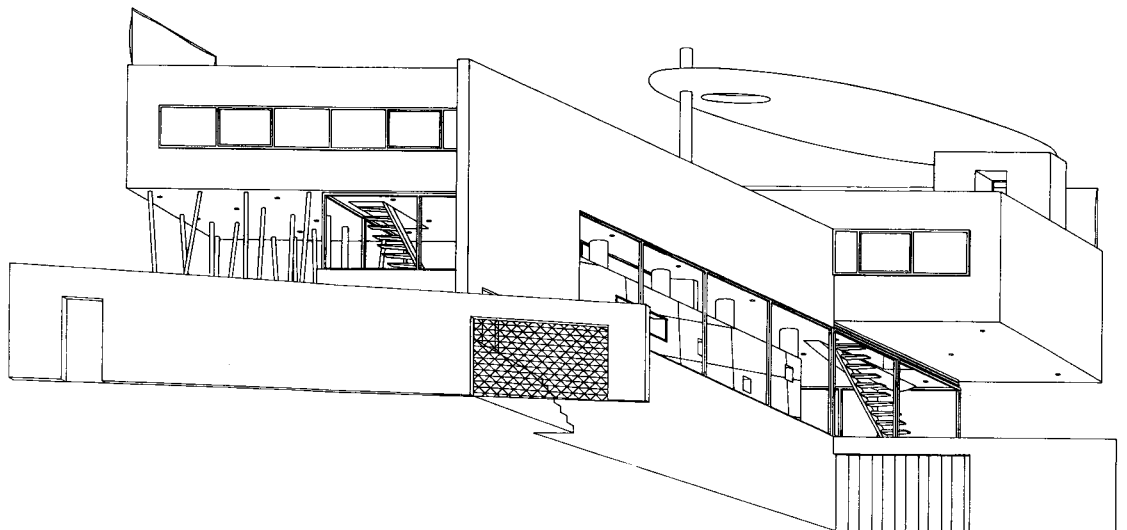
Circle 55 on inquiry card

In this issue

Our editorial fanfare this month hails Part I of a two-part profile on one of Europe's most controversial architectural firms, the Office for Metropolitan Architecture, based in London, Rotterdam, and Athens (pages 94-107). Since its formation in 1975, under the leadership of architects Rem Koolhaas and Elia Zenghelis, OMA has won international recognition with provocative, visionary proposals for cities in America and abroad. To illustrate the impressive scope of the firm's theoretical work, our article in this issue offers a portfolio of recent projects (including the Parisian villa shown below). Part II, next month, will present the Netherlands Dance Theater, OMA's first major building actually built. Dominant themes in both articles are the revitalization of Modernism as an expressive formal language and a continuous enrichment of the contemporary city.

The latter goal, if not the former, is shared by the ambitious urban project from which we extracted a detail for our cover: Rowes Wharf, in Boston, designed by Skidmore, Owings & Merrill (pages 86-93). Ironically, perhaps, given SOM's longstanding reputation as a champion of classic Modernism, this monumental mixed-use development epitomizes the creative reinterpretation of an earlier Classical esthetic. As our article demonstrates, however, the retrospective move signals a thoughtful reappraisal of the place of history in a city's growth, rather than a heedless jump onto the Postmodern bandwagon.

Speaking of bandwagons, figurative and literal, we refer the reader to pages 108-109, wherein we show how traditional small-town American architecture can march to the beat of a different drummer. And, for our finale, a Building Types Study on firehouses (pages 110-125): a parade of variations on another old favorite.



Harboring tradition



With the redevelopment of Rowes Wharf, Boston has taken a giant step toward reversing the urban-planning mistakes of the 1950s and '60s. A major highway-relocation project will complete the task.

Rowes Wharf
Boston, Massachusetts
Skidmore, Owings & Merrill,
Architects

Although the Boston of history books continues to flourish in the gas-lit brick alleys of Beacon Hill and the stately brownstone rows of Back Bay, parts of the city of Bulfinch and Richardson have yielded over the past quarter-century to a brand of anonymous commercial architecture that seems alien to this urban dowager's narrow streets and irregular blocks. Still, if there is anything positive about the recent building boom downtown, it is the ongoing rediscovery of Boston Harbor, which is emerging from a long decline that actually began back in the mid-19th century with the ascendancy of New York City as the East Coast's preeminent commercial-shipping port.

During the 1960s, the Boston Redevelopment Authority (BRA) began acquiring abandoned wharves and other underutilized property on or near the waterfront as part of its overall downtown urban-renewal program. In 1979, the BRA established the Harbor Planning Task Force to undertake a major study of the waterfront and investigate "the harbor's potential as a source of economic growth and recreation." A report on that study's findings—"Boston Harbor: Challenges and Opportunities for the 1980s"—was the first official document to outline potential new uses for all 100 miles of the city's shoreline. Though by no means the only study to advocate the incorporation of public functions into harbor-development proposals, the 1979 report did mark a turning point between the '60s philosophy of waterfront redevelopment (which had led to the construction of isolated luxury-housing projects that in effect reinforced the separation between the city and its harbor) and the current trend toward integrating private development with public amenity.

The BRA was clearly addressing this ideological shift in 1982 when it organized an architect/developer competition for the renewal of Rowe's and Foster's wharves, a pair of dilapidated 18th-century piers at the foot of Broad Street that had become little more than a parking lot and ferry landing for South Shore commuter boats. Working with the Boston Society of Architects, the BRA drew up a set of guidelines for the five-acre site meant to ensure that the 665,000-square-foot project—later dubbed, simply, Rowes Wharf—would relate in character and scale to the adjacent Financial District, and somehow draw Bostonians to the waterfront, past the elevated Fitzgerald Expressway separating the parcel from downtown. The most important of these mandates involved usage (a mix of commercial, residential, retail, and maritime functions), massing (a 165-foot height limit along Atlantic Avenue, stepping down to two stories at the water's edge), vistas (a 50-foot-wide corridor allowing views of the harbor down Broad Street), and pedestrian access (30-foot-wide easements leading to the water along the property's northern and southern boundaries). The guidelines urged architects to "respect the masonry character of the nearby downtown," but stopped short of dictating more specific design criteria.

In tapping the Chicago office of Skidmore, Owings & Merrill and The Beacon Companies over seven other architect/developer teams, the BRA acknowledged "the amount and quality of [the winning submission's] public accesses and open space," calling the premiated proposal "a significant example of the integration of public and private uses within a single development scheme." In metropolitan terms, SOM has produced an urban paradox that incorporates both the grand symbolic gesture of a great civic building *and* the intimate scale of a residential side street. Stylistically, too, Rowes Wharf is an architectural oxymoron,

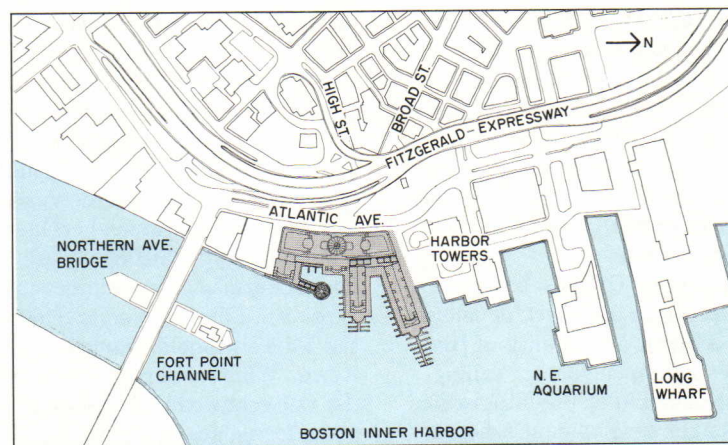
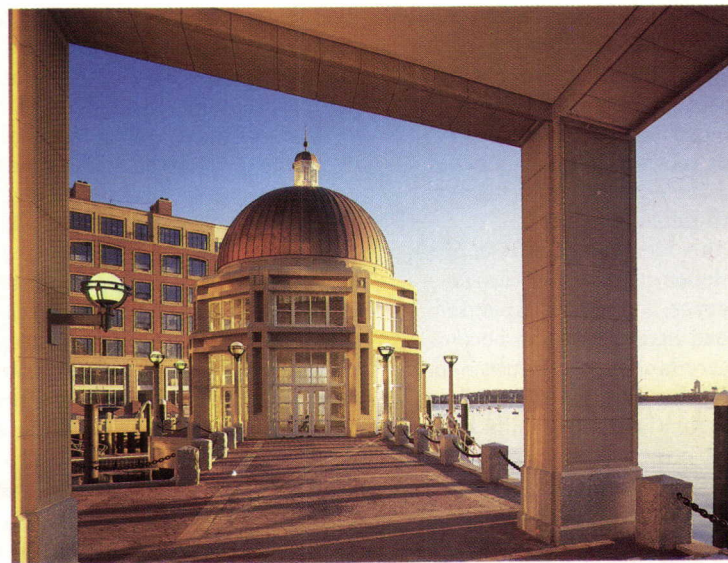
which (and this is especially appropriate for Boston) seems almost radical in the conservatism of its imagery and the refinement of its precast-concrete detail. The project owes much of its success to SOM's relentless adherence to well-established logic. In order to reinforce a building wall along Atlantic Avenue, for example, the architects designed Rowes Wharf to follow the curve of the street, and they set back 16-story residential and commercial towers behind a seven-story datum line that corresponds with two adjacent older office buildings to the south (opposite). Where they could have left the requisite Broad Street view corridor an unarticulated open slot, the architects instead turned the passage into a monumental urban set piece—an 80-foot-high coffered arch that rises dizzily through a series of rings to a public observatory, housed in a copper-clad domed rotunda.

The sources of Rowes Wharf's architectural expression are frankly classical, ranging from the widely emulated Roman triumphal arch and Renaissance dome on pendentives to specific local progenitors like Bulfinch's Tontine Crescent, Faneuil Hall, and the Massachusetts State House. Then, too, SOM was obviously aware of Boston's red-brick and granite vernacular buildings, especially in its design of Rowes Wharf's waterside flank, where three "finger piers" housing offices, condominiums, and part of the 230-room Boston Harbor Hotel allude to the city's 19th-century maritime storehouses. Together with the domed octagon of a new ferry terminal, these stepped structures form a welcoming water plaza for strollers and passengers alighting from commuter ferries and recently inaugurated shuttle boats serving Logan Airport (page 88).

It is here, along the harbor, that Rowes Wharf departs from other recent waterfront projects like Battery Park City, in Manhattan, and Washington Harbour, in Georgetown, both of which meet the water with pleasant, but comparatively aloof riverfront esplanades. The Boston complex, by contrast, literally embraces the harbor, its own brick-paved promenade meandering through a 50-slip marina. (This walkway will eventually hook up with an existing promenade extending north to the New England Aquarium, Long Wharf, and Waterfront Park.) Artificially created diversions by the harbor's edge are blessedly few, and what there is—a small handful of as-yet unopened shops and restaurants—never upstages such real-world sensations as the call of gulls and the scent of marine fuel. Those bent on buying fishermen's sweaters, ships-in-a-bottle, and other nautical paraphernalia can try Quincy Market, just five blocks away.

For all its virtues, however, Rowes Wharf is not what it might be. The quality of the project's interiors varies wildly, running the gamut from handsome red-and-green marble commercial lobbies to predictably luxe, but downright lugubrious hotel restaurants and lounges. The much-heralded public observatory, moreover, is a stinging, gypboard belvedere that smacks of the kind of thin Postmodernism the architects so assiduously avoided elsewhere (page 93). Finally, despite SOM's efforts to adhere to the spirit of the BRA's guidelines and make the project truly *of Boston*, Rowes Wharf will remain physically cut off from the city until the Commonwealth of Massachusetts proceeds with ambitious plans to replace the intrusive Fitzgerald Expressway with an underground highway. Only with the completion of this 10-year, \$3-billion mega-proposal will Rowes Wharf reach its potential as an inviting visual mediator between city and harbor, and a spiritual link between Boston past and present. *Paul M. Sachner*

“Our task at Rowes Wharf,” says Adrian Smith, SOM’s partner-in-charge of design, “was to produce a monumental structure that reads strongly from afar, yet is not an overpowering presence when viewed up close.” With its 80-foot-high arch and 500-foot-wide water frontage, Rowes Wharf easily holds its own when seen from across Boston Inner Harbor, even in the company of such lofty neighbors as I. M. Pei’s 1970 Harbor Towers (right in top photo) and Burgee/Johnson’s just-completed International Place (tall building left in photo). For ferry commuters passing between Rowes Wharf and a 19th-century office building at 400 Atlantic Avenue, however, the architects reduced the building’s apparent mass by specifying a varied material palette of water-struck red brick, acid-washed precast concrete, and granite, and by setting human-scaled wood storefronts between fluted pilasters (opposite). A new ferry terminal, originally intended to be housed in a tempietto-like copper-roofed pavilion along the water (bottom), will actually be located in retail space in Rowes Wharf’s south finger pier.





Rowes Wharf's most distinctive element—a dramatic arch that affords glimpses of the harbor from Broad Street (top)—was not part of SOM's competition-winning scheme, but was added later when the architects recognized that the original open space between the project's north and south office-building wings lacked, in Adrian Smith's words, "a proper sense of containment." Rather than design a simple barrel vault, however, SOM opted for a more memorable volumetric device—a richly ornamented 3 1/2-story-high lantern, ringed by offices and crowned by a domed skylight (bottom), that terminates in a circular public observatory (opposite). Rowes Wharf's traditional masonry finishes—molded-brick window surrounds, coffered precast intrados, and granite plinths and spandrel panels—belie the project's structural-steel framing system and its innovative method of construction. Owing to the site's proximity to Boston Harbor, the builder employed the up-and-down method, a little-used technique that involves simultaneous basement excavation with the erection of a steel superstructure. (The walls of a conventional basement dug so close to the harbor would have been unable to counterbalance the uplift of high tide without the weight of the steel superstructure.) As an added benefit, the technique saved the developer six months in construction time.



©Steve Rosenthal



©Steve Rosenthal

Rowes Wharf
Boston, Massachusetts

Owner:

The Beacon Companies

Architect and engineer:

Skidmore, Owings & Merrill—Adrian D. Smith, design partner; James R. DeStefano, project partner; Robert A. Hutchins, project partner; Hal Iyengar and D. Stanton Korista, partners (structural engineering); Parambir Gujral and Ray J. Clark, partners (mechanical engineering); Joseph A. Gonzalez, studio head; G. Joseph Reibel, senior architect and studio head; John Kelsey, project manager; Richard Smits, senior technical coordinator; Hank Skonieczny, technical coordinator; Peter Van Vecten, senior architect; Dennis DeCapri, John Eifler, Lyn Eisenhower, Will Fugo, Richard Garcia, Julie Gross, Bill Haynes, David Hertzfeldt, Steve Hubbard, Jeff Jarvis, Mike Kuenstle, Lee Ledbetter, Sandy McLeod, Frank Michealski, Dale Olsen, Donna Palicka, Dan Rectenwald, Jean Reibel, Ruth Slobin, Indulis Smidgens, Chris Thomas, Scott Thomas, project team

Consultants:

Haley & Aldrich (geotechnical); Childs Engineering Corp. (special marine and civil engineering); Jules Fisher & Paul Marantz, Inc. (lighting); Cavanaugh/Tocci Associates, Inc. (acoustics); Frank Nicholson, Inc. (hotel interiors)

General contractors:

Beacon/O'Donnell (overall coordination and above-grade construction); Perini Corp. (subgrade construction)



Modern romance

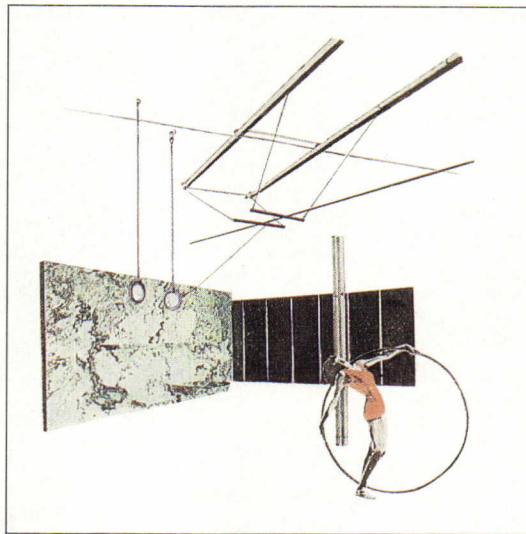
Eight projects by the Office for Metropolitan Architecture

Back in 1975, when most architects were fantasizing about columns, architraves, and keystones, a rebellious gang of four had a Modern dream. Architects Rem Koolhaas and Elia Zenghelis, and their wives, painters Madelon Vriesendorp and Zoe Zenghelis, envisioned a great metropolis of fragmented towers devoted to pleasurable pursuits, and so opened the Office for Metropolitan Architecture (OMA). Three years later, their ideas for "a culture of congestion" were formally presented in a book written by Koolhaas entitled *Delirious New York*. The postscript to this ironic history, subtitled "a retroactive manifesto for Manhattan," consisted of OMA's own designs. The series of allegories about contemporary Gotham, inspired by the architects' teaching stints in the U. S., included such projects as the Welfare Palace Hotel, an entertainment center for Roosevelt Island with a dance floor resembling Théodore Géricault's *Raft of the Medusa*. Colorfully rendered by Vriesendorp and Zoe Zenghelis (no analytical ink-on-mylar for them), OMA's confident, and often comic, visions injected a note of levity into the factious, Whites-vs.-Grays-vs.-Silvers architectural debate of the mid-1970s. Meanwhile, audiences at Koolhaas's New York lectures laughingly remarked, "Those Europeans can't be serious about building their schemes."

Over the past decade, however, the Office for Metropolitan Architecture has proved just how serious its "delirium" is. In 1980, the pair of husband-and-wife teams returned to Europe, "to step out of the jet-lag lecture circuit, and go underground to build," explains Koolhaas. He and Zenghelis opened offices in their respective native cities of Rotterdam and Athens, and began independently pursuing their own commissions. Both continued to teach at the Architectural Association (where they had originally met), which provided a London base for collaboration on entries to major European building competitions. While OMA's efforts over the past five years have yielded an ambitious portfolio of competition entries, exhibition installations, building designs, and master plans, few of these projects have been or will ever be constructed. And yet, despite a succession of competition near-wins and project postponements, OMA has remained a staunch advocate of Modernism. Insists Koolhaas: "Recent attacks on Modern architecture have described it as lifeless, empty, puritanical. It has always been our conviction that Modernism is a hedonistic movement; that its abstraction, rigor, and severity are in fact plots to create the most provocative settings for the experiment that is modern life."

Echoing the Modernist mantra "form follows function," OMA exploits programmatic requirements as a formal device by arranging the functions of a building as a series of juxtaposed, geometric elements. Koolhaas's early career as a scriptwriter undoubtedly influenced this storyboard-collage method, but OMA credits Russian Suprematism and the International Style as its main sources of inspiration in attempting to balance idealized abstraction and material sensuousness. "I'm not just interested in the harmless, early phase of Modernism, but in its aggressive

side during the 1950s and '60s, when it became an acceptable, almost vernacular style," Koolhaas explains. Like Robert Venturi, whose book *Learning from Las Vegas* he admires, the Dutch architect is fascinated by popular architecture, particularly the vulgarity of commercial buildings. This interest is reflected in the improvisational quality of OMA's disjointed compositions and by the 1950s-inspired, curvaceous forms that often strike a humorous note in the firm's projects. Koolhaas's admiration for both high and low Modernism is exemplified in OMA's "La Casa Palestra," an interpretative reconstruction of Mies van der Rohe's Barcelona Pavilion as a body builder's home, displayed at the 1986 Milan



Triennale (left and opposite). Having bent the prototype's overlapping, glass and marble planes into a curved, wedge-shaped interior, the architects promoted the visceral aspects of the Modern icon, equipping it with exercise machines, a piped-in soundtrack, laser projections, and a video "history" of the Pavilion after the 1929 exhibition. OMA's faith in Modernism also extends to the urban scale, as evidenced by numerous competition entries and urban redevelopment schemes. The firm contends that the current practice of small-scale contextualism is not a realistic solution for our cities, maintaining that architects must come to terms with the "tower in the park" and other features of postwar planning in order to effectively influence future

urban growth. OMA's proposal for Bijlmermeer, a 1960s housing development in Amsterdam, attempts to do just that, with new infill to increase the density and pedestrian scale of the monolithic blocks. Other OMA projects, such as competition entries for La Villette in Paris and Melun Sénart, a French new town, propose parks and streets as primary organizational tools, rather than as secondary, residual spaces between buildings.

In arguing a convincing case for Modernism, OMA has exerted an important influence on a younger generation of architects searching for models of bold contemporaneity. Two OMA alumnae, Zaha Hadid and Arquitectonica principal Laurinda Spear, have elaborated the scenographic vocabulary of their former teachers into a richer, more colorful language—going so far as to eclipse, some would say, OMA's pivotal role in the current re-evaluation of Modernism. With the recent opening of the Netherlands Dance Theater (see next month's issue), however, OMA's polemical stance has finally been put to the test of real construction, and the long-awaited translation of its visions into built form validates years of academic experimentation. Unlike those they have inspired, OMA's members assert that their resuscitation of Modern ideals boldly addresses the contemporary city as it exists. "The architects of fragmentary Modernism pretend that there can never be an integration with things as they are," argues Koolhaas, metaphorically distinguishing his younger followers from OMA: "They are like observers looking at the fire from the outside. We're in an asbestos suit headed straight into the flames."

Deborah K. Dietsch

Under the direction of partners Rem Koolhaas and Elia Zenghelis, The Office for Metropolitan Architecture continues to develop its Modernist idiom in an era of Postmodern historicism.



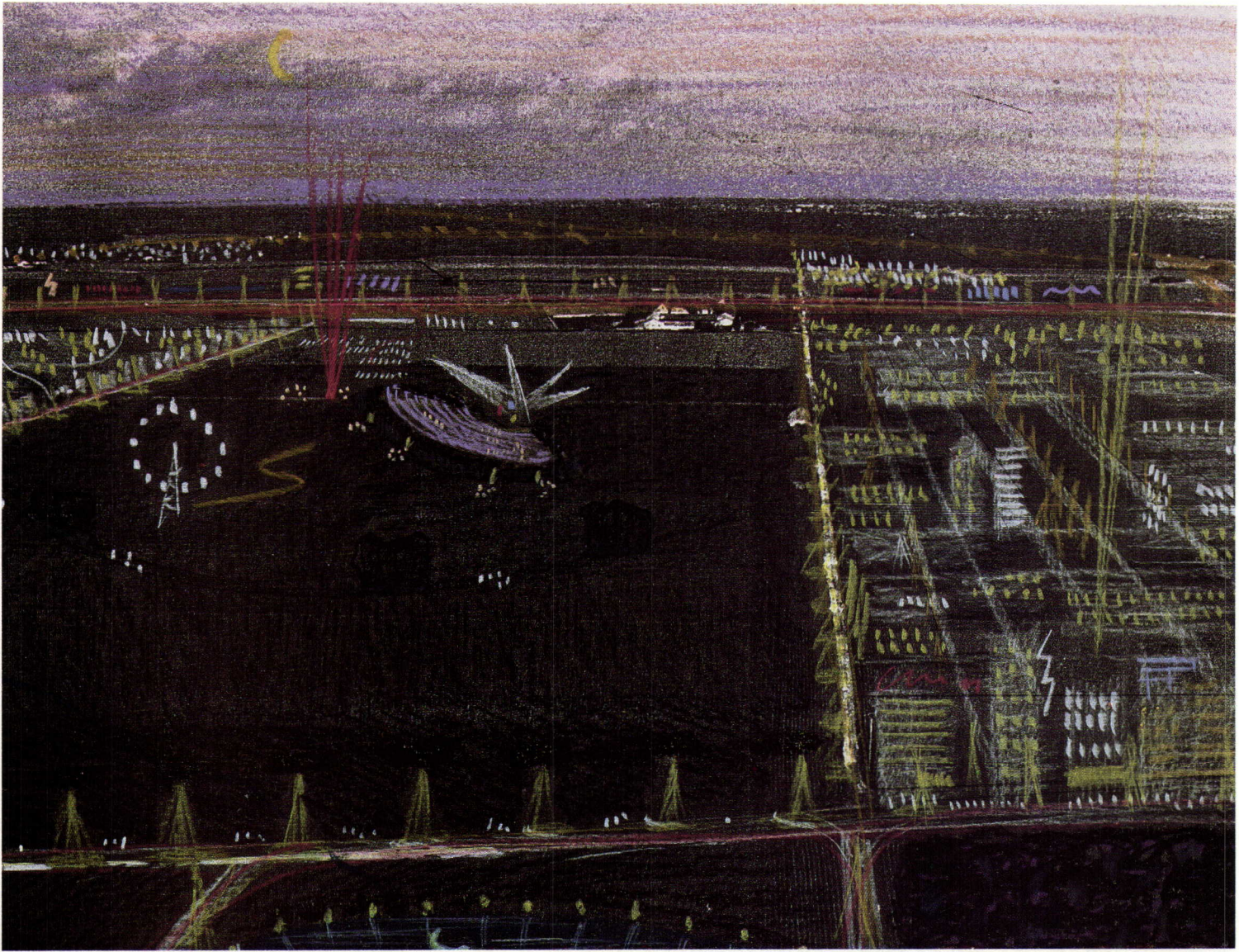
Hans Werleman, ©Hectic Pictures

Luc Rausse

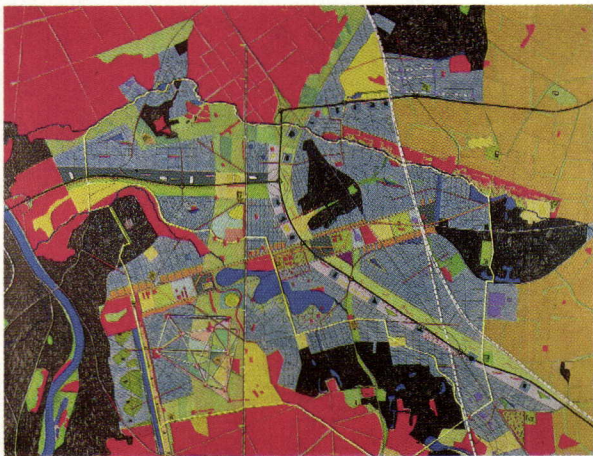


The Hague Town Hall and Library

New town of Melun Sénart



Mike Guyer

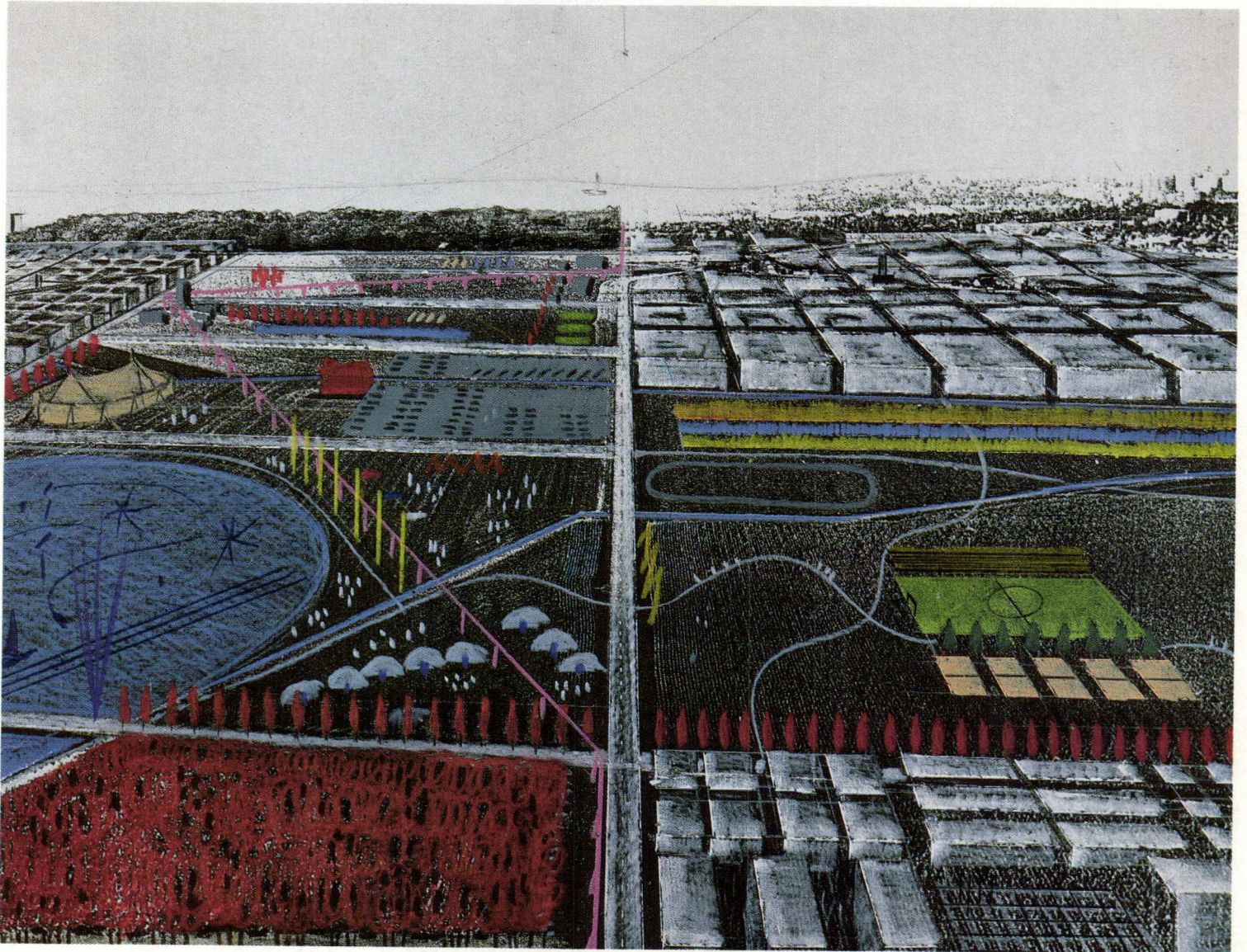


Yves Brunier

As a sequel to *Delirious New York*, Rem Koolhaas's soon-to-be-released book, *The Contemporary City*, will examine the architecture of urban sprawl in such places as Atlanta, Paris, São Paulo, and Osaka. "It's a kind of *Learning from Las Vegas*, but more judgmental," says the author.

Koolhaas asserts that such decentralized cities will become the standard of the future and thus deserve the attention of architects: "You have to do more than just turn your back on these places and despair." OMA has already begun studying ways of designing new urban

types, and its ill-fated 1987 competition entry for Melun Sénart, a new town southeast of Paris, exemplifies the firm's unorthodox attitude toward planning such developments. Unlike the other new towns outside Paris, the OMA design does not center around a vast complex of housing and commercial buildings, but on a network of open spaces. "The built is uncontrollable. It is subjected to a maelstrom of political, financial, and cultural forces," explains Koolhaas. "The voids between buildings, however, are a subject for which architectural absolutes are still



convincing. Our scheme is as much a discourse on what *shouldn't* happen, as on what could happen."

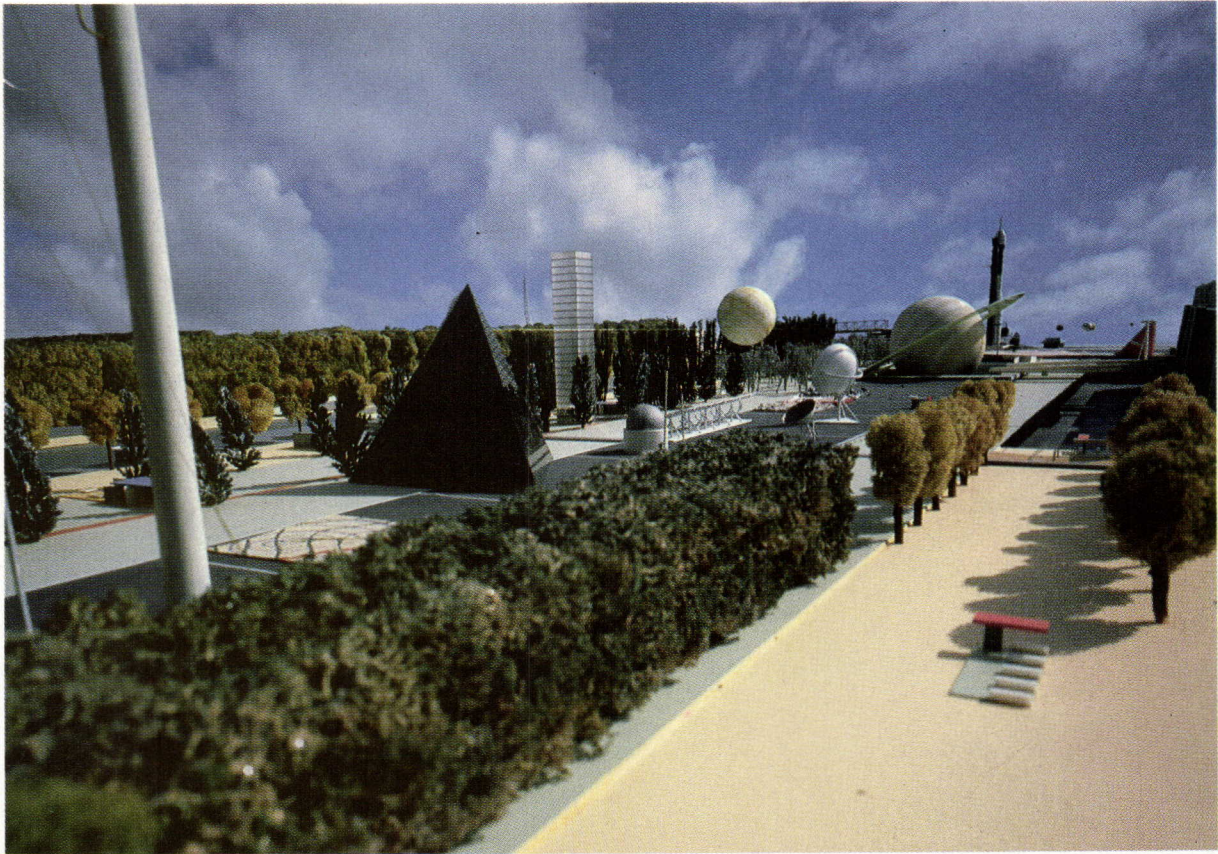
The architects complemented Melun Sénart's forested landscape along the Seine with an irregular pattern of open spaces that corresponds to the topography of the site. Resembling a Chinese character in plan (indicated in light green on site plan at left), this network of bands consists of various types of parks (industrial, recreational, and maritime), including the preservation of existing farmland, and streets (boulevards, highways, and

commercial strips). The residual area around the open spaces (indicated in light blue on site plan)—"the archipelagos within the voids," as Koolhaas refers to the urban patchwork—are intended to be built up gradually as independent entities, according to the evolving needs of the new town. OMA views the relationship between these settlements and the predetermined public areas as potentially the most challenging part of the scheme. The boundaries between the two spaces will be bridged by such amenities as amusement parks and sports arenas (above).

Project team:

Office for Metropolitan Architecture—Rem Koolhaas, Xaveer de Geyter, Yves Brunier, Mike Guyer; Atelier du Folie Mércourt—Yves Bories, Françoise Debuyst, Patrick Chavanne

Parc de La Villette



Hans Werleman, Chiel van der Stelt

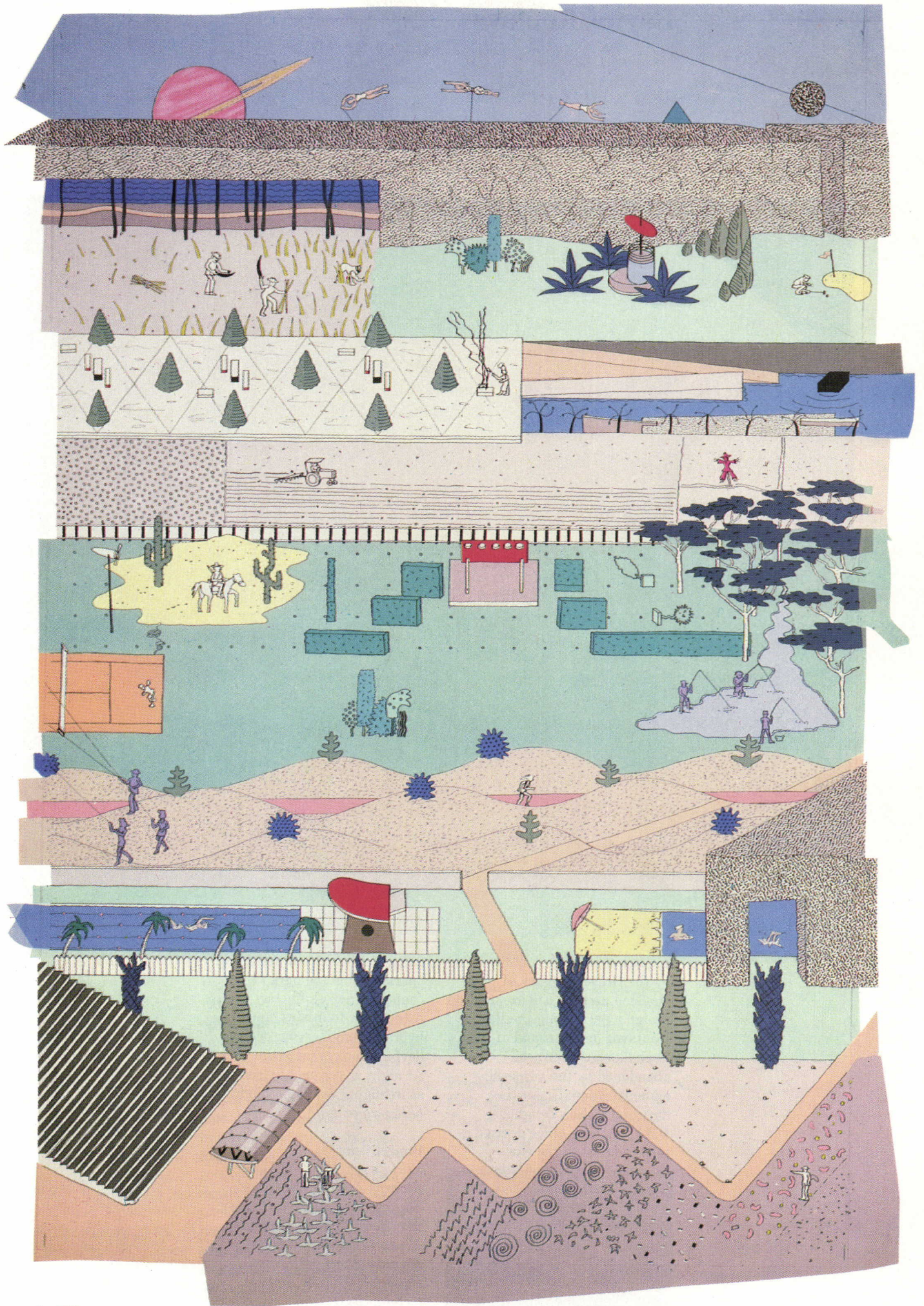
Billed as seeking “an urban park for the 21st century,” the competition for La Villette, a 75-acre industrial site in northwestern Paris, was held in 1982. OMA was initially included as one of nine first-prize winners, although the Franco-Swiss architect Bernard Tschumi ultimately won with a design entitled “Park of Follies.” Like Tschumi, the OMA architects proposed an unconventional arrangement of programmatic elements, but without a large open space—an omission that reportedly prevented the scheme from being premiated.

“OMA rose to the maniacal detail of the over-inflated program . . . by proposing a method, rather than an image,” wrote jury member Françoise Choay in a critique of the firm’s scheme. This method consisted of subdividing the park’s activities into parallel bands, oriented east-west across the site to incorporate existing buildings

such as the Museum of Science. Over this grid, which treats nature as just another function to be accommodated (opposite), small-scale elements such as kiosks, playgrounds, and picnic areas were irregularly distributed as “confetti,” and connected by a circulation system of intersecting boulevards, promenades, and plazas (above). As Koolhaas characterizes his plan for the Parc de La Villette, “The layering is not unlike the experience of a high-rise, with its floors all capable of supporting different programmatic events, yet all contributing to a summation that is more than the accumulation of parts.”

Project team:

Rem Koolhaas, Elia Zenghelis, Kees Christiaanse, Stefano de Martino, Ruurd Roorda, Ron Steiner, Alex Wall; Jan Voorberg, Michel Corajoud (landscape)





Checkpoint Charlie

The city of Berlin has long fascinated Rem Koolhaas. While still a student at London's Architectural Association in 1970, he examined the architectural implications of the Berlin Wall—a project that furthered his obsession with linear barriers and connections. In 1980, OMA seized the opportunity to design housing for Berlin by entering a competition sponsored by the International Bauausstellung (IBA) for two sites in the city's western section. A project for Lutzowstrasse by Elia Zenghelis and a project for Kochstrasse-Friedrichstrasse by Koolhaas

rejected IBA's preference for 18th-century-inspired perimeter blocks in favor of Modern, freestanding slabs; neither scheme convinced the jury to award a commission to OMA.

As a consolation prize, however, IBA gave OMA the chance to construct a building on a small site adjacent to the Berlin Wall along Friedrichstrasse. In addition to providing residential units, the architects were required to incorporate ground-floor facilities for Checkpoint Charlie, the Allies' border control at the Wall. OMA has relegated the checkpoint to pavilions at the



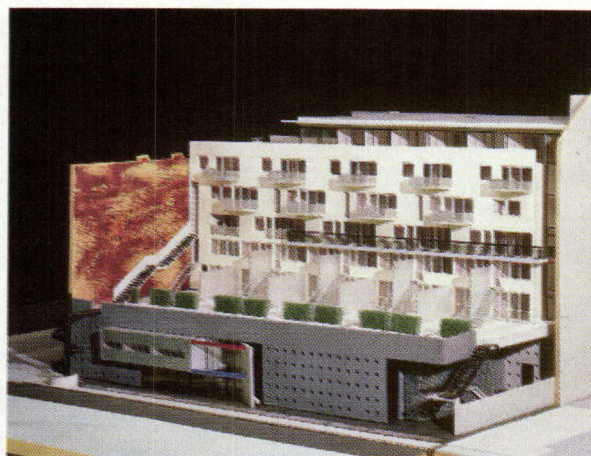
base of the block and superimposed housing above in three types of units served by separate circulation systems. At the rear of the building, a gate opens onto a row of terrace houses with gardens (right); duplex units in the middle are accessible via a “street in the air” suspended over the checkpoint. Under the canopy roof, designed to evoke an airplane wing, penthouses share an outdoor corridor and deck.

Though Koolhaas and Zenghelis admit to mixed feelings in designing a building next to the Berlin Wall—“a zone of ultimate horror,” they call

it—both are optimistic that East and West will eventually be reunited. “One day when the checkpoint pavilions are no longer needed and the ground floor has been converted into a supermarket,” predicts Koolhaas, “the cantilever of the roof will remain as a memory of the Wall.”

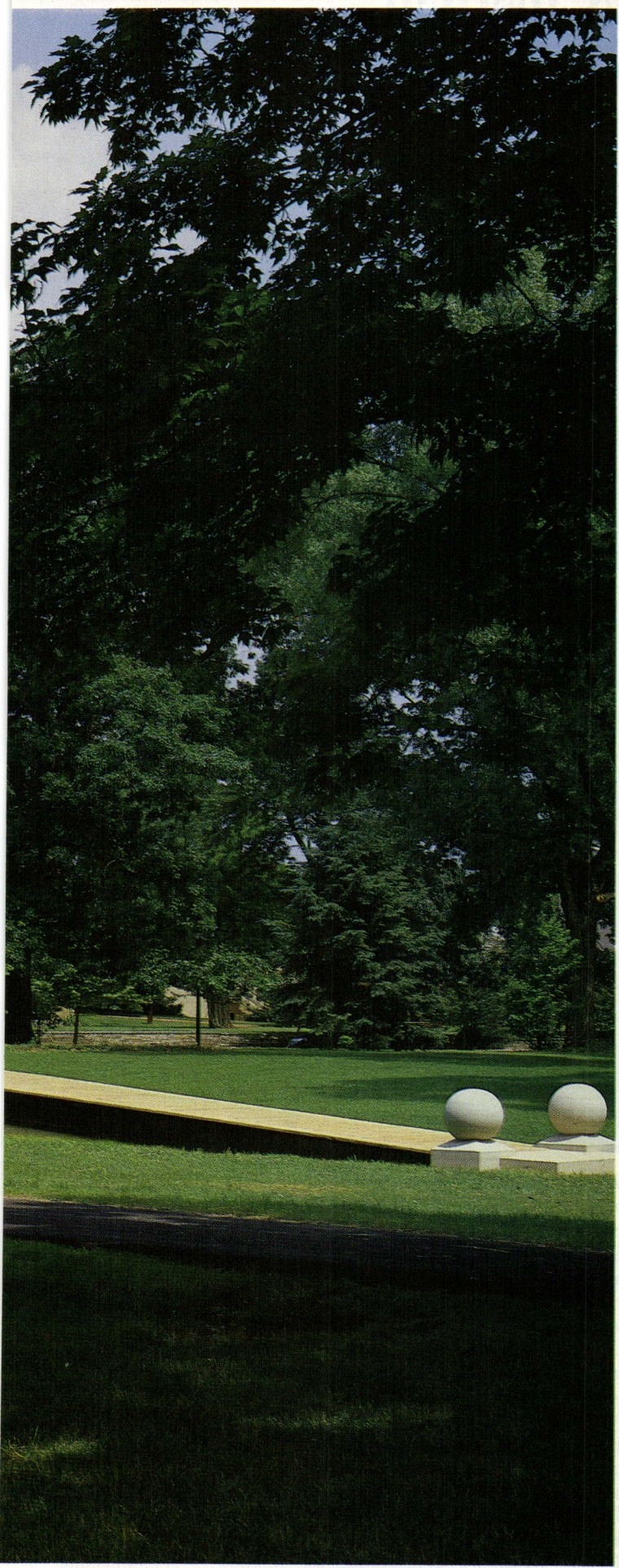
Project team:

Office for Metropolitan Architecture—Elia Zenghelis, Rem Koolhaas, Matthias Sauerbruch, Alex Wall; Polonyi and Fink (engineers)



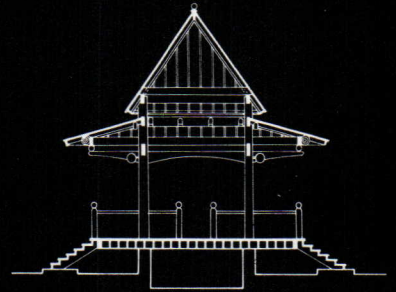
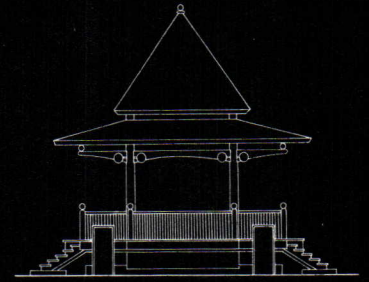
Reprise



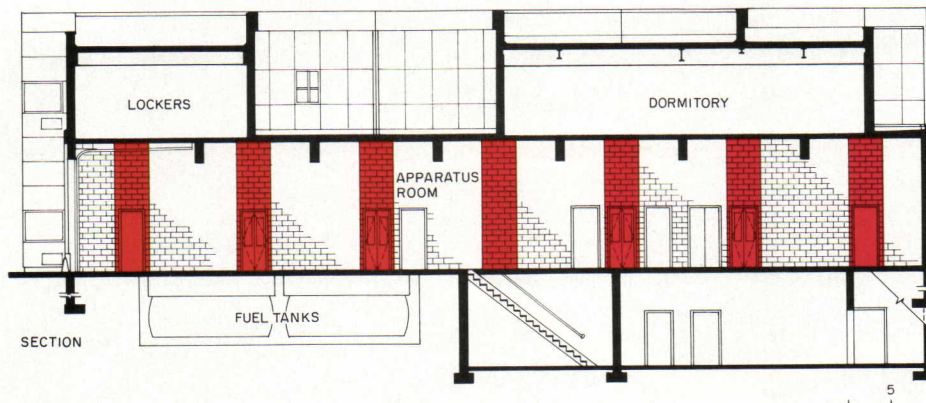
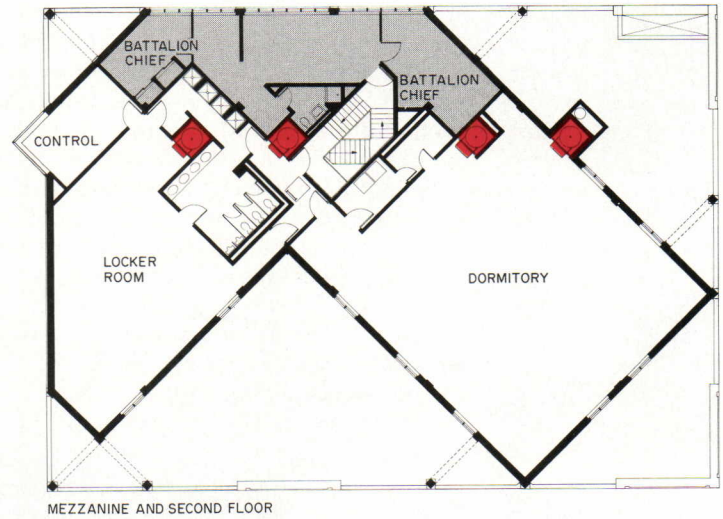
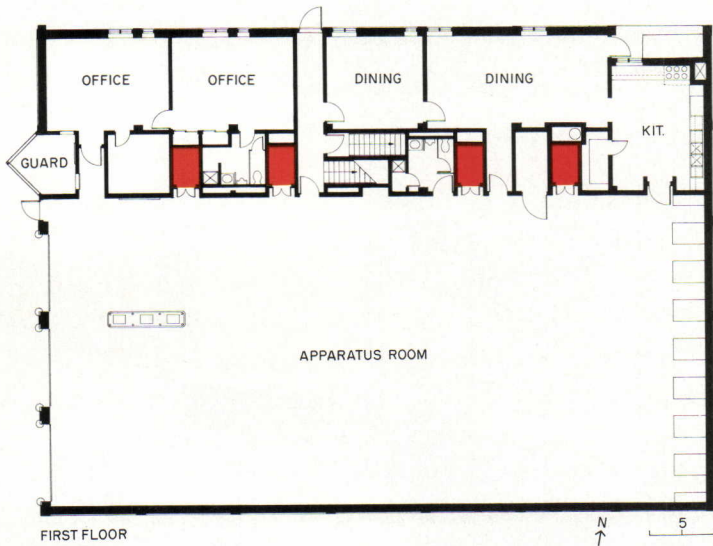
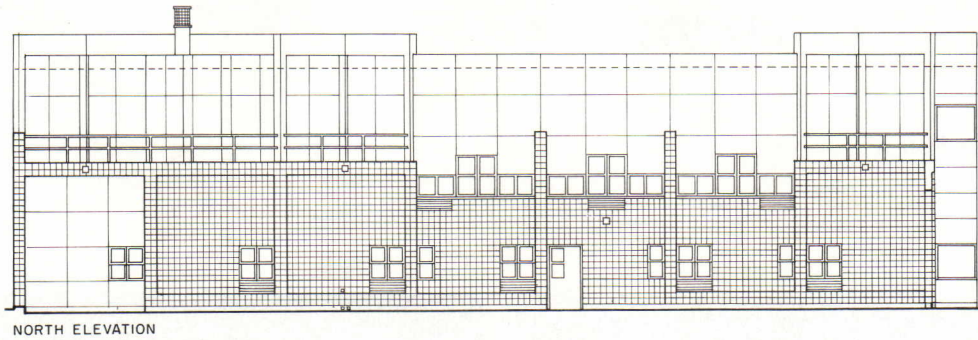


Clark Bandstand
Oberlin, Ohio
Julian S. Smith, Architect

One of the more curious competition-winning projects of recent years [RECORD, August 1985, page 67] is now ready for its first full season of musical offerings. The new pavilion in Tappan Square, a 13-acre green owned by Oberlin College yet open to the public, replaces a 19th-century bandstand burned down in 1907 (photo below). Nostalgic Victoriana would have been the obvious chord to strike for a generic design, but architect Julian Smith (Oberlin '69) set out to compose a more distinctive symbolic harmony. While his timber-framed gazebo does recall a classic bandstand type, the incongruous motifs of a pagodalike canopy, sandstone "wheels," and a ramp jutting out like a stylized wagon pole evoke more enigmatic provenance: Smith modeled his scheme, in part, on Hindu festival carts he had seen in India while teaching on an Oberlin fellowship—vehicles which also brought to mind American parade floats. This imagery at once honors the college's long-term encouragement of U. S.-Asian understanding and acknowledges what the architect (who now practices in Ottawa) calls "the transient, often spontaneous nature of many outdoor musical/cultural events." For visual stability, Smith sunk his wheels in the lawn, echoing a half-buried Claes Oldenburg sculpture on campus; the ramp for the handicapped embodies lessons learned from a disabled classmate. The bandstand's hybrid character also accords with the diversity of its architectural neighbors (which include Cass Gilbert's 1917 Allen Memorial Art Museum—added onto by Robert Venturi in 1977—and Minoru Yamasaki's 1964 Oberlin College Conservatory of Music) and reflects multipurpose use by town and gown alike. Appropriately, building funds (\$250,000) were donated by an Oberlin alumnus and local resident, Arthur H. Clark, whose construction firm served as contractor. *D. B.*



Oberlin College Archives



The facility also houses offices for the batallion chief on a mezzanine level (gray on plans above). The intermediate floor is reflected on the north facade (top drawing). The angles of the two floors are stressed by a steel-clad quasi-tower (opposite). The white-tile interior of the apparatus room is relieved by fire-engine-red panels for firemen's-pole closets and other doors (section and plans above).

Firehouse for Engine Company 233, Ladder Company 176 Brooklyn, New York

Owner: The City of New York Department of General Services, Division of Public Structures, Bureau of Building Design—Thomas Tsue, project architect

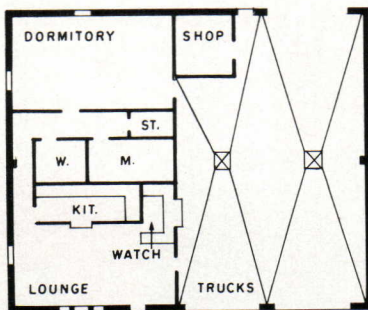
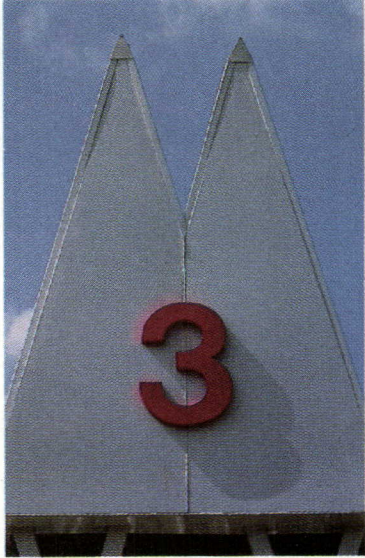
Architect: Eisenman Robertson Architects—Peter Eisenman, design partner; Arthur Baker, senior architect; Ross Woolley, project architect; David Winslow, Mark Wamble, assistants

Engineers: John Altieri (mechanical/electrical); Robert Silman (structural)

General contractor: Bedell Associates



Variation on a prefab



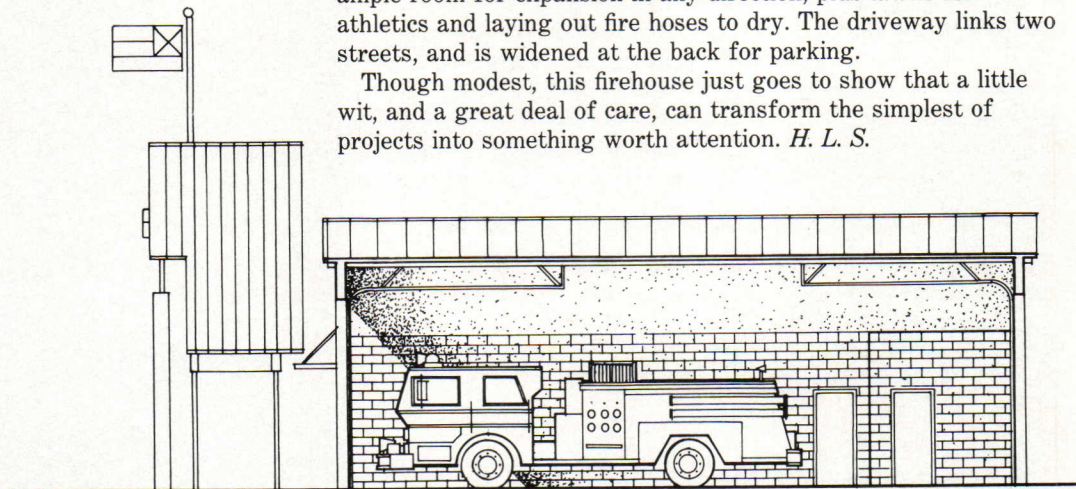
As a stimulus for his exuberant approach to design, Samuel Mockbee starts any new commission by making a series of "inspirational" sketches evoking some of the imagery of the proposed building's intent. For this little firehouse, his images depict a "hands-on" situation (sketch left center), with the hand becoming a helmeted fireman holding a fireaxe, and looming over a background grid of buildings. Abstracted in the final design, these elements translate into a small "helmet-topped" tower denoting the main entrance for the station, a flanking flagpole, and a painted metal trellis as a connecting back-up.

Such simple allusions have made a perky design out of a low-budget, fast-track job. The town of Canton, Mississippi, urgently needing a new firehouse for an area often cut off from existing fire stations by freight-train traffic, specifically requested that a pre-engineered metal building system be used for speed and economy. Mockbee found that straightforward use of an aluminum-clad prefab structure provided clear spans easily adapted to the program requirements, while its humble form and scale seemed quite compatible with neighboring whitewashed, "shotgun" houses. The addition of the small entrance tower gives the building a special identity, and forms a visual counterpoint to an existing water tower (elevation drawing opposite).

Half of the new structure accommodates basic living requirements for up to eight firemen, with kitchen, baths, and storage forming a sound barrier between sleeping and lounge areas. The lounge, at the front, adjoins a small office/watch space, and can double as a reception or conference area. These rooms are surfaced with painted drywall panels. The remainder of the building is a big, drive-through bay for two fire trucks. This bay is partially surfaced with white brick (section below), and contains a small repair shop and one wall fitted with racks for helmets and coats.

The building is set well into its block-square plot, allowing ample room for expansion in any direction, plus lawns for athletics and laying out fire hoses to dry. The driveway links two streets, and is widened at the back for parking.

Though modest, this firehouse just goes to show that a little wit, and a great deal of care, can transform the simplest of projects into something worth attention. *H. L. S.*

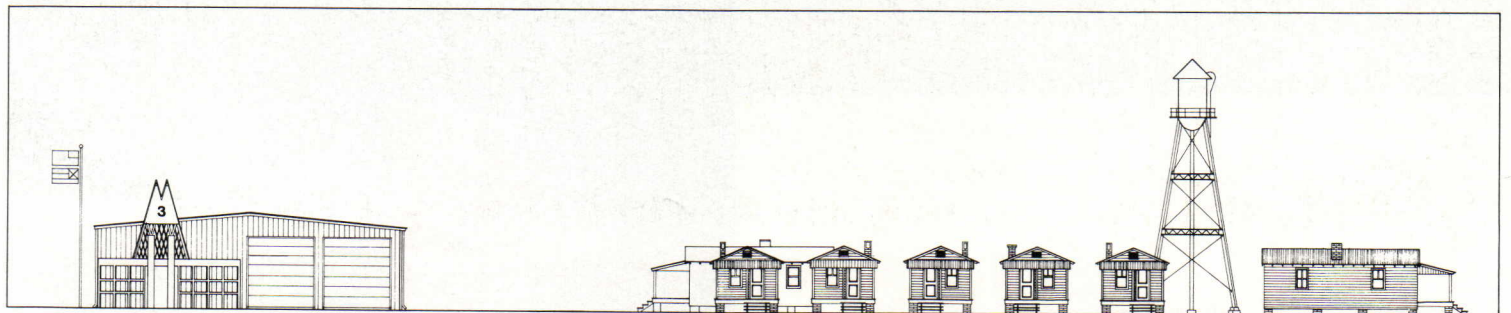


Canton Fire Station No. 3
Canton, Mississippi
Owner:
City of Canton, Mississippi
Architect:
*Mockbee-Coker-Howarth-
Architects*
Engineers:
James Storey (mechanical);

*Windsor Engineering
(electrical); Engineers
Laboratories (soils); Tyner &
Associates (civil)*
General contractor:
King Construction Co.

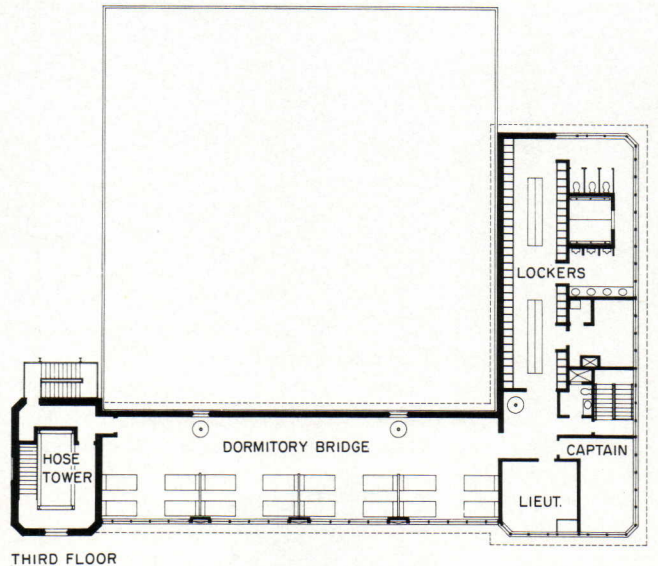
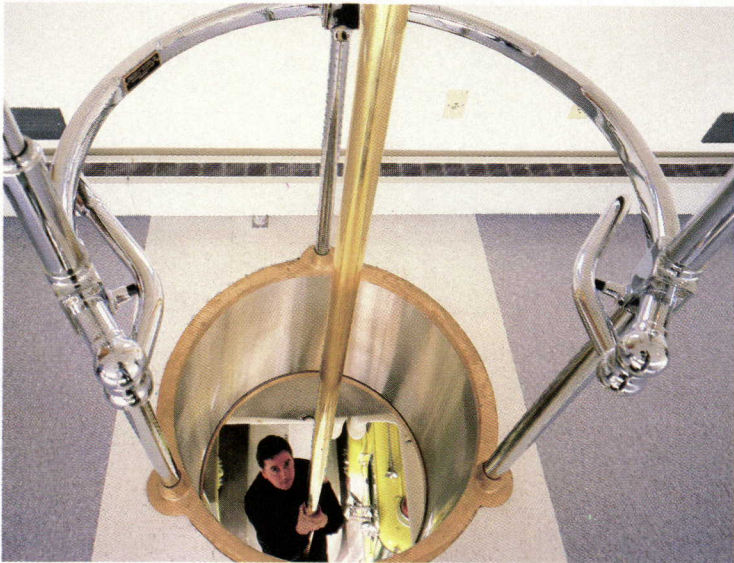


Bruce O'Hara photos

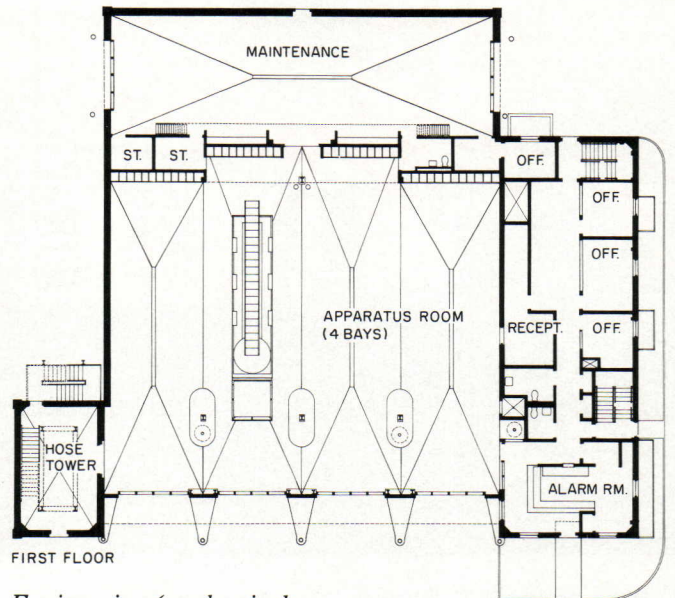


The two-story apparatus room, with bays for four fire trucks (bottom), is flanked on the first floor by offices, and backed by a maintenance facility. On a mezzanine above the offices are more private rooms for lounging, dining, and seminars. The top floor

contains sleeping, locker, and bathing facilities (plans below). Firemen's poles (below) supplement stairs for quick access to the apparatus. The hose-drying tower also serves as an exit stair, and as a training tower for fire-fighting and rescue exercises (opposite).



THIRD FLOOR



FIRST FLOOR

*Wellesley Fire Station
Headquarters
Wellesley, Massachusetts*

Owner:

*Town of Wellesley,
Massachusetts*

Architect:

*Schwartz/Silver Architects,
Inc. — Warren Schwartz, Robert
Silver, partners-in-charge; Paul
R. Durand, James McQueen,
project managers; Warren
Schwartz, Paul R. Durand,
Mark Meche, Dion McCarthy,
Paul Rovinelli, Phil Beck,
design team*

Engineers:

*Souza, True & Partners
(structural); Am-Tech*

*Engineering (mechanical,
electrical, plumbing)*

Consultant:

*Joseph R. Henry Associates
(landscape)*

General contractor:

Eastern Contractors, Inc.



Susana Torre's scheme of overlapping squares for machines and people is clear in the plans below; the juncture of the two areas is spanned by a dual-access room for coats and helmets, topped by a small gym (photo right). The masonry hose-drying tower, whose dramatic interior is shown opposite, signals the main entrance.

*Fire Station Five
Tipton Lakes,
Columbus, Indiana*

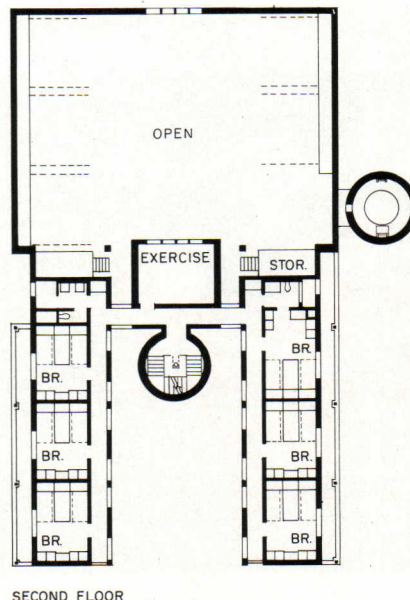
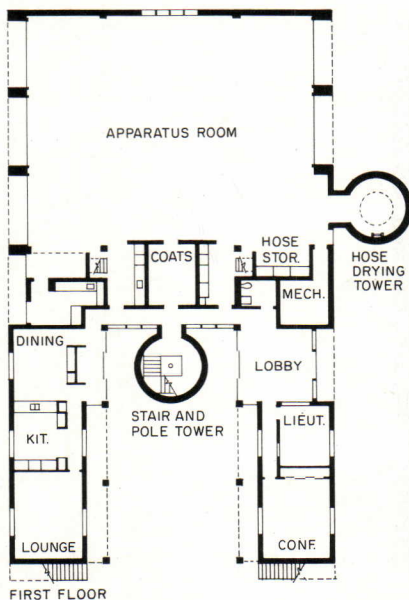
Owner:
City of Columbus, Indiana

Architects and designers:
Susana Torre, The Architectural Studio (now Susana Torre, Raymond Beeler and Associates Inc.), project designer; in association with Wank Adams Slavin Associates, architects and engineers—George Gianakopoulos, partner-in-charge; Charles Anderson, Anna Zietsma, Scott Laidlow, Peter Pfau, Linda Gatter, Jo Landefeld, design team; Charles Budd, architect representative in Columbus

Engineers:
Severud-Szegezdy (structural); Wank Adams Slavin Associates (hvac, electrical, plumbing)

Consultant:
Jeanne Schlesinger Associates (landscape)

General contractor:
Repp and Mundt





“None of us studied architecture expecting to be defendants in a lawsuit. Most architects are creative people—they may or may not be businessmen, although the better they are in business the better it is—but few expected to be defendants in this changing profession. It’s something that has affected me personally, and, I expect, the growth of many architectural firms. It’s caused me concerns, maybe burned me out, in spite of the fact that we’ve won every one of our suits.

In the middle ’70s to the early ’80s, I felt insurance was the biggest problem architects faced—that and litigation. And it’s a continuing problem, no question about it. But I think that today DPIC Companies is with us for our entire future. Although we had only had two other insurers in 69 years, we really moved away from our previous insurer without any hesitation. DPIC was the first insurer that ever discussed loss prevention. And they were the first insurer that ever gave a damn about how we practiced architecture. That makes us very comfortable. Because, really, they are the most important partner in this firm. They provide us with the assurance we need to know they are going to be there. They assist us in undertaking contracts and procedures necessary to try to keep out of trouble in this litigious world. They provide us with legal counsel when there’s a problem brewing. In fact, we took advantage of their Early Warning program just this week.

I feel very good about them.”



Martin David Dubin

Dave Dubin is a principal in Dubin, Dubin and Moutoussamy, a 75-year-old architectural firm based in Chicago. He is past president of both the Chicago and Illinois AIA. We value our relationship with his firm and thank him for his willingness to talk to you about us.

Professional Liability Insurance
For Design Professionals

DPIC COMPANIES



Design Professionals Insurance Company • Security Insurance Company of Hartford
The Connecticut Indemnity Company

Available through an exclusive network of independent agents. Please call
1-800-682-3400 (in California) or 1-800-227-4284 for the agent serving your area.

2959 Monterey-Salinas Highway, Monterey, California 93942

Circle 56 on inquiry card

It only looks like a pen plotter.

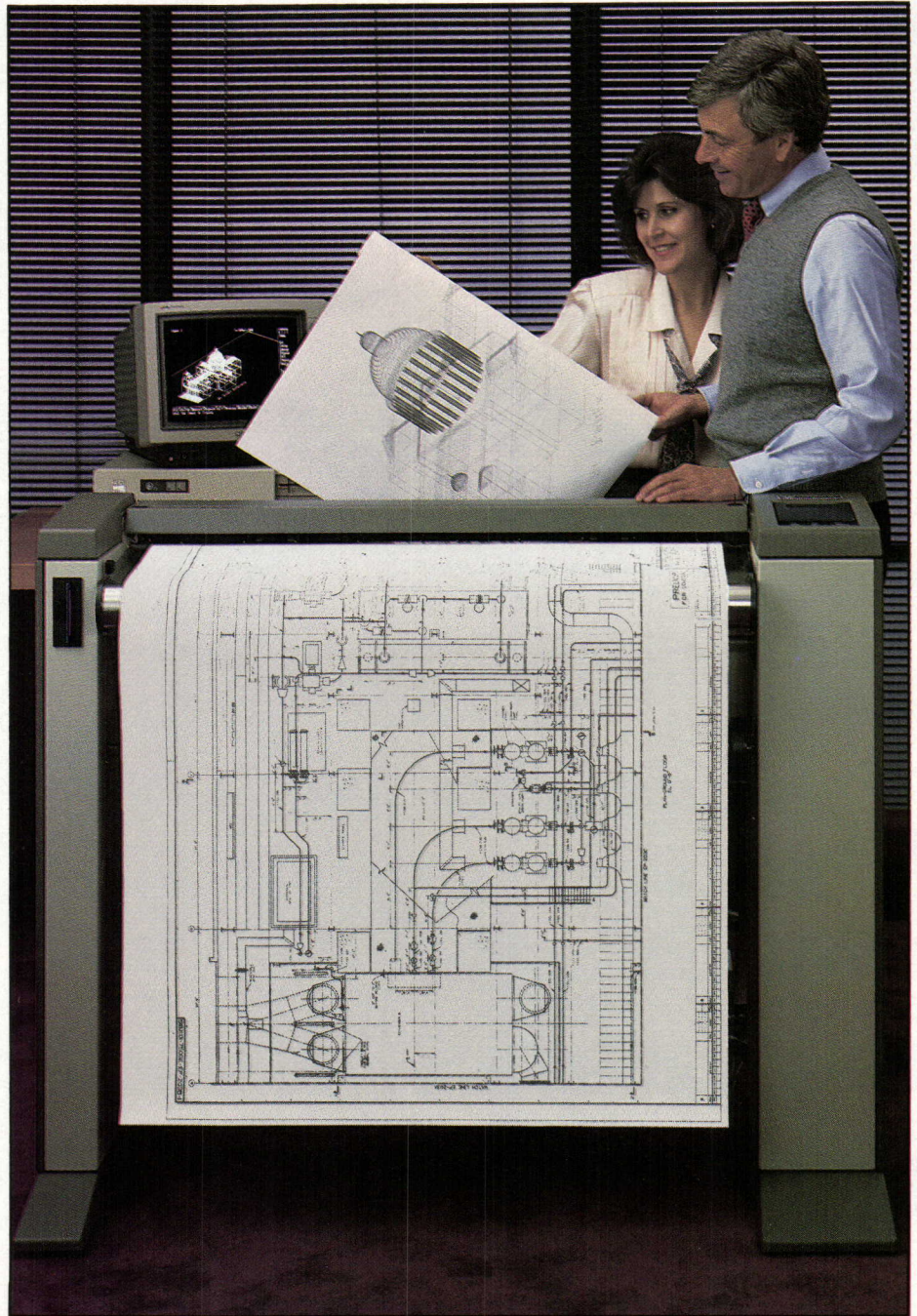
But look again. It emulates pen plotters, reading popular 906/907 and HPGL data formats. It comes in pen plotter widths – 24 and 36 inches. And you can use it with your favorite CAD packages, such as AutoCAD, VersaCAD, or MICRO CADAM.

But the Versatec 8500 series is like no pen plotter made. It is more reliable, because it plots with electrons, not pens. It's faster, plotting D or E size drawings in less than a minute. It can plot an unlimited number of vectors, variable line widths (to ½ inch wide), dashed lines, or text without reducing speed.

A built-in rasterizer and full-page buffer enable fast output at a constant rate for outstanding quality. Plot an original in fifty seconds. Make copies without retransmitting data. And plot over one hundred drawings without changing paper.

So fast you can share one plotter among several users. So quiet you can run this plotter at your desk. So reliable you can plot unattended at remote sites. This is the revolutionary new 8500 series of electrostatic plotters. Prices start at under \$20,000.

Circle our readers' service number or call toll-free 800/538-6477* for a free product application brochure.



*In California, call toll-free 800/341-6060

HPGL is a trademark of Hewlett-Packard. 906/907 is a trademark of CalComp. AutoCAD is a trademark of Autodesk. MICRO CADAM is a trademark of CADAM Inc. VersaCAD is a trademark of Versacad Corporation. Versatec is a trademark of Versatec, Inc. Xerox is a trademark of Xerox Corporation.

Plot data courtesy of Autodesk.

VERSATEC
A XEROX COMPANY

See us at Spring National
Design Engineering and NCGA

Circle 57 on inquiry card

NORTHWEST



EXOTIC ASIA.
LAND OF HOTEL ROOMS,
TAXIS AND CONFERENCE HALLS.

If your business takes you to Asia, we make it our business to get you there.

From over 200 U.S. cities to major business centers in Asia. Like Hong Kong, Tokyo and Seoul. On nothing but 747s. And we fly nonstop from cities like Chicago, Los Angeles, Detroit and New York.

That and our forty years experience make us the best choice for business travelers to the Far East.

So call your travel agent or Northwest at 1-800-447-4747 for reservations.

We know business isn't a vacation.

© 1988 Northwest Airlines, Inc.

LOOK TO US  NORTHWEST AIRLINES

Software reviews for architects

By Steven S. Ross

Drafix 1 Plus, Version 2.0

An inexpensive, fast, full-featured two-dimensional drafting program that is easy to install and operate. It zooms and pans at an acceptable speed on an IBM XT, and offers good control of plotters and printers. A 3D version (not reviewed in this column) is available, as is an AutoCAD file exchange program.

Equipment required: IBM PC, XT, AT, or PS/2 or compatible; 512K (640K recommended); does not support expanded memory, two floppy drives (hard disk strongly recommended), coprocessor chip recommended, especially for PC or XT, mouse or digitizing tablet.

Works with plotters to size C (support of D and E available at extra cost).

Vendor: Foresight Resources Corp., 932 Massachusetts Ave., Lawrence, Kan. 66044. (913/841-1121).

Price: \$295 for Drafix 1 Plus; \$295 for 3D Modeler (requires Drafix 1 Plus to run); \$95 for OTTO AutoCAD file exchange program; \$150 for large plotter option; \$150 for expanded architectural symbol library.

The older Drafix Version 1.0 is available for IBM-type computers and the Atari ST for \$195.

Steven S. Ross is past president of CCM, an educational software company in New York City, and now teaches journalism at Columbia University, where he also runs a large computing laboratory for students. He is often consulted on quality-assurance matters; his latest book, Construction Disasters: Design Failures, Causes and Prevention, was published by McGraw-Hill in 1984.

Summary

Manual: Excellent for Drafix itself. The reference manual is well organized and well written. Installation details (down to cable wiring) are in a separate book, a clear tutorial in yet another. Details of separate dot plotting program (necessary to send drawings to a dot-matrix or laser printer, rather than to a plotter) are carried in the back of the main reference manual, rather than in the installation guide.

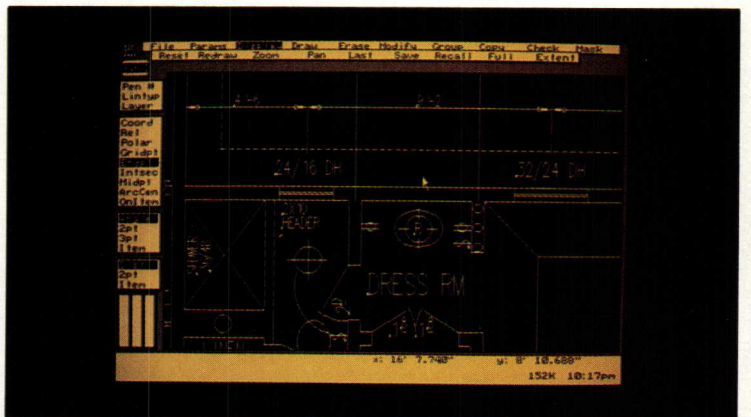
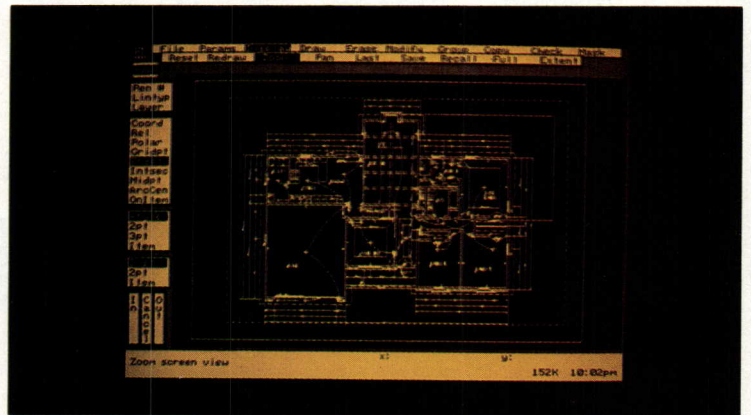
Ease of use: Excellent menu system, with a few quirks.

Error-trapping: Excellent, with good on-screen prompts that often ask for confirming commands if the software is told to do something drastic, like erase all details of a drawing.

Add Drafix to the growing list of 256-layer, 2D drafting programs that run smoothly, can be used on relatively inexpensive equipment, and can exchange files with industry-leader AutoCAD. Inexpensive equipment? This one can run off of floppy disks. That's hardly recommended, but nice to have in a pinch if you have to take work home, or want to bring a drawing into the field on a laptop computer.

Compared to the pack, Drafix also has a better-than-average manual, and clean, easy-to-use menu system. It is also remarkably fast. A four-to-one zoom of a complicated floor plan takes just seconds on an AT with coprocessor chip (80287) and EGA card (the photos of the program in action were taken using a monochrome monitor with EGA adaptor). Speed on an XT, also with coprocessor chip and CGA adaptor, was only about a sixth as fast, but was still acceptable. And separate views can be stored on disk and recalled almost at will.

On the down side, its interface with a laser printer is crude. For instance, it did not easily take full advantage of my LaserJet II's 300-dot-per-inch resolution.



Drafix 1 Plus, Version 2.0, shows full drawing of floor

plan (top), and zoom-in on upper right quadrant (bottom).

In addition, most printer-as-plotter output options (including laser printers using the printer port instead of a serial port) cannot be used from within the program itself. Instead, they are accessed through a separate "dot plotter" program (included).

A few control conventions also require getting used to. When invoking zoom, for instance, the cursor position does not start at the upper left corner of the box that you draw on your art to define the area being included in the zoomed drawing. Instead, the cursor defines the center of the box. Moving your mouse or digitizer to the right or left then sets the box's size.

Using a digitizing tablet with puck? That's the most common input for CAD software these days. But instead of using the top button of the puck to initiate a command (that is, as the

"RETURN" key on the keyboard), Drafix uses the left button. The top button is instead the equivalent of the ESCAPE or UNDO key on a keyboard—the exact opposite of the convention most other CAD programs follow.

Result: You'll waste some time moving backward in menus instead of moving forward, until you get used to the controls. But you won't make any "fatal" mistakes that jeopardize your drawing.

Preparing drawings is easy. It should take no more than a day or two to become reasonably proficient with Drafix. Plotter interfaces are much better than printer controls, too. Users can select any of 16 pen colors, 16 fonts, 32 pointmarkers, 14 crosshatch patterns, and 8 line types. And all can be checked, *Continued on page 137*

Lighting

LIGHTS

We help create the look . . . modern, traditional, soft, industrial. Our designs provide high quality lighting in five different illumination sources (Mercury Vapor, High Pressure Sodium, Metal Halide, Fluorescent and Incandescent). Esco/Duray can even refurbish existing equipment or create custom fixtures to your specifications.

ACTION

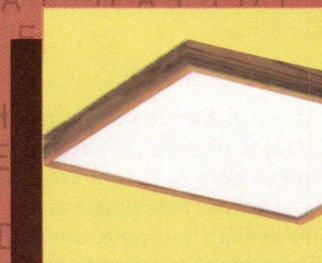
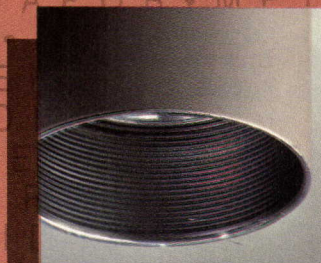
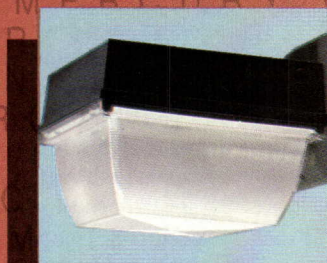
We help create the atmosphere . . . a full range of lighting systems to control lighting from the most intimate dining to a high velocity sport like tennis.

DRAMA

We help set the stage . . . distinctive solutions for the most common lighting needs. Our designs are not duplicates, they're originals.

Lights, Action, Drama . . . are built into every fixture we produce but our designs sell because the price is just as important.

Esco/Duray designing to be the best.



A BRIGHT NAME IN LIGHT

Esco

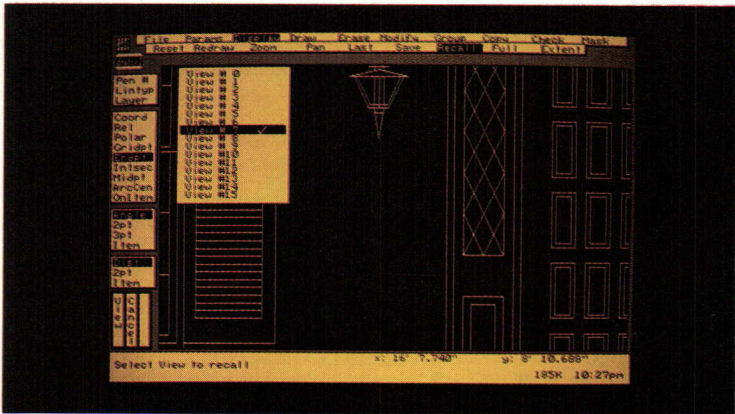
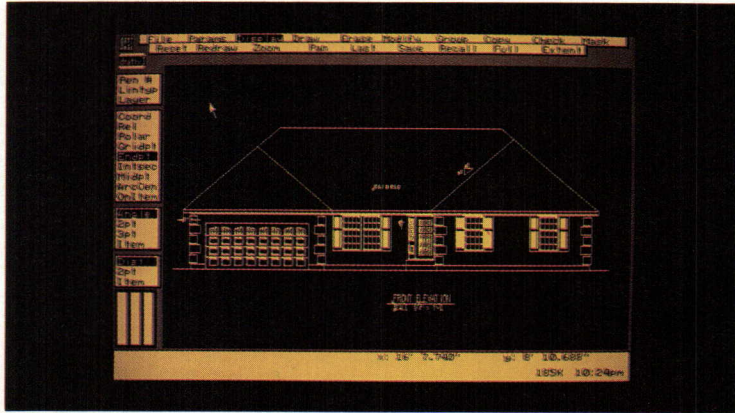
Contact Factory for reps in your area.

2050 W. Balmoral Ave. Chicago, IL 60625

PHONES: (312) 271-2800 (312) 271-6336 FAX: (312) 271-1722

Circle 58 on inquiry card

Preparing drawings is easy. It should take no more than a day or two to become reasonably proficient with Drafix.



Drafix's tutorial includes front elevation of a house (top) and instructions on how to

zoom in on one section, in this case a detail of the door and a window (bottom).

along with a line's dimensions, from inside Drafix, by using the menu command CHECK, then ITEM, and moving the cursor to the line at issue. All dimensional and drawing information about the line then appears on the space below the drawing, on screen.

Adding text is also easy. A little editing window, taking up about a sixth of the screen, pops up for you to use. The default font, "Block," is not to my taste. But a roll-down menu allows selection of 15 others.

Some planning is required to handle deletes and moves of large groups of objects—a table-and-chair combo, for instance. The best approach is to put objects that will move together on their own layer, or one range of layers (there are 16 ranges of 16 layers each, for the 256 total).

You can also define regions by drawing a rectangle around them, or by specifying only objects of a certain pen color or line type.

One warning: Drawings prepared with the older Version 1.0 can be used directly by Version 2.0. But because no backup is created by Drafix itself, you'll have to handle the chore by copying the file using DOS commands. Once Version 2.0 saves the drawing, it cannot be used by Version 1.0 again.

Facilitrac

Linked programs for two time-consuming problems in facilities management: key control and health and safety inspections. The software is reasonably flexible, and generates relevant reports with a minimum of inputting.

Equipment required: IBM PC, XT, AT or PS/2 computer or compatible; 512K, hard disk, PC-DOS or MS-DOS versions 3.1 or higher, printer. The number of records the software can track is limited essentially by hard-disk space; 20,000 records take about 10 megabytes.

Vendor: Facilitrac, 64 East Broadway, Suite 230, Tempe, Ariz. 85282.

Price: \$490 for Grandmaster key control program, \$234 for Inspection Master Tracking System (\$174 if purchased with Grandmaster), \$200 for Personnel Merge (\$95 if purchased with Grandmaster). Demo is \$39 (applied to purchase price). Not tested: Equipment Master (preventive maintenance and work-order generation) and Utility Master (energy tracking and cost analysis).

Summary

Manual: Full manual not seen. Demonstration manual adequate. **Ease of use:** Good. The software is menu-driven with fair, context-sensitive, help messages. Long reports, covering more than 255 records, must be printed out. But quick scans of up to that size can be scrolled on-screen. With few exceptions, keyboard use is intuitive. **Error-trapping:** Adequate. It is difficult to fool the program into taking improper data in a given input screen. But the demo installation program gives no warning when files are not installed due to inadequate disk space.

When reviewing software that, at base, merely makes a routine, unpleasant task somewhat

easier, the following criteria are uppermost:

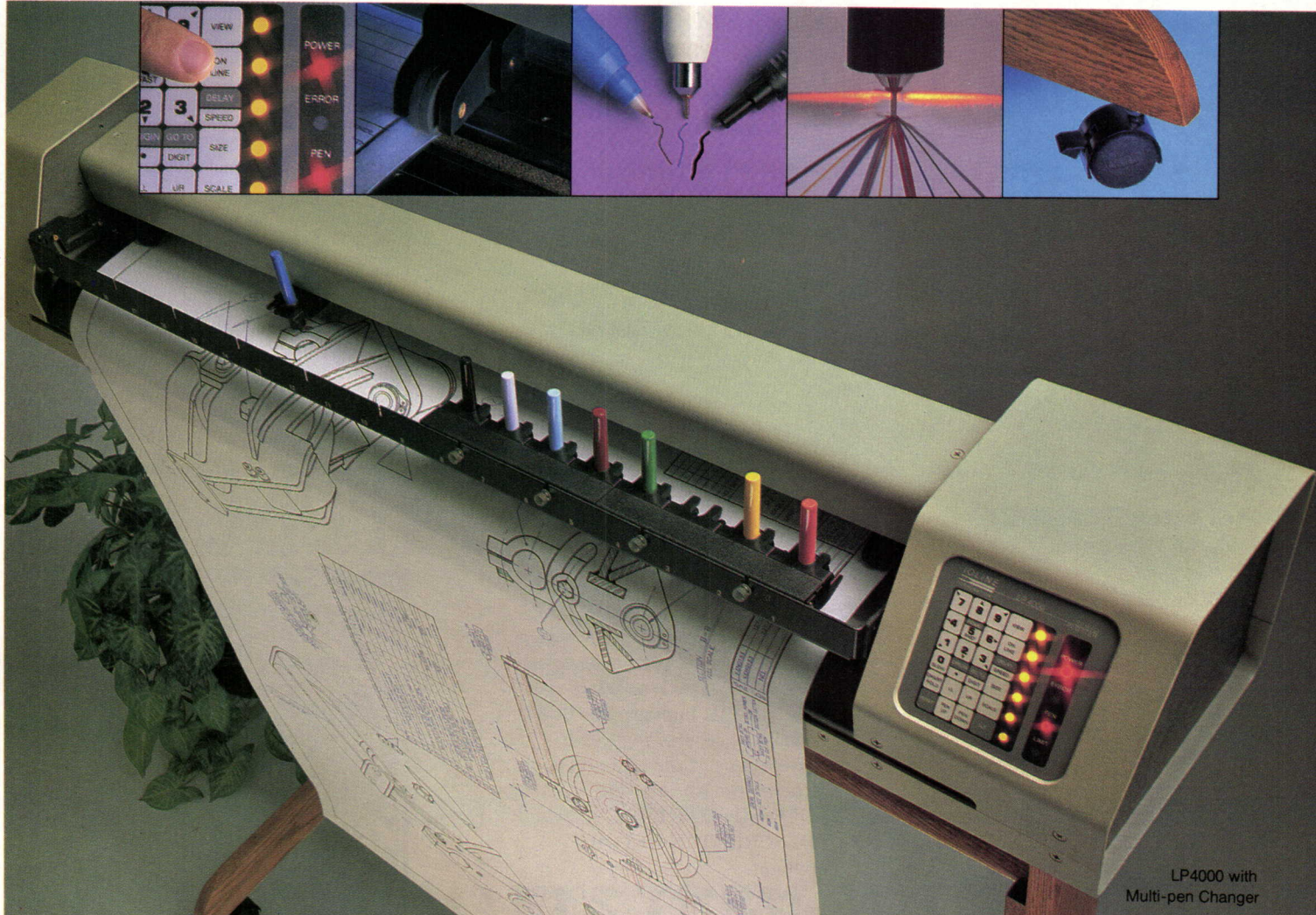
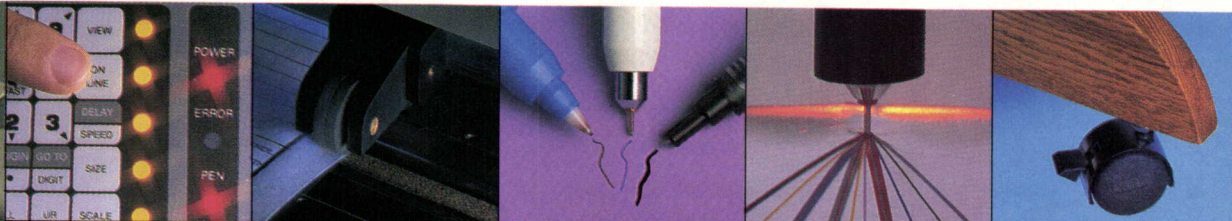
- **Versatility.** Does the software cover all possible events that could happen?
- **Ease of use.** Is the software easier to use than an off-the-shelf spreadsheet like Lotus 1-2-3, or a standard database program like dBase III?
- **Price.** Is the software priced competitively with off-the-shelf programs and, perhaps, the price of customizing those programs?
- **Speed.** Is the software easy to put data into? To sort through data and print reports?

Facilitrac measures up in all respects, but only just. The program demo, for instance, seemed to install smoothly. But because I was installing it in only 850 kilobytes of disk space when it needed a megabyte, the installation process left out some files. The error wasn't caught until the program was run.

There is a good on-line help system that is context-sensitive. That is, the program displays help that's relevant to the specific task the user is trying to perform. In most places in the program, the help is invoked with the F1 key. But in each of the main menus, there is a separate option labeled "help." The F1 key won't work from a menu.

The ESCAPE key unflinchingly moves users backward to the previous screen. But what if you haven't been saving data as you've entered it? The work could be lost. (As is common in data-entry programs, pressing the RETURN or ENTER key after a screen-full has been entered gives you another screen to fill. In general, pressing the "+" key is necessary to save the data on disk.)

It is wonderfully easy to select records to view, by various criteria. Only 255 can be sent to the screen at once that way, however, to be viewed about a dozen at a time. If, by chance, *Continued on page 139*



LP4000 with
Multi-pen Changer

Here's what to look for when you want great value

IOLINE plotters are designed to give you more flexibility and features for less cost than any other machine of their kind.

For example, our plotters draw not only on A through E sizes of media, but also plot on hundreds of in-between sizes from 1.5" x 1.5" up to 37" wide roll stock. This saves you time and money by allowing you to make "check plots" on small, low-cost paper before committing to full-size media for final work.

It's easy also to set paper size, pen speed, micro-calibration, plot rotation—everything exactly as you want—by just tapping a few keys on the plotter's intelligent keypad. Plus, up to 3 sets of personalized defaults can be saved in its non-volatile memory.

They're fast, too. Our high-

performance LP4000™ draws at speeds selectable up to 20 inches per second (ips) axially with .001" resolution. For less demanding applications, our economical LP3700™ plots up to 10 ips axially with .0025" resolution.

Another feature is compatibility. IOLINE plotters emulate both HP-GL and DM/PL plotter languages so they work with a host of software like AutoCAD, VersaCAD, and CADKEY, to name a few.

Furthermore, our Multi-pen Changer™ option holds up to 20

pens and, with our hyper-BUFFER™ option, you can dramatically increase plotting throughput with intelligent vector sorting and compression buffering of up to 1MB of plot data.

Now here's the clincher: Our top-gun LP4000 costs just \$5,495* less options. And there are other models priced even lower!

Why wait? Call us now at **206-821-2140**. Or, circle our reader service number and we'll gladly send you our brochure.

Remember, getting your money's worth—that's what IOLINE plotters are all about.

IOLINE™
LARGE-FORMAT PEN PLOTTERS

IOLINE CORPORATION 12020 - 113th AVE. NE KIRKLAND, WA 98034 (206) 821-2140 TELEX 4949856 IC UI FAX (206) 823-8898
LP4000, LP3700, Multi-pen Changer, and hyperBUFFER are trademarks of Ioline Corporation. AutoCAD is a registered trademark of Auto Desk Inc.
VersaCAD is a registered trademark of T&W Systems. CADKEY is a registered trademark of MicroControl Systems, Inc. *Suggested U.S. List price.

Computers: Are they right for the small architectural firm?

Frustrated by trying to separate hype from fact, the author conducted his own research and shares his findings with us.

By Keith Kondrot

Any industry thinking about using a new technology evaluates whether or not it can be applied effectively. The key is in defining "applied effectively." A computer system that is applied effectively is cost-efficient and generates a profit. It is not one that simply can be useful in handling whatever functions it was bought for. It has to pay for itself.

In architecture, this is most important to small firms, which often have trouble justifying effective application of computers on a day-to-day basis. It would be difficult to find one solution for every small architectural firm. So, let's look at the general factors involved in small offices' computer use to determine whether going to computers is the right choice for your small firm—and suggest some ways to aid your decision.

Small firms may indeed have difficulty in justifying costs at the high end of the scale

A small firm might be defined as one in which the staff ranges from 1 to 10 people. In the middle of that range — at five people — there might be two architects, three draftsmen, and one secretary. On the whole, the business is on a cash basis, with money going out as fast as it's coming in. The offices are rented and capital investment is minimal at best. Small offices are particularly sensitive to the highs and lows of each business cycle as they affect construction.

Their advantage over large offices is that they generally have very low fixed costs and most of their costs are variable ones, such as a staff and flow of office supplies that fluctuate with the work at hand. Consultants are

Mr. Kondrot is business manager for Iuro and Associates, an architectural firm in Berkeley, Ill., with a current staff of seven professionals.

hired only as needed.

Accordingly, the break-even point is very low, which allows a profit at a very low level of production (Figure 1, page 143). This also means low losses if business drops off or stops completely.

All this will be changed if a costly computer system is installed. The break-even point is at a much higher level than it was before (Figure 2). Also, the implementation is binding and can cause great financial problems if the system doesn't pay for itself, despite the most careful analysis.

One example of ongoing costs is maintenance costs. Annual servicing alone runs from 5 to 12 percent of the system's purchase price, which could make this cost very high if you have a \$100,000 computer system. The other maintenance cost is that of updating the system to keep a competitive edge. The amount will depend on the technological advances that occur and how much your system has to be improved to meet these changes. Other costs include the investment value of the capital you have tied up and the start-up and staff-training costs that must be prorated over the life of the system.

As you can see from the two graphs on page 143, the traditional small firm without a computer system has a definite advantage when it comes to hard times for the construction economy or a firm's inability to capture an anticipated share of its market. With a computer system it must now produce a lot more billable work just to break even, gaining larger parts of its market in order to obtain the same amount of annual profit it had before implementing an expensive computer system.

The one advantage that can be achieved, if a firm can capture a larger portion of the market, is leverage. This means that after a firm passes its break-even point,

for every uniform unit of production it receives an increasing unit of profit. Of course, the leverage doesn't exist if a small firm simply wants to stay small.

Not all computer systems need to be so expensive as to be an economic burden

It depends on the functions and capabilities a small firm is looking for. CAD tends to catch architects' attention most because it is intriguing and versatile. It draws and it's graphic. It can cost as little as \$12,000 for an entry-level system. Approximately \$110,000 will buy a fairly complex system. With an entry-level system, you generally rely more on software than hardware. It is the other way around with more complex systems. In either case, we are talking about a capital expenditure, not a routine office expense.

CAD is set up mainly for buildings in which design elements, such as floor plans and wall sections, repeat. Apartment and office buildings are typical. If your firm doesn't do such designs, you probably won't see improvement in current efficiencies or increased production in a given amount of time. And, unless an entry-level drawing system happens to fit your firm's specific needs, it should be passed up because of the limitations in what these systems can do.

Other computer systems that do other things with limited or no graphic capabilities can cost far less. For between \$4,000 and \$22,000, you can buy systems that will do structural, mechanical, and civil engineering calculations. At the low end of the scale, you are moving out of a capital expense and getting close to a routine office cost.

For between \$2,400 and \$5,000, you can buy systems that will do financial management and

Continued on page 143



Fry Reglet: Molding Interiors

Fry's Aluminum Moldings.
The finishing touch.

Fry Reglet Aluminum Moldings —
all dressed up with plenty of places to go.
We'll curve them.
We'll radius them.
We'll make them shine.
When a designer, rich in imagination,

needs a wealth of options — Specify
Fry, and bring added life to your ideas.

*Project: South Bay Galleria
Redondo Beach, CA
Architect: RTKL Associates, Inc.
Dallas, TX
Plaster and Drywall contractor: PFC, Inc.
El Monte, CA*

625 S. Palm Avenue
Alhambra, California 91803
(818) 289-4744

2777 Peterson Place
Norcross, Georgia 30071
(404) 441-2337

 **FRY REGLET**

Don't be intimidated by computers; think of them as a potential advantage that should be studied carefully before buying.

general office functions. The software for the former must be attuned to the special business needs of small firms by offering cash accounting. General-office software does construction-cost estimating and project control, and offers word processing for everything from letters to specifications. It is capabilities in financial management and general office functions — not CAD — that allow most small firms to say they are automated.

The choice of using computers in a small architectural firm isn't as clear-cut as suppliers lead us to believe

The much-touted reason for entering into computer use is that it's the latest in high-tech in the field of architecture. Also, in marketing design services it impresses clients to know that you are automated.

For a large architectural firm with the capital resources, a system is in itself a marketing tool for the firm's services. For a small architectural firm with limited capital resources and a different clientele looking for different capabilities, systems may not be worth the strain and risk.

Don't be intimidated by the hype. Computers should be thought of as a potential advantage that should be studied carefully before buying. The first thing any small architectural firm will have to do is evaluate its needs for automation and justify the costs. If the firm's needs warrant a computer, the next area to evaluate is the way the computer will affect office procedure. You will have to determine what will change with the implementation of the computer system. Realize that start-up costs can be extensive and must include a possible *loss* in profits while you are getting the system up and running. Costs could even include some poor client relations during initial inefficiencies.

The one thing that shouldn't be a deciding factor is the increased production and efficiency numbers given by the computer industry. These numbers should only get you interested, but not necessarily buying. They are too general to be used to predict what will happen in *your* office.

Another factor that should not go into your decision is the claim that systems can be used in the place of more employees to do increased production. Increased production is not guaranteed. You have to go out and get the increased work to produce. And, if you are not planning to increase your business but to stay where you are, you may find that you do not have the necessary incoming revenue to cover the increased fixed costs.

On the whole, for most small architectural firms, you can say that computers make sense. But the only system that is sure to help is the management system. Computerized office management can do many things. The first is to familiarize the firm and its employees with the use of computers. Then, if a firm and its employees feel comfortable with computers, it can progress up the ladder.

If a high-capacity system makes the most sense, financing will undoubtedly be needed, so consider the options Complex financing is difficult for most people to grasp, including architects who have not been schooled in the subject. The financing capabilities of a small business are, at best, limited. Big firms have much more latitude.

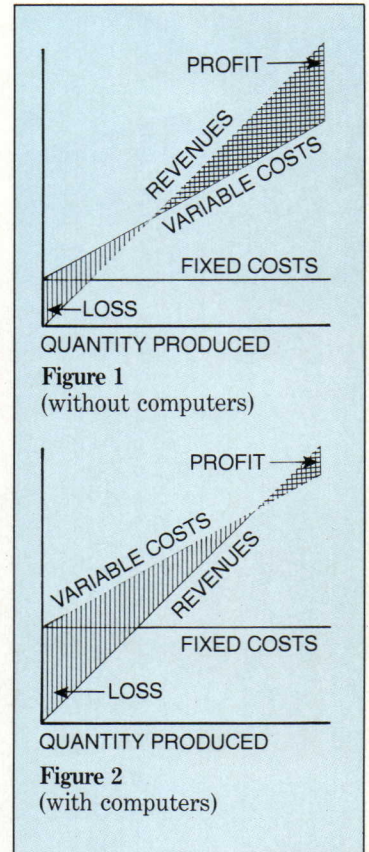
Financing for a small business most often has to be generated from within. At times this comes directly from the owner's pocket. Of course, for the comparatively large capital investments, such as an advanced CAD system, other financing means are needed. One alternative could be going to a bank. Any loan from a

bank is, of course, financially binding, no matter if the construction industry is doing well or is in a slump, and adds to the carrying costs already taken on. And a bank making a loan will typically require the applicant to come up with 20 percent of the money needed.

The other form of financing that can be used, instead of a bank loan, is a lease. With a lease, a small firm has many advantages over taking a bank loan. A lease is like a loan, except that the leasing corporation actually owns the equipment. Similarly, with a bank loan, the ownership turns over to the bank if you default. Also, with a lease, your firm gets 100 percent financing because you don't have to come up with any portion of the initial capital investment.

Another advantage of leasing arises from the quick obsolescence of computers in these times of great advances in the electronic industry. With a lease, the corporation that leased the system is responsible for its disposal if you outgrow it. If, on the other hand, the system still fits your firm's needs at the end of the lease, you can purchase the system at a substantially discounted cost.

So, as you can see, there are many considerations, besides *fad*, to take into account before your small office takes the plunge into computers.



The two graphs above illustrate the much higher level of production that a firm may have to maintain by owning an expensive CAD system rather than relying on traditional drafting methods. The graphs assume, however, that both the rates of increase in revenues and variable costs will remain the same while the fixed costs will go along at a steady, higher level, due to the extra load of CAD carrying costs.

Spring Rain...Summer Sun.



And Winter snow. In every season of the year, Helios Modular Shelters are graceful, colorful structures for shade and shelter. Translucent by day, at night they are a cheerful, luminous accent that glows with underside lighting.

The pre-engineered Helios Modular Shelter is versatile. It can stand alone, or be joined and clustered in any formation that adapts to the requirements of your space. Hexagonal or square configurations in umbrella or inverted tulip shapes are standard.

More than just a pretty parasol, the Modular Shelter is the ultimate in practicality. It has a durable, ten-year-warranty membrane that can be left up through the year or demounted easily. The sturdy steel framework and membrane are engineered for heavy wind and snow loading, meeting many model building codes, and are shipped ready to install in less than a day.

Explore the many possibilities of the Helios Modular Shelter. Our literature tells all.

Helios is a leading fabricator of custom designed soft shell structures, used around the world for their flamboyant, curvilinear shapes, light weight and long life. Send us your idea sketch, we'll help turn it into reality.

Helios Modular Shelters

at Saddlebrook, Wesley Chapel, Florida U.S.A.



HELIOS INDUSTRIES, INC.
Soft Shell Structures Division

Helios Industries, Inc.
20303 Mack Street
Hayward, California 94545, U.S.A.
Telephone (415) 887-4800
Telex 176226
Facsimile 4158870134



Helios Modular Shelters

at Lighthouse Cove, Pompano Beach, Florida U.S.A.

Product literature

For more information,
circle item numbers on
Reader Service Card

•CADD guidebook

A 36-page booklet, written for the architect who is seriously interested in acquiring a computer-aided design and drafting system, *Caddstart* begins with the most important decision—selecting the proper 2D, 2 1/2D or 3D software—and then outlines some musts and must nots involved in purchasing the computer, monitor, printer, plotter, and other system components that will run the program efficiently and economically. The material is presented generically, with the leading vendors of each type of equipment listed at the end of each chapter. CalComp, Anaheim, Calif.

Circle 400 on reader service card

•Reinforced concrete design

Described as a comprehensive listing of currently available literature and software on reinforced concrete design and construction, an 11-page bulletin from the Concrete Reinforcing Steel Institute summarizes the content and function of each publication, and provides prices and ordering information. Topics include design; testing, detailing and placing aids; pavement design and construction; bridges; CRSI professional bulletins; engineering data reports; and case histories. Concrete Reinforcing Steel Institute, Schaumburg, Ill.

Circle 401 on reader service card

•Aluminum-frame skylights

Three types of commercial and residential *Galaxie* skylights are introduced in a 4-page color brochure. Product enhancements include high-strength aluminum framing that allows for 36-in. clear bays, and a thin horizontal muntin that reduces dirt buildup. Laminated, low-E, and *Heat Mirror* glazing may be specified in a number of appearance options. Sunshine Rooms, Inc., Wichita, Kan.

Circle 402 on reader service card

•Face brick and pavers

An 8-page architectural brochure covers a full line of Ironspot clay face brick, tile, and pavers, available in colors ranging from light copper tone to an almost-black manganese blend. Standard shapes are detailed in dimensional drawings; color photographs show built projects, murals, interlocking pavers, and coping. Endicott Clay Products Co., Fairbury, Neb.

Circle 403 on reader service card

•Tile-installation products

Mortars, grouts, and adhesives for all types of ceramic-tile installation are covered in a 12-page design catalog. All 15 colors of new *Tasty II/Polyblend* grout are shown, including such shades as emerald, lemon, and lipstick red. Thin- and speed-set mortars, mastics, and sealers are described. Custom Building Products, Bell, Calif.

Circle 404 on reader service card

•Playground equipment

A full-line 1988 catalog contains almost 100 color pages on recreation equipment—from spring riders for toddlers to 45-by-50-ft structures with 24 “play events”—offered in various configurations of powder-coated aluminum, redwood-surfaced *Alumacore 2000*, and solid redwood. Sports items include basketball and volleyball apparatus and several total-fitness courses. New to the line is *TuffTurf*, a rubber-based, self-draining resilient surface offered in one-meter-square tiles. Landscape Structures/Mexico Forge, Delano, Minn.

Circle 405 on reader service card

•Stone and marble care

A 12-page booklet provides general information on the protection and maintenance of marble and stone. A chart matches stone surface type and problem with the correct protective, maintenance, stain-removal, or restoration product. HMK Stone Care, San Francisco.

Circle 406 on reader service card

•Suspended ceiling systems

Each brochure in the *Imagination Resource Series* focuses on specific theme installations or particular design and product requirements. Architects are asked to provide information on their own ceiling projects for possible inclusion in future issues. Intended to demonstrate the creative potential of this maker's contemporary ceiling products, the brochures come with a storage case and a 100-page ceiling-installation handbook. Chicago Metallic Corp., Chicago.

Circle 407 on reader service card

•Commercial heating

A 6-page color booklet explains the heating options offered by this maker's commercial/multifamily, industrial, and institutional product line. Piping diagrams and installation photographs are included. Weil-McLain, Michigan City, Ind.

Circle 408 on reader service card

•Wire management

Trench, cell, and surface-mount delivery systems and service accessories for a complete line of wire-distribution products are explained in a 12-page color catalog. System alternatives—for new or retrofit use, concrete or steel-frame construction, hazard classification, and different types of service—are charted with appropriate devices. American Electric, Construction Materials Group, Pittsburgh.

Circle 409 on reader service card

•Structural wood design

A 28-page booklet describes how diaphragm construction, using structural wood-panel floors, walls, and roofs, can be used in building design to resist lateral loads generated by high winds or earthquakes. Illustrations show code-approved diaphragm construction in both single- and multistory buildings; design tables recommend shears for high-load horizontal blocked diaphragms. American Plywood Assn., Tacoma, Wash.

Circle 410 on reader service card

•Doors and frames

A binder-format, 150-page specification guide to this manufacturer's *Architectural Group* product line is offered to help the professional select *PermaClad* laminate- and wood-veneer-surface interior doors and *Versatrac* aluminum frames. Detailed installation and ordering instructions are included. VT Industries, Inc., Holstein, Iowa.

Circle 411 on reader service card

•Interior restoration

A firm long active in the conservation and restoration of historic interiors has published a 4-page brochure for architects. It describes both in-house and nationwide on-site services, including all types of painting, gilding, custom and stock plasterwork, wood and stone carving, and stained-glass repair. Representative projects are illustrated. Biltmore, Campbell, Smith Restorations, Inc., Asheville, N. C.

Circle 412 on reader service card

•Access floor system

Product features and performance data for five access floor systems, including *ConCore* steel/concrete panels and the new *Series 1000* aluminum floor, are provided in a 12-page technical brochure. Also shown are accessories such as *PanelMate* carpet tile and *Task Air* underfloor air-delivery modules. Tate Access Floors, Inc., Jessup, Md.

Circle 413 on reader service card

•Ceramic tile

The *1988 Ceramic Tile Specifier* is a 16-page color catalog covering glazed floor tile, glazed wall tile, unglazed pavers, and unglazed mosaics. Installation photographs show tile products in a variety of architectural applications. Test results and code compliances are listed. United States Ceramic Tile Co., East Sparta, Ohio.

Circle 415 on reader service card
More literature on page 147

IN THIS
CORNER
... THE NEW
HEAVY-DUTY
LIGHTWEIGHT

PRESENTING DENS-SHIELD™

Superior moisture protection—weighing in at 1/3 less than Durock® and Wonder-Board®.

Dens-Shield™ tile base challenged portland cement boards. And won. Making it the lightweight, easy-to-handle champ for superior water and vapor protection in any high-moisture area. From walls and ceilings in tiled baths and showers to locker rooms and pool areas.

Superior moisture resistance. Dens-Shield is virtually unaffected by water and humidity. Because its patented water-resistant gypsum core is penetrated by fiberglass mats, front and back, and covered by an exclusive water- and moisture-resistant coating over the face side. And with excellent vapor retarder properties, Dens-Shield outperforms cement board—testing at just 2.1 perms (ASTM C-355), and 0.5 perms when applied with a Type I tile mastic. Plus, installed as directed, Dens-Shield normally requires no additional water or vapor retarder and will remain dimensionally stable.

The easy-to-handle lightweight. A full 33% lighter than portland cement board, Dens-Shield is significantly easier to handle in delivery and on the job site. It's also easier to cut, since no special cutting or drilling tools are required. And Dens-Shield is less brittle, and therefore less likely to break. All this can mean faster installation and reduced on-site labor and material costs.

Put the champ in your corner. Dens-Shield is just one of many innovative products from the Dens-Glass® family, including Dens-Glass gypsum sheathing and Dens-Deck™ gypsum roof board for commercial roof applications. And it's available through over 140 Georgia-Pacific Distribution Centers and Sales Offices nationwide. So call 1-800-225-6119 (1-404-521-5716 in Georgia) for more information and the location of the Distribution Center nearest you—and put the heavy-duty lightweight in your next corner.

Check Sweet's for other G-P building products; 9985-Prefinished Panels; 9250-Gypsum Wallboard; 7460-Siding; 7310-Shingles.

Georgia-Pacific



Insulation, Gypsum Board, Roof Fiberboard, Roofing Materials, **AMERICA BUILDS ON OUR NAME.™** Architectural Shingles, Rebar, Rem

Dens-Shield, Dens-Deck, and America Builds On Our Name are trademarks, and Dens-Glass is a registered trademark of Georgia-Pacific Corporation. Durock is a registered trademark of United States Gypsum Company. Wonder-Board is a registered trademark of Modulars, Inc. ©1987 Georgia-Pacific Corporation. All rights reserved.

Circle 65 on inquiry card for literature

• **Curtainwalls/storefronts**

Two 12-page design catalogs present 1988 product and technical information on a wide range of architectural aluminum products, including *Entara* and *Crystalline* entrances, *I-Line* narrow-sightline framing, the *Sealair* commercial and monumental window line, *Trusswall* curtainwalls, and sloped and barrel-vault glazing systems. Color photographs of built projects and glazing details illustrate each product. Kawneer Co., Inc., Norcross, Ga.

Circle 414 on reader service card

• **Rubber flooring**

Stud-, square-, ribbed-, and smooth-surface synthetic-rubber flooring products are described in *Pirelli's* new full-line architectural catalog. Close-up photos show floor patterns and colors; on-site photography illustrates residential, office, retail, and arena spaces. Jason Industrial Inc., Fairfield, N. J.

Circle 415 on reader service card

• **Healthcare wallcoverings**

Fabric-backed vinyl in warm colors and different textures can supply a home-like feeling to hospitals and institutions, according to a brochure from *Essex 54* wallcoverings. Text explains the maintenance benefits of stain-resistant *Prefixx* finish, standard on 54-in.-wide wall products, and an option on coordinating 27-in. designs. DiversiTech General, Hackensack, N. J.

Circle 416 on reader service card

• **Area drain system**

The *Polycast* interlocking trench drain has 0.65 deg of slope cast into the polymer concrete sections that make up the system; the smooth, U-shaped interior forces water flow to the center for more-efficient, self-cleaning drainage. A 4-page brochure describes how the presloped system can replace larger, cast-in-place drains, and shows products for pedestrian, light-vehicle, and heavy-load traffic. Quazite Corp., Houston.

Circle 417 on reader service card

• **Air-system design**

Intended for those air systems where fan inlet and discharge openings are clearly separated, a design manual provides basic information on system-pressure losses, fan-performance characteristics, actual and laboratory test-system results, and design tolerances. Single copies of the *Air Systems* booklet are available for a \$6 charge. Air Movement and Control Assn., Inc., Arlington Heights, Ill.

Circle 418 on reader service card

• **Drafting materials**

A 92-page catalog presents a full line of drafting products, including films, CAD plotter media, tracing papers, diazo and xerographic media, pens, lettering systems, drafting machines, and inks. *Herculene*, an unabrasive, permanently transparent drafting film, is described. Keuffel & Esser Co., Rockaway, N. J.

Circle 419 on reader service card

• **Copper sprinkler systems**

An illustrated brochure explains the cost, maintenance, and installation advantages of copper tube and fittings in fire sprinkler and single-loop fire protection/heat-pump systems. A chart compares the weight of type M copper tube to schedule-40 steel pipe. Copper Development Assn., Stamford, Conn.

Circle 420 on reader service card

• **Office design**

Law firms and banking institutions want an aura of prestige and responsibility in their working environments, according to two site-specific design brochures available from *Steelcase*. Photographs illustrate furniture systems designed to meet the image requirements of these organizations, while also providing productive, functional support for high-technology office and communications equipment. Steelcase Inc., Grand Rapids, Mich.

Circle 421 on reader service card

• **Sectional doors**

Steel, aluminum, and wood-panel rolling and sectional doors for industrial and commercial applications are shown in an architectural catalog. The *Panoramic*, one of several service-bay doors offered with large glazed vision panels, is suggested for open-air retail and restaurant space; doors of this type may be specified for openings as large as 26-ft wide by 20-ft high. Overhead Door Corp., Dallas.

Circle 422 on reader service card

• **Wood flooring**

A color brochure on *Pattern-Plus* acrylic-impregnated wood flooring illustrates some of the custom patterns possible using the modular, tongue-and-groove units. *Pattern-Plus* is said to be flexible enough to install even over slightly uneven subfloors. A full-line *Hartco* catalog and flooring samples are also available to the architectural specifier. Tibbals Flooring Co., Oneida, Tenn.

Circle 423 on reader service card

• **Architectural doors**

A 12-page brochure describes a product line ranging from hollow-core residential flush doors to institutional-grade and custom specification doors. Applicable industry performance standards, materials, and construction details are shown for each door. The maker's "life of the installation" warranty coverage is explained. Haley Bros., Inc., Buena Park, Calif.

Circle 424 on reader service card

• **Metal ceiling systems**

An 8-page color catalog presents the *Dampa* suspended metal ceiling, configured to meet many acoustic, decorative, and mechanical requirements. A selection chart displays all ceiling profiles, including the half-round *Rondella 200*, vertical baffles, and tiles, matched with sizes, finishes, and surface treatments. Dampa Inc., Scarborough, Ont.

Circle 425 on reader service card

• **Silicone sealants**

Sealants for construction, glazing, structural glazing, insulated glass, and sanitary applications are presented in a tab-indexed specification brochure. New products include *Rhodorsil 70*, a high-strength, medium-modulus silicone for structural glazing, and *Rhodorsil 5C* weather sealant. Rhône-Poulenc Inc., Monmouth Junction, N. J.

Circle 426 on reader service card

• **Thermoset panels**

An 8-page color brochure introduces *Permalam*, a recently adopted trade name for decorative panels made from thermoset polyester or melamine bonded to a composite wood core. Information is given on *Permalam* characteristics, advantages, and applications; NEMA-based performance tests are explained. American Laminators Assn., Seattle, Wash.

Circle 427 on reader service card

• **Fire protection**

Interam penetration sealants and steel and electrical wrap systems are covered in a 4-page technical brochure. Products for fire protection in construction include *FireDam 150*, a water-based caulk, and *Interam CS-195* heat-shielding rigid panels. 3M, St. Paul, Minn.

Circle 428 on reader service card

• **Foam concrete forms**

An illustrated brochure describes the *Thermal Wall System*, a new building technique that contains concrete within permanent forms of fire-retardant expanded polystyrene. Combining the load-bearing strength of concrete with substantial energy efficiency, the system can be used both above- and below-grade for residential, multifamily, and high-rise commercial structures. The wall has a maximum expansion of 0.2mm/m, said to eliminate cracking in the finish coat. RVG/Thermal Wall, Chatham, N. Y.

Circle 429 on reader service card

More literature on page 167



THE MERCHANDISE MART / CHICAGO / JUNE 14-17, 198

Circle 67 on inquiry card

Tandy Computers:
Because there is
no better value.™

The Tandy® 4000

A price breakthrough
in high-performance
80386 technology.

With the Tandy 4000's 16-megahertz clock speed, IBM PC and AT® compatible software comes alive with incredible speed. And new operating systems such as Microsoft® OS/2 will deliver the full potential of the 80386.

The 4000 is just one of a complete line of Tandy computers—the best-selling IBM PC compatibles in America.

Workgroup Solutions. Our 3Com® workgroup lets people and PCs work together, so your entire office can share information and route messages—electronically. And with IRMALAN™, up to 20 people in your workgroup can access your company's IBM mainframe computer.

Multiuser Solutions. With the XENIX® multiuser operating system you can share the power of the Tandy 4000 with others in your office. The fact is, we have more experience with XENIX® multiuser systems than anyone. And we offer SCO™ business productivity software that's designed expressly for maximum multiuser efficiency for small businesses.

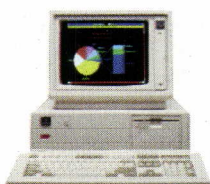
Total Support. Radio Shack Computer Centers offer the most comprehensive range of support services in the industry. The bottom line? We work hard for your business! Come in and find out for yourself—ask for a demonstration of the Tandy 4000 today.



See Tandy's Complete Line of IBM® PC Compatible Computers



Tandy 4000



Tandy 3000



Tandy 3000 HL



Tandy 1000 TX



Tandy 1000 SX



Tandy 1000 HX



Tandy 1400 LT

Send me a 1988 computer catalog.

Mail to: Radio Shack, Dept. 88-A-946
300 One Tandy Center, Fort Worth, TX 76102

Name _____

Company _____

Address _____

City _____ State _____

ZIP _____ Phone _____

Radio Shack®
COMPUTER CENTERS

A DIVISION OF TANDY CORPORATION

XENIX Reg. TM Microsoft Corp. 3Com/Reg. TM 3Com Corp. IBM and AT/Reg. TM IBM Corp. IRMALAN/TM Digital Communications Associates, Inc. SCO/Reg. TM The Santa Cruz Operation.



There's not much that's typical about this office building.

Except, maybe, the relentlessly red Pella Windows.

The owner wanted an alternative to the typical office building around Tucson.

The architect said that playfulness had been left out of today's architecture.

And from the beginning, Pella's custom color was the logical choice for carrying out the design.

Needless to say, this 70,000 square foot office building stands out in a neighborhood of predictably severe granite and glass offices. Williams Center features rounded corners, the playful juxtaposition of unusual shapes, and a dashing color scheme of red and white. You can't miss it.

In fact, the main entrance is easily recognized. It's under what appears to be a giant red metal water slide. Inside, however, the mood changes. Visitors and tenants reach their offices after passing through a charming courtyard with waterfall, meandering pool, lush vegetation, waterside seating, and contemporary sculpture.

The building's shape is the logical outgrowth of a desire to give all tenants a sense of place, regardless of how much or how little space they have. Small tenants aren't stuck with just a carved out portion of a rectangle. Here, tenants can even choose spaces with higher ceilings, or two-story spaces.

About those red windows.

It actually started with the red metal roof. Pella's custom color department scientifically matched the roof manufacturer's color, and applied it to the windows and trim. And, to be sure that the doors matched perfectly, even supplied the paint for the metal door manufacturer.

Pella's custom color capabilities are unlimited. You may choose the most unusual color in the known world, and putting it on a Pella Window will just be typically Pella. Plus, it's a super tough enamel finish that resists

cracking, fading, chipping, and all sorts of plagues due to exposure. Yet, for all this protection on the outside, all you see on the inside is solid wood, ready to stain or paint.

The Pella Type E Slimshade.* For the sake of appearances and energy savings.

All windows feature the insulating efficiency of the Pella Double Glazing System with adjustable Type E Slimshade* blinds between the panes of glass. This gives an attractive, consistent appearance to windows from the outside, and the convenience of built-in blinds from the inside.

For the owner, it also means low maintenance because the blinds are protected from dust and damage by the removable inner glass panel.

Energy saving, too. The low E coating on the blinds is highly effective at reflecting radiant heat back outside, which saves on air conditioning inside. And Pella's low air infiltration means energy dollars won't be lost.

For more information on Pella products for commercial projects, contact your local Pella distributor. Look for Pella in the Yellow Pages under "Windows;" call Sweet's BUYLINE, or see Sweet's General Building File. Or simply return this coupon.

Please send me more information on Pella Clad products for commercial projects.

Name _____

Firm _____

Address _____

City _____

State _____ Zip _____

Phone _____

Mail to: Pella Windows and Doors Commercial Division, Dept. T31C8, 100 Main Street, Pella, IA 50219. Also available throughout Canada.

© 1988 Rolscreen Company.

Bring your designs to Pella.

Williams Center
Tucson, AZ

Architect
John Campisano & Associates
Tucson, AZ

Owner
Shull/Jones Builders, Inc.
Tucson, AZ



Circle 69 on inquiry card

MBCI Metal Roof System Adds a Touch of Warmth and Beauty to Medical Facility

Designer T. A. Fairhurst and his client were seeking a warm and inviting building. Their goal was to avoid the "cold feeling" of many medical facilities while creating a distinctive, high quality appearance.

Read how this was accomplished. Contact the nearest MBCI plant for Project Report No. 1031187. You can rely on MBCI for quality preformed metal roofs, walls, fascias, and soffits. Call today.



Houston 713/445-8555
Lubbock 806/747-4291
Oklahoma City 405/672-7676
San Antonio 512/661-2409
Dallas 214/988-3300
Atlanta 404/948-7568
Tampa 813/752-3474
Richmond 804/526-3375
Circle 71 on inquiry card

MBCI
METAL BUILDING COMPONENTS, INC.

PROJECT REPORT

No. 1031187

Designer Prescribes MBCI Craftsman Series Roof System To Achieve Warm, Friendly Appearance for Medical Facility Complements Surrounding Environment

Medical office buildings do not have to be cold and uninviting. The design by Terry A. Fairhurst for the 9600 square foot OakHill Medical Plaza in Longview, Texas, proved just that point.

Fairhurst said he and his client wanted "a distinctive high quality appearance while avoiding the cold look of many medical facilities." Fairhurst is the principle of T.A. Fairhurst & Associates, a Tyler, Texas, building design firm.

Metal roofing was selected in the initial planning phase of the building design, according to Fairhurst. "Metal has long-term cost-efficiency and offers the high quality

appearance we were after," he said.


"Energy consumption also was an important factor in the selection of a metal roof," he added. "Summer months are extremely hot in East Texas and a metal panel that reflects heat will help keep energy costs down."

Fairhurst specified and used the MBCI Craftsman Series SB16.5 panel in 24 gauge, preweathered Galvalume®. The panel is a 16 1/2" wide pan panel with a 1/2" wide and 1" high snap-on batten. The Craftsman Series has a concealed fastening system for added weather-tightness.

The design called for custom cut

and formed panels for use on the rounded turret roofs. Management (continued on other side)

Project Facts
 Project Name: OakHill Medical Plaza
 Location: Longview, Texas
 Roofing Contractor: Cannon Construction, Whitehouse, Texas
 General Contractor: Snyder Construction, Truett, Texas
 Designer: T.A. Fairhurst & Associates, Tyler, Texas
 MBCI Preferred Metal: Craftsman Series SB16.5, 24 gauge, preweathered Galvalume®

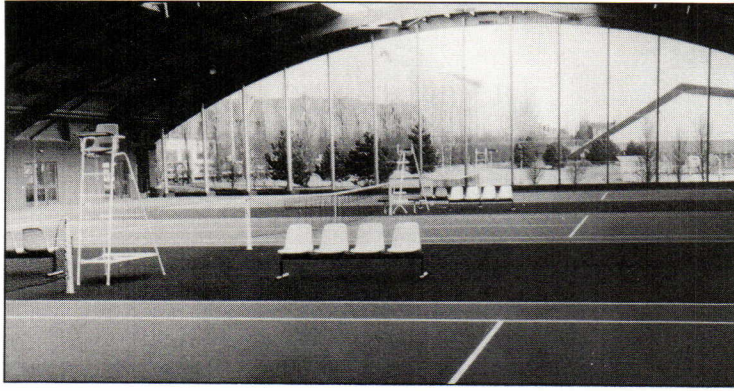


This medical facility creates a warm, inviting appeal as patients enter.



OPHTHALMOLOGY
Michael B. Galters, M.D., F.A.
Craig K. King, M.D.

Continued from page 153



Indoor sports flooring

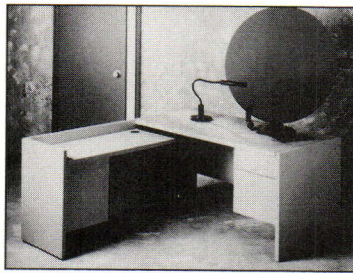
An extension of the *Lobo* carpet line, new French-made *Lobo sport* has a dense pile of over 60,000 nylon fibers per sq in., electrostatically bonded in a waterproof vinyl base. The nonskid, scrubbable flooring

comes in 5-ft-wide rolls, in either green or orange, and colored demarcation lines. Designed for indoor tennis and exercise areas, *Lobo sport* provides a cushioned surface with good ball bounce. Bonar & Flotex, Dallas. Circle 314 on reader service card



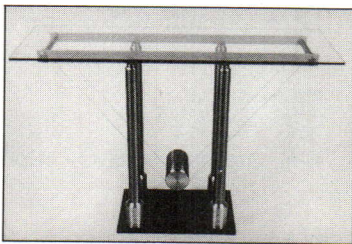
Contract textile

Named for its designer, *Andrée Putman-700 Series* is woven in France of a cotton/polyester blend, and is currently available in two neutral colorways. The fabric is part of the *Architectural Collection* of Twentieth Century Re-Editions. Ian Wall Limited, New York City. Circle 315 on reader service card



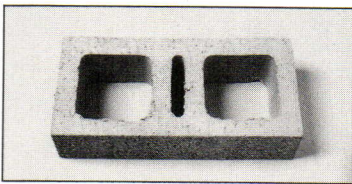
Modular office furniture

The *Express Series*, a new laminate-surfaced office line, is described as functional, attractive, and affordable. Desks, credenzas, and fixed and mobile pedestals work with overstorage units to create a job-specific space; laminate color and pattern range is extensive. HLF Furniture, Livonia, Mich. Circle 317 on reader service card



Aluminum and glass

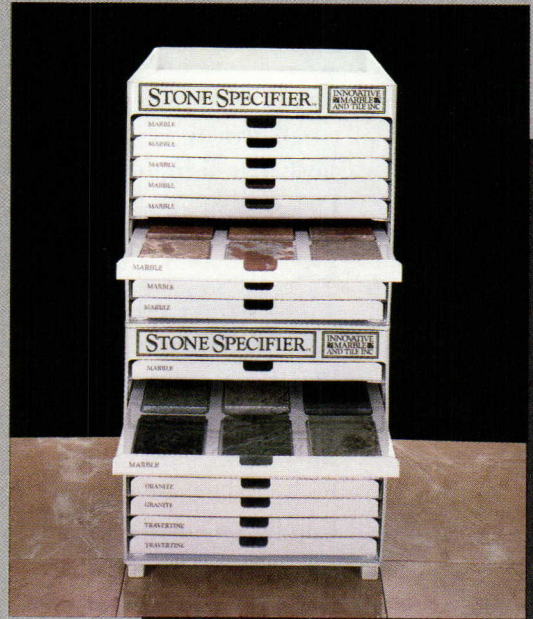
Derek Richards' *Trapase Console* has a pendulum-like stretcher element. The table can be specified in turquoise, light pink, baby blue, black, and natural anodized aluminum finishes. Dennis Miller Associates, New York City. Circle 318 on reader service card. Continued on page 161



Hollow brick

Offered in a new buff color, the *Royale* hollow brick has a compressive strength more than double that required by code, and may be used in 4-hour fire walls. Hollow brick is said to offer substantial cost savings in bearing-wall construction. Davidson Brick Co., Perris, Calif. Circle 316 on reader service card

Innovative Marble and Tile, inc.



The Stone Specifier®



ONE BOCA PLACE, BOCA RATON, FLORIDA ARCHITECTS: SMALLWOOD, REYNOLDS, STEWART AND ASSOCIATES, INC.

Produces results.

To find out more about Innovative Marble and Tile and our patented stone specifier program, or to sample our library featuring the largest selection of marble, granite and man-made dimensional stone, quarried worldwide, contact our New York headquarters.



New York
470 Smith Street
Farmingdale, NY 11735
(516) 752-0318
Fax# (516) 752-0411
1-800-62 STONE

California
8436 West Third Street
Los Angeles, Calif. 9004
(213) 653-5533
Fax# (213) 653-6072
1-800-62 STONE

W.U. Telex. 880145 INNOVATIVE

Circle 72 on inquiry card

why not join

co-chairmen

Jay Chiat, adman

Henry Wolf, designer, photographer

&

Tony Brignull, advertising creative director

Fred Carr, investment strategist

Dick Cavett, entertainer

Kinshala Conwill, museum director

Jim Croak, artist

François Dallegret, designer

Lou Danziger, designer

Liz Diller, architect

Jason Epstein, editorial director

Lauren Ewing, sculptor

Dennis Farrier, scientific developer

Mildred Friedman, design curator

Roz Goldfarb, career counselor

Howard Hiatt, M.D.

Gerald Hirshberg, automobile designer

Carl Hodges, research scientist

Takenobu Igarashi, designer

Eiko Ishioka, designer

Frank Israel, architect

Steven Jobs, entrepreneur

Fred Joseph, investment banker

Tibor Kalman, designer

Richard Koshalek, museum director

Jerry Lettvin, research scientist

Richard Meier, architect

Max Neuhaus, aural artist

Woody Pirtle, designer

David Puttnam, film producer

Paul Rand, designer

Ricardo Scofidio, architect

Marcia Tucker, museum director

to explore

“The cutting edge:

An examination of the state of things”

at the Aspen Design Conference

on June 12–17, 1988

\$425 for regular registration.

\$200 for one additional household member.

\$125 for full time students (photocopy of current ID
required with registration).

Name _____

Address _____

City _____ State _____ Zip _____

Phone Number _____ Business _____

Make check payable to IDCA and mail to:

IDCA—Attention Registrar PO Box 664, Aspen, CO 81612

For further information, write or call (303) 925-2257

IDCA June 12–17, 1988
International Design Conference in Aspen

for a wonderful week.

ARCHITECTS' BOOK CLUB®

Membership Order Card

Please enroll me as a member and send me **Time-Saver Standards for Architectural Design Data, 6/e**, and **Time-Saver Standards for Site Planning**, (583780-3), billing me only \$14.95, plus local tax, postage, and handling. I agree to purchase a minimum of three additional books during my first year as outlined under the Club plan described in this ad. Membership in the club is cancellable by me any time after the three book purchase requirement has been fulfilled. A shipping and handling charge is added to all shipments.

Signature _____

Name _____

Address/Apt. # _____

City/State, Zip _____

This order subject to acceptance by McGraw-Hill. Offer good only to new members. Foreign member acceptance subject to special conditions.

ARCHITECTS' BOOK CLUB®

Membership Order Card

Please enroll me as a member and send me **Time-Saver Standards for Architectural Design Data, 6/e**, and **Time-Saver Standards for Site Planning**, (583780-3), billing me only \$14.95, plus local tax, postage, and handling. I agree to purchase a minimum of three additional books during my first year as outlined under the Club plan described in this ad. Membership in the club is cancellable by me any time after the three book purchase requirement has been fulfilled. A shipping and handling charge is added to all shipments.

Signature _____

Name _____

Address/Apt. # _____

City/State, Zip _____

This order subject to acceptance by McGraw-Hill. Offer good only to new members. Foreign member acceptance subject to special conditions.

**BUSINESS REPLY MAIL**

FIRST CLASS MAIL

PERMIT NO. 42

HIGHTSTOWN, NJ

POSTAGE WILL BE PAID BY ADDRESSEE

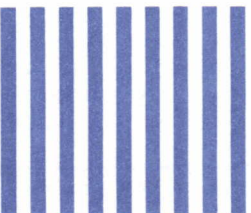
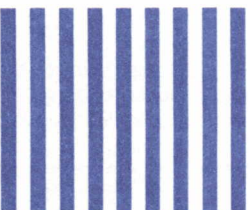
McGraw-Hill Book Clubs**P.O. Box 582****Hightstown, NJ 08520-9959****BUSINESS REPLY MAIL**

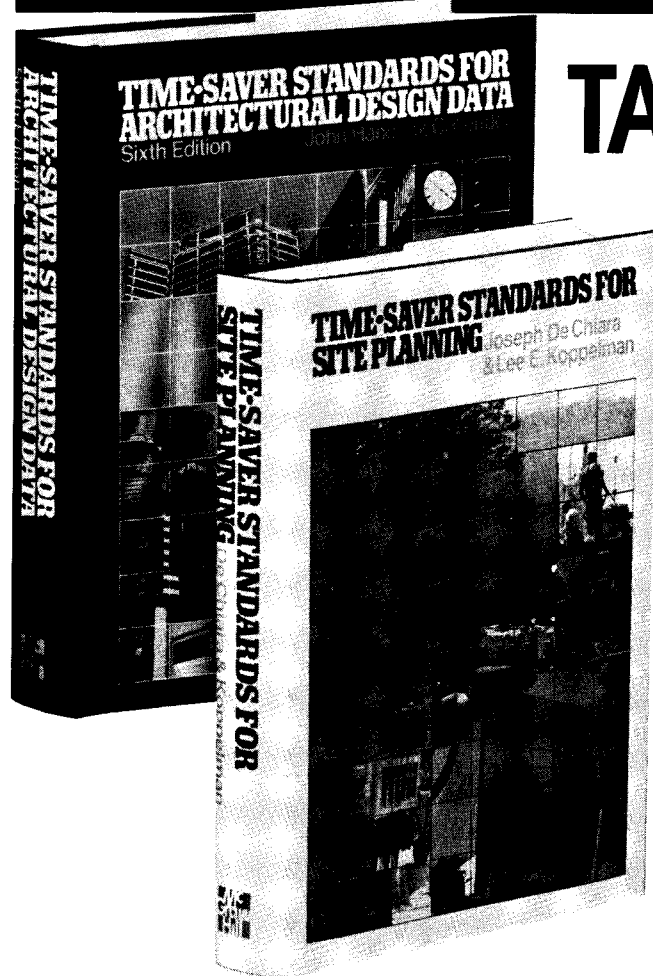
FIRST CLASS MAIL

PERMIT NO. 42

HIGHTSTOWN, NJ

POSTAGE WILL BE PAID BY ADDRESSEE

McGraw-Hill Book Clubs**P.O. Box 582****Hightstown, NJ 08520-9959**NO POSTAGE
NECESSARY
IF MAILED
IN THE
UNITED STATESNO POSTAGE
NECESSARY
IF MAILED
IN THE
UNITED STATES



TAKE THESE TWO GIANT REFERENCES FOR ONLY \$14.95

when you join the Architects' Book Club®

You simply agree to buy 3 more books — all at handsome discounts — within the next 12 months.

Here, at enormous savings, are two books from the renowned Time-Saver Standards series — master reference works which are filled with professional building data, design procedures, facts, definitions, and real-life examples. They help you produce better designed, more cost-effective buildings because they're practical, thorough, and specific. Every page of each giant volume has detailed information you'll use to save time and money. And to make all material perfectly clear, powerful graphics support the text — *over 1,000 illustrations for each book.*

4 more reasons to join today!

1. Best and newest books from ALL publishers! Books are selected from a wide range of publishers by expert editors and consultants to give you continuing access to the best and latest books in your field.

2. Big savings! Build your library and save money, too! Savings range up to 40% or more off publishers' list prices — usually 20% to 30%.

3. Bonus books! You will immediately begin to participate in our Bonus Book Plan that allows you savings up to 70% off the publishers' prices of many professional and general interest books!

4. Convenience! 14-16 times a year (about once every 3-4 weeks) you receive the Club Bulletin FREE. It fully describes the Main Selection and alternate selections. A dated Reply Card is included. If you want the Main Selection, you simply do nothing — it will be shipped automatically. If you want an alternate selection — or no book at all — you simply indicate it on the Reply Card and return it by the date specified. You will have at least 10 days to decide. If, because of late delivery of the Bulletin you receive a Main Selection you do not want, you may return it for credit at the Club's expense.

As a Club member you agree only to the purchase of three additional books during your first year of membership. Membership may be discontinued by either you or the Club at any time after you have purchased the three additional books.

Fill out the card and mail today!

If the card is missing, write to:

Architects' Book Club®

P.O. Box 582, Hightstown, New Jersey 08520-9959

TIME-SAVER STANDARDS FOR SITE PLANNING

Edited by Joseph DeChiara and Lee E. Koppelman

- covers every aspect of good site selection, development, and use
- gives construction details for all phases of site development
- provides basic design criteria for *all* types of buildings
- organized to follow the actual design sequence
- 864 pages are filled with easy-to-use drawings, charts, tables, and cutaway views

(Pub. Pr., \$79.00)

TIME-SAVER STANDARDS FOR ARCHITECTURAL DESIGN DATA Sixth Edition

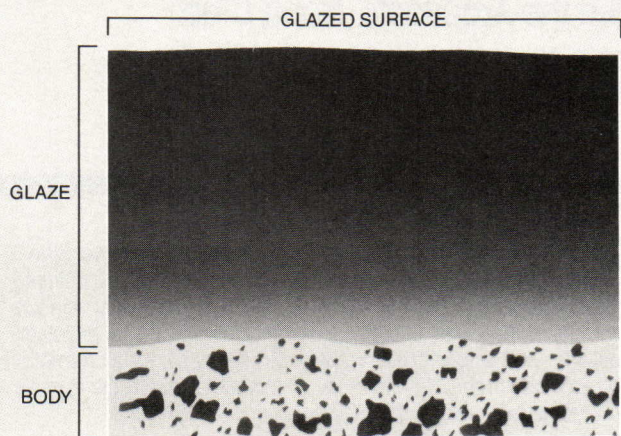
Editor-in-Chief, John Hancock Callender

- shows — through some 1,300 illustrations — every important design procedure, practice, and standard
- gives you instant access to the best technical data available
- reflects the full range of specialties — architectural, interior design, engineering, and construction
- presents major contributions by 57 top authorities
- 1,184 information-packed pages

(Pub. Pr., \$85.00)



MARAZZI CHALLENGES TIME



Microscopic Cross Section of Tile

Traditional single-fired technology captures microscopic gas bubbles in the glaze. As the surface wears, these pores open and dirt becomes trapped within. Marazzi's new process allows these gases to escape and a completely dense glaze results. Resistant to acids, solvents and detergents, "Marazzi Enduro" doesn't harbor dirt and can be completely cleaned with common detergents and water. After years of wear, "Ocean" and "Gloss" can actually be re-polished to their original luster with normal maintenance equipment.

We'll be bringing the timeless beauty of "Marazzi Enduro" to your area soon in the form of a technical luncheon. Call American Marazzi Tile for details.

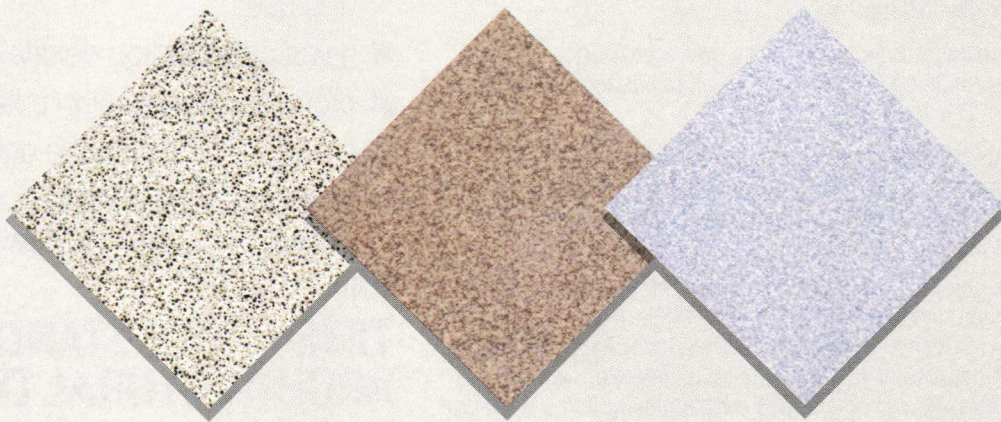
Marazzi challenges time where foot traffic is heaviest. Where elegance and beauty must be matched with extreme cleaning ease.

The challenge is met with "Marazzi Enduro[®]," the product of a new technology in the making of glazed ceramic tile. This unique single firing process applies the glaze, a special molten and vitreous material, to the incandescent body after the inherent gases have escaped. The result — a perfectly hard and dense glaze that is completely fused to the body and easily maintained.

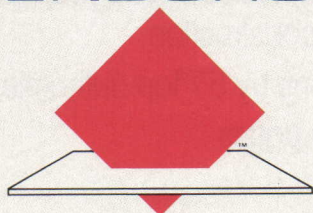
Specify "Marazzi Enduro[®]" for airports, mass transit facilities, shopping malls — the toughest commercial installations — and we'll back it with a 10-15 year warranty.

The "Gloss" and "Ocean" Series together provide 12 colors with a high-gloss finish in a 12" x 12" size. The "Matt" Series offers 4 natural colors, each available with a smooth or "Grip" finish in a 12" x 12" size. Cove base trims are offered for "Gloss" and "Matt."

To receive detailed technical information about "Marazzi Enduro[®]," the glazed ceramic tile that challenges time, call the American Marazzi Tile Marketing Department at (214) 226-0110. For immediate reference turn to section 09300/AIA in the Sweet's General Building & Renovation File.



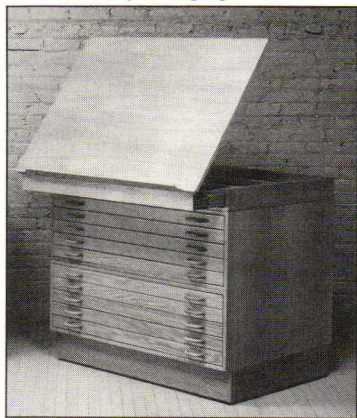
MARAZZI ENDURO



AMERICAN
MARAZZI TILE

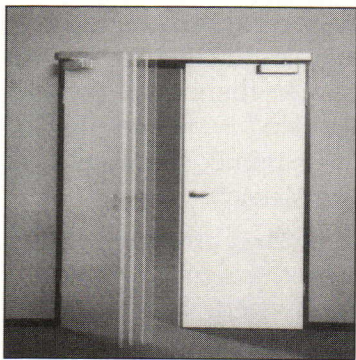
359 Clay Road
Sunnyvale (Dallas), Tx. 75182
(214) 226-0110

Circle 74 on inquiry card



Drafting furniture

A versatile, multiple-function unit, the *Quercus* file has a drafting surface that slides out 14 in. to provide knee room, and tilts up to 60 degrees. Constructed of oak in different finishes, the unit may be ordered with concealed casters. Quercus Woodworking Corp., Chicago. Circle 319 on reader service card



Door controller

TS 93GSR cam-action closers shut paired doors in sequence, the inactive door before the active door, preventing damage to door hardware. Units are said to be easier to install than stop-applied closers. Dorma Door Controls, Inc., Reamstown, Pa. Circle 320 on reader service card



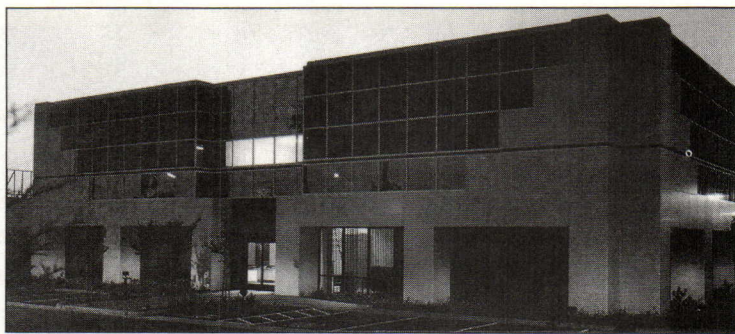
Fiber wallcoverings

Asian Accents wallpapers include back-dyed designs with string overlays and chenille yarns, flame-stitch patterns, and Southwestern abstract print, all Class A rated. Seabrook Wallcoverings, Inc., Memphis. Circle 321 on reader service card



Bentwood chairs

A 1910 Joseph Kohn design, chairs with steam-bent wood frames are part of a new *Thonet* collection. Chairs stand 29 1/2 in. high, with either upholstered or decorative slat sides. Thonet, Statesville, N. C. Circle 322 on reader service card



Metal-skin panel

A decorative metal skin bonded to a honeycomb aluminum core, the *Apogee* wall panel provides an extremely flat surface, and will not be damaged by thermal

stress. The panel is said to have excellent span capability; its tongue-and-groove edges let the panel joints float with building movement. AEP SPAN, Dallas. Circle 323 on reader service card
Continued on page 163



Brooklyn Senior Citizens
Recreation Hall
Brooklyn, OH
Robert Corina Associates, Arch.

ENERGY EFFICIENT CLEARSPAN SKYROOFS . . .
Another of our major advances in the state-of-the-art . . .
the Structures Unlimited "Skyroof" System!

A material that *transmits diffused daylight* to eliminate lighting energy usage in the daytime; that *controls solar heat* transmission to allow maximum heat gain for passive solar applications, or as little as 10% (compared with glass) to save air conditioning costs; that *insulates* up to 86% more efficiently than single glazing!

Combined with our engineered aluminum structural system, Clearspan Skyroofs up to 100 foot span are a reality.

Complete, under only one contract – one responsibility!

STRUCTURES UNLIMITED, INC.

P.O. Box 4105, Manchester, NH 03108 Phone 603-627-7887

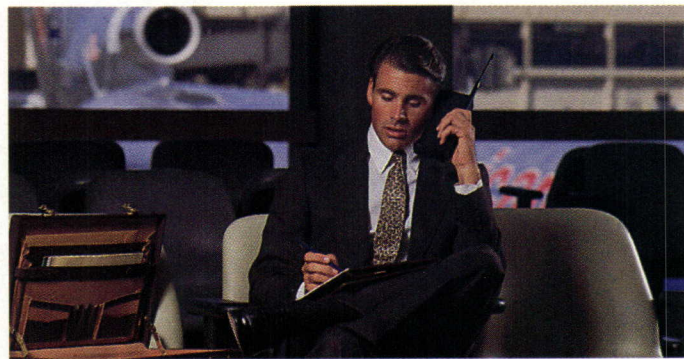
You've got the whole world in your hand...

With Radio Shack's new 28-oz. cellular telephone.

The Ultimate Tool for Executives On the Go. Make and take calls almost anywhere! Use the Radio Shack CT-300 wherever there's cellular service—at a job site, in a rental car, on a service call, or even waiting between flights. It's the essence of portability—only 1½" wide and just 28 ounces. The CT-300 means immediate accessibility if a quick response is necessary.

A Price and Technology Breakthrough. The CT-300 gives you all the convenience of a full-featured cellular phone in a portable size. High-energy rechargeable batteries deliver up to 15 hours standby or 1½ hours of talk time. An antenna, carry case and strap are included.

Backed by Quality Service and Support. We process all start-up paperwork right in the store. You leave with a working cellular phone! The basic phone is \$1499 and a commercial lease is available for as low as \$49 per month*. Come in for a demonstration today. (17-2001)



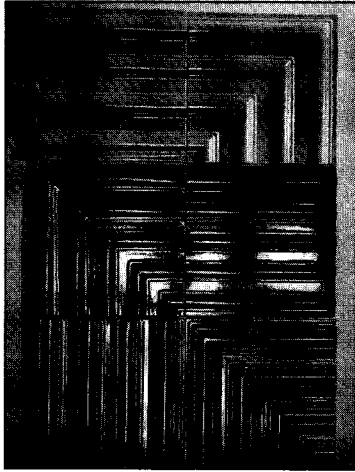
Actual Size!

Radio Shack®

The Technology Store™

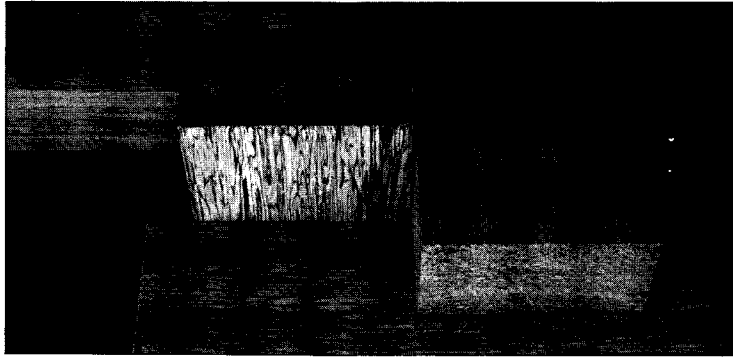
A DIVISION OF TANDY CORPORATION

*Plus applicable use/sales tax. Price applies at Radio Shack Computer Centers and participating stores and dealers. Requires charging accessories, extra.



Ceramic tile moldings

Sculptural half-round relief tile designs are suggested for use as a framing device or as moldings. Twelve-in. tiles come in corner- and straight-rib units that can be field-cut as needed. Custom and standard glazes include glossy metallic oxides, such as bronze and black, and any solid color. Design-Technics, Pen Argyl, Pa. Circle 324 on reader service card

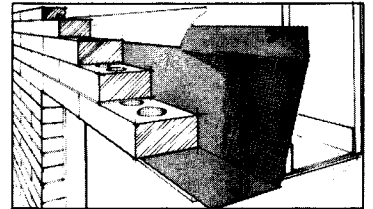


Structural wood

Described as having superior strength and dimensional stability, *Parallam* is made by bonding long strands of wood veneer into uniform structural

beams. It can be a cost-effective replacement for steel and concrete in some renovation applications. MacMillan Bloedel Ltd., Vancouver, B. C.

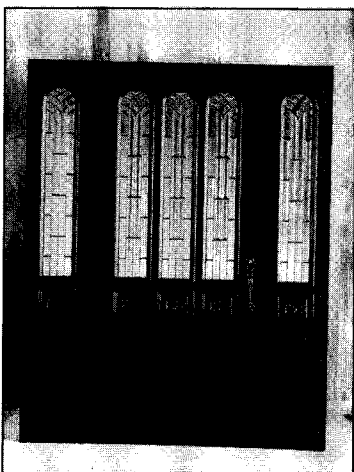
Circle 326 on reader service card



Masonry flashing

An aluminum foil encapsulated in fiberglass-reinforced *Mylar*, *Fiberweb 300* through-wall and concealed flashing is easy to form to the exact shape required. Unaffected by acids, alkali, or bitumen, flashing will not react with the mortar bed. Dur-O-Wal, Inc., Arlington Heights, Ill.

Circle 327 on reader service card



Residential doors

Multiple cut-glass inserts are used in the *Private Collection Series* of American Red Oak and Philippine Mahogany doors and matching sidelights designed by Walter Dorwin Teague Associates. Styled residential doors come with matching top jambs to facilitate installation. Simpson Door Co., Seattle.

Circle 325 on reader service card

Enhance the beauty of your landscape with the elegance of superbly crafted lighting posts by Spring City



WASHINGTON-TWIN
- Capitol Area, Washington, D.C. 10'8" to 17'8" heights (excluding luminaires), 17" O.D. to 25" octagonal bases. Available with four luminaires.



HANCOCK - Boston, Mass. 9' to 13' heights (excluding luminaire) with 10 1/2" O.D. base. Available as a 46" high bollard.

You will be in good company when you light the way with our historically accurate, heavy duty, *Cast Iron* lighting posts. Independence Hall in Philadelphia, for example; the U.S. Military Academy at West Point; Boston Common and William and Mary College in Williamsburg to name just a few of the thousands of locations where these lighting posts are prominent.

The light sources available are: incandescent, mercury vapor, metal halide or high pressure sodium.

Write or call for further information and literature that will illustrate and describe why we are the leading manufacturer of ornamental lighting posts in the United States.

Spring City ELECTRICAL MFG. CO.

P.O. Drawer A, Spring City, PA 19475

Phone: (215) 948-4000

Circle 77 on inquiry card



On and on and on. For as long as 150 feet without stopping. That's the beauty of Cot-R-Cap® exterior surfacing. Its patented construction offers continuous battens and panels that keep going. Even over ridges and other direction changes.

Think of it as metal sculpture. One you shape at the actual job site, with on-site roll forming by Alumax. A method that eliminates dimensional errors, along with freight damages and costs. That lets you go from roof to fascia to soffit and siding, if you like. With a clean, uninterrupted flow of lines.

Cot-R-Cap is available in steel and aluminum. In time-tested, full strength 70% KYNAR® 500 standard color finishes. Plus an unlimited choice of special colors.

And Cot-R-Cap is as practical as it is beautiful. Its unique construction also means no leaking problems. Because there are no horizontal end laps, folding and bending panels or face penetrations.

HOW MUCH LONGER CAN THIS GO ON?



The interlocking pans and battens also assure watertightness. And the concealed fastener system allows thermal movement for excellent positive and negative loading, with a UL class 90 rating. And Cot-R-Cap can be installed directly over purlins, or over plywood and other decking.

Cot-R-Cap. The design possibilities are as endless as the product. And it's available from thousands of Alumax dealers, located nationwide. Each prepared at any time to go to any length to please you.

Alumax provides a twenty-year finish warranty on KYNAR 500 coatings. For your copy of this warranty, write to Alumax.

MADE TO LAST. GUARANTEED TO PROVE IT.

ALUMAX
BUILDING SPECIALTIES DIVISION

P.O. Box 163
Mesquite, Texas 75149
(214) 285-8811

KYNAR® 500 is a registered trademark of the PENNWALT Corporation.

For more information on other Alumax roofing systems refer to Sweet's 07410/ALU.

Manufacturer sources

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

Pages 86-93

Rowes Wharf
 Skidmore, Owings & Merrill
Pages 86-90—Copper roof: fabricated by Titan Roofing. Single-ply membrane roof: Firestone (*RubberGard*). Slate roofing: Vermont Structural Slate Co. Skylights: Wasco Products. Wood-framed storefront and operable windows; entrance canopies: Duratherm Window Co. Fixed windows: Modul-Fonster. Glazing: Saint-Gobain (windows); Viracon (storefront); Karas & Karas Glass Co. (curtainwalls). Water-struck brick: Morin Brick Co. Granite: Moliterno/New England. Precast masonry: Pre-Con Co. Brick pavers: Hastings. Railings: custom, fabricated by Ryan Iron Works. Lighting standards: custom by Spring City. Finial on pavilion dome: Campbellsville Industries. Fiberglass-reinforced gypsum cement, ornamentation: Formglas. Special paint: Polymix. Revolving doors: Tubelite Architectural Products. Balanced doors: Ellison Bronze Co.

Pages 92-93—Semispherical wall lights: Atelier International Lighting. Railing: Ryan Iron Works. Carpeting: Karastan-Guildcraft/Hugh Mackey. Air diffusers: Titus. Paints: Devoe.

Pages 112-115

Engine Co. 233/Ladder Co. 176 Eisenman Robertson
 Ground-face masonry block: Construction Specialties Co. Stainless-steel panels, railings: custom by architect. Hollow metal doors: Bilt-Rite Steel Buck Corp.

Pages 116-117

Canton Fire Station
 Number Three
 Mockbee-Coker-Howarth Architects
 Metal walls and roof: Ruffin Prefabrication, Inc. Metal and glass entrance, glazing: PPG. Aluminum-frame windows: Alen Co. Upward-acting door: Roll-lite. Signage: ABC Manufacturing. Exterior lighting: Prescolite; Infranor.

Pages 118-121

Wellesley Fire Station
 Headquarters
 Schwartz/Silver Architects

Pages 118-119

Water-struck Barrington red brick: Styles & Hart. Aluminum panels and soffits: Benchmark Metal Panels. Shingle roofing: GAF. EPDM roofing: Carlisle. Red oak doors: Graham Architectural Doors. Upward-acting doors: R. G. Toombs. Aluminum windows: Custom Window. Glazing: Supco. Exterior lighting: Bega; Appleton.

Pages 120-121

Floor and wall tile: American Olean. Paints: Sherwin-Williams.

Pages 122-125

Fire Station Five

Susana Torre in association with Wank Adams Slavin Associates

Pages 122-123

Brick: Interstate. Aluminum panels: INRYCO. Skylight: Plasteco. Glass and metal entrance; sliding aluminum-frame windows: Kawneer. Glazing: PPG. Metal doors: Kawneer; Pioneer. Fire shutters: The Atlas Corp. Upward-acting doors: Overhead Door Co. Exterior lighting: Stonco.

Pages 124-125

Bay lighting: mcPhilben. Paints: Benjamin Moore. Wood interior doors: Weyerhaeuser.

DIMENSIONAL STONE

Marble • Travertine

Granite • Limestone

Slate • Sandstone

Onyx • Quartzite

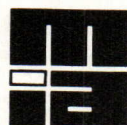
SOURCE INFORMATION

TECHNICAL ASSISTANCE

SPECIFICATIONS

JOB INSPECTION SERVICE

Publishers of "Dimensional Stone—Volume III," the industry design and specification manual.



MARBLE INSTITUTE OF AMERICA, Inc.
 33505 State St., Farmington, MI 48024
 (313) 476-5558



**If you want to see
America's economy revitalized,
do something about it.**

Support America's colleges. Because college is more than a place where young people are preparing for their future. It's where *America* is preparing for *its* future.

If our country's going to get smarter, stronger—and more competitive—our colleges and universities simply must become a national priority.

It's an investment we all share in. Government. Private citizens. And the business community. After all, the future of American business depends on it.

So help revitalize America's economy with a corporate gift to the college of your choice—and you'll know your company has done its part.

Give to the college of your choice.

• **Curtainwalls**

A 1988 *Amarlite* design brochure includes application photos and schematic diagrams for low- and medium-rise, oblique wall, and monumental curtainwall architectural systems. Various anodized and painted finish options are illustrated. *Amarlite* Architectural Products, Atlanta. Circle 430 on reader service card

• **Fire-protection equipment**

A 32-page catalog features fire-protection equipment for all types of buildings, such as hose racks, nozzles, valves, siamese components, and hydrants. Elkhart Brass Manufacturing Co., Inc., Elkhart, Ind. Circle 431 on reader service card

• **Traffic doors**

A 12-page catalog explains the differences in rigid, semirigid, and flexible doors, and matches door types to specific vehicle and pedestrian traffic requirements in commercial, industrial, and institutional applications. Frommelt Industries, Inc., Dubuque, Iowa. Circle 432 on reader service card

• **Floor-by-floor VAV ac**

A 12-page brochure covers variable air volume floor-by-floor air-conditioning systems, available in 20- to 80-ton-capacity self-contained units. These systems are said to offer low first cost, economical operation, space savings, and improved acoustical performance. The Trane Co., La Crosse, Wis. Circle 433 on reader service card

• **Gypsum drywall**

Gold Bond's 1988 specification catalog contains 52 pages of technical data, including code approvals, fire and sound ratings, installation directions, and product characteristics, on gypsum drywall and construction systems. Walls, partitions, and ceilings are illustrated in detail drawings. *Gold Bond Building Products*, Charlotte, N. C. Circle 434 on reader service card

What is a Best Western?



The right place at the right price.

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



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

Need Research That Utilizes Computer-Assisted Telephone Data Gathering?

Want to gather information rapidly using state-of-the-art computer-assisted telephone interviewing? Need fast access to tabulated results? Require integrated graphics with sophisticated analysis? Are you seeking real-time information?

Call *RESEARCHNET* at McGraw-Hill Research

ResearchNet is the leading edge approach to research that integrates study design, computer-assisted telephone interviewing, on-line tabulation, and report analysis capabilities as well as real-time data gathering. ResearchNet links together McGraw-Hill Research project teams, interviewers' terminals, respondent input, and *you*—to produce timely, accurate and meaningful study results.

For a quote or proposal call Sheryl R. Fox (609) 426-5946 (Information Data Gathering) or Joseph T. Collins (212) 512-3264 (Full-Service Research) or write David P. Forsyth at McGraw-Hill Research, 1221 Avenue of the Americas, NY, NY 10020



If it's a marketing research problem, we probably pioneered the solution.

Our Response to the Notion that Porcelain Tile is Difficult to Maintain



**On the contrary,
it's a piece of cake...
if it's Crossville porcelain.**

We dedicate the sentiment behind this lovely triple-layer lemon cake to the skeptics who persist in believing that our elegant porcelain's beauty, durability and availability are its only virtues.

Let us enlighten you.

Crossville porcelain never exceeds a .1% level of absorption—far stricter standards than the industry demands. That means our tile is naturally stain resistant; we don't depend on a quick-fix finish to do the job.

Coffee, ketchup, mustard, even vegetable oil—simple wet mopping with a neutral liquid cleaner will dissolve these and most other tough stains...just what you'd expect from a true low-maintenance porcelain.

So the next time someone moans about the prospect of cleaning porcelain, you'll know what to tell them.

And where to send them. Where else?

 **CROSSVILLE CERAMICS**
Out-front in Porcelain Tile Technology

P.O. Box 1168, Crossville, TN 38557 (615) 484-2110, Telex 53-3097

Circle 81 on inquiry card

Very simply,
the best
single event
for architects
and designers
interested in
computer and
management
systems

A/E/C SYSTEMS '88

May 2-5, 1988
McCormick Place North
Chicago, IL, USA

For complete information, call toll free 800/527-7943

**Versatility
you never
thought
possible
with
exterior
insulation
systems.**

*In climates frigid and hot,
locations wet and dry,
elevations high and low,
structures new and old,
STO Exterior Insulation
Systems outperform
other materials—
like night and day.*

*That's because STO
wall systems envelop the
outside of your building
like a protective shield
that insulates and resists
moisture, yet remains
flexible even in extreme
or changeable condi-
tions—beautifully.*

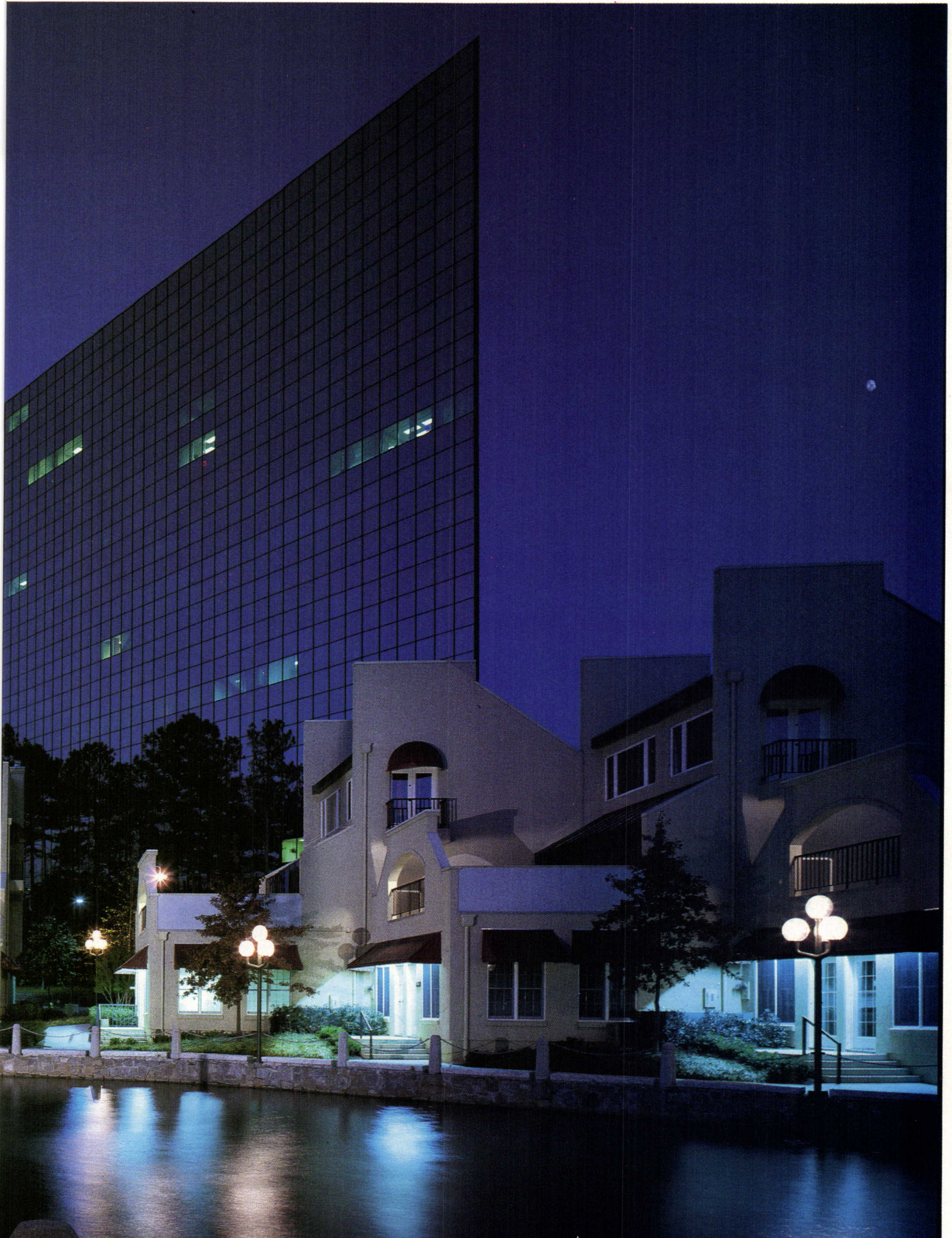


STO INDUSTRIES, INC.

Quality Lane, Box 219
Rutland, Vermont 05701
Toll Free: (800) 851-5533

Circle 83 on inquiry card

sto



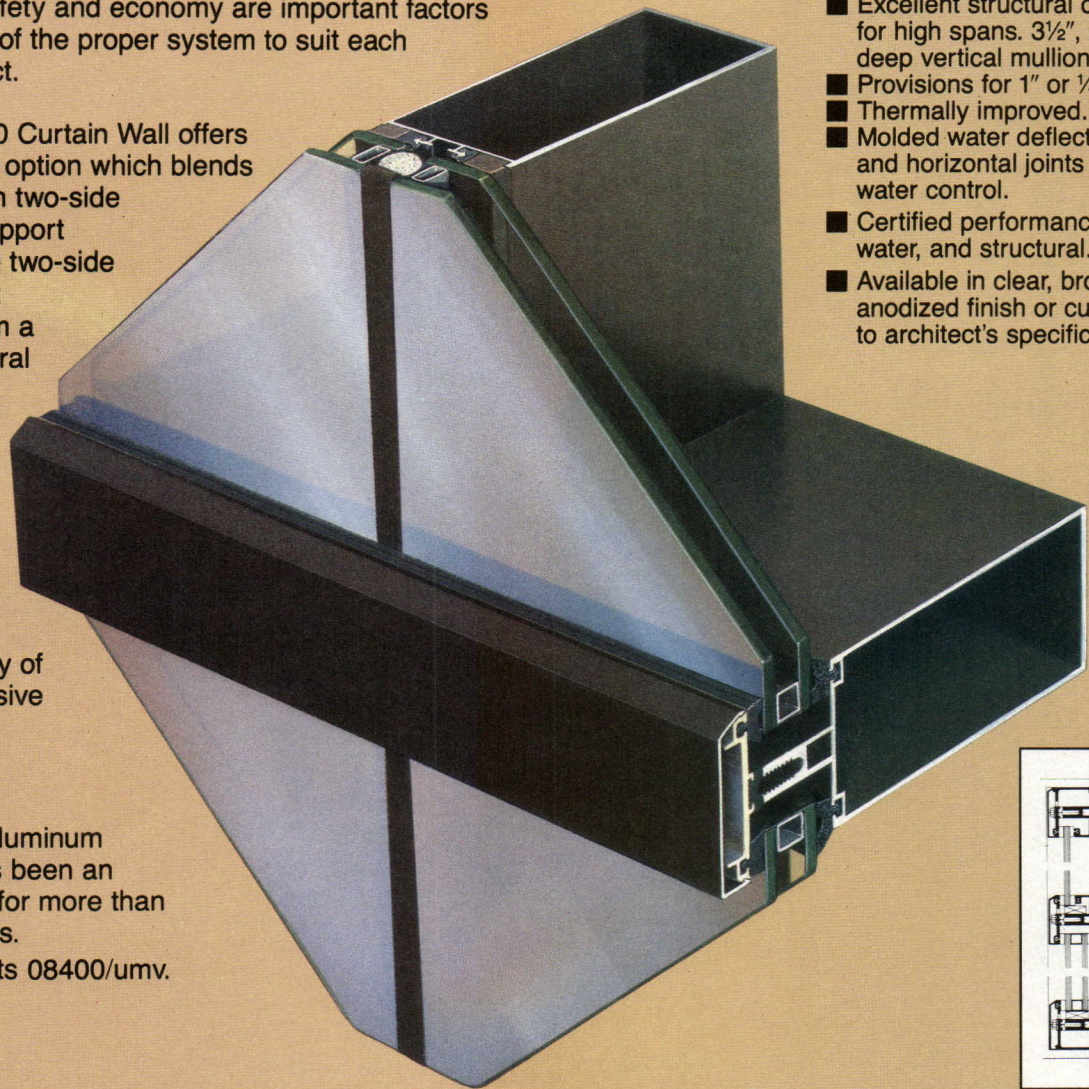
New opportunities with the Series 3100 Curtain Wall from United States Aluminum Corporation

Appearance, safety and economy are important factors in the selection of the proper system to suit each particular project.

The Series 3100 Curtain Wall offers the architect an option which blends a glass wall with two-side conventional support horizontally and two-side silicone support vertically to form a superior structural design.

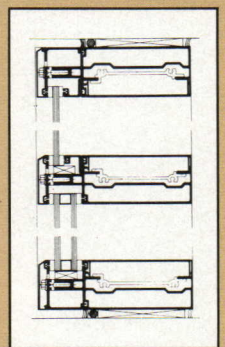
Shipped worldwide, the quality products of United States Aluminum can be seen in many of today's progressive structures.

United States Aluminum Corporation has been an industry leader for more than twenty-five years. See us in Sweets 08400/umv.



Features Include:

- Excellent structural characteristics for high spans. 3½", 5" and 8" deep vertical mullions available.
- Provisions for 1" or ¼" glazing.
- Thermally improved.
- Molded water deflectors at vertical and horizontal joints for optimum water control.
- Certified performance test for air, water, and structural.
- Available in clear, bronze or black anodized finish or custom painted to architect's specification.



For complete information, call 1 (800) 527-6440, in Texas call 1 (800) 442-3247 or write:

United States Aluminum Corporation

Manufacturing Facilities

3663 Bandini Blvd.
Vernon, California 90023
Telephone (213) 268-4230

200 Singleton Drive
Waxahachie, Texas 75165
Telephone (214) 937-9651
or (214) 299-5397 metro

6969 West 73rd Street
Chicago, Illinois 60638
Telephone (312) 458-9070

720 Cel-River Road
Rock Hill, South Carolina 29730
Telephone (803) 366-8326

Circle 84 on inquiry card

POSITIONS VACANT

Roger Williams College — Architecture Division seeks application for full-time teaching position in its Bachelor of Architecture Program starting August 1988. The college campus is located on Mount Hope Bay in Bristol 15 miles from Providence Rhode Island. The program is housed in the new award winning architecture building which opened in October 1987.

Position Description: Undergraduate professional instruction with primary responsibilities for teaching an architectural design studio and courses in architectural history/theory. Professional degree in architecture and PhD required. 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 MARCH 25, 1988.

Affirmative Action/
Equal Opportunity Employer

**WE ARE LOOKING FOR A FEW GOOD
PEOPLE
WE NEED PRODUCT SUPPORT
CONSULTANTS
FOR OUR DEALERS AND VARS
TO PROVIDE TECHNICAL ASSISTANCE
FOR ARCHITRION
PROFESSIONAL CAD SOFTWARE
FOR ARCHITECTS AND THE BUILDING
INDUSTRY
(3D, 2D, AND BILL OF MATERIALS)
FOR TRAINING INFORMATION PLEASE
CONTACT:
GIMEOR, INC.
1815 H STREET, N.W.
WASHINGTON, D.C. 20006
202/CAD-HERE**

SPECIAL SERVICES

FEES FOR ARCHITECTS!

MELTON ARCHITECT'S SERVICES is a book of more than 200 pages that shows you the way to determine the minimum cost of Architect's Basic Service for more than 75 different types of buildings. It is 5½" x 8½" in size and has a beautiful leatherette back with wire roll binding and heavy weight pages for long life.

PREPAID \$29.95

Send to T. L. MELTON CO., P.O. BOX 2644 ATLANTA, GA 30301



**COMPLETE PREPARATION FOR
THE REGISTRATION EXAMS**

Architectural License Seminars (213) 208-7112
Box 64188 Los Angeles California 90064

POSITIONS VACANT

Director of Interior Design — For Interior Architecture Department of major, progressive Southwest Architectural firm. Minimum 15+ current years experience in high-end corporate/commercial projects. Successful candidate will possess proven ability to supervise, schedule and coordinate interior design team with many diversified projects. Marketing skills a must. Salary negotiable. Send resume and sample portfolio (request return if necessary) to: Cornoyer-Hedrick Interior Architecture, 1505 East Missouri Ave., Phoenix, AZ 85014.

POSITIONS VACANT

Michael Latas & Associates, Executive Search and Professional Recruiting Consultants, Specialists in the architectural and engineering fields. Operating nationally. Inquiries held in the strictest of confidence. 1311 Lindbergh Plaza Center, St. Louis, Missouri 63132; (314) 993-6500.

Senior Architect — Richmond, Virginia based A/E firm (35 people) is seeking Architect to assume leadership role and help set future architectural direction of firm. The challenge is to establish a major architectural presence in an organization that has had a successful engineering practice for 35 yrs. and architectural capability for last 15 yrs. The position will assume a senior management and design role with potential for ownership in near term. Major areas of responsibility will be architectural marketing and design. Candidates must have 15 to 20 yrs. of proven experience. Experienced in A/E environment beneficial. Virginia registration or NCARB Certification. Send resume and other background information in confidence to: Personnel Department, P.O. Box 31383, Richmond, VA 23294. EOE.

Architectural/Engineering firm has immediate need for an experienced, Registered Architect to fill the position as manager of Building Division. Must be a skilled designer and organizer and be able to coordinate the activities of all engineering disciplines. Must be willing to participate in community affairs and participate aggressively in marketing. Stock options available. 35 year old firm with 50 employees. State-of-the-art CADD system. Full computer capability. Salary negotiable. Join us in a beautiful rural area. Excellent area to raise a family. Great school system. University city with many activities winter and summer. 50,000 friendly people. KBM, Inc., 1604 South Washington St., Grand Forks, ND 58201 (701) 772-7156 — Mr. Fiala or Mr. Elofson.

Architects — \$25,000-85,000 Group One Search Executive Architectural Recruiters. Key positions nationwide at all levels with Regional & National firms. Experience in research/development, health care, commercial, criminal justice, educational, institutional, industrial and multi-family projects. Confidential. No Fee. Include salary requirements. 4917 Ehrlich Road, Suite 103, Tampa, FL 33624. (813) 969-0544.

Architect — Palm Beach, Florida company which purchases, renovates, decorates, leases or resells apartments and condominiums seeks Architect to supervise construction (emphasizing quality control and implementation of design details), financing, marketing and maintenance of custom-built properties. Professional will also assist with preparation or prepare market research and feasibility studies, and will be responsible for architectural design, planning and review of such properties, as well as construction contract negotiation, public relations with local officials and real estate brokers and liaison activities between contractor and subcontractors. An understanding of marketing of the company's product — ocean front villas — will be essential. Minimum Job Requirements: Baccalaureate Degree in Architecture / Urban Planning and Design, one year training in draftsmanship / construction, one year experience or one year related experience in architectural design and construction marketing. Fluency in French. Forty hours per week and overtime as required, \$1250 weekly salary. Please direct resume to: Job Service of Florida, Attn: Job Order #FL 5268379, 105 E. Broward Blvd., Fort Lauderdale, Florida 33301.

POSITIONS VACANT

Lamp Designer — Job involves the Engineering and Designing of Lamps and other forms of lighting: Using various forms of materials such as: Plastics, Metals, Woods, Glass and Plaster. The specifications of our clientele must often be taken into consideration. The person for this job will consult with the Head Designer of new ideas and must be able to submit sketches for consideration. They will also assist in guiding other workers in solving problems in the Casting and Finishing of products. Must be able to read and use blueprints and drawings to form models. Needs the Architectural background to employ the theories of science and mathematics to find new alternatives in the creation of lamps and lighting. Must be able to use various tools that are used in the Designing and Engineering phases. Requirements: Bachelors in Architecture or equivalent and minimum of 2 years experience. This salaried employee will work approximately 50 hours a week from 7am-4:30pm. \$445 a week. Applicants should send a resume to: Illinois Department of Employment Security, 401 South State Street - 3 South Chicago, Illinois 60605. Attention: Len Boksa Reference #7659-B. An Employer Paid Ad.

FACULTY POSITIONS VACANT

Architect Partner Candidate in established 17 person A/E firm in University city. General practice in schools, government, industry, apartments, CM planning, etc. in several states. Send letter stating goals and philosophy with resume and references to: EAPC, 1407 24th Ave. South, Grand Forks, ND 58201. Equal Opportunity Employer.

Catholic University, Department of Architecture and Planning, offers two full-time tenure-track assistant / associate professorships, beginning Fall 1988, in architectural design: one position requiring a secondary emphasis in construction technology; the other position an emphasis in history, theory, CAD or landscape. Applicants should send non-returnable resume; portfolio of professional work; work of students, if applicable; and list of three references, to Prof. Joseph Miller, Chair, Faculty Search, Architecture, Catholic University, Washington, DC 20064. Review of applicants will begin April 4, 1988 and will continue until positions are filled. The Catholic University is an Equal Opportunity, Affirmative Action Employer.

The Savannah College of Art and Design, School of Building Arts seeks candidates to fill five (5) new full-time faculty positions in its departments of Architecture, Historic Preservation and Interior Design beginning September, 1988. The College offers a five-year Bachelor of Architecture degree, as well as BFA and MFA degrees in Historic Preservation, Interior Design and six other art and design disciplines. Given the integrative nature of the Building Arts curricula, all applicants should have a graduate professional degree in either Architecture, History Preservation or Interior Design, a minimum of three (3) years professional experience, active membership in a related professional organization and be capable of teaching design and technical coursework in at least two of the above mentioned areas. Those seeking an appointment in Architecture should have or be in the process of acquiring, professional registration. Responsibilities in addition to teaching include student advising and participation in Departmental, School and College committees. Please send Curriculum Vitae, with names, addresses and phone numbers of at least 3 professional references, slide portfolio of professional work and cover letter by April 15, 1988 to: Robert G. Scheren, Dean, School of Building Arts, The Savannah College of Art and Design, 26 West Harris Street, Savannah, Georgia 31401. SCAD is an Equal Opportunity / Affirmative Action Employer. Women and minorities are encouraged to apply.

FACULTY POSITIONS VACANT

Chief Designer — The Royal Ontario Museum requires a Chief Designer in the Department of Exhibit Design Services to organize and direct the design of the public exhibit program. Directly supervising the Museum's design team, the incumbent will develop and implement design standards and policies for galleries and exhibitions. The Chief Designer is responsible for maintaining design integration and unity within the Museum, subject to existing plans and policies, and consonant with current knowledge of Museum visitor studies. The successful candidate must possess either a University degree in Architecture, Industrial Design or a related discipline, combined with ten years of relevant experience, or a Master's Degree with eight years' experience. Additional qualifications include proven managerial skills and the ability to resolve complex two and three-dimensional problems. Extensive knowledge of all aspects relating to exhibit design and its application within a museum, art gallery, or similar public institution, is required. Qualified candidates should apply In Writing Only and prior to March 31, 1988 to: Recruiting Coordinator, Personnel Dept., Royal Ontario Museum, 100 Queen's Park, Toronto, Ontario, Canada M5S 2C6.

The Department of Architecture invites applications from candidates for possible full-time tenure track and/or temporary faculty position in its undergraduate architecture program, effective August 1988 in the area of Architectural Design. Candidates with strong design abilities must be able to assume responsibility for an undergraduate architectural studio as well as courses in one or more of the following areas: graphics, architectural theory, photograph, or computer applications. Candidates should have terminal degree in specialty area and recognized achievements in research, scholarship, or creative practice. Talent and ability as a stimulating teacher plus ability to pursue research or creative practice are as important as formal qualifications. Rank and salary depend upon qualifications. Applicants should send letter of interest, curriculum vita, original transcripts, and three letters of reference. Application deadline: April 15, 1988. Apply to: Professor Marvin Rosenman, Chairperson, Department of Architecture, College of Architecture and Planning, Ball State University, Muncie, IN 47306. Women, minorities, handicapped and Vietnam veterans are invited to apply. Ball State University Practices Equal Opportunity in Education and Employment.

Senior Project Architect — Senior Designer. Design oriented A/E firm looking for two registered professionals for Senior positions of responsibility. 10+ yrs. experience. Resumes to: James Barthold, AIA, Ballinger, The Curtis Center, Independence Square West, Philadelphia, PA 19106.

SPECIAL SERVICES

Models; Architectural, Engineering. Jurge Greenwich, 718/462-5379.

Cost Estimating, Quantity Surveys, Computer Applications, Corp, DOD, GSA, VA. Construction Cost Systems, Chicago, (312) 858-5441; Tampa — (813) 887-5600.

Architectural CADD Consultants — Objective-ly help you phase in computing for your architectural practice. 2106 Massachusetts Ave., Troy, NY 12180, 518-274-5600 / 518-274-5544.

POSITIONS VACANT

Construction and planning architect to imple-ment the architect's work by planning all the construction procedures using known technical systems and supervising it during the construction process and to draw any extra plans and rendering for sales presentations, to obtain permits from government authorities and to develop new products for the company. Must be able to perform artist renderings and to be able to manage construction personnel, to be bilingual, English-Spanish and to have basic knowledge of computers, preferably Apple Macintosh. Must have degree in Architecture, 5 yrs. experience, M-F 40 hrs. a wk., \$28,800 yr. Send resume to: Job Services of Florida, 701 S.W. 27th Ave., Rm. 15, Miami, FL 33135. Ref. Job order no. FL5830897.

Architectural Reviewer — The City of Boston Public Facilities department is engaged in implementing a multi-million dollar capital improvement program involving extensive renovation work on City-owned buildings. We are looking for an architect to work with a team of professionals reviewing project designs, evaluating drawings, specs and cost estimates and developing standards for capital improvements. Minimum 6 years' related experience; architectural registration and familiarity with Massachusetts building codes and construction practices preferred. Salary high 30's. Must be Boston resident or willing to re-locate. Send resume and cover letter to: Joan M. Rooney, Public Facilities Department, 26 Court Street 6th fl., Boston, MA 02108. The City of Boston is an Equal Opportunity Employer.

BUSINESS OPPORTUNITIES

Multi-office A/E firm with headquarters in NJ seeks to acquire an A or A/E Maryland firm with management to remain. BO-4792, Architectural Record.

Business Owner deceased. Must sell progres-sive line of designer door knobs and pulls. All inventory, designs, advertising, and list of representatives. Call Estate Attorney, Robert Dahm 313-288-4990.

Expanding French Architectural firm, 7 peo-ple, 2-year presence in the U.S. wants buy or partnership with American firm same profile. Contact BO-4793, Architectural Record.

SPECIAL SERVICES

Remedial Testing and Consulting Inc. — Cur-tain Wall Consultants; review drawings and specifications, field inspections and testing, witness mock-ups. Remedial division evaluates and corrects problems in building exteriors. RTC, Inc. POB 846, Coppell, TX 75019. 214-462-0993.

Professional Models — Architectural and En-gineering. Alberta, Canada (403) 529-6222.

TO ANSWER BOX NUMBER ADS

Address separate envelopes
(smaller than 11" x 5")
for each reply to:

Box Number (As indicated)
Classified Advertising Center
Architectural Record
Post Office Box 900, NY 10108

COMPUTER SOFTWARE

GEOCAD®

THE ARCHITECTURAL CAD SYSTEM

GEOCAD is the most friendly and easy to master AutoCAD[®] based CAD program, because we are Architects and we created it to work the way we do: simply and logically.

It is available as a complete turnkey system, based on the **NEC** APCIV computer. GEOCAD software is also available separately.

Call us or write us to find out more about GEOCAD, also about GEOEST our Bill-of-materials-estimating Module and GEOVUE our new One-Point and Two-Point Perspective Module.



Rudolph
Horowitz
Associates
Architects



P.O. Box 186 LAUREL ROAD
POUND RIDGE, N.Y. 10576
TELEPHONE 914 764-4072

COMPUTER SOFTWARE KNOW-HOW

If you've got it,
advertise it!

Architectural Record's Computer Software Section

Post Office Box 900
New York, NY 10108



1988 ARCHITECTURAL RECORD COMPUTER SOFTWARE SECTION

Sizes	Material		
1 Inch	7/8 x 2 3/8	Artwork or	
2 Inch	1 7/8 x 2 3/8	film preferred.	
3 Inch	2 7/8 x 2 3/8	Typesetting	
4 Inch	3 7/8 x 2 3/8	free of charge.	
4 Inch	1 7/8 x 5 1/8		

1988 RATES

Unit	1X	6X	12X
1 Inch	\$154.70	\$147.00	\$139.25
2 Inch	278.50	264.55	250.65
3 Inch	394.50	374.80	355.05
4 Inch	495.05	470.30	445.55

Telephone Sales:
Ilene Fader
212/512-2984

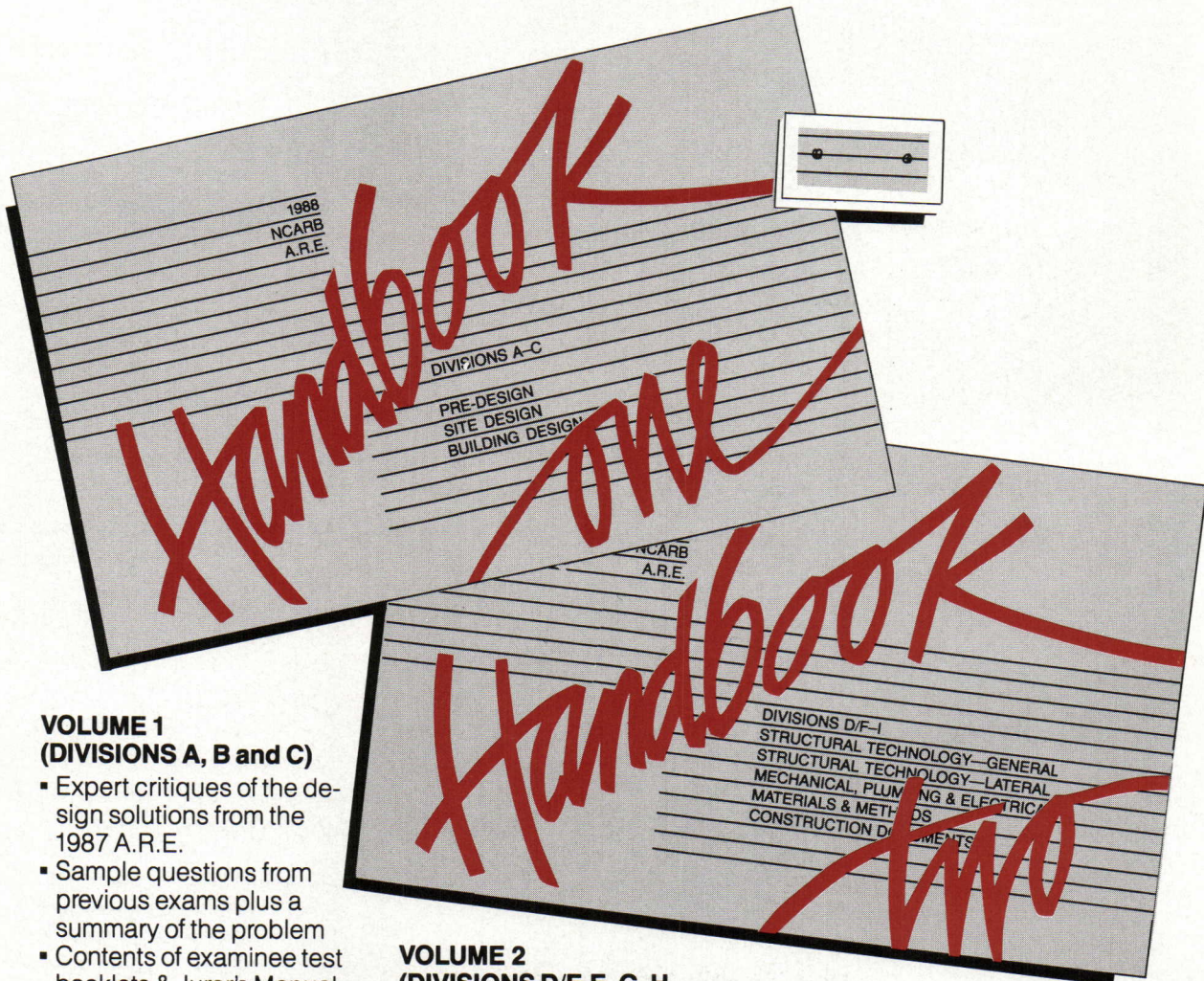
1988 A.R.E. Candidates!

NCARB Handbooks Contain Cassette Tape of Design Critiques

For the first time, NCARB has produced an audio-cassette tape that accompanies volume one of the 1988 A.R.E. Handbook. This professionally produced tape offers practical applications of the grading criteria used by graders of the 1987 exam. Understand, point-by-point, the lengths of a solution as you follow along with the actual solution in the Handbook.

The Handbooks have been revised to include completely new and up-to-date narratives that explain the exam divisions and offer useful advice. The 1988 Handbook also addresses the changes that have been incorporated into the June exam. Volume one covers Division A: Pre-Design; Division B: Site Design and Division C: Building Design. Volume two covers Division D/F: Structural Technology—General and Long Span; Division E: Structural Technology—Lateral Forces; Division G: Mechanical, Plumbing and Electrical Systems; Division H: Materials and Methods and Division I: Construction Documents and Services.

Order your Handbooks by sending your check or money order in the correct amount with the order form to the address indicated. You may charge your handbook on your Visa, MasterCard or American Express. Please specify a complete daytime address; no post office boxes please.



VOLUME 1 (DIVISIONS A, B and C)

- Expert critiques of the design solutions from the 1987 A.R.E.
- Sample questions from previous exams plus a summary of the problem
- Contents of examinee test booklets & Juror's Manual
- Practical advice on preparing for the June exam
- Updated bibliographies for Divisions A, B and C

VOLUME 2 (DIVISIONS D/F, E, G, H and I)

- Sample exam questions from previous exams
- Official test information booklets
- Updated bibliographies for Divisions D/F, E, G, H and I

Order Your 1988 A.R.E. Handbooks from NCARB!

Detach and mail payment to NCARB, Dept. 0618, Washington, DC 20073-0618.
Make checks payable to NCARB. Delivery takes 4-6 weeks.

Name _____
(Please print)

Company _____
(If applicable)

Address _____
(Daytime—No P.O. Boxes)

City/State/Zip _____

IDP Council record no. _____
(If applicable)

*Persons with active NCARB/IDP Council records pay: Set: \$80, Volume 1: \$60, Volume 2: \$35. Include your IDP number to qualify.

QTY	VOL	PRICE*	TOTAL
_____	SET	\$95	_____
_____	VOL. 1	\$70	_____
_____	VOL 2	\$40	_____
TOTAL		\$	_____

NCARB USE—DO NOT WRITE IN THIS SPACE	
D/R _____	CK/MO _____
IDP/OK _____	AMT _____
AUTH _____	DUE _____

- Payment enclosed
 Charge my:
 Visa MasterCard American Express

Acct. No. _____

Expiration Date _____

Signature _____

SIMPLY STATED, WE'RE EXPERTS AT REDIRECTING MOISTURE.



As a leader committed to product innovation, POLYKEN Technologies has utilized its vast experience and technology to develop the POLYKEN 600 Series of Waterproofing Products.

POLYKEN offers a complete line of integrated waterproofing products specifically designed to meet the demands of the building industry.

The POLYKEN 600 Series comprises several types of membranes and tapes to prevent

moisture damage in building construction. Two new and exciting products within the line are POLYKEN 640 ICE-O-LATE™, a 40 mil. membrane to prevent moisture entry at the roof edge and POLYKEN 660, a 60 mil. Foundation and Plaza Deck Waterproofing Membrane.

For more information please call 1 (800) 248-7659 or write to POLYKEN TECHNOLOGIES-WS, 690 Canton Street, Westwood, MA 02090-2322.

POLYKEN TECHNOLOGIES

Waterproofing Systems for the
Construction Industry.

A DIVISION OF THE **KENDALL** COMPANY

Fitness Program

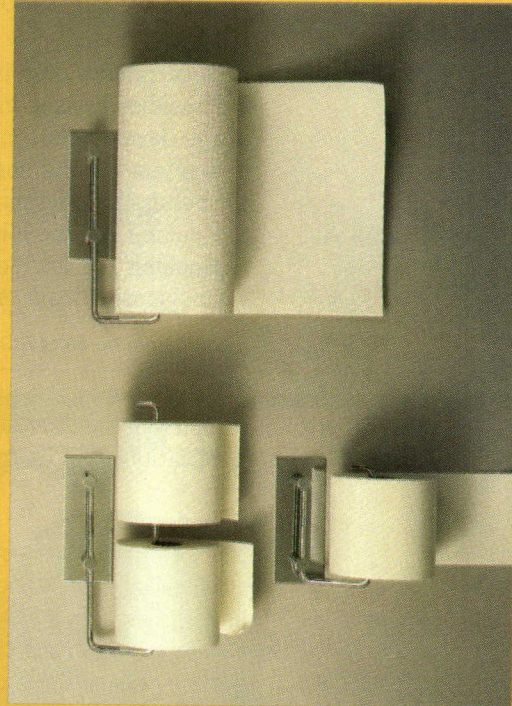
There's only one way to get your kitchen, bath or lavatory into shape. With Kroin Sanitary Fittings. They're made from solid brass with a tough epoxy finish made to withstand the harshest workout. Distinguished by a wide selection of special features, all fitting are entirely compatible with American plumbing standards.

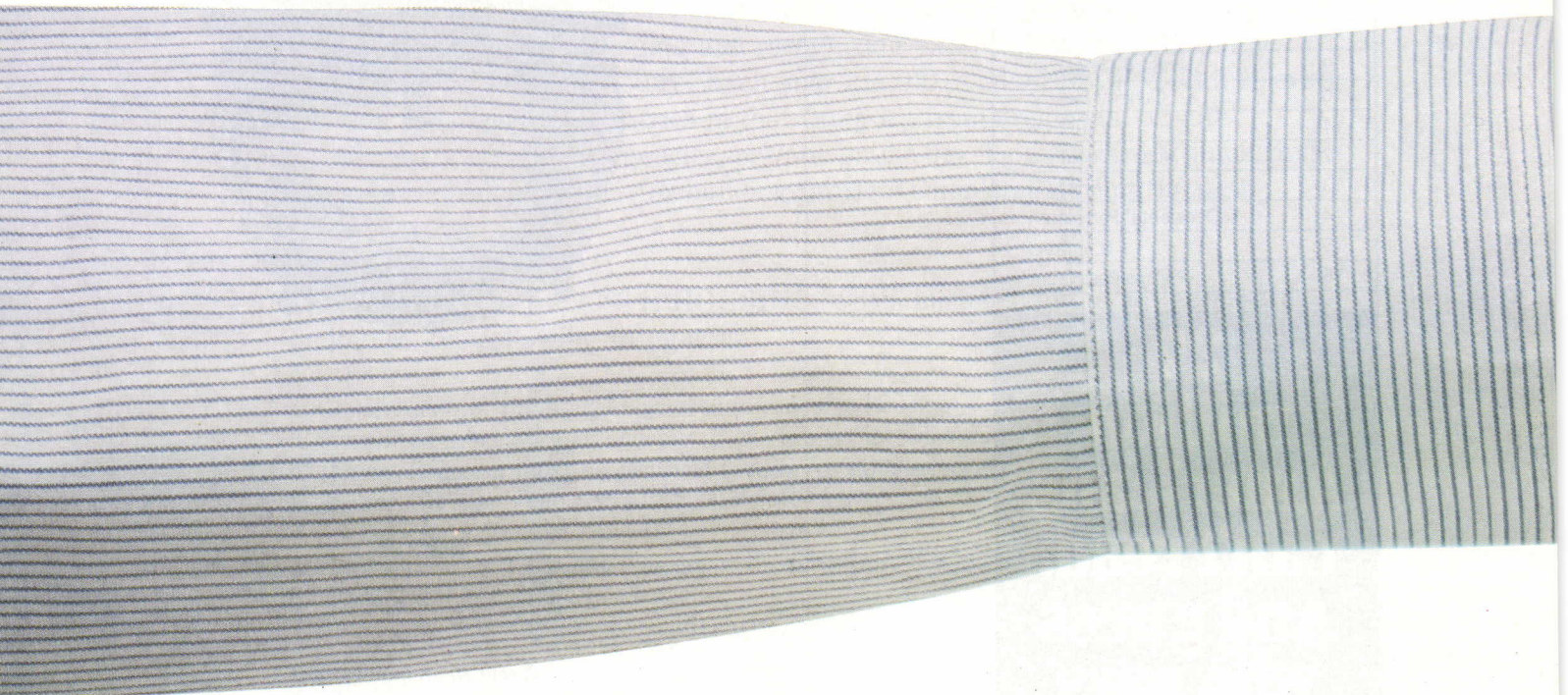
And with the world's most comprehensive system of over 20 wall-mounted accessories as well as the enormous flexibility offered by its wide range of color and placement options, this series is ideally

suited for use in hotels, health clubs, office buildings and other commercial locations.

Last but not least, their competitive pricing makes Kroin Sanitary Fittings the embodiment of the perfect fiscal fitness program.

Circle 6 on inquiry card





***A building
product reference
source that thinks
like you do
is right at the
beginning of
your Sweet's
General Building
& Renovation
Catalog File.***

SELECTION DATA is Volume One of the General Building & Renovation Catalog File. Having it in your office is like having an experienced "old pro" at your beck and call every working day—a professional who's eager to share with you the ins and outs of product selection.

What sets SELECTION DATA apart is the fact that it is a valuable resource for evaluating building products. Its unbiased, generic data, charts and diagrams help you decide on the latest, most appropriate products for your projects.

And while SELECTION DATA stands out on its own, its value is derived from its distinct link to Sweet's General Building & Renovation File, and the manufacturers' catalogs contained therein. SELECTION DATA's charts direct you to the exact product catalogs in Sweet's that meet your design specifications.

If you are an experienced designer

PRODUCTS FOR
GENERAL
BUILDING &
RENOVATION



indexes

Where To Find
Manufacturers' Catalogs

firms

products

trade names

data filing format

key words

selection data

1 enclosure

**2 roof/floor
assemblies &
components**

**3 wall assemblies
& components**

**4 materials—
specific use**

5 materials— multi-use

6 services

see front cover for
complete list of headings

PRODUCTS FOR
GENERAL
BUILDING &
RENOVATION



- 1 general data**
01101 preservation, restoration &
rehabilitation
01850 design office equipment &
materials
01970 computer software

- 2 sitework**
02275 geotextiles/geogrids
02276 earth retainage
02280 soil treatment
02488 docks & boat facilities
02510 walk, road & parking paving
02535 athletic surfacing
02610 utility pipe & fittings
02710 subsurface drainage materials
02722 drains & inlets
02725 precast trench drain system
02770 ponds & reservoirs
02800 site improvements
02820 fountains & pools
02830 fences & gates
02840 walk, road & parking
appurtenances
02842 bicycle racks/lockers
02860 recreational facility & playground
equipment
02870 site & street furnishings
02875 site & street shelters
02880 outdoor sculpture & ornamental
work
02890 footbridges
02960 simulated plants & rocks
02980 landscape accessories
- 3 concrete**
03010 concrete materials
03100 concrete formwork
03200 concrete reinforcement
03250 concrete accessories
03500 cementitious decks
03600 grout
03650 cementitious underlayment

or even a beginner, SELECTION DATA serves as a broad general reference source, and it's a great guide to the latest product catalogs. Whether you're looking for information on Lighting, a chapter added last year, or Heating/Cooling, the newest chapter, SELECTION DATA is an indispensable professional design tool for every design professional. And like you, it keeps getting better.

If you receive Sweet's General Building & Renovation Catalog File, you already have a copy of SELECTION DATA. If you'd like your own *personal* copy, write to Gerri Jackson, Direct Marketing Manager, Sweet's SELECTION DATA, McGraw-Hill Information Systems Company, 1221 Avenue of the Americas, New York, NY 10020 for price and delivery information. Or call her at (212) 512-3958.

SWEET'S | **MCGRAW-HILL**

Where Construction Gets Its Start

We'll give you 6½ acres...

in Suffolk County, Long Island, New York
Why?

As a location to design a unique and lasting memorial to all Vietnam veterans. This is an open competition with a top award of \$15,000.

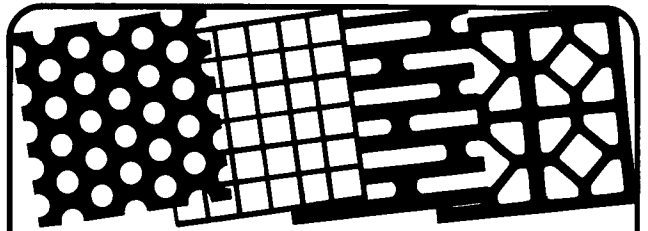
Can you transform 6½ acres into a memorial that will last for generations to come? If the answer is yes, write for details today.

Fact Sheet • Suffolk County Vietnam
Veterans Memorial Commission
Competition Liaison • Veterans Service Agency
65 Jetson Lane • Central Islip, NY 11722



**Suffolk County Vietnam Veterans
Memorial Commission**

Circle 88 on inquiry card



PERFORATED METAL?

WE'VE GOT IT ALL!

ALL METALS • ALL STYLES
STOCK SIZE SHEETS • CUT-TO-SIZE

McNichols Company . . . a "Hole" Steel Service Center. We specialize in all types and alloys of perforated metal — stocking many other styles not shown here. Each service center is equipped with full sawing and shearing capabilities. Take advantage of our one-stop shopping. We have all the Holes you need. Stock items are shipped in 24 hours! Shop for Holes today. Call or write for our free catalog.

CLEVELAND • CHICAGO • DALLAS • ATLANTA • TAMPA



McNICHOLS CO.

5501 Gray Street / Tampa, Florida 33609
813 / 876-4100 Telex: 52706

TOLL FREE:

1-800-237-3820 (In Fla.) 1-800-282-6600



Circle 89 on inquiry card



Last-O-Coat®

The coating that keeps masonry buildings dry now carries a 10-year standard warranty based on over 30 years of on-the-job performance.

For more details, CALL TOLL FREE

1 800 321-3444.

In Canada, Call 216-650-4070 collect.



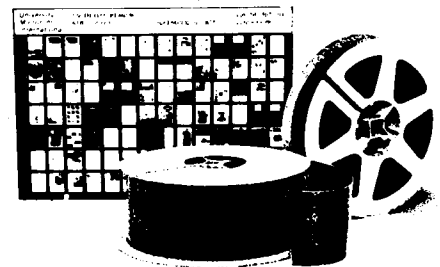
THE FLOOD COMPANY
Hudson, Ohio 44236

© 1988 The Flood Company

764 014

Circle 90 on inquiry card

this publication is available in microform



Please send me additional information.

University Microfilms International

300 North Zeeb Road
Dept. P.R.
Ann Arbor, MI 48106
U.S.A.

18 Bedford Row
Dept. P.R.
London, WC1R 4EJ
England

Name _____
Institution _____
Street _____
City _____
State _____ Zip _____

OCA RECESSED WALL SYSTEM

A combination metal wall stud and slotted insert. For use with dry wall and provides concealed slotted standards to hold shelves, cornices, hangrail, etc. Great for use in retail stores, commercial and institutional construction.



FOR MORE INFORMATION
WRITE OR PHONE TODAY!

Crown METAL MFG. CO.

5925 S. LOWE AVE., CHICAGO, IL 60621
PHONE 312/873-3833



Circle 91 on inquiry card

Up here in Vermont, slate is something of a ritual.



And March 15 means the beginning of our slate season. You see, through the winter we cover our slate with snow to protect it from the cold New England winter. Then, come March 15,

we get out the snowblowers and blow off that blanket of snow. All I can do then is hope for warm weather, because once we've cleared that snow away, another cold spell could crack my slate.

I'm Bill Markcrow, President of Vermont Slate

...and our next step is to chisel and cut our slate, and load it onto dump trucks that will take it to destinations all over the world. While we're hard at work harvesting slate, down in



New York City, come the warm weather, the National Institute for Architectural Education (NIAE) will display the unusual gazebo models from my first-ever, international "Design a Gazebo Competition."

I have great respect for that institution. It sponsors important competitions among students, giving them the opportunity to travel and observe architecture from all over the world. The Institute is especially known for its acclaimed William Van Alen International Competition and the Lloyd Warren Paris Prize.

The Gazebo Exhibition opens March 9 and runs through April 15 at the NIAE, located at 30 West 22nd Street, New York City. Hours are weekdays, 9:00 to 5:00.

So when springtime comes to New York City this year, why not stop by the NIAE and see some of the most unique and remarkable gazebos ever designed.

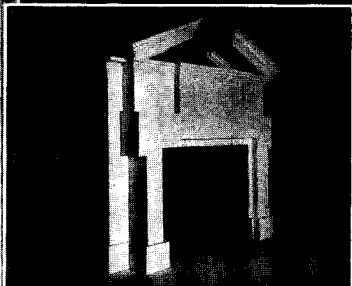
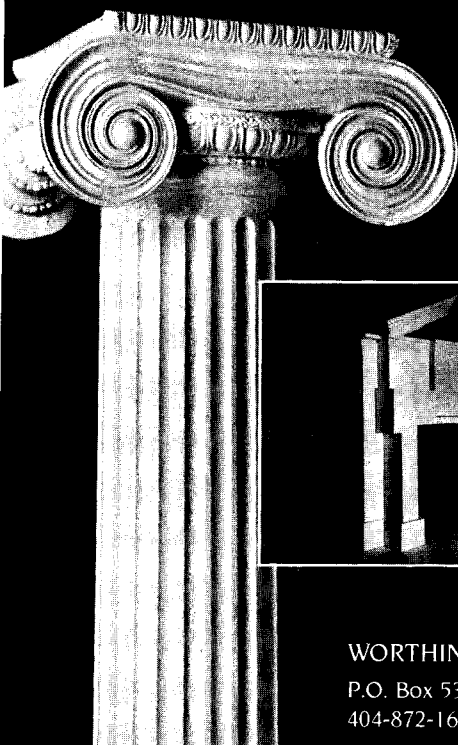
See you there!

VERMONT STRUCTURAL SLATE COMPANY

Fair Haven, VT 05743

WORTHINGTON COLUMNS • MANTELS • TABLE BASES

Crafted in Pine



Catalog \$2.00

WORTHINGTON GROUP, LTD.
P.O. Box 53101 • Atlanta, GA 30355
404-872-1608

Circle 92 on inquiry card

Why you should specify Accuride slides

For residential furniture

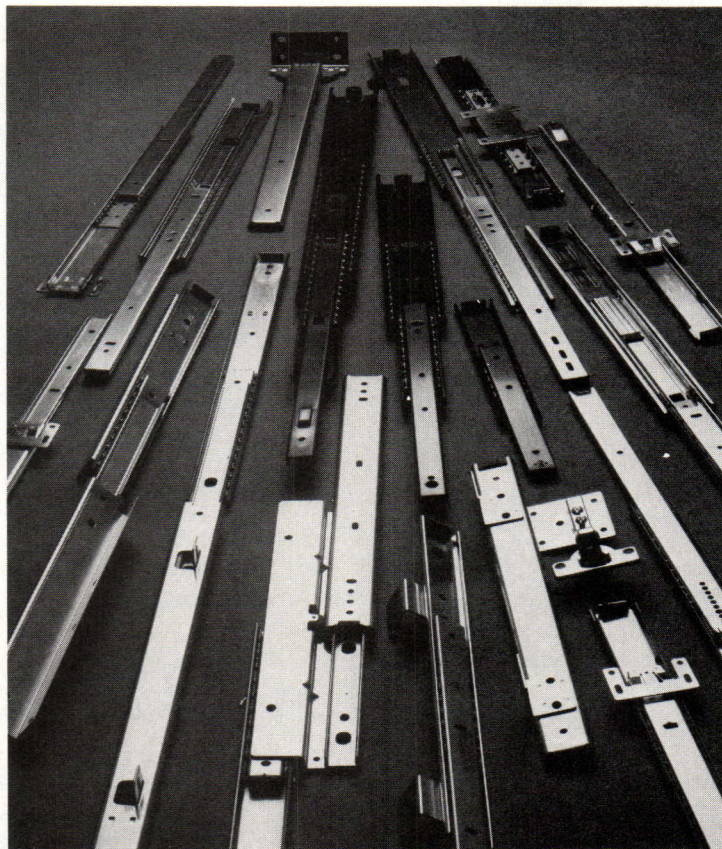
A full line of specialty hardware for buffets, armoires, bedroom suites, home entertainment centers and office furniture.

For kitchens and baths

Ultra-smooth slides for butcher blocks, two-way drawers, kitchen drawers, pull-out pantries, oversized pan drawers and adjustable shelves. 32mm systems available.

For fine office furniture

Slides are available for desk pedestals and lateral files in wood, metal and systems office furniture. Flipper Door™ slides for overheads. Heavy duty lateral file slides for drawers up to 60" wide.



For national distribution

Accuride has a network of distributors in all major U.S. and Canadian markets. Well stocked and ready to serve your needs.

For Quality Assurance

Custom Features can be designed in to meet special requirements. Free design services by Application Engineers are also available.

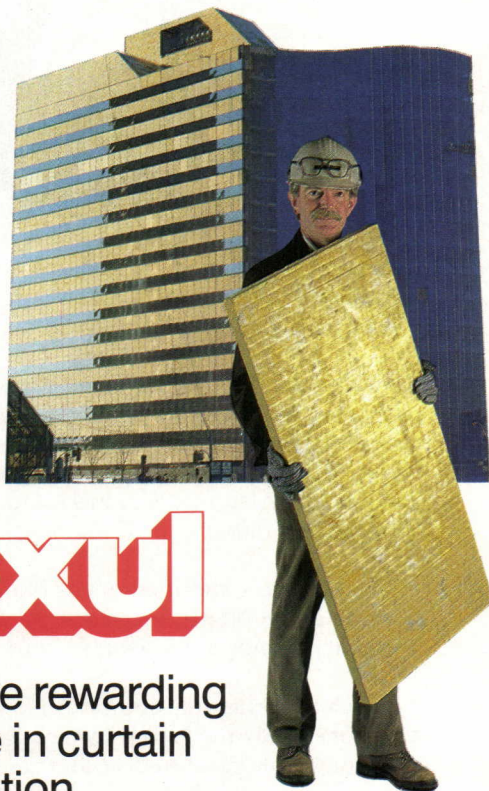
See our catalog pages in Sweets.

Call our Customer Assistance Hotline now for all the facts.

Accuride
12311 Shoemaker Ave.
Santa Fe Springs, CA 90670
(213) 944-0921

Accuride®

Circle 93 on inquiry card



Roxul

...The more rewarding alternative in curtain wall insulation

- ASTM E-119 fire rated.
- Competitively priced.
- Variety of facings available.
- High tech mineral fibre that is clean, high-quality and cohesive.

Ask for literature and the name of your nearest distributor.

Roxul

479 Route 17, North Mahwah, NJ 07430
(P.O. Box 307). Tel: (201) 529-1044
Fax: (416) 878-8077

Canada: 551 Harrop Dr., Ontario L9T 3H3.
Tel: (416) 878-8474 Fax: (416) 878-8077

Circle 94 on inquiry card

Grate Designs for Great Designers

Every designer and planner knows a quality tree grate must be more than a thing of beauty. It must also be defect-free to handle weather and wear. Versatile to accommodate an endless variety of proposed design configurations. And changes! Expandable when required, to allow trees to grow after installation. Our quality tree grates are all these things... and more! Write for the full story and FREE tree grate catalog.

NEENAH **FOUNDRY COMPANY**

Box 729, Neenah, WI 54956
If you can't wait, call! 414/725-7000
Quality castings produced entirely in the U.S.A.

Circle 95 on inquiry card



Not all castles
have to fall into the sea.

The effects of water penetration can humble any modern-day castle. Now, new DRI-SIL™ water repellents from Dow Corning can protect concrete and other porous substrates from potential damage.

Without darkening or altering the appearance of masonry, DRI-SIL silanes protect buildings, parking decks, and stadiums from moisture-related problems such as corrosion of reinforcing bars, salt leaching, and freeze/thaw cracks.

While other water repellents stay mainly on the surface, the unusually small molecular structure of DRI-SIL silanes allows them to penetrate up to a half inch, depending on the porosity of the substrate.

To protect new construction or existing structures, DRI-SIL water repellents offer unsurpassed water and salt resistance.

So don't let the weather wash away your castles. Protect them from crumbling with DRI-SIL water repellents. For specification information on DRI-SIL silanes or other weatherproofing products from Dow Corning call 1-800-346-9882, ext 2222. Or write Dow Corning Corporation, Department 8000, Midland, MI 48686-0994.

DRI-SIL™ DOW CORNING
Water Repellents

DRI-SIL is a trademark of Dow Corning Corporation. © 1988 Dow Corning Corporation

Long-Range Forecast: Clear, Warm And Beautiful.

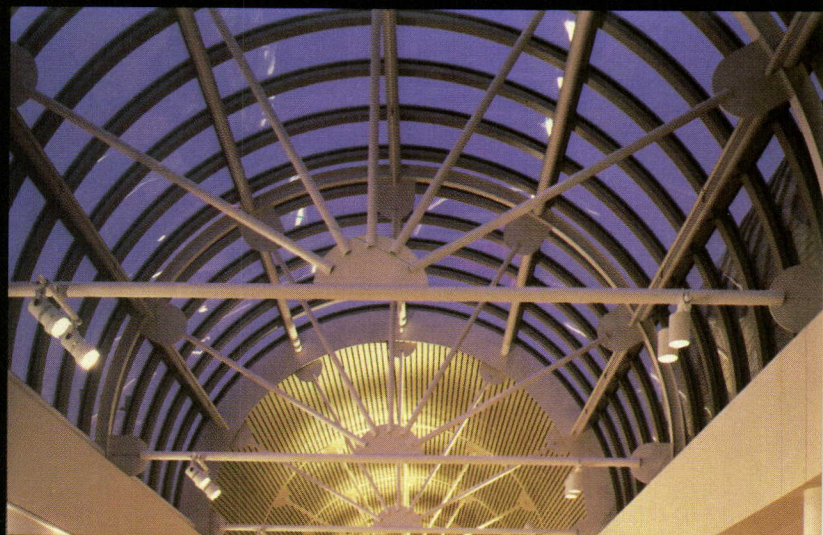
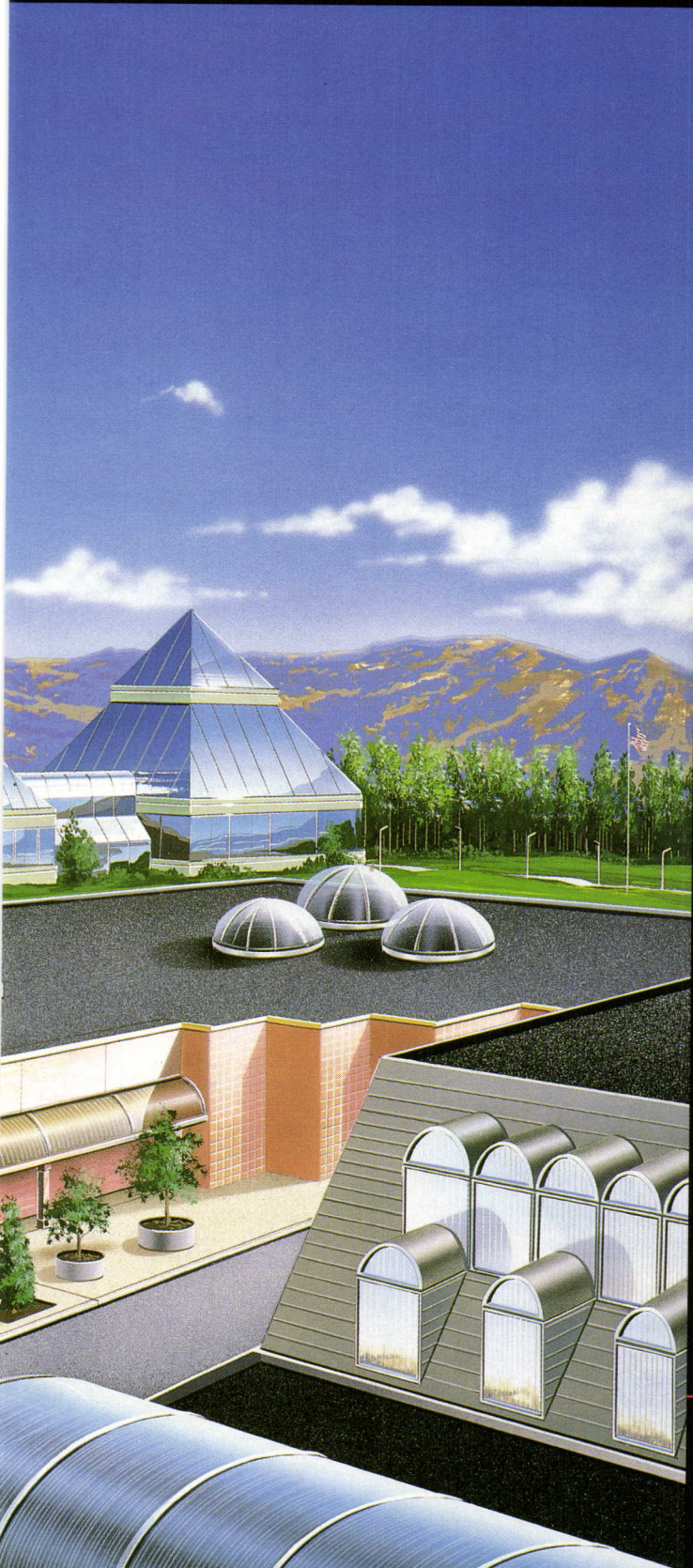


* Registered Trademarks of General Electric Company.
* Details of limited warranty available upon request.

LEXAN® XL Sheet: versatile overhead glazing with unique surface texture against punishing sun and weather. Virtually unbreakable. Easily cold-formed on site. Tough, UV-resistant XL sheet—the brilliant solution for long-term weatherability in advanced architectural design. Or for added thermal insulation, specify double-paneled LEXAN THERMOCLEAR® sheet. For enduring beauty backed in writing*—the family of high-performance LEXAN polycarbonate glazing products from GE. See Sweets Catalog 08840 GVD or GEN, or call (800) 845-0600.



Translucent LEXAN THERMOCLEAR sheet provides up to 40% better insulation than single-pane glass.

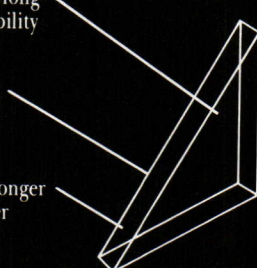


With a proprietary UV-resistant surface, LEXAN XL sheet is ideal for barrel vaults, covered walkways and skylights.

UV surface treatment—ensures long-term durability and weatherability without special maintenance.

Transparent—offers high light transmission and excellent appearance.

Impact resistant—250 times stronger than glass and 30 times tougher than acrylic.



General Electric Company
One Plastics Avenue
Pittsfield, MA 01201

XL • MR5 • LEXGARD® LAMINATES
LEXAN THERMOCLEAR® SHEET

Circle 97 on inquiry card



GE Plastics

Advertising index

Bold face—page number
Italics—Reader Service number

A

Accuride, **184**; *93* [D]
(213) 944-0921
Adams Rite Mfg. Co., **43**; *32* [G]
(213) 699-0511
A/E/C Systems '88, **169**; *82*
(800) 527-7943
AllianceWall Corp., **39**; *31* [G]
(404) 447-5043
Alumax Building Specialties, **164**;
78 [G-D]
(214) 285-8811
American Marazzi Tile, Inc., **160**;
74 [G-L-D]
(214) 226-0110
American Stair-Glide Corp., **190**;
100 [G]
Andersen Corp., **34-35**; *30* [G-L]
Architect's Book Club, **157 to 159**
Armstrong World Industries, Inc.,
Cov.II-1; *1, 2-3*; *2* [G-E-D]
(800) 233-3823

B

BASF Corp.—Fibers Div., **74**; *48*
[G-E-L-D]
(704) 667-7713
Best Western International, **167**
Brick Institute of America,
Cov.III; *102*

C

CARADCO, a Kusan, Inc. Co., **64**; *44*
[G]
(217) 893-4444
Carlisle Syntec Systems, Div. of
Carlisle Corp., **69**; *47* [G-E-I]
(800) 233-0551
Chadsworth, Inc., **190**; *101* [G]
(404) 876-5410
Chemstar, Inc., **32Wb**; *26*
Computervision, **79**; *51*
Cooper Lighting, **80**; *52*
Crossville Ceramics, **168**; *81* [G-D]
(615) 484-2110
Crown Metal Mfg. Co., **183**; *91*
(312) 873-3833
C/S Group, The, **25**; *17, 66*; *45*
[G-E]
(201) 272-5200

D

Dow Corning Corp., **185**; *96* [G-E-I-D]
(800) 346-9882
DPIC Companies, **132**; *56*
Dur-O-Wal, Inc., **78**; *50* [G]
(312) 577-6400

E

Esco Elevators, Inc., **32**; *21*
(817) 478-4251
Esco/Duray, **136**; *58*
(312) 271-2800

F

Federal Sign, Div. Federal Signal
Corp., **32Sa**; *28* [G-E-I]
(817) 640-7511
Flood Co., **182**; *90* [G-L]
Florida Power & Light, **32Sb**; *29*
(305) 227-4324
Formica Corp., **58**; *41*
(800) 543-3000
Fry Reglet Corp., **142**; *63* [G]
(818) 289-4744

G

Gametime, Inc., **48**; *35* [G]
(205) 845-5610
General Electric Plastics-Lexan
Sheet, **186-187**; *97* [G-I]
(800) 845-0600
Georgia-Pacific Corp., **146**; *65, 66*
[G-I-L-D]
(800) 225-6119
Glen Raven Mills, Inc., **20-21**; *14*
[G]
(919) 227-6211

H

Harris/3M Document Products, Inc.,
53; *38*
(800) TLC-COPY
Helios Industries, Inc., **144**; *64* [G]
(415) 887-4800
Herman Miller, Inc., **18-19**; *13*
(800) 851-1196
Hewlett-Packard, **14-15**; *10*
(800) 367-4772
Homasote Co., **24**; *16* [G]
(609) 883-3300

I

Innovative Marble and Tile, Inc.,
155; *72* [G-D]
(516) 752-0318
International Design Conference in
Aspen, **156**; *73*
(303) 925-2257
Inter Trade, Inc., **32Wc**; *27*
(213) 515-7177
Ioline Corp., **140**; *62*
(206) 821-2140

K

Kawneer Co., Inc., **12-13**; *9* [G]
Koh-I-Noor Rapidograph, Inc.,
22-23; *15*
(201) 479-4124
Kohler Co., **44**; *33* [E]
Koppers Co., Inc., **49 to 52**; *36*
[G-E-I]
(412) 227-2000
Kroin, Inc., **177**; *6* [G]
(617) 492-4000

For detailed data, prefilled cata-
logs of the manufacturers listed
below are available in your 1988
Sweet's Catalog File as follows:

L

Laticrete International, Inc., **138**;
59 [G]
(800) 243-4788
Lighting Services, Inc., **179**; *86, 87*

M

Machin Designs (U.S.A.), Inc., **139**;
60 [G-L]
(203) 834-9991
Manville Corp.—Roofing Systems Div.,
56-57; *40* [G-E-I]
(303) 978-4900
Marble Institute of America, **165**; *79*
(313) 476-5558
Marvin Windows, **82-83**; *54* [G]
(800) 346-5128
MBCI, **154**; *71*
McNichols Co., **182**; *89* [E-I]
(800) 237-3820
Merchandise Mart Properties, Inc.,
148; *67*
Milgard Manufacturing, Inc., **32Wa**;
25
(800) 422-5641
Monoceram, 2 page advertising
supplement included with Eastern
copies only.

N

Naturalite, Inc., **28-29**; *19* [G]
(800) 527-4018
NCARB, **175**
Neenah Foundry Co., **184**; *95* [G-E]
(414) 725-4848
Norco Windows, Inc., **54-55**; *39* [G]
(715) 585-6311
Northwest, **134**

P

Pella Rolscreen Co., **150-151**; *69*
[G-L-D]
(512) 628-1000
Pittsburgh Corning Corp., **30-31**; *20*
[G-E-I]
(412) 327-6100
Polyken Technologies, Div. of the
Kendall Co., **176**; *85*
(800) 248-7659

R

Radio Shack, **149**; *68, 162*; *76*
Red Cedar Shingle & Handsplit
Shake
Bureau, **16**; *11*
Roxul, **184**; *94*
(201) 529-1044
Russwin Div., Emhart Hardware
Group,
60; *42* [G]

S

Sargent & Co., **84**; *55* [G]
(203) 562-2151
Shakertown Corp., **189**; *99* [G-L]
(800) 426-8970
Sloan Valve Co.—Plumbing Div.,
Cov.IV; *103* [G-E-I]

(G) General Building & Renovation
(E) Engineering & Retrofit
(I) Industrial Construction & Renovation
(L) Homebuilding & Remodeling
(D) Contract Interiors

Spectrum Glass Products, **5**; *3, 4* [G]
(919) 592-7101
Spring City Electrical Mfg. Co.,
163; *77* [G-E]
(215) 948-4000
Stanley Hardware, **26-27**; *18* [G]
Steelcase, Inc., **10-11**; *8*
(800) 447-4700
Steelite, Inc., **46**; *34* [G-I]
(412) 734-2600
Sto-Industries, Inc., **170-171** *83* [G]
(802) 775-4117
Structures Unlimited, Inc., **161**; *75*
[G-E]
(603) 627-7887
Suffolk County Vietnam Veterans
Memorial Commission, **182**; *88*
Summitville Tiles, Inc., **68**; *46* [G]
Sunbilt Solar Products, **189**; *98*
(718) 297-6040
Sunglo Skylight Products, Inc.,
139; *61* [G]
Sweet's Div.-McGraw-Hill Information
Systems, **180-181**

T

Tischler und Sohn, **32Ea**; *22* [G-L]

U

Unilock Chicago, Inc., **32Ca**; *24*
(312) 892-9191
United States Aluminum Corp., **172**;
84 [G]
(800) 527-6400

V

Velux-America, Inc., **17**; *12* [G-L]
Vermont Structural Slate Co., **183**
(800) 343-1900
VersaCAD Corporation, **8**; *7*
(714) 960-7720
Versatec, a Xerox Company, **133**; *57*
(800) 538-6477

W

Wayne-Dalton Corp., **152-153**; *70*
[G-I]
(216) 674-7015
Wellco Carpets, **62**; *43*
Willamette Building Products, **76**; *49*
(503) 923-3341
WilsonArt, **6**; *5*
(800) 433-3222
Wolverine Technologies, Inc., **32Eb**;
23 [G-L]
(313) 386-0800
Worthington Group, Ltd., **183**; *92*
(404) 872-1608

X

Xerox, **81**; *53*
(800) 448-3400

Sales offices

Main Office

McGraw-Hill, Inc.
1221 Avenue of the Americas
New York, New York 10020

Publisher
Ted Meredith (212) 512-4685

Director of Business and
Production
Joseph R. Wunk (212) 512-2793

Director of Marketing
Camille Padula (212) 512-2858

Classified Advertising
(212) 512-2556

District Offices

Atlanta
4170 Ashford-Dunwoody Road
Atlanta, Georgia 30319
Gregory Bowerman (404) 252-0626

Boston
607 Boylston St.
Boston, Massachusetts 02116
Louis F. Kutscher (203) 968-7113

Chicago
645 N. Michigan Ave.
Chicago, Illinois 60611
Anthony Arnone, (312) 751-3765
Cheryl L. Shores, (312) 751-3705

Cleveland
55 Public Square
Cleveland, Ohio 44113
George Gortz (216) 781-7000

Denver
7400 S. Alton Ct. Suite 111
Englewood, Colorado 80112
John J. Hernan (303) 740-4630

Detroit
4000 Town Center, Suite 770
Southfield, Michigan 48075
Thomas J. Shaw
(313) 352-9760

Houston
7600 W. Tidwell, Suite 500
Houston, Texas 77040
Lockwood Seegar (713) 462-0757

Vice President Market
Development
Federal Government
Paul R. D'Armiento
1750 K Street NW
Suite 1170
Washington, D.C. 20006
(202) 463-1725

Los Angeles
Media Sales Associates
23232 Peralta Drive
Laguna Hills, Calif. 92653
William W. Hague (714) 859-4448
Sherylen Young

New York
1221 Avenue of the Americas
New York, New York 10020
Theodore C. Rzempoluch
(212) 512-3603

Philadelphia
1234 Market St.
Philadelphia, Pennsylvania 19107
Blair McClenachan (215) 496-4966

Pittsburgh
6 Gateway Center, Suite 215
Pittsburgh, Pennsylvania 15222
George Gortz (412) 227-3640

San Francisco
Media Sales Associates
William W. Hague (415) 345-0522
Sherylen Young

Stamford
777 Long Ridge Road
Stamford, Connecticut 06902
Louis F. Kutscher
(203) 968-7113

Cost Information Systems
McGraw-Hill Information
Systems Co.
Percival E. Pereira
P.O. Box 28
Princeton, N.J. 08540
Toll Free 800/527-5295
N.J. (609) 426-7300

Overseas Offices

Frankfurt/Main
LiebigstraBe 19
Frankfurt/Main, Germany

Sheffield
146 West St.
Sheffield S14ES, England

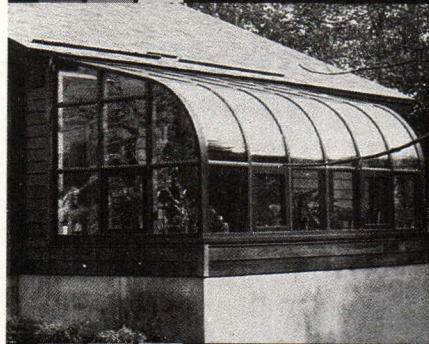
Milan
Via Baracchini No. 1
Milan, Italy

Paris
128, Faubourg St-Honoré
75008 Paris, France

Tokyo
2-5, 3-chrome
Kasumigaseki, Chiyoda-ku
Tokyo, Japan

South America
Empresa Internacional de
Comunicacoes Ltda.
Rua da Consolacao, 222
Conjunto 103
01302 Sao Paulo, S.P. Brasil

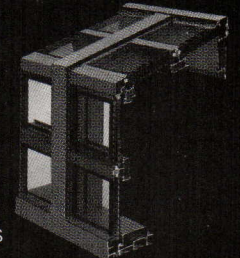
ALL SUNROOMS ARE NOT CREATED EQUAL



Here is an innovative sunroom design. The optional **KLEERTEK™** Glazing System by Sunbilt™ uses no exterior cross caps. It creates a crystalline illusion of one sheet of glass eliminating unsightly overhead water and dirt resulting in a totally maintenance free, thermal efficient room addition. The sweeping 40" curves add a graceful touch. Compare feature by feature and learn why Sunbilt is the **"BEST SUNROOM MADE IN AMERICA."**™

The Sunbilt Creative Sunroom is 50% heavier than most competitive models, tubular cross muntins for rigidity, 1" insulating glass—and more—all designed to create a superior, affordable, quality sunroom.

See us in Sweets — sec. 13123/SUS



sunbilt™

Call or write for
FREE Color Catalog.

EXCLUSIVE SUNBILT DEALERSHIPS AVAILABLE
CREATIVE SUNROOMS

SUNBILT SOLAR PRODUCTS by SUSSMAN, INC.
109-10 180th St., Dept. C, Jamaica, N.Y. 11433 • (718) 297-6040

RESIDENTIAL & COMMERCIAL ENCLOSURES
Circle 98 on inquiry card

©1987 Sunbilt



SHAKERTOWN SIDING: CHOICE #1 FACE: Colonial or Cascade Classic

Some architects want the clearest cedar shingle face available. To them we offer our Colonial panels. Each Colonial panel has 100% vertical grain, No. 1 Grade Western Red Cedar shingles.

But other architects want that rustic look. So we say choose our Cascade Classic panels. Each Cascade Classic panel has enhanced grain patterns and an occasional hand-sorted tight knot for the natural look of wood. Colonial or Cascade Classic, all of our panels are made with the same precision and quality manufacturing that for over 35 years has said "Shakertown Siding."

SHAKERTOWN SIDING

1200 Kerron St., Winlock, WA 98596

1-800-426-8970

In Washington (206) 785-3501

The Woodlands of Darien, Darien, Illinois; Developer: Robert C. Ranquist

PORCH-LIFT®

VERTICAL WHEELCHAIR LIFT
provides a safe, simple solution
to architectural barriers



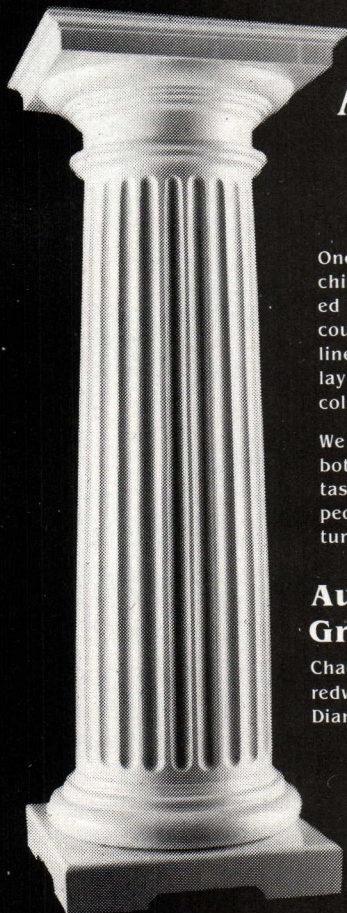
NOW — LIFTS UP TO 12 FT.

Whether you're modifying an existing building or designing a new one, accessibility to the handicapped is important. And PORCH-LIFT provides the simple, economical solution... indoors or outdoors. This safe vertical wheelchair lift platform anchors permanently beside the steps, using a minimum of space. Motor and mechanisms are enclosed. Runs on 110 volt current. Weatherproof finish. Choose from eleven models with varying lifting heights up to 144 inches. Shipped ready for installation.

WRITE FOR A FREE BROCHURE AND NAME OF THE DEALER NEAREST YOU.
AMERICAN STAIR-GLIDE CORPORATION

Dept. AR 0388, 4001 East 138th Street, P.O. Box B
Grandview, Missouri 64030

Circle 100 on inquiry card



TRUE ARCHITECTURAL COLUMNS ENTASIS

One distinguishing feature of a true architectural column. The entasis is the curved or bowed outline of the shaft which counteracts the optical illusion of straight lines which appear to lean inward. Simply lay a straight edge along the length of our column and note the slight entasis.

We show not only the top half but also the bottom half of our column so that the entasis can be shown. This is one reason more people are choosing Chadsworth architecturally correct columns.

Authentic Replication of Greek and Roman Orders

Chadsworth Columns and Capitals available in redwood, pine and other species.
Diameters — 6" - 36" Heights — 18" - 40'

CHADSWORTH
INCORPORATED

For information and brochure:
P.O. Box 53268
Atlanta, Georgia 30355
404-876-5410
Catalog \$ 1.00

Roman Doric Order

Circle 101 on inquiry card

Use your STAC number!

XXXXXXXXXX5-DIGIT 69699
6400 009876543-2 FEB90 S07
TERRY DOE, TD & ASSOCIATES
128 MAIN STREET
ANYTOWN IL 69699

Need product information fast? Your Architectural Record Subscriber Telephone Access Card number can help speed information to you about any product or service (advertised or new products/manufacturers literature items) described in this issue.

Architectural Record's exclusive STAC number system enables you to call and key your "more information" requests directly into our computer via touch-tone telephone. Your personal STAC number is conveniently listed above your name on the mailing address label for each issue. **IMPORTANT:** Your STAC number starts after the first four numbers and is separated from them by a space. If your STAC number starts with one or more zeros, ignore them, as well as the hyphen. (For example, the STAC number on the above label is 98765432.)

Soon after your call, advertisers can access your requests by phone from our computer, and start speeding information to you. So when you need information fast, free help is as close as your STAC number. And STAC service is available to you 24 hours a day, seven days a week.

BEFORE YOU DIAL:

1. Write your STAC number in the boxes in Step 4 below. Do not add leading zeros.
2. Write the Reader Service numbers for those items about which you want more information in the boxes in Step 6. Do not add leading zeros.

CALL STAC:

3. Using a standard touch-tone telephone, call 413/ 442-2668, and follow the computer-generated instructions.

ENTER YOUR STAC NUMBER AND ISSUE NUMBER:

4. When the recording says, "Enter your subscriber number..." enter your STAC number by pushing the numbers and symbols (# or *) on your telephone keypad. Ignore blank boxes. Enter:

#

5. When the recording says, "Enter magazine code and issue code..." enter these numbers and symbols:

2 5 # 3 8 # #

ENTER YOUR INQUIRIES:

6. When the recording says, "Enter (next) inquiry number..." enter the first Inquiry Selection

Number, including symbols, from your list below. Ignore blank boxes. Wait for the prompt before entering each subsequent number (maximum 17 numbers).

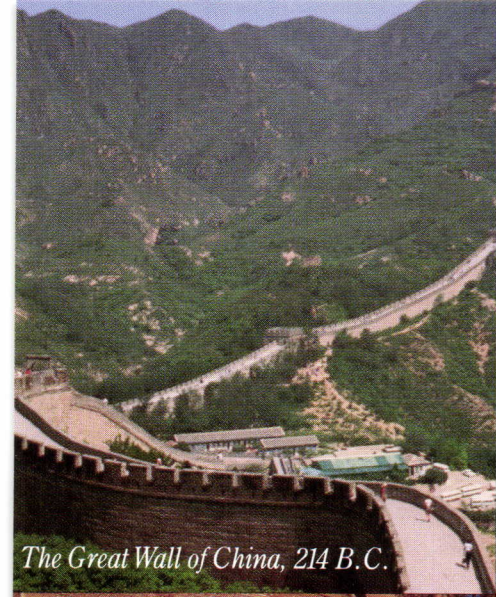
1.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	#	#
2.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	#	#
3.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	#	#
4.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	#	#
5.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	#	#
6.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	#	#
7.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	#	#
8.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	#	#
9.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	#	#
10.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	#	#
11.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	#	#
12.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	#	#
13.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	#	#
14.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	#	#
15.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	#	#
16.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	#	#
17.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	#	#

END STAC SESSION:

7. When you have entered all your Inquiry Selection Numbers and the recording prompts, "Enter next inquiry number," End the call by entering:

* * 9 1 # #

If you are a subscriber and need assistance, call 212/512-3442. If you are not a subscriber, fill out the subscription card in this issue, or call Architectural Record Subscription Services at 914/628-0821.



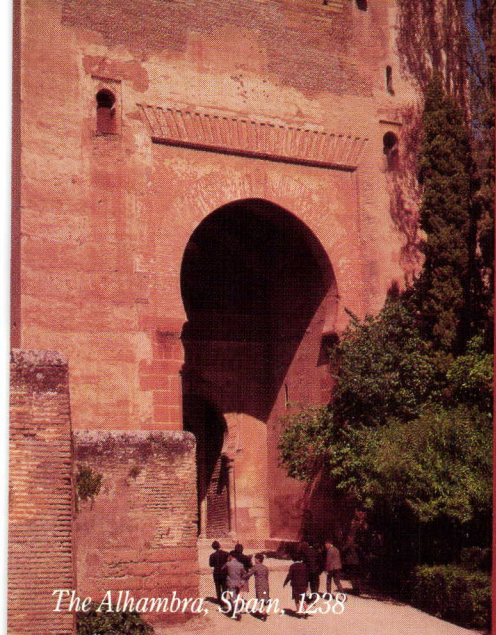
The Great Wall of China, 214 B.C.



The Colosseum, Rome, A.D. 82

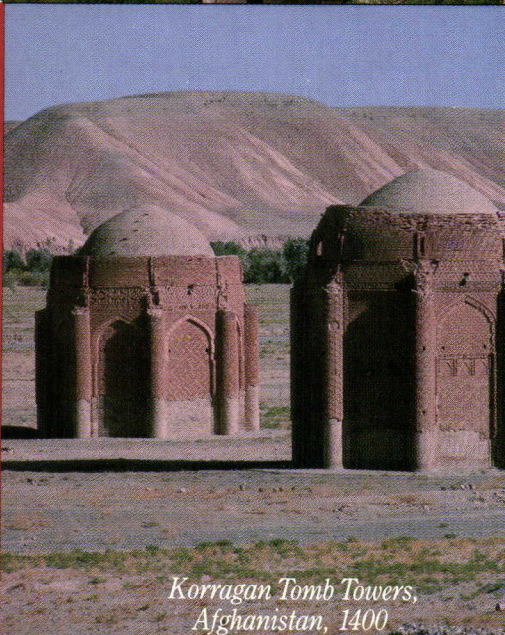


Carcassonne, France, A.D. 485



The Alhambra, Spain, 1238

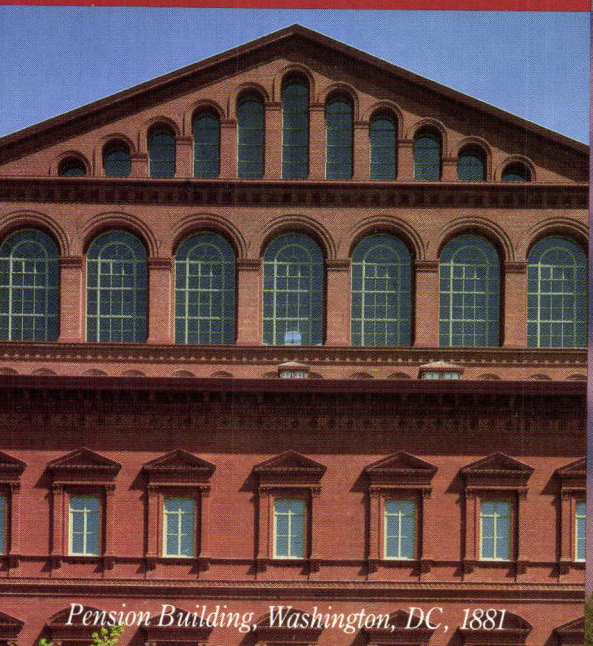
Give an architect
a brick and
just look what
can happen.



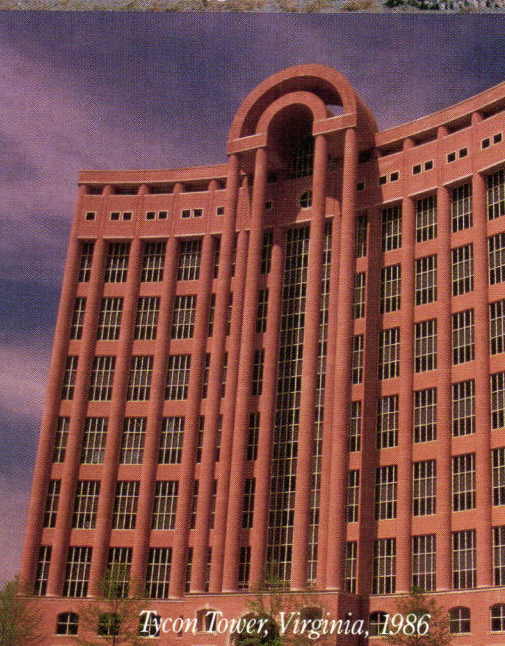
*Korragan Tomb Towers,
Afghanistan, 1400*



Monticello, Virginia, 1770



Pension Building, Washington, DC, 1881



Tycon Tower, Virginia, 1986

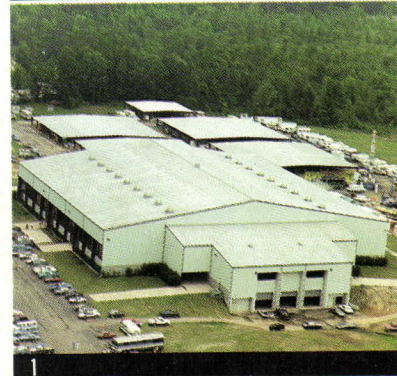
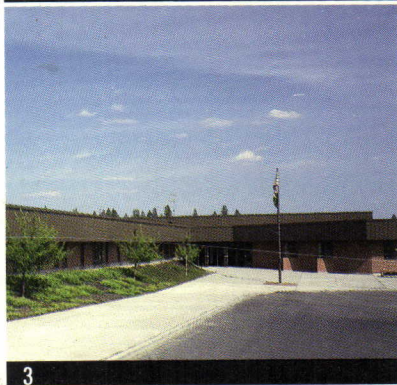
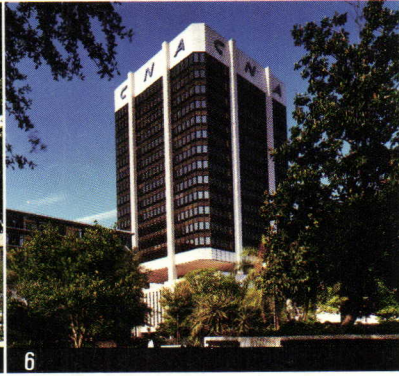
For 2,000 years, architects have worked wonders with brick. And no matter how innovative the design, brick has always provided the flexibility they need. So next time you have a great idea—use brick. And work a few wonders of your own.



If you can see it in your mind, you can build it with brick.

For more information write to: Brick Institute of America, 11490 Commerce Park Drive, Reston, VA 22091.

Circle 102 on inquiry card



At first glance, it's difficult to imagine how these six different buildings are related. But if you take a closer look at their histories, you'll find they all share a common theme: the washrooms in all six buildings have been refitted with Sloan flushometers.

True, these buildings don't look old enough to need major plumbing repairs. But the fact is, the original flushometers that were installed just didn't hold up. Even after repeated servicing, they continued to malfunction. They didn't shut off properly. They leaked at the stops. In some cases, they even flooded the washrooms. In short, they weren't Sloan flushometers.

Unlike substitutes, Sloan flushometers offer proven, reliable service. With built-in quality at an affordable price. That's why today more buildings are equipped with Sloan flushometers than with any other brand.

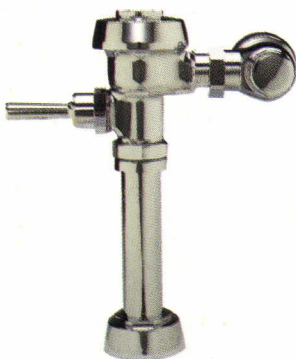
Only Sloan's rugged, tamper-proof design can assure the quiet, dependable operation so critical in buildings like these. Plus, Sloan flushometers are built to last for years with only minimal, routine maintenance—an important consideration for owners who value time and money.

The next time you consider specifying a substitute, think about these six buildings. Then specify and insist on Sloan. The first time.

More
Six major reasons to specify Sloan...

the first time.

1. Angelina County Exposition Center, Lufkin, TX 2. Linpro Company, Berwyn, PA
3. Northwood Jr. High School, Meade, WA 4. Barnett Plaza, Orlando, FL 5. Cow Town Colosseum, Fort Worth, TX 6. CNA Tower, Orlando, FL



S **SLOAN VALVE COMPANY**
10500 Seymour Avenue, Franklin Park, IL 60131
A Tradition of Quality and Pride